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VISION

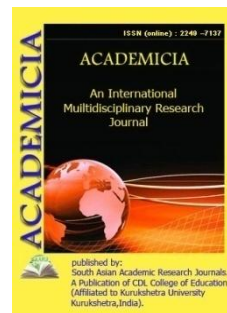
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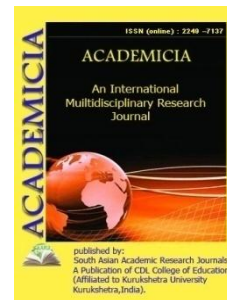
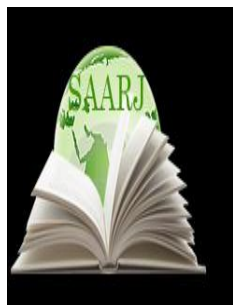
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TRANSACTION PROCESSING MONITORS ON REAL-TIME DATABASES

Aburuotu, E. C.*; Asagba P. O**

*School of Post Graduate Studies,
Department of Computer Science
Faculty of Natural and Applied Sciences,
Ignatius Ajuru University of Education
Rumuolumeni, Port Harcourt, Rivers State, NIGERIA

**Faculty of Science,
Department of Computer Science,
University of Port Harcourt,
Choba, Port Harcourt, Rivers State, NIGERIA

ABSTRACT

The development of distributed database systems has given rise to the transfer of data from one connected terminal to another. During the transmission of the data among various connected terminals, data can be corrupted, infrastructures can fail, hardware can malfunction and network can disconnect; all of these can cause failure in data transmission. This research focuses on Transaction Processing Monitor (TPM) on a real-time database and the standard middleware applications it provides for use in different e-commerce systems from large enterprises to medium and small businesses available on the internet to monitor the transfer of data between multiple terminals. The researchers reviewed many articles that provided detailed information on TPM because of the significant growth and popularity that it has gained. The paper also reviewed various concepts of Transaction Processing Monitors on real-time databases, different areas of TPM functionalities and transactional properties as well as the architectures of Transaction Processing Monitors. This paper also recommended high-end benchmark platform for Transaction Processing Monitor which is very vital to meet the high performance needs of online transactions and to determine their operational status either for success or failure

KEYWORDS: *Data Transfer, Distributed Database, Transaction Processing Monitor, Network and Terminals.*

INTRODUCTION

In real-time databases, a transaction is a program that manages the collection of database operations executed as a logical unit of data processing. The operations performed in a transaction include one or more of database operations like insert, delete, update or retrieve data. Real-time databases are traditional databases that use an extension to give the additional power to yield reliable responses. They use timing constraints that represent a certain range of values for which the data are valid. This range is called temporal validity. A conventional database cannot work under these circumstances because the inconsistencies between the real world objects and the data that represents them are too severe for simple modifications. Bauchman, (2005). An effective system needs to be able to handle time-sensitive queries, return only temporally valid data, and support priority scheduling. To enter the data in the records, often a sensor or an input device monitors the state of the physical system and updates the database with new information to reflect the physical system more accurately. When designing a real-time database system, one should consider how to represent valid time, how facts are associated with real-time system. Also, consider how to represent attribute values in the database so that process transactions and data consistency have no violations.

When designing a system, it is important to consider what the system should do when deadlines are not met. For example, an air-traffic control system constantly monitors hundreds of aircraft and makes decisions about incoming flight paths and determines the order in which aircraft should land based on data such as fuel, altitude, and speed. If any of this information is late, the result could be devastating. To address issues of obsolete data, the timestamp can support transactions by providing clear time references. To ensure the success of various operations in a real time distributed database, a transaction processing monitor was integrated so that all underlying operation in a real-time databases can be determined for success or failure. Laura, et al (2005).

TRANSACTION PROCESSING MONITOR (TPM) IN A REAL-TIME DISTRIBUTED DATABASE

“A Transaction Processing Monitor or TP Monitor also known as ‘teleprocessing monitor is a control program that monitors the transfer of data between multiple local and remote terminals to ensure that the transaction processes succeeds or, if an error occurs, the application takes appropriate actions. A Transaction Processing Monitor allows building a common interface to several applications while maintaining or adding transactional properties. Example of applications that has common interface that runs across them includes CICS, Tuxedo, Encina. A Transaction Processing monitor extends the transactional capabilities of a database beyond the database domain. It provides the mechanisms and tools necessary to build applications in which transactional guarantees are provided. TP-Monitors are, perhaps, the best, oldest, and most complex example of middleware. Some even try to act as distributed operating systems providing file systems, communications, security controls, etc

The term Transaction Processing monitor is frequently used in mainframe-based wide area networks, where TP monitors manage the transfer of data between several clients making

requests to a server. TP monitors will control and manage the data smoothly to available servers by detecting hardware failures and switching to another node.”

Teleprocessing monitors were originally developed to allow several clients to connect to one server. However, they developed to what are now known as transaction processing monitors (TPMs). A TPM breaks down applications or code into transactions and ensures that all databases are updated in a single transaction. This is useful for airline reservations, car rentals, hotel accommodations, ATM transactions or other high volume transaction locations. TP monitors ensure that transactions are not lost or destroyed. Sometimes they are referred to as middleware, because the client sends the data for query or processing to the server database and then it is sent back to the user terminal. This can be accomplished remotely and by multiple users simultaneously. TP monitors are easily scalable allowing for increase in users and data processed.”

“Laura, et al (2005) gave the examples of Transaction Processing Monitors, they include the CICS (Customer Information Control System) for IBM mainframes introduced in July 1969, which can process thousands of transactions per second; IBM Information Management System (IMS, more specifically its IMS TM, also known as IMS DC, component); Transarc Encina and Oracle Tuxedo are major TP monitors in the Unix client/server environment. Laura, et al (2005).”

PROBLEM STATEMENT

Real-time distributed database manages or coordinates big data at regular intervals. Components of the database are shared across various servers that manage the transactions in the database. A Transaction Processing Monitor or TP Monitor also known is required to monitor the transfer of data between multiple local and remote terminals to ensure that the transaction processes succeeds or, if an error occurs, the application takes appropriate actions. This research work will improve the management of the Transaction Processing Systems in various organizations that use the real-time distributed database to support their operations. It will support system analyst, IT specialist, software developers, data scientist and others in various organizations using Information Technology to drive its process. This is an improved research on Transaction Processing monitor in a real-time distributed database.

RELATED LITERATURE

“Philip Bernstein (1990) defined transaction processing (TP) monitor as a program that performs an administrative function by accessing a shared database on behalf of an on-line user. A TP system is an integrated set of products that supports TP applications. These products include both hardware, such as processors, memories, disks and communications controllers, and software such as operating systems (Oss), database management systems (DBMSs), computer networks and TP monitors. Much of the integration of these products is provided by TP monitors which coordinate the flow of transaction request between terminals that issue requests and TP applications that can process them. In this paper we looked further into TPM as an integration into real-time database systems that monitors the operations and processes carried out in real-time database and provide required report on the development around the process.”

Thomas and Mark, (2007) represented transaction processing monitors in a real time database as the execution of an application that performs an administrative function by accessing a shared

database.”Within transaction processing, processing monitors provide the software "glue" that ties together many software components into a transaction processing system solution. A typical transaction processing application involves interaction with many terminal users by means of a presentation manager or forms system to collect user requests. Information gathered by the presentation manager is then used to query or update one or more databases that reflect the current state of the business.”A characteristic of transaction processing systems and applications is many users performing a small number of similar functions against a common database. A transaction processing monitor is a system environment that supports the efficient development, execution, and management of such applications.”

“Processing monitors are usually built on top of or as extensions to the operating system and other products such as database systems and presentation services.”By so doing, additional components can be integrated into a system and can fill "holes" by providing functions that are specifically needed by transaction processing applications.“ Thomas and Mark presented some examples of these functions as application control and management, transaction-processing-specific execution environments, and transaction-processing-specific programming interfaces.”

When addressing the issues around data transmission between terminals, Puntti Tanya, (2007) presented that transaction processing monitor handles the control, transmission of data in a real-time database and determine if the transaction was successful or not. Where the transaction is not successful, Tanya said the middleware application creates a report of failure to notify the database of the process failure so that appropriate action cannot be taken to avoid uncontrollable situation. In his research they suggested that effective database infrastructures should be put in place to avoid possible failure during database transaction.

However, this paper recommended a distributed database environment using the real-time emulation capabilities and virtualization capabilities of the Transaction Processing Monitor in a real-time distributed database. This is to ensure that physical system is provided that have the characteristics and behavior of a real network where a transaction processing operations are carried out.

FUNCTIONALITIES OF TRANSACTION PROCESSING MONITORS

Transaction Processing Monitors appeared because operating systems are not suited for transactional processing. Transaction Processing Monitors are built as operating systems on top of operating systems. As a result, TP-Monitor functionality is not well defined and very much system dependent. A TP-Monitor tries to cover the deficiencies of existing all purpose systems. What it does is determined by the systems it tries to improve. A TP-Monitor is basically an integration tool. It allows system designers to tie together heterogeneous system components using a number of utilities that can be mixed and matched depending on the particular characteristics of each case using the tools provided by the TP-Monitor, the integration effort becomes more straightforward as most of the needed functionality is directly supported by the TP-Monitor. A TP-Monitor addresses the problems of sharing data from heterogeneous, distributed sources, providing clean interfaces and ensuring ACID properties.”

A TP-Monitor extrapolates the functions of a transaction manager (locking, scheduling, logging, recovery) and controls the distributed execution. As such, TP-Monitor functionality is at the core of the integration efforts of many software producers (databases, workflow systems, CORBA providers.

“A TP-Monitor also controls and manages distributed computations. It performs load balancing, monitoring of components, starting and finishing components as needed, routing of requests, recovery of components, logging of all operations, assignment of priorities, scheduling, etc. In many cases it has its own transactional file system, becoming almost indistinguishable from a distributed operating system.”

TRANSACTIONAL PROPERTIES

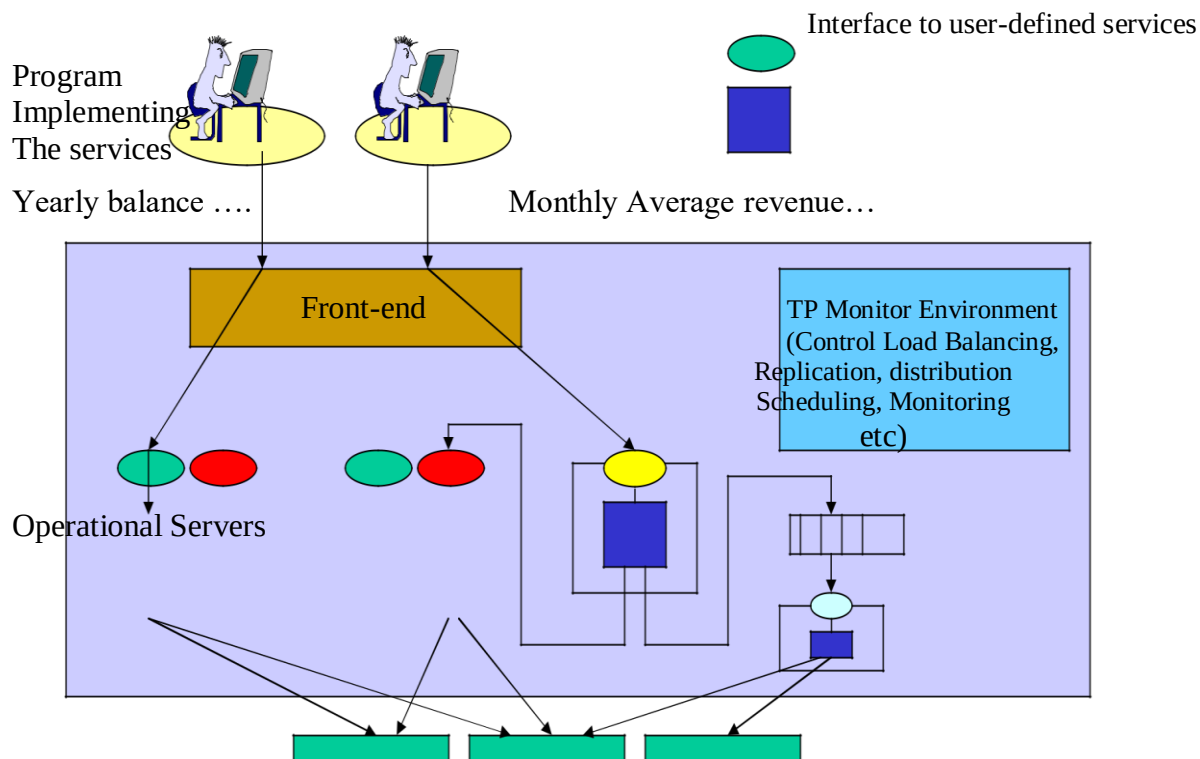
The TP-monitor tries to encapsulate the services provided within transactional brackets. This implies Remote Procedure Call (RPC) augmented with:”

Atomicity: A service that produces modifications in several components should be executed entirely and correctly in each component or should not be executed at all (in any of the components).”

Isolation: if several clients request the same service at the same time and access the same data, the overall result will be as if they were alone in the system.”

Consistency: a service is correct when executed in its entirety. It does not introduce false or incorrect data into the component database.”

Durability: The system keeps track of what has been done and it's capable of redoing and undoing failures in case of failures. Figure 1 presents the architecture of a transaction processing system in a real time database. It also shows how processes are managed by the TPM to ensure success and where a failure occurs; the application generates a report and sends the instant report to the initiator or the administrator to determine the status of the transaction in the real-time distributed database.



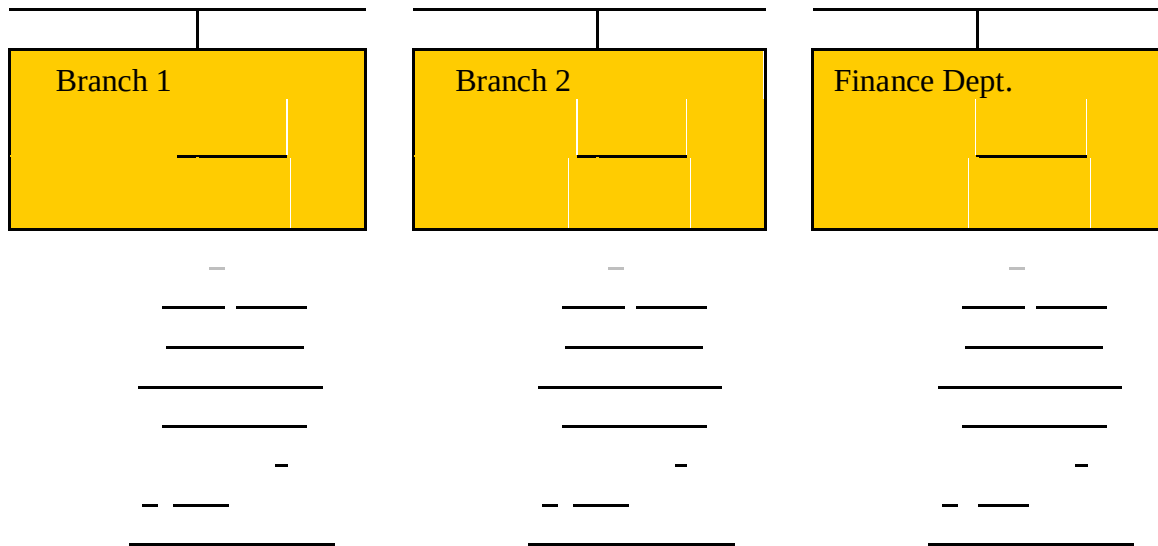


Figure 1: Generic Architecture of Transaction Processing Monitor. Gustavo and Zurich (2010).

TASK OF A TRANSACTION PROCESSING MONITOR

- Core services

Transactional Remote Procedure Call: Implements RPC and enforces transactional semantics, scheduling operations accordingly

Transaction manager: runs 2PC and takes care of recovery operations

Log manager: records all changes done by transactions so that a consistent version of the system can be reconstructed in case of failures”

“Lock manager: a generic mechanism to regulate access to shared data outside the resource managers

- Additional services”

Server monitoring and administration: starting, stopping and monitoring servers; load balancing.”

Authentication and authorization: checking that a user can invoke a given service from a given terminal, at a given time, on a given object and with a given set of parameters (the OS does not do this)”

Data storage: in the form of a transactional file system”

Transactional queues: for asynchronous interaction between components

Bootting, system recovery, and other administrative chores

STRUCTURE OF TRANSACTION PROCESSING MONITORS

TP-Monitors try in many aspects to replace the operating system so as to provide more efficient transactional properties. Depending what type of operating system they try to replace.”

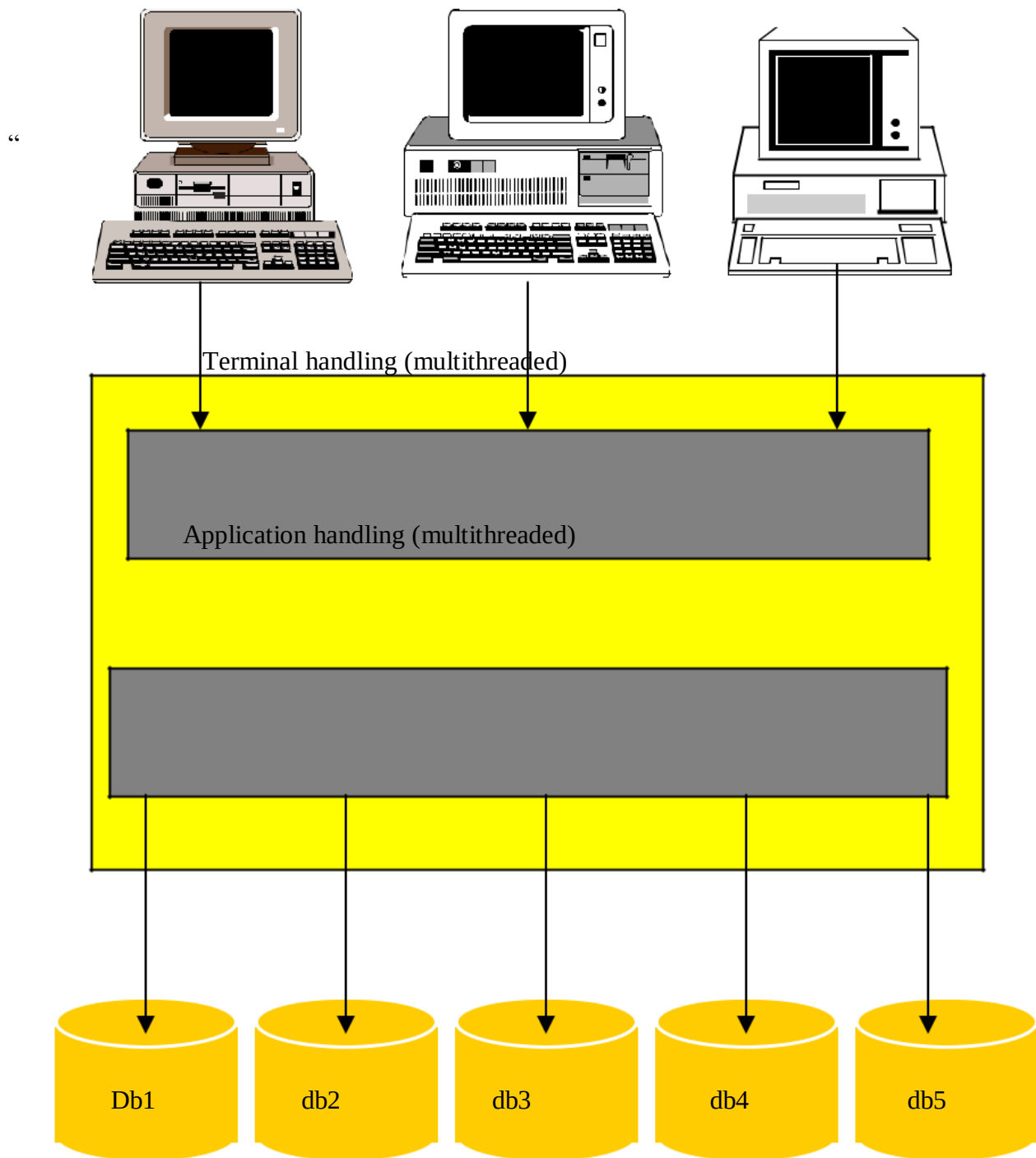
They have a different structure:

- a. Monolithic: all the functionality of the TP-monitor is implemented within one single process. The design is simpler (the process can control everything) but restrictive (single point failure) must support all possible protocols in one single place
- b. Layered: the functionality is divided in two layers. One for terminal handling and several processes for interaction with the resource managers. The design is simple but provides better performance and resilience
- c. Multiprocessor: the functionality is divided among many independent distributed processes.”

Others include:

Queue manager handles incoming messages: Some queue managers provide persistent or durable message queuing contents of queue are safe even if systems fail.”

Durable queuing of outgoing messages is important: application server writes message to durable queue as part of a transaction. Once the transaction commits, the TP monitor guarantees message is eventually delivered, regardless of crashes. ACID properties are thus provided even for messages sent outside the database. Many TP monitors provide locking, logging and recovery services, to enable application servers to implement ACID properties by themselves.”Figure2 and figure 2 shows the relationship between the Transaction Processing Monitor and the hardware infrastructures that delivers the services. The terminals (servers) are the first multithreaded approach while the application handling is stored and managed by the terminals.



“Figure 2: Monolithic Structure of Transaction Processing Monitor. Gustavo and Zurich, (2010)

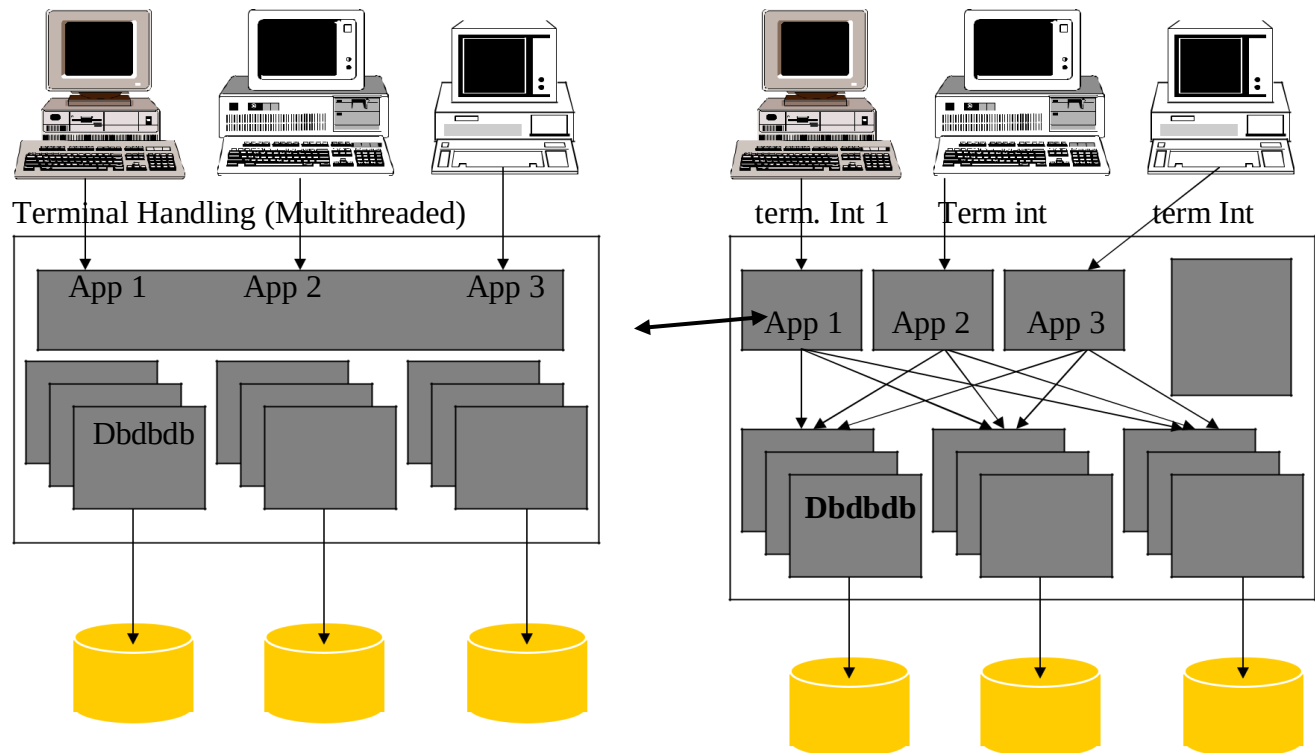


Figure 3: Multiprocessor Structure of Transaction Processing Monitor. Gustavo and Zurich, (2010).

COMPONENTS OF TRANSACTION PROCESSING MONITOR

The current trend is towards a “family of products” instead of a single system. Each element can be used by itself (reduced footprint) and, in some cases, can be used completely independent of the TP-Monitor.”

Monitor: execution environment providing integrity, availability, security, fast response time and high throughput. It includes tools for administration and installation of components and the development environment.”

Communication services: protocols and mechanisms for persistent messages and peer to peer communication.”

Transactional RPC: basic interaction mechanism

Transactional services: supporting concurrency control, recovery, logging and transactional programming. Behavior of the system can be tailored (advances transaction models, selective logging, ad-hoc recovery ...)”

APPLICATION COORDINATION USING TP MONITORS:

A Transaction Processing monitor treats each subsystem as a resource manager that provides transactional access to some set of resources. The interface between the TP monitor and the resource manager is defined by a set of transaction primitives. The resource manager interface is defined by the X/Open Distributed Transaction Processing standard. TP monitor systems provide

a transactional remote procedure call (transactional RPC) interface to their service. Transactional RPC provides calls to enclose a series of RPC calls within a transaction. Updates performed by an RPC are carried out within the scope of the transaction, and can be rolled back if there is any failure.”

Examples of commonly used TP Monitors include:

- Customer Information Control System, or CICS in short. Mostly found in IBM environments
- Tuxedo Monitor for the Unix environment
- Application Servers using the Java Two Enterprise Edition for the Unix environment
- Encina for Unix
- Microsoft Transaction Server, or MTS. Now superseded by ComPlus which is also used in DotNet environments.
- IbmImms”

The following Software Products are probably not classified as Transaction Processing Monitors

- ComPlus provides an environment and services to support a Transaction Processing Monitor, but should not be viewed as a Transaction Processing Monitor, which is a software product. A closer match would probably be the MTS component within a Windows 2000 Server.
- A Web Server such as Internet Information Server (IIS). A closer match would be the IIS server(s) running under the management services provided by a product such as Microsoft Application Center..

ADVANTAGES OF TRANSACTION PROCESSING MONITORS

Transaction Processing Monitors are a development and run-time platform for distributed applications. The separation between the monitor and the transaction manager was a practical consideration but turned out to be a significant advantage as many of the features provided by the monitor are as valuable as transactions. The move towards more modular architectures prepared TP-Monitors for changes that had not been foreseen but turned be quite advantageous:”

The web as the main interface to applications: the presentation services included an interface so that requests could be channeled through a web server queuing as a form of middleware in itself (Message Oriented Middleware, MOM): once the queuing service was an internal resource manager, it was not too difficult to adapt the interface so that the TP-Monitor could talk with other queuing systems. Distributed object systems (e.g., CORBA) required only a small syntactic layer in the development tools and the presentation services so that services will appear as objects and TRPC would become a method invocation to those objects.””

OBJECTIVES OF TRANSACTION PROCESSING

i. Sharing of resources

“The first objective of a Transaction Processing Monitor is to enable sharing of resources and the optimum use of those resources by the application.”

“This point is quite a key point. For a longer explanation, just consider some application that runs a fat client on the client workstation and owns its dedicated link to the database. This kind of

application is generally referred to as a two tier application: one tier being the application and the other tier the database. In this kind of model:"

- You can run an application on a LAN with a limited number of users (up to several hundred),
- You will need a big database machine with a lot of processes that are commonly doing nothing but wait for the user rollback buffers to commit,"
- You can have programmers that will forget to commit or rollback transactions and so organize the possibility to lock for long periods of time some data in the database,
- You cannot scale very properly because you will reach a limit where the database machine cannot accept more database connections while guaranteeing correct response times."""

The main idea of the TPM (on Unix-like platforms) is to introduce a layer of processes between the client side application and the database. Each TPM process will own one database connection. This process will be in charge of executing application code for a particular transaction or set of transactions."That means that the "TPM process" is made of two parts: "one part being the monitor stack (TPM libraries) and the other being the application code linked together by the application developer. The link can build a process with one or several transactions in it. Unix-like TPM usually support programming in Cee Language, Cobol Language or CeePlusPlus."

The flow will be different in that model than in the two tier application model:""

- "The client side application invokes a "service" with data marshaled in the appropriate "format; that means that the client application has some knowledge of:"
- The TPM remote invocation language (probably a client middleware stack embedded into the client application),"
- Or the knowledge of a "generic" way to call the TPM services through "standard" protocols (such as LU6.2, RPC, RMI/IIOP, proprietary formats, WSDL, etc.);""
- The TPM chooses (commonly some kind of intelligent TPM agent) what process will handle the query"(based on certain criteria such as addressing or load balancing concerns);
- The TPM processes the message and calls back the application code;"
- The application code does its stuff in the database and possibly commit or rollback the transaction;"
- The TPM process can commit or rollback the transaction as well (when the TPM is configured to handle the database resource manager, the TPM commits or rollbacks);"
- The answer is wrapped back in the appropriate format and sent back the client application."

Right after the answer, the same TPM process can:"

- Process another transaction (note that the TPM process is not supposed to "remember" something about the previous transaction - so the model is basically stateless);"
- Get a clean context for the application code to run again."""

OTHER TPM SERVICES

There are several other potential services provided by the TPM:"

- Coordination of resource managers (typically a database engine, a transactional file engine, a queue system, coordinated one by one or all together in XA standard, etc.);"
- Load-balancing and spawning of new TPM processes in case they are needed (dynamic workload management, process restart in case of core dump),"
- Security access to services,"
- Routing services (very often, the notion of "domain" is used),
- Wrapping and unwrapping respectively data messages into messages and the messages into data structures,"
- Monitoring for operations,"
- Protocol stack management,"
- Quite often "Queue to queue" guaranteed delivery services,
- Error handling (such as process restart)."""

Some specific TPM can provide advanced services such as:

- Hot failover (even under high traffic) running in multi-nodes contexts,
- Secured and audit-able transaction journal (for applications where one single transaction shall not be lost)."

DESIGN CONSIDERATIONS

A Transaction Processing Monitor usually provides a kind of development framework for coders. This framework is usually quite restrictive both in the design of transactions (imposed callbacks, use of certain TPM APIs mandatory, restrictions in memory management, etc.) and in the building of the executables (requirement to build and link with the TPM libraries with some conventions). This usually makes the application specifically designed for a specific TPM."

"In terms of transaction design, you may want to read the Transaction Design page."

CONCLUSION

A Transaction Processing Monitor is a subsystem that groups together sets of related database updates and submits them together to a relational database. The result is that the database server does not need to do all of the work of managing the consistency/correctness of the database; the **TP Monitor** makes sure that groups of updates take place together or not at all. The advantages of this include increased system robustness as well as throughput. This also supports the four transaction processing ACID requirements which include:

- **Atomicity:**

All transactions are either performed completely - *committed*, or are not done at all; a partial transaction that is aborted must be *rolled back*.

- **Consistency**

The effects of a transaction must preserve required system properties. For instance, if funds are transferred between accounts, a deposit and withdrawal must *both* be committed to the database, so that the accounting system does not fall out of balance.”

“In double-entry accounting, the "staying in balance" property is usually not overly difficult to maintain. The more thorny issue comes when the property is something like Cash Balance Cannot Drop below Zero, or we cannot ship out inventory we do not have. In such cases, if you have two transactions being submitted concurrently, it could be that *either* could be accepted, but not *both*. If one of the transactions would cause balance requirements to be violated, the TP monitor therefore needs to reject one of the transactions.”

- **Isolation**

Intermediate stages must not be made visible to other transactions. Thus, in the case of a transfer of funds between accounts, both sides of the double-entry bookkeeping system must change together for each transaction. This means that transactions appear to execute serially (*e.g.* in order) even if some of the work is done concurrently.

- **Durability**

Once a transaction is committed, the change must persist, except in the face of a truly *catastrophic* failure.”

If Mongol hordes ride through and lay waste to your server room, you cannot expect the TP monitor to help keep transactions persistent! But it should be resistant to reasonably traumatic sorts of system failures such as a network link breaking down or perhaps even a disk drive malfunctioning.

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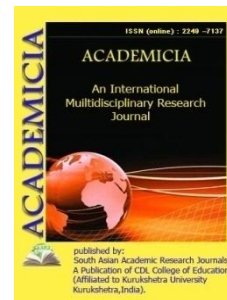
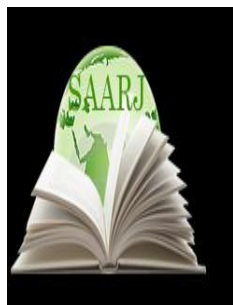
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TRENDS IN THE DEVELOPMENT OF THE BALLAD GENRE IN NEW CULTURAL AND HISTORICAL CONDITIONS (90S)

Abdivali Kazakovich Eshkobilov*

*Researcher,

Samarkand State Institute of Foreign Languages,
Samarkand, UZBEKISTAN

Email id: eshqobil-vali@umail.uz

ABSTRACT

The article describes the historical fate of the Uzbek ballad of the last decade of the last century and highlights the most important features of poetics in the development trends of the genre at the present stage. The author draws attention to the national-historical features of literary texts in the works of modern Uzbek ballad poets, which determine the genre.

KEYWORDS: *Ballad Genre, Poetics Of Uzbek Ballad, Genre, Development Trend, Stages Of Development, Nationally Specific, Genre-Forming Features.*

INTRODUCTION

In the ballet art of the 90s of the last century, we can see the desire of ballad poets to create new forms of ballads, to enrich the genre with new artistic and aesthetic content and spirit. A number of other poets have different approaches to the traditional features of ballad poetics and its content. In particular, based on the author's individual style and artistic-aesthetic position, a modification of the genre is observed, and the update is carried out taking into account changes in the value criteria of society.

This situation is explained by the fact that the authors have a unique creative style, as well as the tasks facing them, stemming from the philosophical and artistic needs of the new era, the traditional genre of ballad is not accepted by some poets as a strategic genre. Therefore, exploring ballads from the 90s. so far, we have turned to the ballad creativity of active participants in the literary process of that time, famous Uzbek poets Rauf Parpi, Chori Avaz, Yuldosh Eshbek, Aziz Said, Bakhrom Ruzimhammad, Khalim Akhmedov, Fakhriyor, Rustam Musurmon, whose works are completely in some others degrees corresponded to artistic and theoretical requirements. The absence of a genre index in a particular lyrical-epic work or the

rarity of the predominance of the lyrical principle may have predetermined the “unique” title of M. Bollieva’s scientific work “Development of Uzbek lyrical genres and ballet poetics” (“Development of Genres and Poetry Ballad of the Uzbek Lyric Poet”). The publication is devoted to the analysis of the ballad genre, but the author's interpretation from the point of view of the theory about the genres of poetry in Uzbek and foreign literary criticism, as well as from the point of view of scientific stylistics, seems to us to be erroneous. One of the two articles by M. Bollieva, which we met in different sources, is devoted to the analysis of the work of U. Azim “The Ballad of Rain”. The article is called “The depiction of feelings in a ballad” and, by its name and theoretical setting, casts doubt on the age-old scientific concepts of genre-defining canons developed by scientists. The title of the second article, “The Eastern Sample of the Western Genre,” immediately “solves” the problem of the genesis and history of the genre in national literature, or at least seriously hints at its “solution” (1).

The Main Findings and Results

At the end of the 90s and later, Usman Azim in his ballad works, using metaphors and other tropes, having strengthened the content-semantic side of the works, reaches the strengthening of the energy of the text; this became the defining characteristic of the ballad genre of this period. Azim Suyun also continued to create ballads. They contain events related to historical figures (Bodioldoi Samarkandi Samarkand runner, Fast as the Wind, faithful servant of the folk hero Abu Muslim), folk legends (“The Legend of Teshiktash, or One Truth about Shame”), national traditions (“Teacher and student”) And social events (“The Ballad of Office, Desk and Death”). They are dominated by the pathos of a pronounced national identity, the rise of folk heroes.

Ballads written in the 90s, “At the Gate of Wolves”, “I am on the way” by Agzam Uktam, “Old Legend”, “Unfulfilled Dream” by Kh. Khudoiberdiyeva, “An unfinished canvas or a ballad about an artist's love”, “To the poet” by Chari Avaza, lyric-epic poems “Beloved”, “Pain”, “Told”, “Frontier Guard Sadyk” by Usman Shukurov, “Ballad about a mouse and a man who lives in his hole”, “Ballad of immortality” by Iqbal Mirza, “Ballad” H. Rustamova, several symbolic and plot works included in “Proverbs” by Bakhrom Ruzimhammad, written in the spirit of modernism, can be characterized as national samples of lyric-epic poetry and the history of the ballad genre in the period under study.

When studying the artistic discoveries in the content and form of the ballad genre in modern Uzbek poetry, it can be noted that a number of works are mainly devoted to artistic style, literary trends, style, problems of poetic language and others. Emphasizing the important role of such studies, it is necessary to note the paucity of monographic works in scientific and theoretical literary criticism and in criticism devoted to the history and theory of individual genres. The reason for this is not the lack of attention and interest of young researchers and scientists, but the many works created in recent decades. Their authors improve the content, not the content: it focuses on the different development of images and poetic emotional and intellectual perception. Therefore, the thematic classification of poetic works of the type: “intimate”, “mystical-Sufi” (definitions of Ulugbek Hamdam) is quite reasonable. It was even observed when the poet published in a journal a plot lyric-epic poem with a genre index “ballad” under the influence of judgments about this work of an experienced, well-known literary critic, but then removed the genre index when compiling a collection of poems (2).

Ballads, with or without genre, are rare in poetry collections published in the early 1990s and later. It seems very interesting to analyze new works and new names, along with the work of several poets. They are Sayar, Safar Barnoev, Khurshed Davron, Shavkat Rakhmon, Tursunbai Adashbayev, Nurilla Oston - they occupied a worthy place in the literary process of the era, but despite this, their work did not attract the attention of researchers. That is why a number of highly artistic ballad works of these poets were analyzed along with typical ballads and other lyric-epic works of such poets as Muhammad Yusuf, Sirojiddin Sayyid, Iqbal Mirzo, Tursun Ali, Bahrom Ruzimuhammad, Khalima Akhmedov, Aziz Sa'yor, Akhmad, Usman Bek, Nemat Dushaev, Arif Tukhtash. It is on them that in the analysis of the poetics of the ballad genre, in its form and content, the scientific validity of the concept of *new names and new works* from a scientific and theoretical point of view is based (3).

In the late 90s, in literary theory, the term "lost texts" has been introduced into scientific use (4). Conditionally called "lost" texts are "forgotten" or omitted from works for various reasons (political, cultural-philosophical, etc.), and the urgency of their study is necessitated by the need to restore scientific justice. Such can be considered the ballads of Sayar "About my mother, about me, about my sister", "The Legend of Gurlan", "Alus", "The Ballad of the Captive", Safar Barnoev's "Ballad of the Sea", "Ballad of the Oath", "Ballad of two friends", "The Ballad of the Lost News", which are included in the collection of poems under the significant title "Faces. Poems and ballads" (5). Such ballads and lyric-epic poems that meet all the canons of this genre, awaiting their explorer, are found in the works of Aydin Khodzhieva ("Ballad"), Khurshid Davron ("Ballad of the Traitor", "Ballad of the Blockade, Bread and Brothers", "The Legend of the Poet"), Shavkat Rahmon ("The Tales of Akyn Smet", "The village of Khorezm", "The Legend of the Sun and the Sun's Rays", "The Wanderer", "Unexpected Gifts"), Tursunbai Adashbayev ("The Ballad of Fate") and others.

During the period of Independence, along with such famous People's poets as Muhammad Yusuf, Sirojiddin Sayyid, Iqbol Mirzo, next to such famous poets as Tursun Ali, Bahrom Ruzimuhammad, Khalima Akhmedova, Aziz Said, Abdikayum Yuldoshev, Ahmad Khoja, names appeared: Safar Allayar, Usman Bek, Nemat Dushaev, Arif Tukhtash and others. They create ballads that reflect the general patterns of the development of the genre in Uzbek poetry in new socio-philosophical and cultural-historical conditions.

CONCLUSION

The scientific results of the study can be summarized as follows:

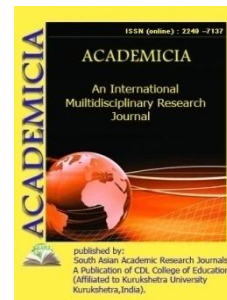
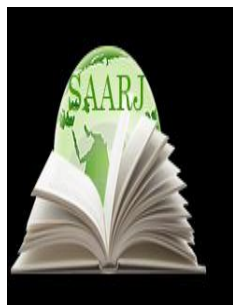
1. The problems of history and theoretical poetics of genres in modern Uzbek poetry, which is a topical problem of literary criticism, are a reflection of the renewal taking place in the artistic consciousness of the period.
2. The ballad genre, which is in constant development in modern Uzbek poetry, while preserving the classical traditional artistic-historical poetics, acquires a number of features. In particular, the emergence of forms of the genre of a new type is observed - from small, fragmentary ballads to large ballad cycles, poems consisting of several ballads and ballads with a very large volume of text, turning into megatext.
3. Writing ballads in the 90s, along with the famous ballad poets Usmon Azim, Azim Suyun, with recognized People's Poets Shavkat Rakhmon, Khurshid Davron, Khalima Khudoyberdiyeva, Muhammad Yusuf, Sirojiddin Sayyid, Iqbal Mirzo, famous poets Tursun

Ali, Baxrom Ruzimuhammad, Khalima Akhmedova, Aziz Said, the young ones who take part in the works of the Uzbek poet, Ahmad Khoja literature of this period.

4. In modern poetry, from the second half of the twentieth century to the present, there are enough facts to conclude that the priority for the Uzbek ballad is the striving for deep and in-depth illumination in the spiritual world of a person, and not just a simple expression of attitude to social life, which then a call, a political motto. This is evidenced by the renewal of the form of the genre in ballad in modern poetry, the creation of miniature patterns, the emergence of tendencies to express new, religious and spiritual content, as well as the desire to parody the genre. In our opinion, all this proves the interest of masters of words in the ballad and its sustainable evolutionary development, including Uzbek poetry.

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WHY “BAD JOURNALISM” FORMULA IS USED?

Halim Saidov*

*PhD, Associate Professor,
Department of theory and practice of International Journalism,
World Languages University, UZBEKISTAN

ABSTRACT

The article deals with the discussions about one of the problems of the global media, "bad journalism". Western experts cite an example of "bad journalism" by American media magnate William Randolph Hearst in journalism in 1898. This is an example of a British journalist, former editor of the London-based "Observer", taken from "Universal Journalist" by David Rendall for the journalists from Central Asia. The article includes a publication and the forces behind it, including February 17: "The enemy has a hand in destroying a war ship", February 18: "The whole country is in a military malaria," February 20: "Havana residents are insulting the memories of those who died in "Maine", February 23: "Maine's treacherous demolition", February 26: "The Journal urged its readers to write a letter to congressmen of their choice", March 22: "War is the only way out of crisis!", March 28: "War or shame?" April 1: "War!", April 6: "The war is not so long"; April 13: "Congress is about to announce war!". All of the above mentioned materials can prove the actions committed in order to attract the population to the war, to make the leaders of Spain worried about the case and to disturb the US military. For the formula of "bad journalism" by the author of the article, D. Rendall, he suggests to exemplify a one-on-one review of the events of May 13, 2005 in Andijan, Uzbekistan. First of all, the court found that foreign journalists had visited Andijan three days ago. Hearst also sent his reporter three days in advance. The BBC and other Western media were misinformed, and worst of all, other countries' media outlets blindly copied. It is the first of its consequences for the world community that false information is being spread as truth. The author compares the first news released to the "unexpected shock" in the American-Japanese conflict and its effectiveness. Even after the Uzbek authorities reported that the intruders had killed the border guards, soldiers and officers, and then raided the city with the help of international terrorists before taking over the Andijan region, it was not recognized as truth. Instead of correcting information, new charges

have been filed, such as those in the Hearst case. More than one hundred sailors died in the 1898 US shipwreck. Blood shed. The indictment: "The Spanish government did this." There was bloodshed in Andijan as well. The charge is the same – "The Uzbek government did this." The BBC did not say, "It would not have happened if there had not been an international terrorist attack". The author simply answers the question of "why?" by saying that their purpose was different.

KEYWORDS: *Advanced Journalism, Bad Journalism, News, Democratic Society, Objectivity, Accurate Journalism, Fake News, Print Media, Journalism Problems, Effectiveness.*

INTRODUCTION

Scientists studying the problems of world journalism began to call its peculiarities in different terms. For example, "progressive journalism", "effective journalism", and "good journalism", "bad journalism" ... In this article we want to reflect on the last of the above categories of journalism. Why the government of a democratic society has to do a lot of work to spread the true, objective information.

Main part

Western scholars (researchers) in journalistic science consider the example of "bad journalism" as a self-serving, intentional, malicious, nourishing enmity and hatred movement carried out by the American media magnate William Randolph Hearst. His summary of David Randall's words is as follows:

"However, nothing characterizes the attitude of Hearst, like many other owners, towards journalism better than a few telegrams of 1898. Hearst, for personal political reasons and for the sake of increasing circulation, was interested in the war between Spain and America over Cuba. His main newspaper, The New York Journal, published false, cheers-patriotic articles with flashy headlines: "Prisoners were fed by sharks," "The War with Spain for the Killed Americans," and "The Greatest Insult to the United States for All their history" (about a letter from the Spanish ambassador criticizing the President). At the direction of Hearst, his subordinates went into all seriousness to find evidence of the "cruelty" of the Spaniards. Those who are more honest did not find anything (and this had a bad effect on their career), others gave vent to imagination. Among these latter was a certain artist named Frederick Remington. Finding that everything was calm, and that there was no smell of bloodshed, he telegraphed to Hearst:

"Everything is quiet. Nothing terrible happens. There will be no war. I would like to return."

Hearst sent an answer:

"Please stay. Provide illustrations. I will provide the war."

As far as one newspaper can organize a war, it is understood how much Hearst will keep his word. A few weeks later, the American battleship "Maine" exploded on the coasts of Havana and this explosion claimed 260 lives. And Hearst began to publish leading articles that this is a diversion of the Spaniards. While two large groups revealed the true causes of the explosion, the Hearst newspaper, without showing any evidence, continued to blame the Spaniards. These articles, calling people to war, are still cited as visual aids covering the truth. Pay attention to the

preparation date and headings of the articles related to the Maine incident published in the Journal:

“February 17: “Destruction of a warship is the work of the enemy”. Under the heading – a drawing that took seven columns – the image of the ship and mines under its bottom, connected by wires to a Spanish fortress on the shore – pure fiction.

February 18: "The whole country is trembling in war fever." This headline appeared on the day when the Spanish and Cuban authorities held a state funeral for the victims of the explosion, transferring the cemetery to eternal possession of the United States. About this "Journal", whose circulation for the first time exceeded a million, not a word was said.

February 20: “The population of Havana offends the memory of victims from the Maine. The Journal devoted an average of eight and a half pages a day to all this misinformation.

February 23: "The treacherous destruction of "Maine". A new lie about the death of the ship, and in addition - the rules of the card game "War with Spain" for four players.

February 26: Journal encourages readers to write to congressmen with letters requiring war. And this despite the President’s statement that Maine was damaged due to an accidental explosion of gunpowder cellars on board. (An official investigation never revealed the true cause of the explosion.)

Over the next few weeks, Hearst concentrated all efforts on whipping up war fever and publishing materials about the harassment of Cubans by the Spanish authorities. Finding these materials or simply inflating them was not difficult. But the Journal added lies about Maine. On March 11, the newspaper said: "The investigation found that the Maine were blown up by representatives of the Spanish authorities." This untruth served Hearst as a fuel for the release of additional circulations and large headlines.

March 22: “War is the only way out of the crisis!”

March 28: “War or dishonor?” The next day, the Journal spoke about creating a regiment of American sports champions and sending him to Cuba to defeat the Spaniards.

April 1: “War!” Nothing of the kind.

April 6th: “War is just around the corner!” Journalist reporters scoured across the country in search of the families of the victims on Maine, typing out their appeals for revenge. On such issues of the newspaper now usually flaunted the image of the American flag.

April 13th: "Congress is about to declare war!"

The final decision of Congress on April 25 was probably a terrible disappointment for Hearst (“I will ensure the war”). However, he did not calm down¹.

This quote is taken from the book “Universal Journalist”, published for “Central Asian Journalists,” English journalist David Randall, former deputy editor-in-chief of the London newspaper “Observer”.

Naturally, the aforementioned tricks of Hearst (note: 1898), his activities in the book (textbook) are criticized as “bad journalism”. This event called many people to war, confused their

imagination, stole the peace of Spanish government leaders, in a word, not to count the harm of false information.

Now, in order, compare the formula of “bad journalism” proposed by D. Randall with the Andijan events of May 13, 2005 in Uzbekistan.

First of all, as revealed in the trial of the participants in the event, foreign journalists arrived in Andijan in three days. Convicts confirmed that foreign media representatives participated in these events.

The author of this article with his friends, journalists from Uzbekistan, when the event occurred, or rather, on May 14 was in Shanghai (China). We don't know Chinese. In this regard, the Shanghai Daily newspaper, published in Shanghai, was found at the airport. There was an article about the events in Uzbekistan. But in the newspaper they saw only the article “Up to 50 Uzbek dead”² (“50 Uzbeks died”) of the Associated Press news agency (USA). In it, the observer used a new term – “Muslim Entrepreneurs.” And yet, we, experts from Central Asia, knew that this term did not appear from nowhere. But, what's others' view? In the evening, in a Beijing hotel, while watching BBC television news, the term was again used. Most interestingly, other mass media channels of other states began to repeat the information.

At such a moment, you clearly understand how important the disseminated first information is (if it is prestigious television, radio channels, news agencies).

In US-Japanese events, the “unexpected blow” and its effect were tested during the war. As a result of such attacks, many people died on the unexpected side, and the second side, naturally, achieved goals. Films have even been made about this.

And the information blow gave the same result. First of all, among the world public, the false information was spread as if it were true.

A day later, based on a statement by the head of Uzbekistan, a correspondent for Xinhua News Agency (China) distributed completely different information³. But, “BBC” instead of apologizing to the audience, each time relied on the opinions of some “international observers”, “non-governmental organizations”, continuing their “politics”.

Many observers said that the reason for this was that Uzbekistan disseminated its own information late. But it took time to analyze events, identify true information...

As it became known, these innocuous “Muslim entrepreneurs”, before seizing the khoimiyat (municipal office) of Andijan region, with the assistance of international terrorists, won a militarized checkpoint, killing soldiers and officers of the military unit, took possession of their weapons.

RESULTS AND DISCUSSIONS

This was not recognized even when the media in Uzbekistan disseminated truthful information. That is, instead of correcting the information that “the weapon was actually captured, an attack was committed”, like Hearst's tricks, new charges began to be brought. As you read above, after a while more than a hundred sailors died as a result of the explosion of a US-owned ship. Bloodshed committed. The charge is “the work of the Spanish government.” And in Andijan, bloodshed was committed. The charge is similar – “it was committed by government forces.”

The formula is the same. If you noticed, the BBC did not confirm that the bloodshed was committed as a result of a terrorist attack; on the contrary, it indicted the government forces. It did not convey that "if it had not been for the raid by international terrorists, this event would not have happened." The question "why" can be answered, "their goal" was different.

In order to say so, there is every reason. First, how can you understand the fact that after not accepting the BBC information, British Foreign Secretary Jack Straw, for some reason meeting with US officials, demanded pressure on the Uzbek government? Why is the English minister not interested in eliminating the bloody war in the African continent interested in Uzbekistan? In fact, does the competence of the Minister of Foreign Affairs include confirmation of the information of the so-called radio channel? Perhaps, the Foreign Minister was angry because the color revolution did not happen in Uzbekistan? And in the fulfillment of the color revolution, their interest is clear.

We will not list these interests one by one, but turn to the article "Anglis va Turkiston"⁴ written in 1918 by one of the great and ambitious Jadids of Turkestan

Abdurauf Fitrat, who lived and worked at the beginning of the last century. Consonance with Fitrat's thoughts can be traced in the article of another advocate of enlightenment Said Ahrori, "The Last Hope of the British,"⁵ written at that time.

Footnote: "No country's diplomats could "play" successful roles and "melt" the coolness of British politicians ... With the help of the power of their money, they are trying to "enter" the territory of Turkestan with the "feet" of Afghanistan and Bukhara. And we can say that they began to advance. In the last days, the five English ambassadors arrived in Bukhara, at the direction of the emir; they were not welcomed by the courtier, which has sufficient evidence of our claim. If necessary, frankly, they are not ambassadors, but "merchants of conscience". Turkestan may not be accessible to the British, but they wisely send their "germs", who skillfully bribe several ignorant "ignoramus" who sell their conscience and honor...

The British, for the sake of their political interests, deceiving Afghanistan and Bukhara, want to sacrifice us as well. Their dirty tricks had an impact and exacerbated the already precarious situation of Turkestan, so it is likely to remain "under the hooves"...

Each of us, after all this, having met the one who promoted the British, without avoiding him, let them remind him of the troubles that he has done to the Muslims to this day ...

In the future, now anticipating such actions by the British, we know that this is our national task – the defense of the Fatherland. Therefore, we publicly invite the whole people of Turkestan to "open their eyes" to this. For, you always need to remember that such a lack of intelligence can cause the destruction of the homeland".

As you can see, the actions and intentions of British Foreign Secretary Jack Straw have a historical foundation. If you say, do not panic like the BBC, at least give the following thought of the former leader of this state, Winston Churchill: "England has neither friend nor enemy. The country has only interests! "

CONCLUSION

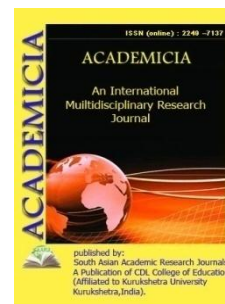
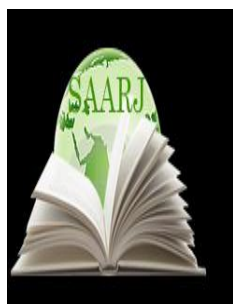
The events in Andijan and the information raids around them prompt several conclusions.

First of all, there really are different threats to the independence of Uzbekistan. We must explain to the population the need to protect, protect it, explain where and how threats can arise, the essence of organized informational lies or different interpretations that arise during periods of geopolitical games, false discoveries, linking them with news that appears during such events. For example, why the criminals who organized the Andijan events that participated in them, turned into artificial defectors in violation of international standards, were transported from Kyrgyzstan to Romania. Five months later, the existence of secret prisons of the Central Undressing Administration of the United States became clear⁶. Why then did the US Secretary of State, Condoleezza Rice visit Romania?⁷

The above gives conclusions that, firstly, it is necessary to carry out a number of works and, if possible, to quickly (first) disseminate information. It is very important to respond promptly, promptly, if necessary in foreign languages, to information invasions.

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TRUTH, GOOD AND BEAUTY EXPRESSED BY THE HEROES OF THE NOVELS (IN THE EXAMPLE OF “ARROWSMITH” BY S.LEWIS AND “THE THREE ROOTS” BY P.KODIROV)

Aziza Komilovna Akhmedova*

*Uzbekistan State World Languages University,
Tashkent, UZBEKISTAN
Email id: aziza.ahmed@inbox.ru

ABSTRACT

The article is dedicated to the typological-comparative analyses of the twentieth century of American and Uzbek realistic novels —“Arrowsmith” and “Three roots”. Comparative literature is specialized in identifying common and unique features of national literatures. There are some similarities in the artistic creation of the novelists like Sinclair Lewis and Pirimkul Kodirov. Lewis was the first American writer who got the Nobel prize for literature. As for P. Kodirov, he made an immense contribution in the development of Uzbek prose. The article analyses and explains the common and diverse features of the two novels. Both writers depict their ideals about a contemporary intellectual man and the ethical worldview of men in science. The conflict between a man and society is given through the fate and the outlook of the characters. Despite the social differences, S. Lewis and P. Kodirov apply similar techniques to put moral qualities against various social ailments. The artistic concept and the art of character creation show common features in the authors’ prose.

KEYWORDS: Truth, Beauty, Good, Artistic Concept, Conflict, Character, Protagonist, Ideal Hero, Typological Similarity.

INTRODUCTION

In his novel *Arrowsmith* (1925), the writer Sinclair Lewis embodies his ideals about a faithful scientist, a truly intelligent person. The protagonist of the novel, Martin Arrowsmith, is a bacteriologist, and the events of the work artistically reflect the young scientist's hard work on the way to maturity, his bitter professional experience. The novel was written in a realistic method and for the first time in American literature described the world of science, the spiritual

world of scientists, the relationship between students and professors on a large scale. It is well known that at the beginning of the last century, medicine, like all fields in American society, was rapidly commercialized. The bourgeois ideology was penetrating into the most valuable asset of mankind— medicine. The dominance of materialistic values in this sphere can lead to unprecedented social tragedies. Seriously aware of this fact, the novelist expresses his idealistic views on dedicated medical workers, scientists, through the protagonists of the work. Gotlieb, Sandelius, Martin Arrowsmith embody the author's ideals about the truth, good and beauty.

In the novel *The Three Roots* (1958), in the image of Mahkam, Akbarov, Toshev and Karamatov, Pirmkul Kodirov embodies his ideas about a courageous historian. In particular, the image of historians Toshev and Akbarov carry the author's views on objective and realistic evaluation of the history. In the portrait of Toshev P. Kodirov emphasizes clarity of observation and the ability to think globally. In Akbarov's character displays the respect for the national history, his poetic eloquence, and his passion for educating the younger generation are stressed.

MATERIALS AND METHODS

The main message of the article is that the heroes of the novels are described as an image that vividly reflects the creative aesthetic views of the author. The idea put forward in the study is that the image of the ideal hero reflects the author's views on truth, goodness and beauty. The purpose of the research is to identify the techniques and the ways of transmitting aesthetic ideals into an artistic image. Comparative-historical, comparative-typological methods were used in the study. It also provides some analytical information on the biographies of the authors.

The characteristic feature in the realism of both writers, which is most evident in the novels "Arrowsmith" and "The Three Roots" is seen in the synthesis of realistic and romantic styles in depiction of the protagonists. While the two novels meet all the requirements of the creative method of realism, there are characteristic features of the romantic direction.

The reasons for this synthesis are the following: the influence of predecessors (G. Toro for S. Lewis; A. Kadiriy for P. Kodirov); an inclination for poetry; the artistic concept of novels (both novels glorify humanistic values, altruism, idealism); the historical period (the 1950s, P. Kodirov).

In the works, the plot events move forward through the similar motif; the actions of the protagonists are closely connected with the motif of the quest of the truth. The motive of searching for the truth has a certain function as a motif-action (Putilov) in the plot construction of the two novels. As the analysis of this motif required a consistent observation of the plot of the work, more emphasis was placed on the description of events in this chapter.

It has been acknowledged by many researchers that one of the central ideas in Sinclair Lewis's novel *Arrowsmith* is the young scientist's struggle to find his own truth. T. K. Whipple states that *Arrowsmith* is "the story of any scientist, or any seeker for the truth— chemist, economist, historian, philosopher, theologian". [1.] Mark Schorer who wrote a more complete bibliography of the author states that "Not only was Arrowsmith based on a "spiritual idea"—selfless dedication to truth-seeking— it also permitted its chief character to realize his "spiritual" ambitions, to transcend the strain and sordid struggle that, in *Main Street* and *Babbitt*, had defeated the chief characters. [2.] In the analysis of the works, attention was paid to the fact that the motif of the quest of the truth moved the plot as a semantic-functional repetition. The protagonists of the two

novels appear in the image of an enlightened seeker of the truth. The motif of searching for the truth, as the driving force of the plot of the works, is repeated in different layers of events, as if arranging them in a literary unity. It is also through this motif that the psychological dynamics of the protagonist are revealed. The conflicts that drive the novel's plot also stem primarily from the conflict between the truth of Martin Arrowsmith and the truth of other characters such as Gotlieb, Pickerbough, Angus Duer.

The confrontation of the poles is also intense in the novel *The Three Roots*. Later, the protagonist's attitude becomes more mature toward his surrounding. As a result of a fierce internal struggle at the Faculty of History, serious qualitative changes appear in the character of Mahkam and his comrade Ochil. They have become broad-minded individuals who look at the life more deeply, who can mobilize all their strength for the benefit of society. The fates of such scholars as Akbarov and Toshev confirm that no matter how many obstacles goodness and justice face, the victory will always prevail.

Thus, the commonalities in the characters of the novels are that the protagonists Martin Arrowsmith and Mahkam are caught between two paths, they commit a fierce struggle to find out the truth, and that they find their way in the process of the plot events. In the works, the vivid reflection of the struggle between the two poles - good and evil - is similar to the clash of romantic novels.

In the analyzed works, the ideal heroes serve as a means of glorifying a high spirituality, humanistic ideals. Sinclair Lewis and Pirmkul Kadirov mobilize heroes who fight for the promotion of good ideas. Their protagonists rise above the worries of daily routine. In S. Lewis's and P. Kodirov's works, the glorification of civic duty and a sense of social involvement can be found in several novels. In particular, the novels *Arrowsmith* and *The Three Roots* are dominated by these ideas. In the novels *Arrowsmith* and *The Three Roots*, professional ethics is also glorified as a high moral value. In the article "The Professional Ethics of Individualism and Tragedy in Martin Arrowsmith's Expedition to St Hubert" by American researcher Thomas Shaffer [3] the novel *Arrowsmith* is interpreted by the point of view of professional ethics. In Shaffer's view, S. Lewis artistically portrayed individualism as a high virtue in his work. S. Lewis's protagonist appears a lonely hero in a series of events. Shaffer concludes that the writer advocates the advantages of individualism. In our view, by saying individualism Shaffer stresses individual freedom. According to S. Lewis, social relationships, even family relationships, should not chain the creator. At the end of the discussion with his wife, Martin says:

The answer is that very few ever do, under any condition, willingly leave a soft bed for a shanty bunk in order to be pure, as you very properly call it, and those of us that are pioneers — Oh, this debate could go on forever! We could prove that I'm a hero or a fool or a deserter or anything you like, but the fact is I've suddenly seen I must go! I want my freedom to work, and I herewith quit whining about it and grab it. (p.462).

One of the central themes of the novel *The Three Roots* is a literary objection to the biased interpretation of the history. The biggest question of the work is who can perform such an honorable task and in what way? The message that the author wants to convey to the reader is that such a task can and should be performed by dedicated specialists, dedicated citizens. Such people have courage to resist any pressure in order to keep historical truth intact.

The protagonists of both novels appear to the writers as beautiful individuals. We know that beauty is an aesthetic whole phenomenon, the composition of which consists of various elements such as harmony, charm, elegance. The main means of perceiving these elements of beauty is to look at the object with the eye of love. That is, beauty is manifested through love. The beauty of the characters of the two novels is realized through love: in the novel *Arrowsmith* the images of Martin and Gottlieb are reflected in scientific research, in the novel *The Three Roots* Mahkam, Akbarov, Toshev's passion for history is reflected as a strong belief. The heroes of *Arrowsmith*

"sink blissfully into the laboratory" (p270), for them the laboratory stands for "perfect world"(p.295). In *Arrowsmith* the ethos of science is described as a divine madness,..., as Plato phrased it(Phaedrus,244-256).[4].According to the scientist, the mental image of Martin, who was exposed to a "principle X" that destroys living bacteria, is a clear example of this. In fact, the discovery completely changes Martin's lifestyle:

He was completely fagged; he was, like a surgeon after a battle, like a reporter during an earthquake, perhaps a little insane; but sleepy he was not.(chapt 28); He made a checking list of the favorite neurasthenic fears: agoraphobia, claustrophobia, pyrophobia, anthropophobia, and the rest, ending with what he asserted to be "the most fool, pretentious, witch-doctor term of the whole bloomin' lot," namely, siderodromophobia, the fear of a railway journey.

From the passage above, it is clear that Martin broke away from a healthy lifestyle after the discovery and plunged into the world of ideas. S. Lewis skillfully reveals hero's mental dynamics surrounding the discovery of the bacteriophage. Martin, who is awake at night in the laboratory before the discovery, loses his mental balance when a bacteriophage is found. As Martin examines himself, he remembers an incident that corresponds to each type of fear listed. In our view, this episode served to show the boundaries of Martin's passion in the novel. In the line of Gottlieb, too, the writer presents his involvement in the world of ideas as beauty. In fact, Martin equates Gottlieb's work in the lab at night with a prayer.

P.Kodirov in the images of Mahkam, Akbarov and Toshev, embodied the devotion to the science of history, the superiority of devotion to this science over personal interests, and these ideas are woven in the artistic layers of the work. In the personification of these heroes, P. Kodirov portrayed a selfless man who considered his actions to be of the highest value. In the image of Toshev, the love of history resembles the passion of S. Lewis's characters.

When Toshev taught history, he searched through his archives and searched for something, but he could not be called to lunch or on the phone. To Gavhar's questions "Would you answer yourself", "Will you have dinner?"," Won't you?" He said "Yes" and didn't move. Then Gavhar's mother would come and threaten to take the ladder away.(110).

The charm of the protagonists of the two writers is manifested in their immense passion for a particular interest, and, if possible, in their insane pursuit of that passion. The insane passion (divine madness) for his work in the images of scientists reflected in order to show a high level of love. This approach has provided a great charm to the protagonists of both novels. However, in the novel *The Three Roots* such passion is manifested only in the image of Toshev, while in *Arrowsmith* Martin, Gottlieb, Sandelius reflect this feature vividly. It is also significant that in the novel "Three Roots" the characters of Mahkam and Ochil were purified under the influence of love and grew up as a beautiful person in the eyes of the reader. The novel reflects an artistic expression of the power of love, which traditionally elevates and humanizes the person.P.

Kodirov expressed the love between a young man and a girl with delicate emotional details as an integral part of a person's self-awareness. We know that ideas about a noble, spiritually mature man ("komil inson" in uzbek language) in Eastern literature has long been understood in close connection with love and is reflected in uzbek national-literary traditions. The novel *The Three Roots* depicts different aspects of love in the line of images of Mahkam and Gavhar, Ochil and Zamira, Zokir and Farida. The beauty in Ochil's character is vividly revealed through the sufferings of love. His "I", who grew up to be very emotional, does not want to be a slave to anything, even to the feeling of love. While he loves Zamira, he ignores the girl's presence. He quarrels with her and writes poems in grief. P. Kodirov uses the theme of "a love triangle" to reveal the character of this hero. If we follow the course of events in the work, we can see that Ochil turned from a sentimental teenager into a pure-loving, strong-willed young man.

Hence, the ideal hero expresses the author's aesthetic views. In particular, the commonalities of the ideal heroes in the novels under analysis are in the reflection of the creators' ideas of truth, goodness, and beauty by means of characters.

CONCLUSION

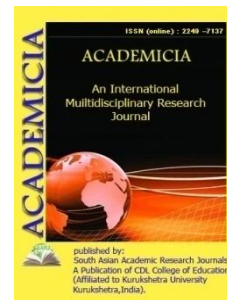
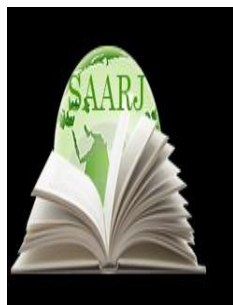
In the image of the ideal hero, the author's aesthetic views on truth, goodness and beauty are embodied. The honest nature of the character arose through the motif of seeking truth, which is repeated in the text of both novels. This motif served as the driving force behind the plot events in the play. It is also through this motif that the mental dynamics of the protagonist are revealed.

In the protagonists of the analyzed works, beauty is reflected through the theme of love. In both works, the attitude to his work in the images of the scientist is reflected as a strong passion, and the same passion is beautiful in the eyes of the author. Unlike Arrowsmith, *The Three Roots* explores the beauty of the protagonists through the theme of interpersonal love. P. Kodirov's innovation is that he puts a social meaning on such a noble feeling as love. The writer's view is that through love, qualities such as social responsibility, duty, and involvement are formed in the individual. The novel emphasizes the theme of love as means by which the protagonists become mature.

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FACTORS OF FORMATION OF PHRASEOLOGICAL UNITS

Anora Jabbarova*

*Jizzakh State Pedagogical Institute,
UZBEKISTAN

ABSTRACT

This article discusses the relationship between language and culture, the understanding of national mentality, and the need for an in-depth and scientific study of the nature of language, its communicative function. Both are characterized by active application in speech. The variant phrases in our language that do not fit into the skin and do not fit into the body also express the emotional-expressive state of a person.

KEYWORDS: *Cognitive Linguistics, Pragmatic Linguistics, Psycholinguistics, Linguoculturology, Ethnolinguistics, Language Corpus, Semantic-Thematic Group.*

INTRODUCTION

In world linguistics, national languages are studied in terms of cognitive linguistics, pragmatic linguistics, psycholinguistics, linguoculturalism, ethnolinguistics, the creation of the language corpus, the linguistic landscape of the world. The field of linguoculturology is rapidly developing in world linguistics. In the process and as a result of the linguoculturological study of language units, their essence is fully revealed, their practical significance increases.

For phraseological units related to a person, the personality sign becomes an integral sign, and modeling them can be the basis for dividing them into semantic-thematic groups.

Categorical meaning occupies the highest stage in the semantic hierarchical structure of phraseologies. The categorical meaning of phraseologies has a high degree of abstraction, which includes the sign of belonging to which grammatical category of phraseologies. Phraseologisms with the same categorical meaning are grouped under a larger paradigm, indicating that the phraseologies belong to certain word families.

The Main Part

Phraseologisms have their own synonymous series and variants. The peculiarity of phraseological synonyms is that they play an important role in distinguishing the emotional-

expressive possibilities of this or that phraseology. The reason is that synonymous phraseologies differ from each other by semantic edges or by stylistic coloring. For example, in the Uzbek language, the phraseology of uplifting and uplifting differs from the first in its emotional and figurative expression of meaning. It is well known that the phenomenon of synonymy is peculiar to phraseologies. In order for two phraseologies to be synonymous, they must have the same meaning, without which it is difficult to speak of the phenomenon of synonymy. By phraseological semantics we mean the expression of the same meaning and close meaning. Each semantic phraseology has its own set of semantic edges from the meaning of these synonymous lines.

Verb phraseology is used in the sense of joy, gladness that escaped the whims of the mouth. At the same time, the phraseology of our language "the strings of the lips have escaped" also expresses the state of joy and happiness of people. This phraseology is considered a lexical variant of the phraseology of the word tanobi escaped. Under the condition of a multivariate expression, a variant is a base variant, and the variant variant can be used in the same way as the base variant is used in the language. So they are also a linguistic phenomenon. According to Sh. Rakhmatullaev, variants are divided into two main groups: a) lexical variants; b) grammatical variants. It is self-evident that lexical variants occur on the basis of the mixing of word components in a phraseology into another word, the addition of a word, or the omission of a word. Grammatical variants, on the other hand, arise due to grammatical changes in the structure of fraeologism. It is also possible to have both lexical and grammatical changes within a phraseology at the same time, which is called a lexical-grammatical variant in linguistics. Most of the phraseological structure of the modern Uzbek literary language are lexical variants. We have seen that both phraseologies, which are considered lexical variants, are used almost identically in speech.

The phrases in our language, head to toe and head to toe, are synonymous and express the emotional state of people's joy. Both are characterized by active application in speech. The variant phrases in our language that do not fit into the skin and do not fit into the body also express the emotional-expressive state of a person. In this case, the lexical variant of the phraseology is formed on the basis of the use of the word component exchange of the basic phraseology. Although these phraseologies are used in the same way in speech, they differ from each other in terms of semantic aspects, emotional and figurative level: the chest rises like a mountain - the heart rises like a mountain.

The meanings of a number of synonymous phraseologies are realized in the spoken text. For example, such phrases as heartbreak, heartbreak, heartbreak can express in the text a sign of joy, happiness, as well as a sign of fear.

Phraseologisms in our language that do not fit into joy and do not fit into joy also express meanings such as joy, pleasure in people. These phraseologies are considered lexical similarities to each other.

The phraseologisms of throwing the doppi into the sky, throwing the doppi into the sky, and throwing the doppi into the sky are also synonymous, and in speech they express the emotional states of people, such as joy and happiness.

Or the phraseologisms of open-hearted, open-hearted are also used a lot in our language to express the emotional state of people enjoying, rejoicing. As we have seen, semantic phraseologies differ from each other in their stylistic coloring.

The authors express their inner experiences through figurative phraseology, not in simple words, through phraseological compounds that express the emotional states of the person. This increases the artistic value of the text as a whole, of the event being described.

The structure, grammatical characteristics of the mentioned phraseologies show that they are considered verb phraseologies according to their structure. The main feature of verb hypotheses is their participation as a basic component of the verb. The basic component represents the way in which the action is performed on the whole phraseology. This type of phraseology therefore represents situations related to the behavior of people.

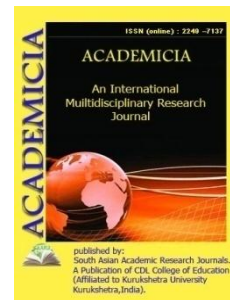
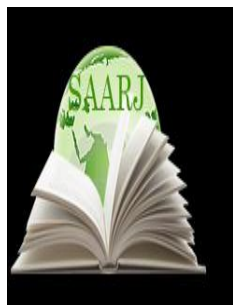
The phenomenon of gradation, which is present in phraseology, reinforces the meaning. For example: to be amazed-to be amazed-to be stunned.

CONCLUSION

In conclusion, it should be noted that the study of human activity and the emotional-expressive state of his qualities in the form of an anthropocentric paradigm is gaining popularity. The manifestation of the spiritual values, national way of thinking and customs of each nation, first of all, in the language of this people requires the enrichment and expansion of the scope of traditional linguistics in new directions.

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ARTISTIC MASTERY OF ALI SAFI KASHIFI HIRAWI (ON THE EXAMPLE OF “RASHAKHOT”)

Bahriddin Umurzoqov*

*Senior Lecturer,

Doctor of Philosophy in Philological Sciences (PhD),
Department of Source Studies and Sufi Hermeneutics,
Tashkent State University of Oriental Studies,
UZBEKISATN

Email id: bahrurmr_nur@mail.ru

ABSTRACT

This article is about the scientific and literary heritage of Fakhruddin Ali Safi ibn Husayn Waz Kashifi Hirawi (1463–1533), a mature manaqibnavis and tazkiranavis scholar who lived in the 16th century and left a rich scientific legacy, in particular, on the example of his work “Rashakhhot aynu-l-hayat” (Drops of the spring of life) dedicated to Hoja Ubaydullah Ahror, which is devoted to the study of the author’s mastery of the application of literary sciences in the example of the work.

KEYWORDS: “Rashakhhot Aynu-L-Hayot”, *Manoqib, Poetic Genres, Poetic And Artistic Arts, Husn-I Talil, Literary Sciences, Narrative Science, Tashbih, Satirical Tashbih, Muharaza Science.*

INTRODUCTION

Classical literature of the East is an elegant literature with its own art, deep meaning, great enlightenment, strong influence. Almost all the masterpieces of this literature, first of all, healthy faith, chastity, good manners, as a high result of high human qualities, the great talents compete with each other in a non-discriminatory, positive way and resulting from the effects. For this reason, the interest in our classical literature and its priceless works has been growing in the last century, and they are being studied. One of our ancestors who made a great contribution to the development of world culture and science with his creativity was Fakhruddin Ali Safi bin Husayn Waz Kashifi (d. 939/1533). His work is notable for its coverage of various fields of secular and religious sciences. Fakhruddin Ali Safi's works, in particular, in his work “Rashakhhot

aynu-l-hayot” (“Drops of the spring of life” It is then given in the form of Rashakhot) through which the ideas of broad thought and reasoning, the promotion of pure morality, have found expression. From this point of view, it is important to reveal how the poet and scientist covered the mystical subject, on what sources, on the basis of his artistic and religious works, what formed the basis of his faith, his inner world. Mature *manoqibnavis*, “Khojagon tariqati naqbandiyya-ahroriyya suluki tazkirachisi” [1. 353], described as Mawlana Fakhruddin Ali Safi, is, in fact, one of the most mature scholars of his time, one of the representatives of classical literature. Fakhruddin Ali Safi Hiravi’s world-famous work is his work “Rashakhot”.

Artistic Expression and Interpretation in “Rashakhot”

“Rashakhot” was written in the genre of *manaqib* (Arabic - منافب) and was written in 909 AH (1503-1504 AD). Although the work is dedicated to Hoja Ubaydullah AhrorWali (1404-1490), we see in it the life, activities and words of more than three hundred Mashayiks belonging to the Khojagon sect. “Rashakhot” is a truly unique and unique work, despite the fact that the rules and regulations of the Khojagon sect are perfectly described. For centuries, this work has served as a guide for those who set themselves the goal of learning the basics of the Khojagon sect. According to the preface of the work, Ali Safi called his work “Rashakhoti aynu-l-hayat” (“Rashakhoti aynu-hayat”) in order to awaken the *qasawat-i qalb* (those who have a hardened heart, those who are stubborn) from the sleep of ignorance or to revive the souls of the dead who are deprived of high human qualities. arabic (رشحات - called “drops of the spring of life.” At the end of the work the rubai, which begins with “*Omad “Rashakhot”i mo kasiyru-l-barakot, Chun ob-i Xizr munfajir az ob-i hayot...*”(Our work “Rashakhot”, which is full of blessings, was the water of Hizr flowing from the spring of life....) is a clear indication of this.

For this purpose, Ali Safi collected important information about the supreme sect, that is, the path of Khojagon, and managed to write an independent, holistic, unique encyclopedic work about the Khojagon dynasty.

Prior to Rashakhot, Mawlana Abdurahman Jami (d. 898/1492), a contemporary and compatriot of Ali Safi, wrote a book on the life and work of the sheikhs of the sect in Persian, *Nafohatu-l-uns min hadaroti-l-quds*, Alisher Navoi (d. 907/1501) wrote “*Nasoyimu-l-mahabba min shamoiiyi-l-futuvva*”(Breezes of love that radiate the fragrances of greatness) in the Turkish language. “*Nafohatu-l-uns*” is an Arabic and Ajam mashayikh tazkira, and “*Nasoyimu-l-mahabba*” is mainly a Turkish tazkirah. “Rashakhot” is the only work that fills the gap of Khojagon mashayik *manoqibi*. It is true that many works were written in the genre of *manaqib* before “Rashakhot”, such as “*Manoqib-i Hoja Yusuf Hamadoni*”, “*Manoqib-i Hoja Abdulkhalik*”, “*Manoqib-i Hoja Bahauddin*”, but they are all characterized by the fact that they are devoted to the life and work of one person, that is, one sheikh.

It is known that the work “Rashakhot” - although the author says that the work consists of *fehrest* (content) part “*Introduction*” (preface, introduction), “*Article*” part and “*Three Goals*” (three major chapters) and “*conclusion*” in, but the work actually consists of six parts.

The first part consisted of “*Introduction*”. In it, the author first introduces himself after the traditional expressions of praise (praise be to Allaah) and *salaat-u-salam* (peace and blessings of Allaah be upon him), then explains why and for how long he wrote Rashakhot, and finally the contents of the work. He finished the preface of “Rashakhot” with a statement.

The second part is called “Article”. This section contains important information about the dhikr of the ancestors of Hoja Ubaydullah Ahror. This section also contains valuable information about the life and activities of the sheikhs who spread in Khorasan, Transoxiana and Turkestan.

The third part is called “*Maqsad-i Awwal*” (The First Purpose, ie the First Chapter), the fourth part is called “*Maqsad-i Duvvum*” (The Second Purpose, ie the Second Chapter), and the fifth part is called “*Maqsad-i Sevvum*” (The Third Purpose, ie the Third). chapter). These three sections mainly deal with important information about the life, activities, prophecies, and praiseworthy morals of Hoja Ubaydullah Ahror.

The sixth part is called “conclusion” and this part is about the death of Hoja Ubaydullah Ahror.

Through the preface to Ali Safi’s work and the three major chapters in it, he described in great detail the invaluable information about more than three hundred historical figures - the righteous. In this regard, the work “Rashakhot” is an encyclopedic scientific and literary source, a prose work with a unique use of poetic genres, one of the mature examples of the genre of *manoqib*.

Poetic Genres in “Rashakhot”

The work “Rashakhot” deserves recognition as a mature example of the prose of our classical literature. However, the poetic genres and arts in it have not been studied as a separate research topic. As a talented poet, Ali Safi effectively used poetic genres and arts to enrich the form and content of his work.

The “Introduction” section contains a 6-byte poem of the Masnavi genre. The “Article” section consists of 106 poems of various genres, totaling 212 bytes.

The “Introduction” contains 3 bytes (6 lines) written by the author, which is written in the genre of masnavi. The “Article” section contains a total of 107 poems, of which 4 are ghazals, 3 are poems, and the rest are poems written in continental and rubai genres. The number of poems in the first chapter (i.e., the first chapter), entitled “*Maqsad-i avval*”, was 7, and the number of bytes was 13, for a total of 26 verses. In this section we see rubai-poems dedicated to the death of more than a dozen people. They are called “history”. If the last sentence or phrase of the last verse of these “history” poems, or the last word, is converted to abjad (that is, if the Arabic letter is converted to a specific number that represents it), the resulting number represents the date of that person’s death.

The “histories” quoted by Ali Safi in “Rashakhot” are wonderful examples of the history of this genre. For example, we see that the date of Abdurahman Jami’s death was “History” with a verse from the Qur’an: “...*Va man daxalahu kona ominan!*” (The meaning of the verse: Whoever enters it, that is, the Ka’bah, the Masjid al-Haram, then he is safe from any danger). If this Arabic expression is calculated in alphabetical order, it will be 1492. This is the date of death of Abdurahman Jami.

The second chapter, entitled “*Maqsad-i duvvum*”, contains a total of 47 poems, consisting of 94 bytes. 6 of these poems belong to the genre of fard (one-line poem), the rest are poems written in continental and rubai genres. One verse can express the meaning of a great poem. We see that Hoja Ubaydullah Ahror often expresses his views and opinions about a person by saying fard, and by expressing his views and opinions on this or that event in fard. The purpose of this is to

express his personal attitude and opinions to the people around him in one word. For example, “Na’ra kamtar zan, ki nazdik ast Yor” (Meaning: Cry less, for Allah is near, that is, Allah is not far from you. He is very close to you spiritually. He is even closer to you than your jugular vein - your jugular vein!).

Finally, in the “Conclusion” section of “Rashakhot” there were 2 poems in total. The first of them is a large poem dedicated to the death of Mawlana Abdurahman Jami on the death of Hoja Ubaydullah Ahror Wali. The second poem is “history” (rubai) by Ali Safi, in which the completion of “Rashakhot” is expressed in alphabetical order.

As a *manoqibnavis* and poet, Ali Safi in the text of “Rashakhot” paid special attention not only to the content, but also to art, especially poetic perfection. It is not surprising that the fact that the work was written in a long period of time, that is, completed in a period of seventeen years, also served to ensure such success. In prose, he was able to use the methods of maturity and eloquence in their place and moderation, and in poetry, he skillfully used the elements of weight, rhyme, *radif*, as well as beautiful artistic forms and arts:

*Omad “Rashakhot”i mo kasiyru-l-barakot,
Chun ob-i Xizr munfajir az ob-i hayot.
Yoband muhosibon-i sanjiyda sifot,
Ta'rix-i tamomash az huruf-i رشحات (Rashakhot).*

(Our work “Rashakhot”, full of blessings,

It was the water of Hizr that gushed forth from the spring of life.

Accountants with pleasant qualities,

Its writing date is found in the letters رشحات.)

These verses, along with his poetic talent, testify to his unique ability to write history through *abjad* (the science of expressing numbers in Arabic letters). The fact that the title of the work (رشحات) indicates the date on which the work was completed, that is, 909 AH, is indeed a testament to the uniqueness of the creative ability. It is worth noting that, first of all, Ali Safi, like his father Hussein Waz Kashifi, wrote “history” in almost all of his works, which deserves praise and recognition in alphabetical order. Secondly, this artist, who has a deep knowledge of puberty and eloquence, shows that he was a leader among his contemporaries and successors in writing poetry in the genre of “history”. In this regard, we have given examples from the work “Rashakhot” above. Therefore, in this work “Rashakhot” can be divided into two groups (the following groups):

1. Both spiritual and verbal poetic arts, which are characteristic of the work of Ali Safi, are fully reflected in the work “*Rashakhot*”;
2. It is the appropriate use of the arts (*husn-it talil*, *jam'* and *taqsim*, *laff-u nashr*, *nido*, *iktibos*, etc.) that are directly aimed at more vividly expressing the scientific content of the work “*Rashakhot*”.

The Arts Used in the Work

In the preface to Rashakhot, Ali Safi skillfully used the art of براعة الإستهلال ("baroat-i istihlol"), first of all. That is, the creator began his work with skill, eloquence. Of great importance in this was the fact that he composed mature sentences that attracted the attention of the addressee (interlocutor, reader) from the very beginning, aroused interest in the word (word, sentence) and the work in general. After all, the best of the beginning is the word (sentence) that has "baroat-i istihlol."

To understand what Husni Talil is, we need to pay attention to the following information. Atoullah Hussein narrated the following story in his book "Badoyi'u-s-sanoyi" "Abu Muqatil Zarir entered the presence of Doi Alawi, the ruler of that time, on the first day of Mehrjan (ie, a day similar to Navruz, the Feast of Harvest), the day when the sun passed to Mezan, and recited the following verse to him:

لا تقل بشرى و لكن بشران عزة الداعي و يوم المهرجان

Meaning: Say, "One gospel!", But two gospels:

The day when the doi is saint and the day of mehrjon (the arrival of).

Doi took a bad omen from the poet's words and said, "O blind! Does Mehrjon start his day with such words?" he said. Some say that he ordered the poet to be taken out and beaten with fifty sticks, and said: "Etiquette (inserting his mind, i.e. punishing) is better than rewarding him"[2. 253-254].

It is well known that there is a purpose to saying a word. If the speaker begins his speech in accordance with this purpose, he is considered to have used the art of "baroat-i istihlol." In Arabic puberty, it is emphasized that in one type of art, the goal is expressed through subtle gestures, rather than directly stated [3. 94]. "This type of "Baroat-i Istihlol" is called "husn-i talil" or "husn-i ibtido sanati" by foreign scholars. [2. 252]

In fact, this is an art form, that is, the style of the Qur'an. Because at the beginning of the Qur'an there is a reference to its general purpose. For example, we all know that the Qur'an begins with Surat al-Fatihah, and in this blessed surah there is a call first to Islam, that is, to monotheism, and then to the themes of the Qur'an (the stories of the prophets and the verses of the Qur'an). There is a subtle reference to all the hundreds of verses of Tawheed, rulings and narrations in the Qur'an in Surat al-Fatiha.

Accordingly, a person who begins his speech with Surat al-Fatiha will have started his speech with the Qur'an. This is because Surat al-Fatihah contains hadiths about the "mother, the foundation of the Qur'an." Since it is called the "Fatiha" because it is a great surah, it is also the beginning of the Qur'an, the revealer. [4]

The fact that Rashakhot begins with basmala and hamd, that is, "Bi-smillah ..." and "al-hamdu lillah ..." is from the art of "baroat-i istihlol", in other words, from the art of "husn-i talil":

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ الحمد لمن رش رشحات الحقائق و الحكم على قلوب العارفين بفيضه الاقدس الاقدم و الصلوة على المظهر الاتم---

(Translation: ar-Rahman ar-Rahim In the name of Allah. Praise be to Allah, Who, by His holy and ancient grace, has poured drops of wisdom and truth on the hearts of His servants....)

Not only in Rashakhhot, but in the beginning of all his other works, Ali Safi skillfully used “*husn-i talil*” more than the arts. However, the *husn-i talil* at the beginning of Rashakhhot is as unique as the *husn-i talil* used at the beginning of Abdurahman Jami’s works. So, it can be concluded from this that Ali Safi entered a creative competition with the leading teachers of the Herat Scientific and Literary School - masters of eloquence Abdurahman Jami, Alisher Navoi, Hussein Voiz Kashifi and others, and as a result achieved good results.

The Science of Narration in Rashakhhot

Narrative science is another thing that gives a special charm to poetry and prose, determines the creativity and literature of the author of the work, and proves that the owner of the pen has a unique ability and style. If the creator can make effective use of the types of narrative science, he will achieve such success.

In the work “Rashakhhot” one can see that the creator used such forms of narrative science as *tashbih*, *majoz*, *istiora*, *kinoya*.

تشبيه *Tashbih*. The shortest definition of *tashbih* in science, which is the first type of narrative science, is to liken one thing to another. [5. 47]

We see that Ali Safi used the art of *tashbih* in the preface of “Rashakhhot” in a very beautiful and unique style. For example, he wrote so “*I would be happy to hear the meaningful words that I had the honor of hearing from Hazrat Hoja Ubaydullah, and I would keep and take care of them in the Quva-i hafizah (memory) “Ka-amsoli-l-lu’lii-l-maknun” (Surat al-Waqi’a, 22).* (that is, it is memorized from time to time so as not to be forgotten). It is known that in the verse, the hurras of Paradise are likened to pearls, that is, the huras of Paradise are an example of pearl necklaces that have not been touched by sunlight or even seen by strangers. Ali Safi likens the words of Hoja Ubaydullah Ahror to a pearl. This analogy is in a very mature and eloquent style. That is, to apply a new style in *tashbih*.

تشبيه الكتاية – تشبيه كتايه *allusion tashbih*. According to Atoullah Husseini, one of the teachers of puberty, the definition of this *tashbih* is as follows: “The speaker makes an analogy with something in his heart and does not quote the custom of *tashbih* (that is, something like that) in the word and interprets the word *mushabbah* with the word *mushabbah bih* (something to imitate)”. [2. 213] His shortest description is as follows: in the *tashbih*, nothing resembling analogy and resemblance is mentioned. [3. 155-156] In Rashakhhot we see that in the 130th byte the allegorical element of the allegory is used:

Byte. *Bar oston-i irodat, ki sar nanihod kas-e,*

Ki lutf-i do’st ba ro’yash darichash nakushud. [6. 350]

(Contents: *If a person does not step on the threshold of will, the grace of a friend will not open a window in his face.*)

Literary Sciences in “Rashakhhot”

The author of “Rashakhhot” in his work had twelve types of literary sciences: **dictionary** (absolute aspect of a word in language) science, **sarf** (word change) science, **ishtiqoq** (word formation) science, **nahv** (rules of content of words in sentences) science, the science of **ma’noiy** (maturity and eloquence), the science of **narration** (styles such as allegory, allegory, allegory,

satire), **aruz** (verse weights) science, rhyme (rules of harmonious ending of verses) science, **essay** (rules of writing various letters, pamphlets, documents), **poetry fard** (science of poetry evaluation, criticism, evaluation science), **muharaza** (the science of using historical events and narrations, the words and literary works of the salaf in their proper place) and the **picture-letter** (the art of writing, knowledge of letter forms and spelling).

There are hundreds of passages in the play that testify to **muharaza** (the science of making wise use of historical events and legends, the words and literary works of the salaf in their place). Undoubtedly, the most perfect of these is the Wasiyatnoma-i Khoja Abdulkhaliq.

There are also manuscripts of “Wasiyatnoma-i Khoja Abdulkholiq” in Turkish manuscript collections.

The pamphlet “Wasiyatnoma-i Khoja Abdulkholiq” was translated and published under the title “Abdülhalık-ı Gücdüvanı Hazretlerinin Nasihatları”. [7. 166] It turned out that the publication was translated not only on the basis of copies in the Istanbul Manuscripts, but also on the basis of the text “Rashakhot” “Wasiyatnoma-i Khoja Abdulkholiq dar Odob-i tariqat.” The work was published by Doctor of Theology, prof. M.A. Joshan translated into modern Turkish, which was republished by Dr. N. Yilmaz in Turkey in 2009 [7. 147-152]. The number of wills in this translation text was 36.

If we compare the text of the “Wasiyatnoma-i Khoja Abdulkhaliq dar Odob-i tariqat” in Rashakhot with the text of the Iranian manuscript and the text of the Turkish edition, there are significant differences in the beginning and end of the work, in words and phrases. But these three testaments are the same in meaning and substance.

For example, in the Turkish edition, the translation of the pamphlet “Wasiyatnoma-i Khoja Abdulkhaliq” began as follows:

Abdülhalık-ı Gücdüvanı Hazretlerinin Nasihatları

Bu risale şeyhler şeyhi, pırlar sultanı, veliler kutbu, ulu makamlar, yuksek kerametler, gayb aleminden gelen varıdat ve kutsiy keşifler sahibi, Hacı Abdülhalık Gücdüvanı kaddesa-llahu ruhahu-l-aziz tarafından, özlü sözler halinde, tarikat mensuplarından bir müride emir buyurulmuş nasihatlerini ihtiva eder. Bahis konusu müridin, Hacı Evliya-ı Kelan olduğu nakledilir.

İ.Ey ogulcagızım! Sana vasiyet ederim ki takvayı kendine şiar edinesin! İbadet cinsinden vazifelerine sınıksız sarılesin! Ahvalını kontrol edesin. Daima, hatalardan korku halinde olasın!.. [7. 147]

The text of “Rashaho” begins with “Wasiyatnoma-i Khoja Abdulkholiq dar Odob-i tariqat” as follows:

“(Page 15b). Hazrat (Khoja Abdulkhaliq) sent a “Testament” on the etiquette of the sect to his spiritual children (beloved disciple) Khoja Awliya-i Kabir - may the grave of Allah shine brighter! - they wrote, these testaments contain many benefits, from which there are many benefits to all taxpayers and murids. We also bring some of them here in the hope of achieving rewards and blessings.

Rashha. They said: Oh, my boy! I bequeath to you knowledge, manners, and piety in all circumstances. You will always follow the sunnah mutahhara, you will be a circumcision and public man.

Oh, my boy! I bequeath to you knowledge, manners, and piety in all circumstances. You will always follow the sunnah mutahhara, you will be a circumcision and public man. If you study jurisprudence and hadith, you will never go near ignorant Sufis, you will stay away from them. You always perform the prayer in congregation. As long as you are not an imam or a muezzin..."

When these two texts were compared, it became clear that the Turkish edition of "Wasiyatnoma-i Hoja Abdulkhaliq" was not translated from the pamphlet contained in Rashakhot. The order of the wills in the Turkish translation of the Will is reminiscent of the Iranian version and the sequence of the wills in the Ramzi Kabuli's Will, and is similar to their free translation. The Turkish translation of the will differs from the pamphlet contained in "Rashakhot".

The results of the textological comparison of the copies of the pamphlet show that the Rashakhot's وصیت نامه در آداب طریقت ("Wasiyatnoma-i Hoja Abdulkhaliq dar Odob-i tariqat") differs in size and wording and even in meaning from the Iranian version, the manuscripts of Ramzi Kabuli's "Will" and the Turkish edition. In our opinion, Ali Safi tried and succeeded in compiling the "Will" in a unique way and transforming it into a new product of art.

In general, we see that this "Wasiyatnoma-i Khoja Abdulkhaliq" is quoted in the "Rashakhot" as a story within a story, and in the chapter "The statement of the remembrance of Khoja Abdulkhaliq Gijduvani" it expresses the formative content. In this way, Ali Safi was able to explain the etiquette of the Khojagan sect of Khoja Abdulkhaliq Gijduvani in a very short, but clear, vivid way, when referring to the "Wasiyatnoma-i Khoja Abdulkhaliq", it is clear that for centuries the version of this "Will" in the "Rashakhot" has been widely used, and the quotations are taken from the version of Ali Safi. All this means that all these cases were reorganized under the editorship of Ali Safi, and the regulated "Will" was born as a new product.

Thus, Ali Safi included "Wasiyatnoma-i Khoja Abdulkhaliq" in his work "Rashakhot" and called it "Wasiyatnoma-i Khoja Abdulkhaliq dar Odob-i tariqat". He focused on revealing the content of the "Will" and was able to express it in a unique artistic style.

The language of Rashakhot is also a high example of Arabic, Persian and Tajik literary languages. From this it is clear that the author of "Rashakhot" paid attention to every detail of his work, for example, to every word, that is, the phonetic aspect of the word, its pronunciation. Academician A. According to Rustami, only a scholar who has mastered the sciences of etiquette, that is, the sciences of etiquette, is called an "adib". Fakhruddin Ali Safi, who in his works, in particular, in his work "Rashakhot", has a unique application of literary sciences and arts, is, in fact, a mature writer of the Herat scientific-literary school of the XVI century, a master of the Khojagan sect.

CONCLUSION

In conclusion, it is worth mentioning that Ali Safi realized this example of creativity in the traditional manaqib genre with his creativity and ability to create innovation. Although the main purpose of his work was to write a perfect work on the life and work of the Khojagan sect, in particular, Khoja Ubaydullah Ahror, but for those who are devoted to this sect, he managed to

write a unique encyclopedia, if necessary, a comprehensive guide to the mystical issues of the Naqshbandi series.

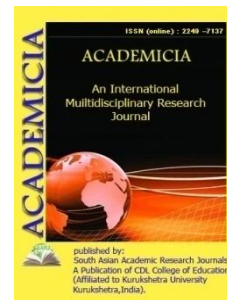
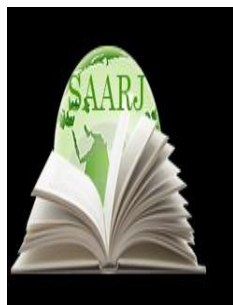
As mentioned above, the protagonist of this work, which consists of three major chapters, is the author himself and his language is carefully crafted. It can be seen that the creator effectively used the possibilities of creation to fully reveal the content of the subject. This, in turn, indicates that the artist has fulfilled the task set for him in the play, that his mystical-enlightenment, artistic-aesthetic goal has been achieved. The play contains a reliable account of the life and work of Khojagan Mashayik, especially Khoja Ubaydullah Ahror, in close connection with the verses, hadiths, rubais, qitas, and verses from the Qur'an. As a result, the reader receives spiritual nourishment from the wisdom of the sheikhs of Khojagon, which is expressed in detail through rashas. The work "Rashakhot" has its own inner tone, a unique rhythm, which reflects the uniqueness of the creative work of the talented artist, who is able to reflect a series of thoughts and feelings. Rashhas served the emergence of a work in the true mystical-moral and enlightened spirit. This is the most important factor in determining the goal of Ali Safi in the play.

Among the works in the history of our classical literature in the Sufi direction - mystical commentaries and manaqibs, Ali Safi's work "Rashakhot" is distinguished by its holistic theme, the accuracy of its scientific theme; at the same time, no other large-scale biographical work of an integrated mystical-enlightenment, educational nature, dedicated to the Naqshbandi and Yassavi leeches of the Khojagon sect, is known.

Ali Safi's style of narration, typical of the manaqib genre in this work, laid the foundation for his ideological maturity, the correct and unbiased coverage of the information given in "Rashakhot" in terms of purpose. The enlightenment, moral and educational views in the work are expressed primarily on the basis of the desire to be a perfect human being, purity of heart, sincerity, tolerance, humanity and kindness.

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IT COMPANIES: TRANSITIONING FROM PHYSICAL TO VIRTUAL WORKPLACES

Sushree Sangita Ray*; Rachita Ota**

*Asst. Professor,
Amity Global Business School,
Bhubaneswar, Odisha, INDIA
Email id: sushree1973@gmail.com

**Asst. Professor,
Amity Global Business School,
Bhubaneswar, Odisha, INDIA
Email id: ota.rachita@gmail.com

ABSTRACT

With the advent of COVID-19 crisis, most of the world has navigated towards remote working conditions. This has led to the rapid acceptance of the Work from Home process as the best defensive strategy. This case helps in bringing about a clear understanding of how these organizations have evolved and with the help of the appropriate tools has been able to revive their productivity which has got sabotaged by the pandemic. With the help of a Fishbone Diagram, various factors have been highlighted which has an influence on the efficiency of the firms while bouncing from physical to virtual workplaces. Creation of virtual workplaces have turned up into the latest trend in the corporate world as it assists the workforces for focusing on conveying time-bound tasks. Still there are certain factors that are affecting the Work Life Balance and the efficiency of the employees. This has been clearly depicted through the Cause and Effect Method. The million dollar question was – To what extent has this Work from Home strategy been able to act as a strategic sword for the organization during this crisis situation?

KEYWORDS: Digital Platform, Pandemic, Strategic Sword, Virtual Workplace, Work From Home.

1. INTRODUCTION

A virtual working environment isn't some theoretical future objective. It's a serious need at this moment, and will be a sign of pliant organizations throughout the coming years for a half-decade. Organizations that grasp the virtual workforce progress and make it part of their drawn out culture will be at a preferred position—presently and well after physical workplaces resume. One can consider it as anything: The business at distance or the Post-COVID world. None can deny the fact that having the option to work with virtual groups will be fundamental to versatility in 2020 and past. It will address your deftness, yet in addition your validity. The legend that virtual groups are less beneficial is as of now being negated. Organizations that can't uphold a far off workforce or attempt to restore every one of their kin to desk areas could fall off inhumane and withdrawn, gambling by and large out of date quality.

Presently, the workforce is working either completely or incompletely in a remote mode, contingent upon ones industry and the idea of the work. The corporate world needed to consider various logistics like:

- Video conferencing for virtual gatherings
- Technical support from far off areas
- Cloud capacities and relocations of exclusive data
- Supplanting face to face business and occasions
- Terms of arrangement for physical spaces (i.e., office leases)

2. IT AND WORK FROM HOME

By focusing on employee benefits and company profit, maximum Software companies' employee work from home during this lockdown. Lots of companies are thinking to continue on this Work from Home concept on a long-term basis.

Now Tata Consulting Services has declared that it will move 75% workforce to WFH permanently by 2025. To work securely, it is operating all of their work by the help of SBWS (Secure borderless work spaces) operating model. As a result of which it will reduce their infrastructural facilities, maintenance changes inside the company.

In Wipro, On April 15, 2020, 93% of their employees were allowed to work from home and them also working on different projects globally where they are engaging their clients through video conference. They provide a flexible work schedule to their employees who are dealing with costumers directly like Customer Relationship Management activities, sales & marketing department etc. Wipro said all the employees to work from home, depending upon their feasibility, availability.

Infosys also follows this WFH strategic for their productivity; around 93% of employees were working from home since April 15, 2020.

In Capgemini, 90-95% of the employees are allowed to work from their home. As we know, it is one of the best IT companies; still it is facing some issues by providing Work from Home facilities to its employees. So, a group of IT professionals ensured to provide good bandwidth to

employees so that they can work smoothly from their home, certain setup has been made, known as "War Room" as a result 95% of their employees able to work from their home in India.

Pesto Tech, is also working remotely. Cisco has already reduced their offices and is following WFH system from the last two years.

It shows that, over 90% of Employees work from home in top IT firms of India. When you look at different industries, they are also working smoothly with this strategy in their respective field.

3. FACTORS AFFECTING THE WORK LIFE BALANCE DURING THE WORK FROM HOME STRATEGY

Work Life Balance is a great challenge for the employees that are keeping a balance between their personal and professional life. Failing to which you may either end up being a Workaholic or a Casual worker. A Workaholic person is going to sacrifice his personal life for the stake of his job role and a Casual worker would find his personal life, his distractions and temptations to be more important and further neglecting his professional responsibilities. In both the cases in a long run the efficiency of the workers would get reduced, further affecting the productivity of the organizations.

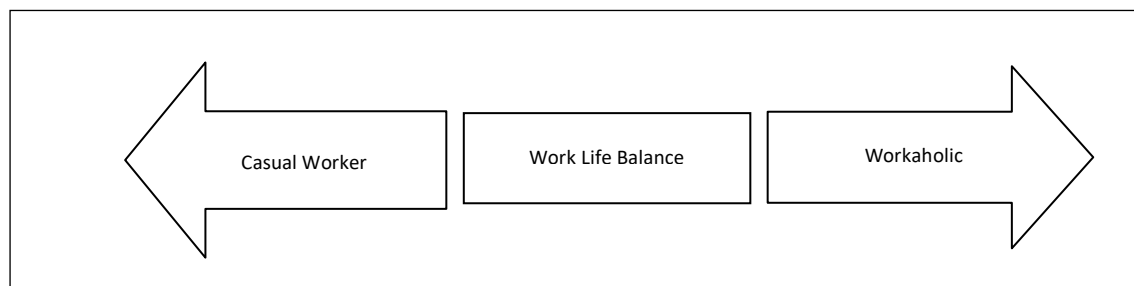


Figure 1: Work Life Balance Continuum

Fishbone diagram (otherwise called Ishikawa model) was made with the objective of distinguishing and gathering the causes which produce a quality issue. Progressively, the strategy has been utilized additionally to aggregate in classifications the reasons for different sorts of issues which an association stands up to with. (Ciocoiu, Carmen & ILIE, Gheorghe, 2010)

Along with the benefits that have been incurred from the Work from Home Strategy, there are also certain factors that affect the efficiency of the workforce. There are many factors acts as a barriers and hurdles in achieving efficiency during the Work from Home. When the employees work at home, they always face a role conflict between their personal Life and professional life. The role shift from personal to professional and vice versa turns out to be quite cumbersome for many of the employees especially the female workforce, for whom taking care of the household chores and the professional liabilities becomes very difficult.

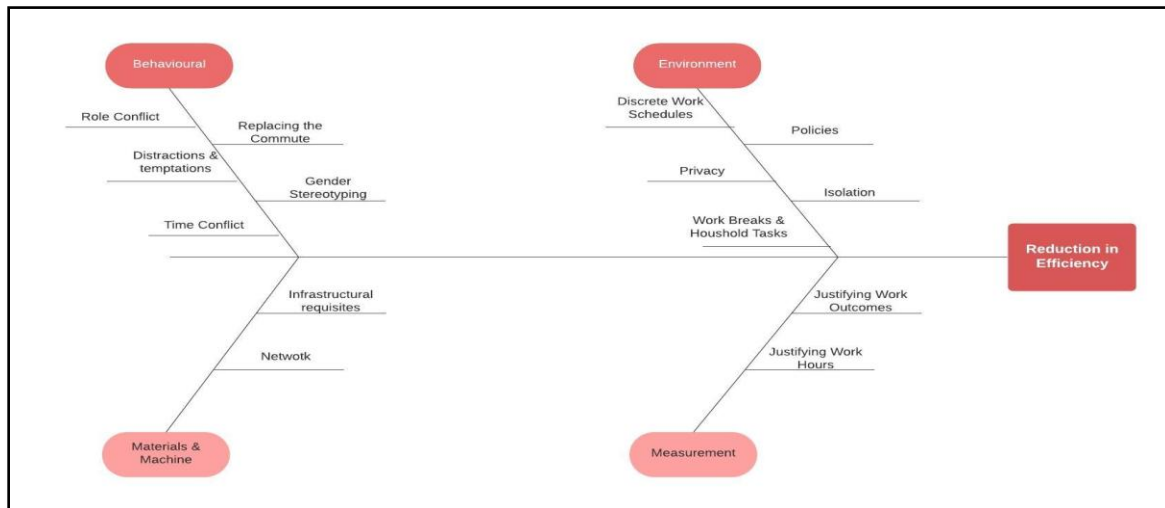


Figure2: Fishbone Diagram: Cause and Effect Diagram showing the factors that led to Effect – Reduction in Efficiency

These factors that act as a barrier to the efficiency of the Workforce during the Work from Home Period has been clearly explained through the Ishikawa's Fishbone Diagram based on the Cause and Effect concept. Here in the figure 2, it has been clearly depicted that the problem or the effect we are talking about during the Work from Home is the reduction of efficiency which is due to the major categories of the Causes which are as follows:

1. Behavioural Aspect
2. Environmental Aspect
3. Materials and Machine Requisites
4. Measurement Aspects

BEHAVIOURAL ASPECT:

This category explains all the factors that are related to the behavioural aspects of the workforce. These comprise of:

TIME CONFLICT:

This occurs when there is a tussle between the role obligations (Personal vs Professional) which is because of the time constraints and rigid work schedules. Due to this one may suffer from role overload which occurs at an instance when the total time demanded from both the roles exceeds the time available to the employees.

ROLE CONFLICT:

Many a times even if employees have time, but the work pattern turns out to be strenuous either physically or psychologically that one is unable to fulfil all the obligations expected.

GENDER STEREOTYPING:

Managing a full time work at home may be Hercules task for the employees but the extent of propensity of the females is far more than compared to males. In our society, it's the perception that if a working female is at home, it is assumed that she would be doing all the household chores, would be the one taking care of the kids and all other household obligations would be her responsibilities. This is something which is mostly not found in the case of men. Many men resent from doing these household tasks as they may feel that this may affect their masculinity and they assume that these are the tasks meant for the women, even if the woman is also the breadwinner.

REPLACING THE COMMUTE:

In case of Working from Home, many scholars have identified that not dressing up for the work and not commuting helps in saving a great lot of time and energy and this may help the employees from the Role Overload. But, few scholars have interpreted this in a different way, stating that the time one spends while commuting is the time an individual receives to transform its role that is from Personal life to Professional and then vice versa.

DISTRACTIONS AND TEMPTATIONS:

In absence of a close monitoring and supervision system, many employees fall under the prey of distractions and temptations which may greatly affect the productivity.

ENVIRONMENTAL ASPECTS:

This category explains all the factors that either externally or internally affects the working pattern of the employees

DISCRETE WORK SCHEDULES:

Even though the employees working away from office may have a rigid time schedule but due to presence of different household obligations, this may greatly affect your continuous work patterns and result in reduction of your efficiency

ISOLATION:

While working at office, many a times the colleagues or co-workers can provide a great support in achieving once tasks and this is something which lacks during Work from Home strategy. While there are certain categories of personalities whose performances greatly increases in such environment and they really find isolation to be a great performance enhancers.

PRIVACY:

In many organizations, the employees are involved with many projects and tasks where privacy may be strictly maintained. This turns out to be quite difficult in case of working at home.

GOVERNMENT AND ORGANIZATIONAL POLICIES:

Both government and organizations may play a vital role in framing several policies required for the functioning of various organizations. But while working from home, it's difficult for the workers to abide by all the rules and regulations formulated.

WORK BREAKS AND HOUSEHOLD TASKS:

While working at office, work breaks meant proper breaks where, one could rest their eyes or have a quick chit chat with their colleagues and most of the employees have agreed that this is of great help to them and these breaks have indirectly affected their work focus in a positive way. But at home, breaks means getting involved in household tasks which cannot be considered as a proper resting break for the employees and hence may have negative effect on their work focus.

MATERIALS AND MACHINE REQUISITES:

This category explains about the factors that are necessary at the infrastructural level for making the tasks of the employees comfortable

Infrastructural requisites: In order to work comfortably it's essential for the workers to have proper comfortable working layouts and spaces. For this many organizations have actually spent a good lot of money to create an ergonomic working layout. This is something which a particular worker may miss while working at home and in due course may affect one's efficiency.

NETWORK:

In order to work from home, network facility is something which is of great need and for which the employees are greatly dependent on the telecommunication companies. But, even after spending good lot of money on getting the best network facilities, still the efficiency which the workers were able to create while working from office is difficult to achieve while working from home.

MEASUREMENT ASPECTS:

This category deals with the factors that are related to monitoring and supervision, which again a gruesome task for the authorities of the organization.

JUSTIFYING WORK OUTCOMES:

During Work from Office, the efforts and hard work is visible, which is not in case of Work from Home. While working from home, it all depends on the trust of the supervisors on their employees and they can only predict the outcomes through concrete quantifiable outcomes.

JUSTIFYING WORK HOURS:

In this case also, it totally depends on the relationship and trust of the employers and the employees as you do not have any concrete face to face supervision to check whether the employees have abided strictly to the working hours or not.

4. CONCLUSION

Today, a huge number of individuals around the globe are using the strategy of work from home as their cities are under lockdown to forestall the spread of COVID-19. Creation of virtual workplaces have turned up into the latest trend in the corporate world as it assists the workforces for focusing on conveying time-bound tasks with negligible distractions and with a reasonable work-life balance it leads to better wellness of individuals. Notwithstanding, as indicated by an ongoing report, 20% of telecommuters feel that associating and teaming up with partners is the greatest challenge one faces while working from dispersed areas. Further, 18% of respondents guarantee, they feel separated while working distantly.

The COVID-19 pandemic has put an exceptional strain on the capacity of associations to keep their workforce connected with during these occasions as they face anxiety and stress given the vulnerability encompassing the circumstance.

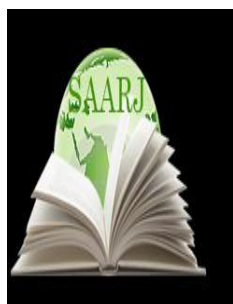
Firms are developing and are coming up with new activities meant for employee engagement as additionally making sense of approaches to gauge their commitment viability. From facilitating virtual espresso meetings to group snacks, administrators are utilizing a few methods to associate with their colleagues they not, at this point meet face to face each day.

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A SYSTEM FOR TEACHING FUTURE PRIMARY SCHOOL TEACHERS TO DESIGN TRAINING CLUSTERS

Abdullayeva Gulmira Abdullayevna*

*Teacher,

Department of Primary Education

Nukus State Pedagogical Institute named after Ajiniyaz Assistant,
UZBEKISTAN

ABSTRACT

The article substantiates the urgency of the problem of preparing future primary school teachers for organizing the design of educational clusters. The role of the educational cluster in the innovative development of the region is shown. The need for the development of regional educational clusters as an important competitive advantage of the modern economy is proved. The issues affecting the efficiency of educational clusters in compliance with the requirements of professional standards are considered. The priority directions of increasing the efficiency of educational clusters are highlighted.

KEYWORDS: *Preparation; Preparation Of Future Teachers; Activity; Extracurricular Activities; Primary Education; Project; Project Activities; Designing Educational Clusters.*

INTRODUCTION

Modern economic conditions have determined the need for a critical assessment of the compliance of the vocational education system with the requirements of regional and international labor markets. The traditional model of educational programs was mainly focused on general issues and economic processes that existed in a particular industry. Many professional educational institutions centrally trained personnel exclusively for a specific sector of the national economy. The emergence of new realities in the educational sphere, such as the abolition of compulsory employment of graduates or the reorganization of rigid vertical structures, led to a number of contradictions between regional structures and individual components of the vocational education system.

Practice has shown that these contradictions can be resolved when forming regional educational clusters. An educational cluster is a collection of interconnected vocational education institutions

united by industry based on partnerships with regional enterprises of the chosen industry. In the broad sense of the word, it is a system of training, peer learning and self-learning tools in the innovation chain "science - technology - business", based mainly on horizontal links within the chain [4]. The development of regional educational clusters is an important competitive advantage of the modern economy, which provides a real synergistic effect.

The educational cluster helps to solve the problem of uniting, as a rule, a territorial zone, fundamental scientific and scientific-practical developments, educational projects, new technologies and methods, design and production of intellectual products. In this case, the educational cluster becomes very attractive for employers who determine for themselves the areas of priority investments, since it appears to them as a producer of practice-oriented knowledge. One of the main tasks of the university in this case is the production of an innovative product. Therefore, research universities actively participate in the formation of a specialist, in accordance with the needs and development prospects of their regions. Educational clusters make it possible to activate the creative potential of students, both in scientific and innovative activities. All of the above contributes to a change in the qualities of the innovative economy as a system: flexibility, dynamism, variability, adaptability, stability and predictability, continuity, integrity [1].

The wide interest in this topic is also explained by the numerous positive experience of clustering the regional economy of the developed countries of the world, which in practice have proven the effectiveness of using network structures to increase the competitiveness of the economy of both the country as a whole and its individual regions. An analysis of foreign experience in clustering the regional economy shows that the policy of cluster formation is carried out over a long period. For example, in Denmark already in 1992, 40% of all firms in the country, which provided 60% of all exports, participated in clusters. The main motives for creating modern economic clusters are the desire to raise the level of regional economies, develop high-tech industries, increase the economic activity of depressed regions and organize the training of highly qualified specialists [3]. All these motives, to one degree or another, can also be applied to educational clusters.

Due to the exceptional relevance of the topic under consideration, it is necessary to consider some issues that affect the efficiency of educational clusters.

The first area of activity is associated with the relative novelty of this phenomenon in Russian reality. The main characteristic feature of the activity of the educational cluster is its orientation towards the constant development of an innovative orientation and the quality of scientific and educational activities. The introduction of cluster education in the process of training specialists requires the development of new pedagogical, organizational, technological and economic conditions for the implementation of professional educational programs.

Speaking about the pedagogical conditions for the implementation of educational programs, the primary task is to train the teaching staff capable of producing innovative goods. For this, it is advisable to develop and implement new additional educational programs for advanced training and professional retraining, developed on the basis of professional standards with the obligatory involvement of practitioners who are well aware of the content of this professional activity [5].

To achieve this goal, it is necessary to radically change the existing system of advanced training of the teaching staff of most educational institutions, moving away from unified additional

professional educational programs in general pedagogical or industry-wide areas, focusing on programs that correspond to the profile of the teaching activity of teachers. This becomes not only a wish, but also a necessity if we turn to the professional standard "Teacher of vocational training, vocational education and additional vocational education", which in the near future will have to be applied by employers in the formation of personnel policy and in personnel management, in the organization of training and certification of workers, the conclusion of employment contracts, the development of job descriptions and the establishment of remuneration systems [6].

In accordance with this professional standard, the requirements for the education and training of an assistant, teacher, senior teacher and associate professor are higher education (specialty and higher), the focus (profile) of which, as a rule, corresponds to the taught curriculum, discipline (module). If the profile of education does not match, the employee needs to have additional professional education based on higher education - professional retraining, the focus (profile) of which, as a rule, corresponds to the taught course, discipline (module). The professional standard also recommends training in additional professional programs in the profile of pedagogical activity at least once every three years.

Organizational issues are primarily related to the organization of the educational process in such a way as to make learning practice-oriented.

A review of publications and information and analytical materials on the topic under consideration showed that at the moment there is a fairly large number of works devoted to the problem of both clusters in general and educational clusters in particular. Despite a sufficient number of theoretical developments containing the patterns and principles of the development of educational clusters in modern conditions, and practical reviews devoted to highlighting the experience of the development of innovative educational clusters in different regions, the question of the methodology for testing the effectiveness of the formation of a competent graduate of an educational cluster has not been properly developed.

To confirm the relevance of the existence and development of educational clusters, such an experimental test is needed not only in individual clusters, but also in comparison with the effectiveness of forming a competitive graduate of a classical university.

The next important question is dictated by the fact that the effectiveness of educational clusters is possible only if there is a strong social partnership, and this is possible if certain conditions are met.

Firstly, within the framework of one cluster, it is necessary to create a successive subordination of all levels of education in one industry. In modern conditions of integration of educational institutions, there is a long overdue need for the development and implementation of mutually agreed educational programs. Multilevel professional education should be implemented by the participants of the educational cluster, which ensure continuity, interconnection of different levels of education, as well as organizational and subject unity. A number of authors indicate the principles on which multilevel professional education should be based - continuity, openness, completeness and integrity [2]. The continuity of educational programs at different levels allows you to optimally shorten the training period, thereby ensuring the right of a student or listener to study according to an individual curriculum of accelerated learning, within the studied educational program in accordance with Article 34 of the Law on Education. Compliance with

this condition also helps to minimize the adaptation time of the student during the transition from one level of education to another, as well as the graduate in the workplace. Based on the research of psychologists, the minimum period of adaptation of a young specialist to a new workplace, sufficient for an employee to be capable of both promptly solving standard tasks and participating in the adoption of strategic tasks, is 6-7 months. Compliance with the continuity within the educational cluster will reduce this period to 3-4 months.

Secondly, the educational programs of the participants of the educational cluster must be developed strictly in accordance with the requirements of professional standards. At the same time, programs of different levels of education should be coordinated in their structure and agreed in content.

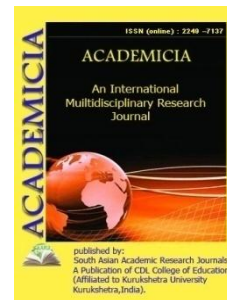
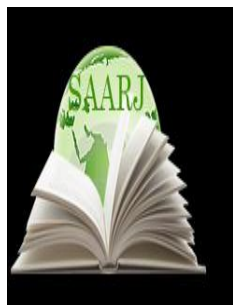
Third, the principle of corporatism in the interaction of enterprises and teams of educational clusters. Compliance with this principle will avoid the repetition of the content of read disciplines. According to research data, in the implementation of certain basic educational programs of full-time education and programs of additional professional education, the average percentage of conjugation of these programs reaches 83% [8]. The time that is freed up due to the observance of the principle of corporatism is proposed to be spent on filling gaps in the education of students and (or) on better training of future personnel for a specific industry, by introducing courses developed jointly with potential employers.

In accordance with the above and in order to increase the efficiency of educational clusters as a resource for innovative development of the region, it is now necessary to highlight priority areas of development, such as: development of a methodology for assessing the effectiveness of educational clusters; ensuring the effective organization of the environment of the educational cluster by creating conditions that will ensure healthy competition of cluster members not only with other educational clusters, but also with each other; providing conditions for the sustainable development of existing cluster education initiatives and stimulating the emergence of new initiatives; formation of a system of training and retraining of qualified teaching staff for regional educational clusters; stimulating the attraction of businesses to co-finance innovative educational projects; development of public-private partnerships with the aim of more intensive involvement of private business in the process of choosing directions for educational, innovative and scientific activities of educational clusters; improvement of legal regulation in the field of cluster education.

At the moment, it is indisputable that in the modern conditions of globalization, those regions that maximally show their innovative activity have a competitive advantage [7]. A regional educational cluster can play a significant role in regional innovative development. A properly built model of an educational cluster allows us to take into account the constantly changing needs of the regional labor market and creates conditions for the training of a competitive and competent specialist. This is achieved due to the independence of educational clusters in the choice of professional educational programs and the implementation of cross-cutting curricula that cover the main areas of training for a particular region.

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THE IMPORTANCE OF RELATIONSHIPS IN STABILIZING A HEALTHY SPIRITUAL ENVIRONMENT IN THE FAMILY

Davronova Dildora Saidovna*

*Teacher,

Doctor of Philosophy in Pedagogical Sciences (PhD),
Department of Pedagogy and Psychology,
Uzbek State University of World Languages,
UZBEKISTAN

ABSTRACT

Article shows that the role of the family in the child's life immeasurably high in importance. All his life must pass in the family. A child living in a family going through a whole range of emotions and relationships in it. This leaves a mark on his soul. The family is responsible not only for laying the foundation of the so-called human building, but also until its last brick is laid. The formation and upbringing of a full-fledged citizen of society is an important task of the modern family. The development of intelligence and creativity, cognitive forces and primary work experience, moral and aesthetic principles, emotional culture and physical health of children - all this depends on the family, on the parents, and all this is the main goal of family education.

KEYWORDS: *Family; Child; Education; Development; Personality; Love; Stability.*

INTRODUCTION

The upbringing of a harmoniously developed generation is one of the most pressing issues for society at the level of public policy. The full development of the child can be achieved by maintaining his health in all respects, both mental and physical. The concept of mental health is important for educators and psychologists, as it reflects the emotional and cognitive health of the child, the development of character and personality, the neuropsychological state of the child. But sometimes the emergence of bad habits in the behavior of children as a result of the decline of the educational function of the family and the lack of advocacy work is a matter of concern. Always “problematic”, “uneducated”, “disobedient”, “careless”, “neglected” children are the result of misunderstandings in the family and the unmet needs of the child. The world experience

of providing psychological support to children and their parents shows that if the atmosphere of positive communication in the family is created, then even the most serious problems with children can be solved.

Russian psychologists (L.S. Vygotsky, S.L. Rubinstein, P.Ya. Galperin, L.I. Bojovich, V. S. Mukhina, etc.) consider the spiritual values that a child acquires throughout his childhood as a key aspect of personality development. and see the social experience. In the process of mastering this experience, children not only acquire specific knowledge and skills, but also in the process of developing their abilities, personal formation takes place. The coherence of family relationships is important for the child's personal development.

The mental, physical, moral, aesthetic upbringing of children is based on the family. The family is responsible not only for laying the foundation of the so-called human building, but also until its last brick is laid. The formation and upbringing of a full-fledged citizen of society is an important task of the modern family. Through family upbringing, a person is instilled with a certain political and ideological outlook, moral norms and patterns of behavior, physical qualities. As a result of the process of socialization that takes place in the family, the person assimilates social norms and values, enters social life.

The process of raising children in different categories of the family has its own characteristics. Therefore, it is important to study the important factors of the educational process, to determine the general interrelationships of this process.

At all stages of a child's development in the family, both he and his parents are constantly influenced by various factors of the social environment. Some of them improve the educational functions of the family, while others have a negative impact, creating various problems for the family, its members and the environment.

Knowing these factors will allow children to fully or partially correct the inconveniences in family communication, improve their microenvironment. V.S. Torokhtiy distinguishes the following from the general factors:

The "mindset" in the family. It reflects the socio-psychological aspects of family life and has its own characteristics. First, the system of all values, attitudes, motives, and needs in the family must be geared toward the real possibilities of sustaining his or her life. The way of thinking in the family is largely determined by living conditions. Second, over time, the family has developed the ability to adapt goals, attitudes, value orientations to the realities of external life that affect the psyche of each of its members. Third is the willingness of both spouses to make changes in their careers and lives.

The "communication style" in the family. It reflects the socio-psychological aspects of family life. It also has its own characteristics: First, interpersonal communication, which is of particular importance due to the important personal nature of communication. Second, family communication is the openness of life to the social environment, the expression of the family's own interests. Third is the informality of relationships between family members. Fourth, the development of mechanisms such as empathy, identification, pedagogical reflection. Fifth, the special importance of the relationship with parents.

The relationship of the social environment with the family. These relationships are ambiguous and are often characterized by conflicting, sometimes inadequate, demands and expectations.

Nation, area (place) traditions where the family lives. In a multi-ethnic country like Uzbekistan, family members have to deal with the culture, morals, customs, language, and dialects of different nations and peoples. The family, the traditions of the region (place) where the family lives, are assimilated in the form of ideas about universal values, rules and norms of behavior. Parents and children, while preserving the general qualities of their nation, the culture of their people, also partially assimilate the values of the national social environment.

Family traditions. Norms and rules of behavior are manifested as one of the means of formation of high moral qualities of children, expressing cultural heritage.

The intellectual level of the school, group, class in which the child is studying.

Knowing the general factors mentioned above will help to restore the pedagogical environment of child rearing in the family.

Conditions that arise as a result of the interaction of important factors for upbringing are created by the educator. One of the main tasks of the family is its educational function. That is, it is the parents' responsibility to bring up the child properly. These functions are understood not only as a certain relationship between parents and their children, but also their basis, that is, a certain way of life of the family and the interaction between its members. Parents' ignorance of upbringing, the use of incorrect forms of upbringing complicate family relationships and negatively affect the child's personal development.

One of the wrong forms of family upbringing is conflicting upbringing. At the same time, each member of the family uses different parenting methods for one child, for example, the father is very strict, the mother is very kind, or the parents are very controlful of the child's behavior and take responsibility for his moral upbringing, while the grandmothers caress him. E. Eidemiller, V. Justitsky, N. Lengard studied such unstable methods of upbringing and proved that as a result the child develops negative character traits, such as stubbornness, misjudgment of the pressure of authority figures. While parents imagine the consequences of instability in parenting, they do not know how to prevent it. Often the thought that these are childhood traits reassures them. Most parents take the wrong parenting path even for fear of losing or disappointing their child. Therefore, family upbringing is a very complex process in which parents must be psychologically prepared in advance.

There are a number of peculiarities that distinguish family upbringing from social upbringing. Family upbringing, by its very nature, is based on emotions. If there is not enough emotional harmony in the family, if the family environment is unhealthy, the development of the child in such a family becomes difficult, family upbringing becomes a negative factor in the formation of personality.

Some mistakes made in the relationship with the child during the upbringing process can become serious problems in the child's future life as he or she grows up. Some problems, difficulties, and misunderstandings can also arise as a result of the shallowness of parents' perceptions of child rearing. The fact is that parents often do not take into account the specific characteristics of the child, his abilities, inclinations and desires in the process of upbringing. They often carry out the upbringing of the child in the direction in which they think, adapting it to a certain "pattern" and with a certain outcome in mind. In our view, the task of the parent is to accept the positive and negative aspects of the child, as well as to encourage the child's strengths. In many cases, we

witness a process of parenting that “breaks down and rebuilds” the child. Before our child grows up, we make clear plans about where he will work, live, and so on. The process of upbringing, in turn, becomes a difficult way to adapt the child to this imagination. This creates a number of inconveniences not only for the parent but also for the child. As a result, there is a “chasm” between the parent and the child, the child goes against the instructions of adults, is closer to others than the parent. Another basis of these problems is that parents and children are representatives of different eras. In this sense, the difficulties in the relationship between parents and children can also be called disagreements between representatives of the two eras. We adults often evaluate our children with our views shaped by the spirit of our time.

Often a person's attitude and outlook on life also creates specific problems in the process of upbringing. Changing our attitude to life means rebuilding our methods of upbringing. For example, instead of talking about a child's bad behavior, it is better to give the child a positive direction.

In short, discipline is a set of relationships that are pursued toward a well-intentioned goal. In carrying out this relationship, parents are required to have patience, perseverance, and an objective view of everything.

Upbringing is a process that requires certain knowledge, life experience, skills, sincerity from parents. The development of a child into a mature person in all respects depends on this process of upbringing in many ways.

Parents, family, and childhood have a huge impact on human development. In the family, the first years of a person's life usually pass, which are decisive for the formation, development and formation. Jan Amos Kamensky reasoned: “If parents teach their children to eat, drink, walk, talk, adorn themselves with clothes, then all the more they should take care of imparting wisdom to children.” And in “wisdom” the most important is, firstly, the knowledge of the real world, and secondly, “the ability to carefully and reasonably manage oneself.” The family largely determines the range of his interests and needs, views and value orientations. Moral and social qualities are laid in the family. The future of the child depends on the educational influence of the family, on what qualities will be developed and formed.

The goal and motive of raising a child is a happy, fulfilling, creative, useful life for this child. [2] The task of family education is the formation of such qualities and personality traits that will help to adequately overcome the difficulties and obstacles encountered on the path of life. After all, life is full of surprises. The development of intelligence and creativity, cognitive forces and primary work experience, moral and aesthetic principles, emotional culture and physical health of children - all this depends on the family, on the parents, and all this is the main goal of family education.

Everyone has a certain pedagogical experience, since the experience acquired from childhood from their parents and grandparents is transferred to the upbringing of their own children. All the most important processes of primary education take place in the family - it all starts from early childhood. According to Z. Freud and A. Freud, the mother acts for the child, on the one hand, as the first and most important source of pleasure, as the first object of libido, and on the other, as the first legislator and “controller”.

Currently, there are many studies that analyze various aspects of the influence of the family on the child. Many authors identify as the leading factor influencing the development of the child's personality, intrafamily relations, any serious deviation from the norm of which means the inferiority, and often the crisis of the given family, its educational capabilities. V. Ya. Titarenko writes that internal family relations have unique characteristics that make family education the most adequate form of education. They play a special role at an early age, as they act in the form of interpersonal relationships that take place in the process of direct communication.

The theory of classical psychoanalysis made an enormous contribution to the development of ideas about the specifics of the relationship between children and parents. As you know, psychoanalysis was the first theory in which the relationship between the child and the parent was considered as the main factor in child development.

Family education begins, first of all, with love for the child. Pedagogically appropriate parental love is love for a child in the name of his future, as opposed to love for the sake of satisfying his own momentary parental feelings. It is very important for a child that he grows and even "blooms" in an atmosphere of benevolence and kindness. Upbringing should be an inspiration, a child should be inspired by recognition, sympathy and empathy, sympathy, a smile, admiration and encouragement, approval and praise [1]. "Difficult" children are the result of family traumas: conflicts in the family, lack of parental love, parental cruelty, and inconsistency in upbringing. Children often learn not only positive, but also negative behavior patterns of parents, if the elders in the family call for honesty, and they themselves lie, for restraint, and they themselves are hot-tempered and aggressive, then the child will have to make a choice, and in these conditions he will always protest against requirements to behave in an exemplary manner, if the parents themselves do not [4].

Observations from the personal experience of a primary school teacher show that a child in a dysfunctional family environment reduces academic performance, becomes irritable, conflicted, and confused. His self-esteem decreases, he becomes emotionally unstable.

The peculiarities of the child's interaction with the parents, the degree of their responsiveness, the presence of emotional ties and attachment relationships have an impact throughout the entire period of childhood, and in later life, are their own about a different standard of building his relationships with other people. Therefore, it is so important that every child has a father and mother.

But if there is only one parent in the family? What are the socio-psychological consequences of the educational influence of such a family on the formation of the child's personality? As a rule, there are no fathers in single-parent families. The lack of male influence in single-parent families is manifested in the form: violations of the development of the intellectual sphere (the analytical and spatial abilities of the child suffer due to the development of verbal); insufficiently clear implementation of the process of gender identification of boys and girls; difficulties in teaching adolescents to communicate with members of the opposite sex; the formation of excessive, pathological attachment to the mother.

For the full development of a child's intellect, it is very important that both types of thinking, both male and female, meet in his environment starting from early childhood. The absence of a father in the family, whatever it may be associated with, has a negative effect on the development of intellectual abilities, both boys and girls.

The family is also a factor in upbringing because it is the organizer of various types of activities for children. From birth, a child, unlike many representatives of the animal world, does not possess the skills that will ensure his independent life. His interaction with the world is organized by his parents and other family members. This has a great pedagogical meaning, because even a child who is lucky enough to be born in a favorable environment will not be able to fully develop if he is limited or deprived of active interaction with it. The fact is that by itself he does not master the means of mastering, assimilating and appropriating those cultural achievements with which he is surrounded. In the family, the child begins to familiarize himself with various types of activities: cognitive, subject, play, work, educational, and also communication activities. Initially, adults work together with the child, stimulating and reinforcing his activity. But as the child masters individual actions, it becomes possible to organize his activity as jointly shared with the adult.

The upbringing process in the family has no boundaries, beginning or end. Parents for children are an ideal of life, not protected by anything from the child's gaze. In the family, the efforts of all participants in the educational process are coordinated: schools, teachers, friends. The family creates for the child the model of life in which he is included. There are many good families who are aware of this high parental mission. The influence of parents on their own children should ensure their physical perfection and moral purity. Each child involuntarily and unconsciously repeats his parents, imitates fathers and mothers, grandmothers and grandfathers. It is children who carry the charge of the social environment in which the family lives [3].

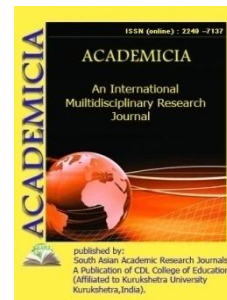
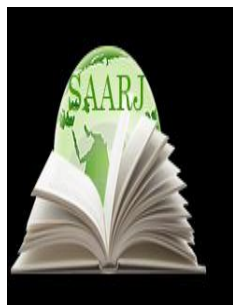
The Law "On Education" has put in the first place such a dual task for the family and the school, as the development of the child's personality, the preservation and strengthening of his physical and moral health. This problem should be solved daily, hourly, every minute. Therefore, it is very important to convince parents that family upbringing is not morality and notations, but the whole way of life of parents' thoughts, it is constant communication with children of the swarm, provided that universal human morality, rules of behavior and communication are observed [5].

Thus, we can conclude that in the process of upbringing and development of the child's personality, the family plays the leading role. What the child will be like, happy or not, depends on the parents.

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THE ROLE OF NATIONAL AND SPIRITUAL VALUES IN THE PROCESS OF EDUCATION OF YOUTH

Karimova Gavkhar Qudratillaevna*

*Associate Professor of "Pedagogy,
Psychology and Educational Technologies",
UZBEKISTAN

ABSTRACT

This article is devoted to the specifics of the formation of national, spiritual and religious values, and provides information on the importance of national and universal values in the process of educating young people. An established scientific fact can be considered that the cultural values of religion, which determined the features of the upbringing and education of the younger generations, lie at the source of the culture of any nation. In this regard, the views of great thinkers on improving the efficiency of the educational process, the views on the education of the perfect man and spiritual-enlightenment, educational-moral, religious education are widely expressed in his works from the scientific-artistic, pedagogical-psychological point of view.

KEYWORDS: Family, Child, Education, National, Spiritual, Tradition, Value, Respect, Universal, Community.

INTRODUCTION

Today, the ongoing reforms in the field of education in our country create ample opportunities for young people to get an education, learn a language and choose their future profession, as well as become mature professionals. It is important that we harmonize our spiritual, religious values and national traditions in the process of educating our youth.

Our national values, spiritual and enlightenment culture, science, as well as pedagogical science, which have reached us, began to develop again thanks to independence. It is known from the history of social and cultural life that the role and importance of folk pedagogy in the development of spiritual, enlightened and harmoniously developed youth in education was great. Formed and developed over thousands of years, folk pedagogy has been the basis of the history of national pedagogy. [2]

Resolution of the Council of the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan No. 484-II of May 30, 2012 "Approved by the Resolution of the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan No. 453-II of March 5, 2012, in addition to the main activities of the Legislative Chamber of the Oliy Majlis of the Republic of Uzbekistan for 2012 on measures to increase efficiency" sets tasks to increase the effectiveness of spiritual and educational work to educate young people in the spirit of national and universal values.[1]

National values are a set of spiritual ideals of representatives of certain ethnic communities, which reflect their historical originality. They act as social and normative-cultural axioms for the behavior of people of the same ethnicity [6].

Hence, the most important role in the upbringing of the younger generations is played by values, which, being socio-historical in nature, are a means of introducing an individual to a family, thereby making it possible to overcome the temporality of individual existence. The value-semantic content is the most important moment in the formation of the "choice of a fulcrum", that is, worldview guidelines.

In the pedagogical literature of the 1990s. as such a fulcrum was proposed self-determination of the individual exclusively around universal human values; opinions were expressed, according to which there is no reason to delve into the study of traditional spiritual values, it is enough to rely on the so-called universal. This requires clarification of the scientific position of this study.

General human values, the significance of which can neither be diminished nor exaggerated, can only set a context, which, in turn, must be filled with a certain content arising from the dialectic of the relationship between the universal and the national in education.

In terms of this study, it is important to pay attention to the importance in the pedagogical process of not so much universal human values as traditional national values. An established scientific fact can be considered that the cultural values of religion, which determined the features of the upbringing and education of the younger generations, lie at the source of the culture of any nation. These values were an important component of the national culture, which played a primary role as a regulator of public morality. It should be recognized that modern pedagogical education does not sufficiently take into account the factor of changing the religious situation in the country as a whole, associated with the intensification of the activity of traditional spiritual institutions, which are represented by world religions - Christianity, Islam and Buddhism, firstly, as well as changes in the situation in school classes, where at the desks sit children who identify themselves with one or another confession, and secondly. Each of these confessions, in accordance with its traditional culture, has a powerful arsenal of influence on the processes of education, and this must be known and taken into account.

In a crisis that has engulfed all spheres of life, when society is in a state of impulsive and turbulent ideological fermentation, the idea of turning to the field of spiritual culture, the core of which is traditional spiritual values, is increasingly being put forward at the forefront of not only pedagogical but also social life. This sets the situation for the need to refer specifically to traditional values, due to which the common human values will be filled with a deeper and more specific content, which causes an increase in their role and significance in education.

The essential characteristics of traditional spiritual values include: “firstly, primordial - initially accepted values that have become a historical choice, shaped the culture and traditions of the ethnos as a whole; secondly, values of a culture-forming nature, which for a long time have an influence on the development of the state, people, and culture; thirdly, the values that formed the basis of the people's daily lifestyle, entered their language, customs, became the archetypes of their worldview; fourthly, original values that make the national culture different from the cultures of other countries and peoples”[8].

Basic national values (family, labor, religion, nature, state, art, etc.) are revealed and deepened in the system of moral ideas of traditional confessions about the spiritual world of a person, patriotism, native land, justice, mercy, solidarity, honor, dignity, freedom, trust in people, state institutions, tolerance, formed on the basis of interfaith dialogue.

Thus, modern education is faced with the task of forming a system of values that is based on the historical continuity of generations, preserves and develops the traditions of the state. The relevance of the appeal to the cultural meanings of traditional spiritual values is evidenced by the fact that over the past decade, formational transformations and democratization of all spheres of life have led to the growth of national, ethnocultural and religious identity. The understanding is affirmed that “religious values are an important component of national culture, they play an essential role as a regulator of public morality” [9]. Proceeding from the essential understanding of religion as a certain system of ideological views [10], the point of view is recognized that it serves as a source of cultural and historical development, since it lies at the basis of the core of any national culture.

At the same time, it must be emphasized that the use of traditional spiritual values, including for the formation of trust and consent among young people, requires a correct attitude: the emphasis should be placed not on religious dogma, but on cultural and worldview meanings and values.

In the process of educating students in general secondary schools in our country, it is necessary to strengthen the educational activities of students, to develop the views of our thinkers on history, universal values, to teach respect for our national values in the family, to study our national customs and traditions. Not only in educational institutions, but also in family education, it is necessary to inculcate in the minds of young people national values and traditions, religious education, to educate young people in the spirit of harmony of national and universal values. In this regard, the views of great thinkers on improving the efficiency of the educational process, the views on the education of the perfect man and spiritual-enlightenment, educational-moral, religious education are widely expressed in his works from the scientific-artistic, pedagogical-psychological point of view.

The scientific and philosophical foundations of spiritual and cultural values are also reflected in the works of great scholars. It is not only the importance of education in the family and what to pay attention to in the upbringing of a child, but also the spiritual, moral and religious upbringing of young people. , but also influences the composition of good or bad aspects of his behavior, so that in every family parents are very careful in their upbringing of their children.

To do this, to create an aesthetically rich worldview in young people, to form in them a high spirituality, culture and creative thinking, to integrate with national history, folk traditions and customs, to preserve and enrich national culture, to consider education as an important factor of national development. The interdependence of this process is aimed at the formation of a fully

developed person, educational and scientific and cultural knowledge, spiritual and moral qualities based on national and universal values, work skills, creative thinking and conscious attitude to the environment and career choice. it is necessary to use effective forms and methods of moral education and enlightenment, to ensure the fight against various information threats, to form in students a rich aesthetic worldview, to teach them to form high spirituality, culture and creative thinking.

In conclusion, the works of great scholars are an invaluable cultural and educational heritage, a way to educate young people as perfect human beings, devotion to the Motherland, love for family, respect for the nation, faith, morality and self-awareness. Therefore, it is necessary to teach the younger generation to respect national and universal values in the comprehensive development of the family, based on the formation of a healthy environment in families and the correct organization of children's relationships in families.

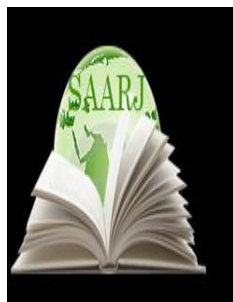
The spirit of national and universal values, moral and educational work carried out to improve the efficiency of the youth organization of leisure time in national history and cultural heritage, as well as young readers and parents with museums, theaters, cultural and recreational activities, to direct the formation of spiritual culture too plays an important role.

Training students and young people in the process of self-education, self-development, spiritual maturity, patriotism, strive to improve their respect for the values, legal knowledge, parents and all the partners (self-governing bodies (local), non-governmental organizations, human rights - law enforcement agencies, secondary special, vocational education institutions). To this end, we need to improve the cooperation of educational institutions with parents and the community, jointly organize national values, traditions and national holidays, and teach young people to respect national values.

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METHODS AND TECHNIQUES OF DEVELOPING COGNITIVE ACTIVITIES OF PRIMARY SCHOOL PUPILS

N. T. Tosheva*

*Professor

Department Of Primary Education Theory,
Bukhara State University,
UZBEKISTAN

ABSTRACT

The article analyzes the opportunities to develop the process of acquiring knowledge of pupils in primary education, making foundations for the further stages of education and the role of pupils as the main subject of educational process. Elementary students will not have mastered the methods of activity needed to interpret facts and events. Therefore, they make assumptions that provide a solution to a particular problematic situation. The task of the game in the learning process is to give students emotional uplift in the restoration of acquired knowledge. Games have a strong effect on students' mood by making it easier for them to master the learning materials.

KEYWORDS: *Primary Education, The Process Of Student's Cognition, Pedagogical Technologies, Subject, The Process Of Education, The Opportunities Of Knowledge Academic Situation, Didaktik Approach, Psychological Approach, Psychological And Pedagogical Peculiarities.*

INTRODUCTION

The system of continuing education on "Priorities for the development of the social sphere" of the Action Strategy for the five priority areas of development of the Republic of Uzbekistan for 2017-2021, provided by the Decree of the President of the Republic of Uzbekistan dated February 7, 2017 No PF-4947 further improvement, increasing the capacity of quality educational services, highly qualified personnel in line¹ with modern needs of the labor market. The continuation of the training policy is of particular importance.

Therefore, in nowadays education system of Uzbekistan "Concept of primary education", the Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated 04.06.2017 No 187

"On approval of state educational standards of general secondary and secondary special, vocational education" and curricula for primary education and special attention is paid to expanding the opportunities for the elaboration of students' cognitive activities in educational-methodical complexes.

The intensity level of student cognitive activity is influenced by the methods and techniques of teacher's activity. At the same time, this degree is also an indicator of the teacher's pedagogical skills. Active teaching methods include methods that accelerate the growth of students' cognitive activities. These methods, in turn, encourage students to acquire knowledge with aspiration.

In pedagogical procedure, there is experience that based on the source of knowledge in classifying teaching methods. These include:

- The method of presenting knowledge in words; story, lecture, conversation, reading, teacher's statement, etc .;
- Demonstration teaching method; demonstration in a natural way, through slides, through other visual aids and experiences;
- Practical methods; practical work and preliminary laboratory work.

Each of these techniques can be very active and relatively active.

The test assignments are used individually and for the whole class. In the age of modernizations, the use of test assignments is recognized as an effective way to determine students 'mastery and learning opportunities. However, there are a number of drawbacks associated with the use of tests. Because students sometimes try to answer questions roughly. On the other hand, when using tests to determine students 'mastery and cognitive abilities, their oral and written speaking skills remain undefined.

The problem-solving method is used in learning situations aimed at developing students' cognitive activities. The basis of this method is the creation of problem situations in the learning process. Elementary students will not have mastered the methods of activity needed to interpret facts and events. Therefore, they make assumptions that provide a solution to a particular problematic situation. This method allows students to develop the skills of mental activity, analysis, generalization, comparison, popularization, substantiation of cause-and-effect relationships.

The problem-based approach incorporates logical thinking operations. Because such operations are important to find a complete solution to the problems posed. At the same time, this method includes:

- ask problematic questions;
- create a problematic situation based on the ideas expressed by the teacher;
- to create a problematic situation on the basis of contradictory views expressed in the context of a particular question;
- Demonstration of experiences and information that help to create a problematic situation;
- solving cognitive tasks, etc.

In the process of using this method, the teacher's role is to create a problem situation in the learning process and to manage students' learning activities.

In the process of using the method of solving logical and computational tasks independently, all students solve logical and computational tasks based on the given tasks in a sample or creative way. However, complex, creative assignments are always solved by strong students. Sample-based reproductive tasks are solved by students who are idle. The students themselves do not pay special attention to this. Each student receives an assignment from the teacher according to their abilities and abilities. Under such conditions, students' interest in the learning process does not decrease.

Demonstrative methods are partly exploratory in nature. In using this method, the teacher guides the students in the classroom. As a result of organizing students' work in this way, they complete some of the assignments as they find themselves independently. In such an environment, teachers' experiences are demonstrated until they explain the new material. Students, on the other hand, solve problem-solving tasks through observation and discussion.

Practical methods are also partly exploratory and demonstrative in nature. In such a situation, students solve problematic tasks and acquire knowledge in part through independent research. They also learn new information by discussing their experiences in detail. Prior to independent practical work, students will not have an idea of the expected outcomes if they are aware of the goal.

In addition, oral conversation and oral narration methods are used in the progress of students' cognitive activities. In the procedure of using this method, a plan is developed to present the training materials in a certain sequence. In this proceeding, clear evidence is selected, compared, and information in this area is generalized. It also uses methods to manage students' learning activities. In particular, it has the character of accelerating students' aspirations and learning activities at the stage of perception of learning materials and arousing their interest. They are:

- a) Method of receiving news. The content of educational materials combines interesting information, facts, historical data, social experiences of the Uzbek people, spiritual and moral concepts;
- b) Meaning loading method. Based on this approach, there is an opportunity to arouse students' interest by revealing the meaning of words;
- c) The method of enthusiasm. Ensuring enthusiasm and expansion in students' cognitive activities in order to ensure the study of processes and events;
- d) Method of significance. To teach educational materials to students, explaining their socio-economic, spiritual and moral significance.

Methods of accelerating students' learning activities at the stage of mastering the studied materials include:

- a) Heuristic method. Students are asked difficult questions, through which learners are brought closer to the answers; discusses controversial issues and develops students' ability to substantiate and justify their opinions;

b) Research method. Based on the observations made, the analysis and experience of the literature, students form their own conclusions based on the solution of cognitive tasks.

At the stage of retrieving acquired knowledge, the method of naturalization is included in the methods of developing students' cognitive activities. In this course, learning tasks are performed by students using natural materials and collections.

Different criteria and indicators can be used to assess students' learning activities in learning situations. In order for students to have a high level of cognitive activity in learning situations, it is necessary to:

- 1) Teachers objectively evaluate the results of students' cognitive activities with a comprehensive diagnosis.
- 2) Teachers distribute cognitive tasks to students in accordance with pedagogical rules.
- 3) Assessment of the cognitive activity of the group of students and each student.
- 4) give students homework of a creative nature, popularizing the purpose of the educational operation.

In the procedure, students can become quietly, imperceptibly active. Students' cognitive activities can also be developed during extracurricular activities.

Any learning situation has a complex didactic character. In this process, first of all, the teacher and the student act in the framework of subject-subject relations. This approach should primarily focus on the development of students' cognitive activities. The concept of learning situation consists of a set of relationships and situations that make up a learning collaboration, a relationship between a teacher and a student, and a set of actions that lead to a specific solution in the process.

The main elements of the learning situation are:

- The purpose of the learning process;
- Objects of educational influence;
- Subjects of educational influence; these, in turn, are the driving forces of the pedagogical situation. It leads him to pedagogical tasks and their solutions.

Learning situations vary. It is the result of interaction between the teacher and the students. This means that both sides have a role to play in the learning situation.

The learning situation can be seen as a unit that analyzes the learning process. The assessment of learning activities in the learning situation integrates the solution of tasks from beginning to end. Certain subjects of the educational situation may change from the outside. If the teacher sets a new task for the students, or in connection with the internal situation, the subject changes the learning situation. As the assignments change, a new learning environment emerges. Although learning tasks vary, they can be divided into certain types. The type and level of complexity of learning tasks are the basis for classifying learning situations into specific types. Including:

1. According to the level of productivity: active and passive learning situations.
2. In terms of duration: intensive and long-term learning situations.

3. Learning situation participants: students and teachers.

1. Forms of interaction in a learning situation: cooperation is a kind of interaction in a learning situation, in which one person notices the situation of another and changes the negative attitude towards him. Accepts his actions and develops him to successfully solve the tasks set. Partnership demonstrates the ability of partners to care for each other's success through mutual support.

2. The nature of decisions made in the learning situation: a) learning situations require quick decisions, which are associated with the daily pedagogical activities of the teacher. The following can be summarized as follows:

- Identify the goals and objectives of certain actions performed by students, anticipate their consequences;
- Taking into account the peculiarities of the student's personality;
- Choose the most appropriate tools, methods and techniques to achieve the objectives of the learning situation.

Decisions made in such learning situations should not be voluntary, internal, intellectual, emotional. At the same time, students' inclinations, life experiences, memories, and their relationship with material wealth should be harmonized. These principles should be reflected in many ways in solving tasks in the learning situation. Here:

1. Not rushing to pass judgment;
2. Getting rid of preconceived notions;
3. Detailed description of the work done;
4. Express each question in simple terms;
5. Go from simple to complex in solving tasks.

Learning situations can be formulated in the following forms. They have a variety of appearances. The formation of a learning situation is in many ways directly related to the learning process. It also depends on the teacher how the learning situation is organized. Such learning situations include:

- ☐ Learning situations that guide students;
- ☐ Choice-based learning situations;
- ☐ Learning situations that ensure student success;
- ☐ Conflicting learning situations;
- ☐ Problem-based learning situations, learning situations aimed at solving problem-based learning tasks;
- ☐ Learning situations related to criticism and selfcriticism;
- ☐ Support and mutual aid training situations;
- ☐ Selfassessment learning situations;

- ☐ Communication situation;
- ☐ Accelerated learning and communication learning situation;
- ☐ Competitive and competitive learning situation;
- ☐ Game-based learning situations;
- ☐ Responsible decision-making learning situation;
- ☐ The situation of learning new ways of working.

We discuss below some of the learning situations, their content, and their formation.

Problem situations in the learning process create an environment in which students can set learning tasks. In this environment, the knowledge acquired by students is mobilized to solve tasks, their thinking activities are accelerated. Such operations are performed by students with the help of a teacher. The main task of the problem learning situation is to ensure that students master the learning materials in the most complex conditions, and their mental capacity is involved in the state of activity. The problem situation can include the following:

- ☐ Questions, hypotheses, problems as unproven events;
- ☐ Tasks substantiating the theoretical state of ideas;
- ☐ Tasks to create diagrams of the studied events;
- ☐ Like assignments to find conflicts and seek solutions to them.

Learning situations of an instructive nature allow for the creative mastery of learning materials and the free reinstatement of knowledge. At the same time, the effect of the development of cognitive activity is reflected in the development of students' ability to distinguish the essence of events at a high level. Their ability to study the opinions of their classmates, to analyze the expected results together, to justify events, to put forward their hypotheses, to find solutions is reflected. At the same time, the ability of students to overcome difficulties with determination is also included.

The play situation encourages students to engage in conditional, fun, entertaining activities. Games have a great impact on the formation of knowledge, skills and abilities in students. The task of the game in the learning process is to give students emotional uplift in the restoration of acquired knowledge. Games have a strong effect on students' mood by making it easier for them to master the learning materials. Game-based activities create a variety of emotional experiences among students, stimulate their emotions, deepen their cognitive abilities, stimulate their internal orientation, engage them in the learning process, reduce various pressures, relieve fatigue, and enable them to visualize the amount of work they need to learn. In the learning process, with the help of the game there is an opportunity to model any life situation, relationships between people, events, the state of things.

Game elements can be involved in all forms of education. The educational essence of the game is that it creates a convenient opportunity for students to master complex learning materials in bright, emotionally rich, interesting situations. The developmental effect of games is reflected in the mobilization of students' extraordinary creativity and natural-creative potential.

From an educational point of view, games have the ability to help students overcome internal insecurities, express themselves, recognize themselves, and realize their full potential. The controlling, diagnostic essence of games is that they help the teacher to understand the independence of students, to determine their perceptions, imagination, dreams, desires, creative abilities, levels of activity, readiness for interaction, ability to feel in a team.

Thus, we try to analyze another type of learning situation that serves to develop students' cognitive activities. It is a state of striving for success. The only force that serves to overcome difficulties is the desire to read, that is, the desire to succeed in the learning process. Modeling this situation requires a great deal of knowledge and skill from the teacher. In this process, the situation manifests itself as the sum of the conditions that ensure the success of the students. The success of the students is the result of this situation.

Cognitive activities of students are a unit of emotional perception, theoretical thinking and practical activity. It emerges at every stage of school education and develops steadily. Cognitive activity is strengthened and expanded in students' social interactions and in all types of learning activities. In addition, the performance of specific learning tasks in learning situations also plays an important role in the elaboration of students' learning activities. However, it is only in the learning procedure that students' cognitive activity is clearly shaped. Because the learning activities of students serve as the basis for the formation and development of cognitive activities.

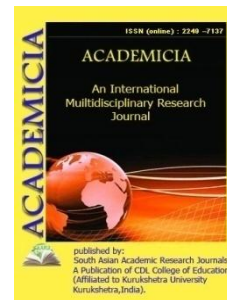
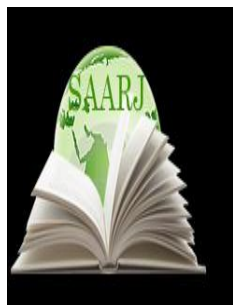
One of the important tasks of a teacher is to teach elementary school students to perform every aspect of cognitive activity. On this basis, the teacher should develop students' skills of planning and rational organization of their activities. The progress of cognitive activities will depend to some extent on how well students master different aspects of different activities and how well they can use them to acquire new knowledge. As a result, students' learning interests and needs develop holistically.

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THE ROLE OF NATIONAL VALUES IN ENSURING THE STABILITY OF MARRIAGE AND FAMILY RELATIONS IN MODERN UZBEK FAMILIES

Ryzikulova Amina Totliboyevna*

*Senior Lecturer,
Department of «General Pedagogy and Psychology»,
Navai State Pedagogical Institute,
UZBEKISTAN

ABSTRACT

The purpose of this article is to determine the features of the influence of national values in ensuring the stability of marriage and family relations in modern Uzbek families. The article analyzes the evolution of the institutions of family and marriage. The article presents the fundamental provisions from the hadiths about the need to form a family, which say that marriage is an important prescription for Muslims, those who refuse it are not considered true followers of the Prophet Muhammad. In general, Islamic values have had and continue to have a significant impact on strengthening the stability of Uzbek families.

KEYWORDS: Marriage, Family, Family Structure, Strengthening The Family, Traditions, Customs, Examinations, Young Family.

INTRODUCTION

The family serves as a social space and a pedagogical factor that ensures the eternity of social life, the continuity of generations, the continuity of upbringing, and influences how the next generation grows up. Man is formed in the family. Family is a source of love, respect, solidarity and kindness. It is these values that every developed society relies on.

As noted by President Sh.M.Mirziyoev, "it should be to further strengthen the foundations of the family, which are sacred to us, to create an atmosphere of peace, harmony and mutual respect in homes, to fill spiritual and educational work with concrete content."

Indeed, honest living, working, raising children in family relationships, which have been recognized for centuries and have risen to the level of religious and moral values, are a source of

social lifestyle development. In Eastern upbringing, the basis for the formation of an individual's worldview begins with the family.

The human child inherits genetically from the parents. He also has a share in the gene pool of his ancestors, of course. Biologists call this heredity. Dilbands, who open their eyes to the world of light, initially enjoy air, breast milk, and water, which are considered to be the highest material values. Then begins the factor of family upbringing, which is one of the important factors that provide the basis for the realization of personal maturity and ensure it.

What is the culture of family relationships? It is the creation of humane and appropriate conditions in the family, the full fulfillment of family responsibilities, the correct formation of family life, ensuring the behavior, worldview, ideology of family members, the continuity of family life. A strong family is the foundation of a strong society. Therefore, the society pays special attention to strengthening families, shaping and improving the individual's cultural outlook in family relations.

We must begin the scientific study of the common cultural worldview of the individual in the family and family relations by expressing his development in accordance with the laws of social development. The development of the family is related to the material production and spiritual life of society. It has been extensively analyzed in the scientific literature that the change in family forms is associated with changes in the spirituality of material production at all historical stages from the time of primitive society.

But the change in the material living conditions of society and the family does not in itself lead to spiritual maturity. When a person who is culturally poor becomes rich, he does not suddenly rise to the level of spiritual maturity. Educators-scientists study the educational aspects of this topic, paying special attention to the role of the family in the upbringing of the individual, highlighting the aspect of family education as part of general education; psychologists approach the family and family relationships from an ethno-psychological perspective. Ethnographers-historians have also studied the impact of family customs, traditions and rituals on the upbringing of young people, focusing on issues related to the origin of the family and the formation of a culture of family relations.

Our philosophers, in revealing the essence of the problem, based on the general anthropological law of the relationship between the individual and society, put forward the theoretical concept that the individual consists of a set of social relations. It is natural to draw another theoretical conclusion from the same concept that the upbringing of children in the family has a social character. Cultural scientists have been analyzing the impact of the culture of family relations on the upbringing of the younger generation.

It should be noted that in the works of Central Asian thinkers and enlighteners Farobi, Beruni, Ibn Sino, Yusuf Khos Hajib, Kaykovus, Devoni, AlisherNavoi, Babur, MunisKhorezmi, Bedil, Behbudi, Abdulla Avloni, QoriNiyazi, Cholpon, Fitrat and others. there are valuable insights into family and family relationships. In many of them, views on the subject have been streamlined and raised to the level of doctrine. In particular, in the works of Abu Ali ibn Sina "Morality", "Family Economy", AlisherNavoi "Hayrat-ulabror" and "Mahbub-ulQulub" special attention was paid to the family and considered it the main place in the development of man.

One of the founders of the Enlightenment movement in the early twentieth century, Fitrat in his work "Family" stated that it is possible to get rid of this stagnation, to reform society by building the family foundation, physical, mental and moral education of the younger generation. "The fate of a nation depends on the condition of the family in which it lives. Erda The stronger the family relationship, the stronger and more orderly the country and the nation." he writes.

The skill of the culture of family relationships also occupies a special place in mystical philosophy. In the sects of Ahmad Yassavi, BahovuddinNaqshband, NajmiddinKubro, who are the great representatives of this philosophy, we see that the role of parent-child relations in the development of children, the attitude of children to parents is emphasized.

The great scholars Al-Bukhari and al-Termizi also paid great attention to this topic in their hadith collections and works. In the hadiths after the Qur'an, the Prophet Muhammad (peace and blessings of Allaah be upon him) said: it is the duty of the child to the parents not to give, not to break their heart, to be polite in conversation, to do what they are told to do in a timely manner.

Issues of legal regulation of family and marriage relations during independence Otahojayev, the historical foundations of the spirituality of Uzbek families, the spiritual psyche, traditions, the problems of raising children from the point of view of the ideology of independence. Safarov, M. Mahmudov analyzes the role of the family in society, family upbringing, the role of family members in the family, national and universal upbringing in the family from a pedagogical point of view. Musurmanova, the essence of the family, the responsibility of parents in the upbringing of children, some national religious traditions related to the duty of childhood. Yusupov, issues related to the preparation of young people for family life. Halmatova analyzed.

The division of family species according to demographic and social structures has its own peculiarities and its influence on the culture of family relations. Most of the families in our country are full families. A complete family is a family consisting of parents and children. This is a typical family trait. Such families, in turn, are divided into patriarchal, nuclear, mesalcan. Another peculiarity of Uzbekistan is that today there is a large patriarchal family farm in Uzbek families. In this case, the economy of 2-3 generations is common, and family property, which is the basis of their economic unity, is in the hands of only the head of the family, and everyone is subject to him. That is why the marriage of relatives and descendants continues. The marriage of close relatives is also included.

When we make a comparative analysis of the characteristics of Eastern and Western families, the peculiarity of European families is explained by the prevalence of free life without marriage, the increase in divorces, the decrease in births. Some Western scholars believe that by completely abolishing marriage, marriage restricts a person's freedom, which is contrary to human nature. Of course, this is wrong and contradicts human progress.

The second characteristic of modern families is their nucleation (Nuclear is derived from the Latin word, which literally means "nucleus". It consists of a couple and children). Today, under the influence of Western civilization, this type of family is on the rise. In such families, conflicting relationships between the mother-in-law and the bride or brides-to-be are prevented because they live separately, and in a way of life they have a more valued, compassionate cultural relationship with each other. On the positive side of this issue, it leads to the formation of an individual's common cultural outlook in family relationships. The bride and groom, living separately from their parents, learn to live independently, to plan the family economy, to raise

children independently. Nuclear families will have the freedom to relax on family matters, make the most of their free time, and so on.

The third characteristic of modern families is the growth of mesalis. ("Mesallians" is a French word meaning families with large differences between the couple's social, cultural and economic positions). "Mesalyans" can be understood, for example, marriages between urban and rural people, intellectuals and workers and peasants, herdsmen and people of different nationalities. The increase in the number of mesalian families is also a genetically positive social phenomenon.

In Eastern upbringing, we parents should pay special attention to sexual education in ensuring family happiness and preparing young people for marriage. The famous philosopher Z. Freud taught that a family is built not only to live together, but also to live a full life, to meet human needs.

In deciding on a comprehensively healthy environment in the family, we can recommend the following social, pedagogical, psychological, spiritual and cultural criteria:

- Achieving a positive attitude of young people to sports, including family sports;
- Achieving the rational organization of life activities and the formation of reproductive culture in children;
- Study and widespread promotion of the unique traditions and values of our people as a key factor in a healthy lifestyle in the family;
- Enhancing the responsibility, capacity, literacy, pedagogical and psychological capacity of parents in the upbringing of children, ensuring the unity of family and social upbringing;
- Upbringing a spiritually and physically mature generation in the family, preparing young people for family life, equipping them with the secrets of modern professions;
- Achieving the formation of a common cultural worldview of children in family relationships.

It is clear from our rich scientific and cultural heritage, ancient customs and traditions that the family is a sacred value for us in any time and place. Therefore, our ancestors understood very well that the stronger the family, which is a social unit based on educational, spiritual-enlightenment, spiritual-moral, economic-legal relations, the more stable the development of society.

Today, our country is focused on building a democratic state governed by the rule of law and civil society. As we set ourselves the task of realizing our long and lasting national interests through a unique model of reform adopted in our country, the effective solution of this issue means, first of all, ensuring the family and its well-being, which is the smallest link in society. The family is a small part of society. The peace and prosperity of a society free from evil and corruption depends, first of all, on the peace of the family. Ensuring peace and happiness in the family will be sustained as its members understand and fulfill their responsibilities. The traditional nature of the family, its role in the system of national, religious and universal moral values, the role of the family environment in the upbringing of a harmoniously developed generation are playing an important role in the development of classical and modern philosophical thinking. Therefore, as a result of a scientific approach to the issue of family,

family relations, its philosophical study, the following can be identified as factors that lead young people to spiritual maturity:

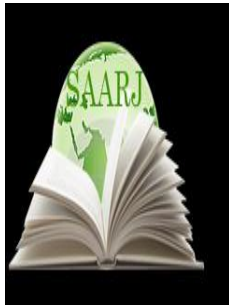
- First, to inculcate in the minds of young people the historical heritage and national values that enrich the spiritual world of young people in strengthening family ties;
- secondly, to develop the ability to understand and fight against the inhuman nature of foreign ideas, which are considered in the West as an example of democracy and are escalating in the world;
- Third, to explain to the younger generation the importance of national, religious and universal values in strengthening the family, related to the duty and responsibility of the family based on single marriage to society;
- Fourth, to promote Islamic principles and their spiritual significance in strengthening family ties among various segments of society, especially the younger generation;
- Fifth, to teach the content of laws and other normative legal acts regulating family relations and supporting families in the legal and political sphere.

In short, in Uzbek families, spiritual perfection is the basis for personal development. The qualities of generosity, hospitality, honesty, courtesy, loyalty, purity, decency inherited from our ancestors are an important aspect of our national mentality. It is expedient to form these qualities in the minds of the younger generation in the educational process, to enrich their psyche with the gems of the people, to pay more attention to national values.

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REVIEW ON MEASURING TRAINING EFFECTIVENESS, AN INTEGRATED MODEL OF TRAINING EFFECTIVENESS AND SATISFACTION WITH EMPLOYEE DEVELOPMENT INTERVENTIONS

Suleyman Abdureman Omer*; Nuradin Abdi Hassen**

*Rural Development and Agricultural Extension Department,
College of Agriculture and Environmental Sciences,
Institution of Haramaya University,
Oromia Region, ETHIOPIA
Email id: suleymanabdureman65@gmail.com,

ABSTRACT

The world is changing rapidly, and with businesses required to be more competitive, the need for employees to be on top of their job has increased. Change is the order of the day, working methods and techniques are witnessing a change giving birth to the need for employees to learn continuously. The most innovative form of technology used, regardless of company size was videotapes. The major barriers or obstacles to using more innovative tools (i.e., computer-based) were high costs and short life span of current computer technology. Every organization determines its training needs according to its own environment and observed signals. Performance reports, for example, may indicate that performance is declining (e.g., decrease in production numbers, lower quality, increased number of accidents, increased rejection rates, etc).

KEYWORDS: *Continuously, Interaction, Computer-Based*

1. INTRODUCTION

Employee training is not only linked to improved business results but is also a powerful factor in shaping employee attitudes. It creates a motivation for increased discretionary behaviour and a satisfaction with career development that ultimately leads to increased job satisfaction. Jobs with high scope and associated potential development lead to enhanced motivation, job satisfaction and performance. The present study seeks to identify and devise the mechanism on how to measure the potential enablers of a successful training event. The study also formulates a

measurement scale to gauge satisfaction with organizations “employee development” intervention. The study assumes that an increased satisfaction with the employee development is a strong catalyst in creating job satisfaction.

The research undertook employee development as a contingent factor to job satisfaction. Limited attempts have been made to measure satisfaction with training. Schmidt (2004) developed a model in the PhD dissertation whereas Sahinidis and Bouris (2008) used only one item scale to measure training satisfaction. Kauffeld and Lehmann-Willenbrock (2010) based their training evaluation only on items concerning the perceived content validity of the training, implementation of training content, and sales competence, thus limiting the scale to sales oriented trainings. There is certainly a gap in research, calling for the development of an appropriate scale of measurement for evaluation of training satisfaction. The current study proposes an integrated measurement scale to capture the overall training satisfaction and satisfaction with employee development intervention.

Training is a process that helps companies and employees cope with the effects of changes in the business world that result from competition, globalization, and technological advancements. The process essentially seeks to improve trainees’ skills, knowledge, attitudes, and/or on the job behavior. Brown (1994) indicated that a company seeking continuous improvement could use training managers to facilitate the implementation of total quality management, as they would play the role of change agents. Every organization determines its training needs according to its own environment and observed signals. Performance reports, for example, may indicate that performance is declining (e.g., decrease in production numbers, lower quality, increased number of accidents, increased rejection rates, etc).

A manager may recognize that the workplace is evolving because of job redesign or technological advancements. Some companies administer training programs on the job because of simplicity and lower costs. This usually takes one of two forms: First, a trainee may be assigned to an experienced employee who acts for the trainee as a teacher, mentor, or coach. Second, employees may be allowed to work at different jobs in the company according to established job rotation schedule in order to have good exposure to a variety of tasks. Other companies arrange for their training programs to take place outside the workplace (e.g., training institutes, suppliers of equipment, labs, etc). The common methods used for such off-the job training programs include classroom-based methods, multi-media-based methods, and simulation-based methods. **Classroom-based methods** are usually designed to provide specific technical knowledge and/or problem-solving skills. **The multi-media-based methods** use films, videos, and computers to demonstrate technical skills that are not easily presented by other methods. **Simulation-based methods** provide learning and skills by having the trainees actually performing the work using computer simulated programs, case analysis, experimental exercises, role playing, and group interaction. While determining training needs and generating new training programs for employees is important, yet it is not enough. There is also a need to evaluate the effectiveness of the training efforts in order to rationalize them.

Prior studies (e.g., Kirkpatrick 1994, Bramley and Kitson 1994, Clements and Josiam 1995, and Bedingham 1997) indicated that companies use different levels of analysis to evaluate training effectiveness. Some companies follow a traditional approach that focuses on trainees’ attitudes or reactions to a training program (e.g., trainee’s opinions about training materials, delivery

methods, effectiveness of the trainers, usefulness of the training program, etc). Others extend the training evaluation to incorporate some measured outcomes of the training programs (e.g., skills learned or knowledge gained, measured changes in trainees' behavior on the job after the training, etc). Still other companies seek to measure the net financial effects of the training programs (or their returns) to the company, as a whole, or to its individual departments. Bramley and Kitson (1994) indicated that measuring the effectiveness of a training program at the reaction level and/or the levels of skills learned or knowledge gained are the most common approaches that companies use. However, Tan, Hall and Boyce (2003) indicated that trainee reactions to training programs tended to be poor predictors of training success.

This review examines the effectiveness of one of the training programs held in the United Arab Emirates (UAE) in 2003 using the first two levels of analysis. It focuses on trainees reactions to the training program (i.e., reactions to the training material and the trainers) and the level of skills and knowledge that trainees gained from the program. It also investigates the roles of trainees effort and their perceptions of the training usefulness, after controlling for the effects of demographic variables, in explaining achieved levels of effectiveness.

1.1. Review an integrated model of training effectiveness and satisfaction with employee development interventions

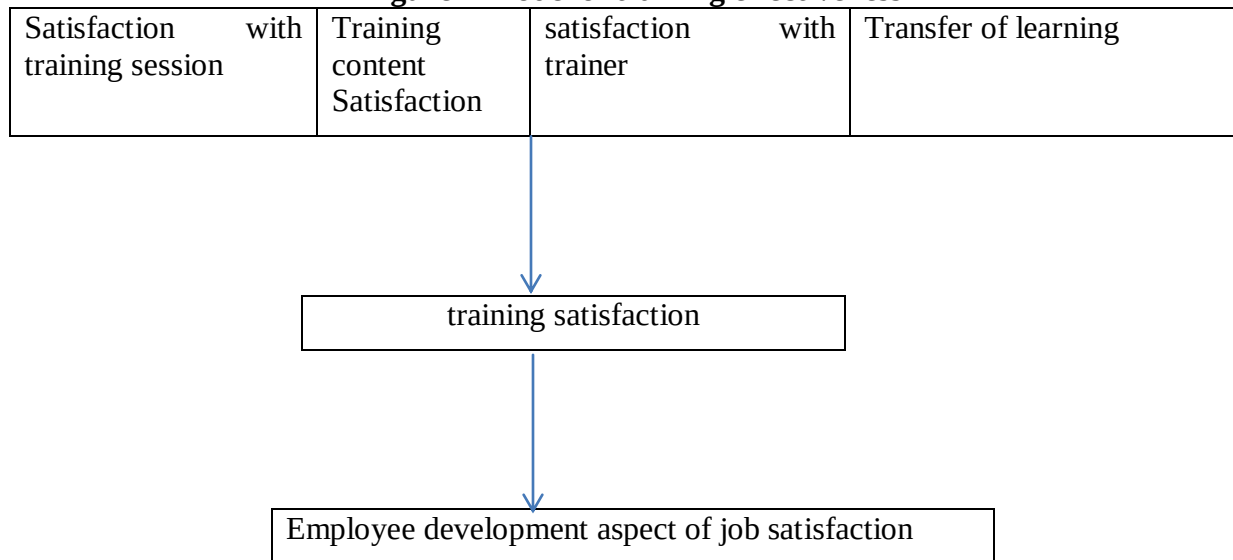
1.1. Employee training

The world is changing rapidly, and with businesses required to be more competitive, the need for employees to be on top of their job has increased. Change is the order of the day, working methods and techniques are witnessing a change giving birth to the need for employees to learn continuously. The objective for the organizations is to improve business processes through enhanced learning that stimulates better performance. The intent for any business entity is to create an engaged and committed employee base resulting in better performance of the individuals and business. Training acts as a pathway for learning, learning and development is an important factor in creating a sense of progression and purpose that leads to organizational commitment (Armstrong, 2009). Choo and Bowley (2007) found that training positively impacts productivity, which results in higher level of customer and employee satisfaction thus increasing brand value.

Aligned with the aforementioned researchers findings Michael and Combs (2008) in their study, revealed that training can reduce probability of failure as training effects performance, enlarges the skill base and develops the level of competence, It helps in developing climate for learning which not only aids in training to flourish but also supports self-managed learning practices like coaching and mentoring (Armstrong, 2006). Truelove (2006) asserted that learning comes either by experience or training whereas Sadler-Smith (2006) referred to learning as an “elusive phenomenon” and drew upon learning from various fields whereas training was identified as one of those fields. He referred it to be a very formal, systematic and step wise process, defined as: The systematic acquisition of skills, rules, concepts or attitudes that result in improved performance in another environment. Striking in the above definition is the term “another environment” which actually draws onto the need of providing training, it shows that the current level of skills might not be suitable for the changing environment, as identified by Buckley and Caple (2004) that to survive and prosper in times of change; organisations would need to respond

in a timely and flexible way, thus survival and growth would depend on its ability to cope with the change, implying the need for staff to be equipped with new knowledge, skills and attitudes.

Figure 1 Model of training effectiveness



“ Management takes it for granted that employees already know the benefits, this makes the whole learning scheme nebulous. ”

Garratt (1997) put forth the significance of learning. He postulated rate of learning shall be greater or equal to the rate of change so that one is able to survive, optimize returns or exploit new opportunities:

Rate of learning = Rate of change = Survival

Cementing the equation is Simmonds (2003) who also proposed that learning is firmly located in the centre of organisational change. Simmonds (2003) proposed:

Learning = Action + Reflection

Reflection is an integral part of learning, it offers individuals, teams and businesses to look back at what happened, identify the weaknesses, strengths and assess how things could have been done in a better way and ultimately leads to necessary changes. Eaglen et al. (2000) in their study at McDonalds identified systematic approach to training as a way to achieve strategic objectives. Training is in direct benefit to the organisation as identified by Burden and Proctor (2000) that a firm's ability to learn faster than its competitors may be its only sustainable competitive advantage. Acton and Golden (2003) compared firms that are committed against firms that are non-committed to training, the results yielded showed that training not only positively impacted job performance but also aided in improving employee ability to manage stress at work. Similarly the study by Lopez et al. (2005) in Spanish companies found organisational learning to be a mediator in high performance human resource and business performance. However Clarke (2004) in his research contradicted the findings and interpreted that there emerged some association between training and business performance, but causality was not established. The present study identifies four different yet interrelated dimensions of training satisfaction. The

study proposes that being considerate of the four dimensions would result in a more satisfied employee training.

1.2 Satisfaction with training session

Organizations often fail to communicate what they are trying to accomplish and how the training will benefit each employee. Management takes it for granted that employees already know the benefits, this makes the whole learning scheme nebulous. In most cases, the workforce does not understand the long-term benefits, elements that need to be shared with everyone early in the process. It actually dents the whole process as employees will not be able to do what they are expected to do after the training session. Dawe (2003) specified one of the drivers for a successful training program, he summarized that success in any activity can be thought of in terms of the extent to which an activity achieves its desired objectives. Buckley and Caple (2004) underlines the significance of training objectives, they help speculate the activities one should be able to perform at the end of training whereas Silberman (2006) highlighting the importance of objectives, called them to be the “pillar” of training programs and lack of solid objectives meant a total catastrophe. Apart from this objectives would facilitate in seeking an answer to the question of “Why” do the trainees need to be at the training session.

It could be conclusively proposed that objectives ultimately lend a helpful hand in bringing a motive to the training session. Jolles (2005) insisted that establishing utility of training program would make trainees understand the need to learn, the training program should answer the very basic question of the learner I-e “What’s in it for me”. Silberman (2006) presented the value objectives bring to the training program; they not only help in preventing too much and too little teaching but also help in forming basis for measuring the effectiveness of the training in terms of knowledge, skills and attitudes. It could be claimed that objectives help in fencing the training so that it does not go out of bounds. Wickramasinghe (2006) also claimed objectives are utilized throughout the training effort. They are frequently used to choose the type of training programmes, to provide an overview of what participants are going to learn, to explain to resource persons what is expected after the completion of the program and to validate/evaluate training programs.

1.3 Training content satisfaction

Increasingly heavy amounts are being directed towards the enhancement of employee skills base; however the challenge lies in the fact that work-related knowledge is outdated quickly. Content validity concerns the degree to which trainees feel that training content reflects their job requirements. (Kauffeld and Lehmann-Willenbrock, 2010). This calls for sufficient attention to be put in while devising the contents for the training program. Kauffeld and Lehmann-Willenbrock (2010) study results suggested that incorporating the main knowledge, skills, and abilities needed in a certain job will result in higher content validity of the training while Kirkpatrick (1994) noted learning as the second level of training effectiveness and referred to as the skills and knowledge acquired in training are most important.

1.4 Satisfaction with trainer

The person who is entrusted with the job to convey the training objectives is the trainer, trainer holds centre stage in achieving efficacy with the training program, Gauld and Miller (2004) emphasized that effectiveness of trainers who deliver the training is known to be momentous in

the final return on training investment. Hinting on the characteristics of the successful trainer Moss (1993) suggested that trainer needs to plan, be prepared, and show encouragement and empathy to the learners. The role of trainer is changing, from a mere role of providing some skills, now according to Buckley and Caple (2004) it is of active communicator, pro-active thinker, one who builds onto achieve training objectives with strategic dimension of the organisation holding central importance. Trainer plays an important role in transferring the learning to work. Broad (2000) identified one of the barriers to transfer the training is “poor training design and/or delivery”. Thus a complete trainer is one who has the skills ranging from foundation to administration.

1.5 Transfer of learning

The study also takes into account the perspective of the results of training in the organization. Transfer is insufficiently considered in both practice and academic research. Content validity concerns the degree to which trainees feel that training content reflects their job requirements (Kauffeld and Lehmann-Willenbrock, 2010). Kirkpatrick (1994) at the third level of training effectiveness specified the question of transfer from training to work. Successful accomplishment at this level is represented by trainees’ ability to use the acquired skills and knowledge on the job.

Sofo (2007) reported learning acquired from training sessions is applied and maintained on the job to increase performance and productivity but still only about 10 percent of what is learnt in training is applied on the job (Fitzpatrick, 2001). Even if the knowledge obtained through training is accurate, organizational performance will not improve if dichotomy in implementation exists in the business organization (Tsang, 1997). The study by Seyler et al. (1998) implied that environmental variables (opportunity to use, peer support, supervisor sanctions, and supervisor support) have a broader influence affecting not only post-training behaviour, but motivation to transfer but on the contrary in their study Klink et al. (2001) focused on just one environmental behaviour I-e supervisory behaviour and did not found any convincing evidence for its impact on the transfer of training.

1.6 Employee development aspect of job satisfaction

A UK bakery turned around its business after aligning its training with employee development which resulted in an expansion from two shops in 2002 to 22 shops in 2010 (Pollitt, 2010). Job satisfaction – refers to positive or negative feeling/perception one has about his/her job. Rowden and Conine (2005) called it a subjective perception of work, as satisfying factor for one employee might not act as a satisfying feature for another. Job satisfaction is widely researched topic (Curtis, 2007) because most individuals spend a large part of their life at work, and understanding the factors that contribute to job satisfaction are important in improving the overall well-being of individuals. One human resource function that aids in changing employee behaviour is that off support from employer for personal development, it leads to employees positive responses as being engaged and committed (Maurer and Lippstreu, 2008). Opportunities for employee development determine personnel satisfaction (García-Bernal et al., 2005) resulting in both an improvement in worker productivity as well as a reduction in the cost of hiring and training workers. Likewise Linz (2003) deduced that job satisfaction correlate positively with labour productivity and negatively with labour turnover, both of which influence firm performance. In order for a firm to positively impact its performance it has to take a step

that increases employee satisfaction with the job. One such step is identified by Gazioglu and Tansel (2006) who specified employees who received job training were more satisfied than those who had no training opportunities.

Aligned with the aforementioned findings, the value of employee development is further cemented in a study conducted in America and Canada pointed that receiving training that enhanced skills and capability was a key component of what potential candidates looked for in jobs (Community Banker, 2001). The above assertions and findings lead us to propose that organizations failing to provide adequate employee development initiatives will fail to attain optimum level of employee satisfaction and will face turnover issues. Herzberg (1968) proposed training to be a hygiene factor thus training may not be a primary cause of employee satisfaction but on the contrary Rowold (2008) in their empirical study found training was specifically designed to accomplish an explicit goal: enhanced job satisfaction likewise Bedingham (1997) specified training brought changes in on the job behaviour, the benefits of this were established in the study by Eaglen et al. (2000), some of them are improved productivity, employee satisfaction, reduced turnover and willingness to accept strategic and organisational change.

Buckley and Caple (2004) suggested the categories of job satisfaction that can have an impact due to training. One is intrinsic that may come from performing task well or being able to apply the skills learnt, it infuses a sense of being developed and having an increased competence whereas extrinsic job satisfaction comes from extra earning that comes from improved job performance, the ability to perform the task, applying the skills and improved job performance stem from the learning that comes from training. The study of Linz (2003) among Russian workers agreed with the above assertion and maintained that workers reporting high levels of job satisfaction tend to be those who have a high expectation of receiving intrinsic job characteristic, by developing additional skills, learning new things, accomplishing something worthwhile and all this is possible to achieve through training.

Acton and Golden (2003) in their study identified that training of employees does not only positively relates to employee job satisfaction but also contributes in building a negative relation to turnover cementing the assertion is Winterton (2004) who stressed on failure to invest in training and development contributes to higher labour turnover. The researches support the conjecture that offering talented employees training to keep them current on their job functions and allowing them to learn new skills can be utilized to improve satisfaction with the organisation. Coetzer (2006) discovered that employees' perceived lack of incentives to learn posed a challenge in motivating and retaining employees while it threatened satisfaction of employees at work. To meet this challenge Barnett and Bradley (2007) made it imperative on the organisation to support employees in developing their careers which increased not only their job satisfaction but also their career satisfaction, this according to Sadler-Smith (2006) could be done through training as it provides a mean to master the skills employee's needs to advance in the company.

2. Review of Measuring Training Effectiveness

Perdue, Ninemeier, and Woods (2002) assessed perceived relative effectiveness of alternative training methods (in relation to specific objectives) among managers of private clubs. They used an email questionnaire to collect their data from a random sample of 123 private club managers in USA. The results indicate that one-to-one training is considered the most useful overall

method and the preferred method for all objectives except interpersonal skill development. The use of videotapes ranked fifth best overall training method. Audio conferencing, paper and pencil methods, program instruction, audio-tapes, computer conferencing, and self-assessment were considered the least effective training methods. Buch and Bartly (2002) examined the relationship between learning styles and preferences for alternative delivery modes used by most organizations today. Delivery modes included computer-based methods, TV-based methods, print-based methods, audio-based methods, and classroom-based methods.

Learning styles included convergers, accommodators, divergers, and assimilators. The authors used a questionnaire to collect their data from a sample of 165 employees of a large US financial institution. The results support the notion that learning styles should be taken into account when making decisions regarding the use of delivery modes available today for training purposes. It was found that convergers had a strong preference for computer-based delivery while assimilators had a strong preference for print-based delivery. However, there was a strong overall preference for classroom-based delivery regardless of the learning style. Klink and Streumer (2002) examined the effectiveness of on-the-job training and some potential factors that explain effectiveness of two samples drawn from two Dutch companies. The first sample consisted of 36 telephone sales staff who were trained to improve the quality of the telephone sales call, with the underlying objective of increasing sales.

The results indicate higher levels of effectiveness for telephone sales staff training than the counter clerks. Trainees' perceptions of managerial support and experience as sales employee were the main explanatory variables for training effectiveness in the first sample. For the second sample, workplace and trainees' self-efficacy were the main explanatory variables for training effectiveness. Hashim (2001) surveyed 262 training institutes in Malaysia to identify the practices of training providers for evaluating training programs. The results show that training providers use different evaluation methods that include trainees' feedback, observations, interviews, performance analyses, and training reaction forms. However, the most used method was the training reaction forms as clients require them. Bolt, Killough, and Koh (2001) examined the behavior modeling and lecture-based approaches to computer training using a social cognitive theory framework. Their emphasis was on task complexity as an added variable to prior performance, computer self-efficacy, outcome expectations, and performance.

The authors indicated that soft skills such as listening, communication, teamwork and leadership are the least preferred in terms of tangible training gains. Training should only involve tangible, hands-on skills and observable behaviors. Thus, training objectives should focus on skills and competencies. The authors also indicated that for training to be successful, it is imperative that the goals of training be in line with the company's strategic plan. The strategic training plan should identify and detail problems that are currently impeding the company's potential for maximum profitability and should also serve as a reference point for determining success or failure of the training program. The time devoted to a given training program should be determined by how long it takes employees to master the skills that the company deems as important. Leat and Lovell (1997) discussed some of the weaknesses of current training needs analysis.

They cited imprecise training goal setting and failure of the performance appraisal reviews to diagnose needed areas to improve employees' skills in the working environment. The authors

indicated that a variance between actual performance and performance objective should uncover training needs. But these needs should not be limited to that level only. Possible improvements at the organizational and task levels should also be evaluated, as part of training needs analysis. Training expectations should also be developed and detailed after an extensive research into the interrelationship between inner and outer contextual changes and within the organization and individual goals.

The authors also indicated that evaluation of training must be linked to the organization's objectives. Effective training must have a value to the organization and training approaches should match the organizational culture. Mann and Robertson (1996) examined trainees reactions and knowledge gained as measures for effective training. The results indicate that training increased trainees' knowledge. However, positive attitudes do not predict how well people are able to perform actual tasks. Attitudes and reaction measure are not linked to later performance and therefore such measures should be used with caution as ways of evaluating training programs. Hedges and Moss (1996) examined the cost effectiveness of training commercial vehicle drivers. They selected a sample of 80 drivers who went through a specific driver training program and a matched sample from those who did not attend the driver training program. All drivers were from the Parcel force in North England. The parameters investigated were operating costs (in terms of fuel consumption), accident and repair cost, maintenance costs, and driver's attitude.

The results indicate that trained drivers experienced lower stress levels and lower accident rate compared with those drivers who did not attend the training program. On the financial side, the training program resulted in a total saving of about 33,000 British pounds. Harris (1995) surveyed the opinions of a sample of American directors of human resources and training programs about their training methods and the quality of each of these methods. The results indicate that the most used method of training is the classroom method. One-on-one training such as on-the-job training is the method most used by smaller firms. The most innovative form of technology used, regardless of company size was videotapes. The major barriers or obstacles to using more innovative tools (i.e., computer-based) were high costs and short life span of current computer technology. The author concluded that training methods and tools used to train employees were not as effective or efficient as they could be and recommended using computer-based technology and multi-media as training methods as they save time and money.

Bramley and Kitson (1994) discussed four levels of training evaluation. The first is the trainees' reaction to the program. It focuses on assessing what the trainees thought of the training program, usually in the form of a questionnaire. The second level is trainees' learning. It focuses on measuring their gained skills that were specified as training objectives. The third level is the behavioral outcome. It focuses on measuring aspects of job performance, which are related to the training objectives. The fourth level is the organizational results. It focuses on the results of the training program to organizational objectives and other criteria of effectiveness. The authors indicated that evaluation at the third and fourth levels are not well understood because of measurement problems. Defining the criteria by which improvements can be measured will help applying the evaluation levels. Cost benefit analysis, impact analysis, and analysis of organization processes could produce criteria for measuring improvements.

3. CONCLUSIONS

The objective of the study was to formulate a scale for the assessment of training and an important feature of job satisfaction, i.e. employee development. Where previous studies have failed in a provision of a suitable and extensive scale that taken into account all the necessary enablers of a successful training event the scale developed highlights the potent factors. The study also develops a scale to assess the effect of training initiative on employee development aspect of job satisfaction. As for evaluation of training the study identified four factors to be contingent to an effective training, they were:

1. Satisfaction with the training session.
2. Training content satisfaction.
3. Trainer satisfaction.
4. Transfer of learning.

Examined empirically two levels of measuring training effectiveness using a sample of trainees who attended a training program in 2003. The first level focused on trainees' reactions to the training material and the course instructor as documented in the trainees' evaluation forms. The second level focused on knowledge and skills gained from training as measured by scores on entry and exit tests. Conclusion that the training course was effective. In conclusion, the researcher recommends some avenues for future research. First, training institutions use different training aids and methods (e.g., computers, cases, and simulations), there is a need to address possible effects of such training aids and methods on training effectiveness. Second, the literature indicates that some companies prefer to have on-the-job training while others prefer to send their people to different training sites. Therefore, there is a need to study possible effects of training locations on training effectiveness.

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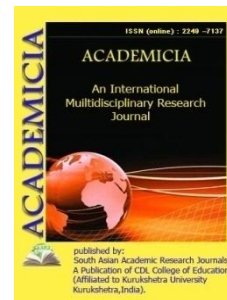
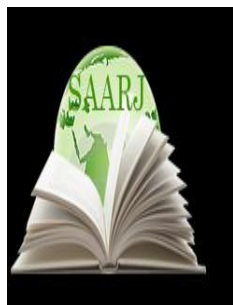
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THE CURRENT STATE OF STUDY OF ANCLEANES OF KARAKALPAKSTAN

Turemuratova Gulistan Ismailovna*; Nagmetov Hamid Salavat ogli**

*Ph.D., Associate Professor,
Department of General Biology and Physiology,
Karakalpak State University named after Berdakh, Nukus,
UZBEKISTAN

**2nd year student,
Direction of the bachelor's degree "Water Resources and Aquaculture",
Irkutsk State Agrarian University named after A.A.Yezhevsky,
UZBEKISTAN

Email id: publicate0811@gmail.com

ABSTRACT

Based on the collection materials 2015-2019. The taxonomic composition, abundance and biomass of zooplankton in different ecological zones of the reservoir are considered in seasonal and interannual aspects. The author faced the problem that the same species are marked by different researchers under different names. As a result of the work on synonymy, he was able to bring the species list of zooplankton of Lake Sudochye to the current state at that time (1988). The color is gray with a yellowish tinge. Antennulae 17-segmented. The posterolateral parts of the 4th thoracic segment are not elongated into pterygoid outgrowths; their posterior surface is characterized by a large tubercle. P1-P4 are three-segmented. P5 is two-segmented. They inhabit various biotopes - plankton, benthos, periphyton, neuston. The importance of cyclops in water bodies is determined by their significant number and variety of connections with other elements of ecosystems.

KEYWORDS: Priaralye, Nauplii, Copepodites, Adults, Microalgae, Detritus, Rotifers, Bioindication, Identification.

INTRODUCTION

The relevance of research

One of the most important problems in the Aral Sea region is effective monitoring of ecosystems, including aquatic ecosystems. One of the important components of aquatic ecosystems are the copepods of the order Cyclopoida. Cyclops live in almost all types of aquatic ecosystems, avoiding only hyper saline water bodies. They inhabit various biotopes - plankton, benthos, periphyton, neuston. The importance of cyclops in water bodies is determined by their significant number and variety of connections with other elements of ecosystems.

Cyclops are an important part of the food supply of commercial fish, and their larvae, nauplii, are consumed by fish fry at the very first stages of development (Bogatova, 1980). On the other hand, large species of cyclops themselves can attack fish fry causing their death. In ecosystems, cyclops play a role, as a rule, of consumers of the 1st (nauplii, younger copepodites, as well as adults of many species) and 2nd (adults and older copepodites of many species) orders. Consuming microalgae, detritus, protozoa, rotifers, and crustaceans Cyclopoida have a significant effect on the dynamics of processes in aquatic ecosystems (Monakov, 1976).

The study of the Aralian cyclops is clearly insufficient. This is especially felt in recent decades, when significant progress in the taxonomy of Cyclopoida requires a revision of the composition of the fauna of this group of the Aral Sea region. Indeed, only with a sufficiently accurate species identification of cyclops can they be used in bioindication, parasitology, and the study of processes occurring in aquatic ecosystems.

PURPOSE OF THE PROBLEM

The main purpose of the study is to conduct an audit of copepods, including the Cyclopoida of Karakalpakstan. To achieve this goal, the following tasks were pursued:

- Determination of the species composition of the Cyclopoida of Karakalpakstan;
- Study of the structure and variability of Cyclopoida;
- To analyze the zoogeographic links of the Cyclopoida of Karakalpakstan;
- Study of the distribution of Cyclopoida in the regions of Karakalpakstan, types of water bodies, biotopes;
- Studies of the seasonal development of Cyclopoida in Karakalpakstan;
- Study of Cyclopoida of Karakalpakstan as intermediate hosts of parasitic helminths.
- To assess the importance of Cyclopoida in the aquatic ecosystems of the region.

MATERIAL AND METHODS

The material for the work was our own collections in 2015-2019 on various water bodies (lakes, rice paddies, fish ponds, puddles, swamps, canals) of Muinak, Nukus, Ellikkala, Takhtakupyr, regions of Karakalpakstan. In total, 300 samples from 7 reservoirs were processed.

Samples were collected with conical plankton nets of different diameters (nylon sieve NN 56-78), stretching them from the bottom to the surface, or by scooping up a certain volume of water using various containers (depending on the type of reservoir) and filtering it through the plankton

net. Samples were fixed with 3-4% formalin. The material was processed in laboratory conditions using microscopes MBS-9 and Biolam.

To determine, study morphology and sketching, crustaceans were placed sequentially in 50% and 100% glycerol and dissected under a stereoscopic microscope using sharpened entomological pins. The preparations mounted on a slide were covered with a cover slip on plasticine legs and edged first with fir balsam and then with pedicure varnish.

All drawings were made using a RA-4 drawing apparatus. The seasonal development of cyclops was studied in fish ponds and lakes. During the entire growing season of 2015-2019, from April to October, plankton samples were taken 1-2 times a month in 6 feeding and growing ponds. The area of pudd is hectares, the depth is about 1 m. Samples were taken in a 10-liter bucket in 5 replicates and filtered through a plankton net. To determine the quantitative indicators of the development of planktonic cyclops and zooplankton in general, zooplankton organisms were counted under a microscope using pipettes and a Bogorov camera. Counting was carried out separately for different species, size and age groups. This made it possible to estimate the abundance of zooplankton. To calculate the biomass, we used the obtained data on the number and the calculated data on the individual weights of organisms. The latter were calculated according to the well-known formulas of allometric growth that relate weight to linear dimensions (Salazkin et al., 1984).

The state of knowledge of the Cyclopida of Karakalpakstan

The history of studying the Cyclopida of the Aral Sea region is almost 100 years old. The first information about the cyclops of Karakalpakstan was given by V. Meisner (1908) in a work devoted to the microscopic fauna of the Aral Sea. The most extensive studies of the zooplankton of Karakalpakstan were carried out by D.A. Aripov and A.M. Mukhamediev (Aripov, 1965; 1968; 1970, 1971; 1972; Aripov, Mukhamediev, 1967, 1974; Mukhamediev, Aripov, 1974). These authors studied the zooplankton of rice paddies, collector-drainage canals, and khauz. Among other planktonic animals, they noted a number of cyclops species: *Ectocyclops phaleratus*, *Microcyclops varicans*, *Microcyclops karvei*, *Microcyclops* sp., *Microcyclops dengizicus*, *Mesocyclops leuckarti*, *Mesocyclops leuckarti* var. *pilosus*, *Mesocyclops oithonoides*, *Mesocyclops crassus*, *Acanthocyclops vernalis*, *Acanthocyclops vernalis* var. *robustus*, *Acanthocyclops bicuspidatus* var. *odessana*, *Cryptocyclops bicolor*, *Macrocyclops albidus*.

In particular, these authors indicated that among many species of crustaceans of tropical and subtropical origin, there is also a cyclops *Microcyclops karvei* (Aripov, Mukhamediev, 1967).

In a special work, Mukhamediev and Aripov (1974) provided information on the bioecology of copepod crustaceans in small water bodies of the Aral Sea region - distribution, fertility, data on abundance, size, seasonality.

S.K.Kazakhbaev (1988) investigated in 1969-1986. and summarized the literature data on the zooplankton of Lake Sudochoye. This is by far the most complete and deepest study of the zooplankton of the Southern Aral Sea region. The author faced the problem that the same species are marked by different researchers under different names. As a result of the work on synonymy, he was able to bring the species list of zooplankton of Lake Sudochoye to the current state at that time (1988). According to the researcher, 106 species and forms of plankton animals were

identified in the lake zooplankton, including 52 (49%) species of rotifers, 36 (34%) species of cladocerans, 18 (17%) species of copepods. Among the latter there are 12 species of cyclops: *Macrocyclus albidus*, *Macrocyclus fuscus*, *Paracyclus fimbriatus*, *Cyclops vicinus*, *Cyclops strenuus*, *Cyclops* sp., *Eucyclops serrulatus*, *Acanthocyclops viridis*, *Microcyclus bicolor*, *Microcyclus* sp., *Mesocyclops leuckarti*, *Thermocyclops crassus* (Kazakhbaev, 1988). The author noted that the number of species varied significantly in different periods of research. The reason for this could be differences in the amount of materials that the authors had at their disposal, as well as in the duration of the observation periods. Comparison of changes in species diversity revealed a negative relationship with the dynamics of the mineralization of the reservoir. Moreover, copepods were probably the most resistant to fluctuations in mineralization.

With the increase in the salinity of the Aral Sea, there was a general decrease in biodiversity, including the diversity of crustaceans. So, by the end of the 1970s. former dominants such as *Acanthocyclops viridis* and *Mesocyclops leuckarti* were extremely rare (Andreev and Semakina, 1978). In the salinized areas of the sea (24-28 o / oo), only *Halicyclus neglectus rotundipes* was recorded (Andreev et al., 1978).

15 species of cyclops were identified by T. Allaniyazova (1977, 1980) in the course of parasitological studies at Lake Ashchikul, Dautkul reservoir, rice paddies and collectors. Almost all of the noted species were carriers of helminths. In Lake Dautkul, a spontaneous infection of crustaceans with botryocephals was noted. The carriers of the invasion were 7 species: *Macrocyclus fuscus*, *Eucyclops serrulatus*, *E. macrurus*, *Acanthocyclops viridis*, *Mesocyclops leuckarti*, *M. crassus*, *M. oithonoides*. The average extensiveness of the invasion was 1.9%. Some 11 species of cyclops were infected with bird cestodes:

M. fuscus, *M. albidus*, *E. serrulatus*, *E. macrurus*, *E. macruroides*, *Ectocyclops phaleraatus*, *A. viridis*, *M. leuckarti*, *M. crassus*, *M. oithonoides*, *Cyclops strenuus* (Allaniyazova, 1980). The infection rate ranged from 0.1 to 0.6%. Larvae of 13 cestode species were observed:

Confluaria capillarioides, *Diorchis elisae*, *Diorchis ransomi*, *Diorchis inflata*, *Diorchis stefanskii*, *Diploposthe laevis*, *Fimbraria intermedia*, *Microsomacanthus paramicrosoma*, *Microsomacanthus compressa*, *Microsomacanthus fausti*, *Retinometra macracanthos*, *R. venusta*, *Anomataenia* cf. *globulus*.

Seasonality of infection was noted. Only isolated finds of geminolepids were attributed to the winter period. The highest infection rate was observed in summer. In autumn, the infestation of copepods with cestode larvae gradually decreased (Allaniyazova, 1980).

Embergenov (1986) investigated the zooplankton of the brackish-water lake Ashikul in the vicinity of Nukus. The only cyclops he met was *Acanthocyclops viridis* (Jurine). The same species is given by Daribaev (1969) for lakes Sudochoye and Karateren.

Only *Cyclops strenuus* from *Cyclops* was recorded in Lake Sarykamysh by N. Mnazhev (1986) and Embergenov et al. (1987), and only *Mesocyclops leuckarti* - in the same place and at about the same time by Z.M. Zamanmuradova (1986). It should be noted that Embergenov et al. (1987) give unusually high rates of quantitative development of zooplankton for this lake - biomass up to 73 g / m³! In the memory of LP Pavlovskaya (1990), "in terms of the rate of production of zooplankton biomass, Lake Sarykamysh is ahead of other reservoirs of the lower reaches of the Amu Darya, which are part of the same irrigation and drainage system". Mnazhev (1986) also

provides data on the significant biomass of zooplankton in Sarykamysh in spring - up to 11.7 g / m³. In summer, the biomass was significantly lower - 3 g / m³, including copepods (mainly diaptomus) - 1.4 g / m³.

Seasonal changes in the composition of planktonic copepods of Lake Ashikul (2014, 2015, 2018): in March - April, Cyclops vicinus, which fell out of plankton in May, dominated in plankton. At the same time, thermophilic forms, including Mesocyclops crassus, gain mass development in plankton. Among other cyclops, Macrocyclus albidus and Eucyclops macrurus were noted here (Ainazarov and Mukhamediev, 1974). The general indicators of the development of zooplankton in this reservoir were very significant: in spring and summer 7-8 g / m³, in autumn - 1.7 g / m³.

TABLE 1. CYCLOPS TAXA RECORDED IN THE WATER BODIES OF KARAKALPAKSTAN WITH OPENLY TO PREVIOUS RESEARCHERS.

№	Taxa	Source
1	Halicyclops aequareus	V. Meisner (1908) .
2	Halicyclops neglectus rotundipes	Morduxhay-Boltovskoy (1972), Boruskiy (1972).
3	Eucyclops serrulatus	Nikolskiy, Pankratova (1934); Akatova(1950); Ivanova (1964); Kazakhbaev (1988)
4	E. macrurus	Akatova (1950), Ivanova (1964), Allaniyazova (1980), Mukhamediev (1974)
5	E. macruroides	Akatova (1950), Allaniyazova (1980)
6	Macrocyclus albidus	Nikolskiy, Pankratova (1934); Akatova(1950), Aripov , Mukhamediev , Allaniyazova
7	Macrocyclus fuscus	Akatova (1950). Allaniyazova (1980)
8	Ectocyclops phaleratus	Allaniyazova (1980)
9	Paracyclops fimbriatus	Kazakhbaev (1988), Aripov , Mukhamediev .
10	Paracyclops affinis	Kazakhbaev (1988), Akatova (1950). Allaniyazova (1980)
11	Cyclops vicinus	Akatova (1950). Allaniyazova (1980)
12	Cyclops strenuus	Akatova (1950), Ivanova (1964), Embergenov . (1987) Allaniyazova (1980)
13	Acanthocyclops viridis	Daribaev (1969), Ivanova (1964), Embergenov (1986) Allaniyazova (1980)
14	Acanthocyclops vernalis	Aripov , Mukhamediev (1980)
15	Acanthocyclops vernalis var. robustus	Aripov , Mukhamediev 1980)
16	Acanthocyclops bicus-pidatus var. odessana	Aripov B, Mukhamediev (1980)

17	Acanthocyclops bisetosus	Allaniyazova (1980)
18	Microcyclops dengizicus	Aripov , Mukhamediev (1980)
19	Microcyclops bicolor	Nikolskiy, Pankratova (1934), Aripov , Mukhamediev Allaniyazova (1980)
20	Microcyclops varicans	Aripov , Mukhamediev (1980)
21	Microcyclops karvei	Aripov , Mukhamediev (1980)
22	Mesocyclops leuckarti	Z.M. Zamanmuradova Kazakhbaev (1988)
23	Mesocyclops leuckarti v. pilosus	Aripov , Mukhamediev Allaniyazova (1980)
24	Mesocyclops crassus	Allaniyazova (1980)Mukhamediev (1974)
25	Thermocyclops crassus Mesocyclops dybowskii	Kazakhbaev (1988) Allaniyazova (1980)
26	Mesocyclops oithonoides	Allaniyazova (1980)

In the water bodies of Karakalpakstan, we found 32 species of cyclopids belonging to 14 genera of 3 subfamilies:

Halicyclopinae

1. Halicyclops rotundipes Kiefer, 1935
2. H. spinifer Kiefer, 1935 **

Subsem Eucyclopinae

1. Ectocyclops phaleratus (Koch, 1838)
2. Eucyclops serrulatus (Fischer, 1851)
3. E. macrurus (Sars, 1863)
4. Macrocyclus albidus (Jurine, 1820)
5. Paracyclops affinis (Sars, 1863)
6. P. fimbriatus (Fisher, 1853)

Subsem Cyclopinae

1. Acanthocyclops robustus (Sars, 1863) **
2. Apocyclops dengizicus (Lepeschkin, 1900)
3. Cryptocyclops bicolor (Sars, 1863)
4. C. linjanticus (Kiefer, 1928) **
5. Cyclops vicinus Uljanin, 1875.
6. C. furcifer Claus, 1857 **
7. Diacyclops bicuspidatus (Claus, 1857) *

8. *D. odessanus* (Schmankevitch, 1875)
9. *D. bisetosus* (Rehberg, 1880)
10. *Megacyclops viridis* (Jurine, 1820)
11. *Microcyclops karvei* (Kiefer et Moorthy, 1935)
12. *M. pachyspina* Lindberg, 1937 **
13. *M. rechtyae* Lindberg, 1960 **
14. *M. rubellus* (Lilljeborg, 1901) *
15. *Mesocyclops aequatorialis similis* Van de Velde, 1984
16. *M. aspericornis* (Daday, 1906)
17. *M. leuckarti* (Claus, 1857)
18. *M. ogunnus* Onabamiro, 1957
19. *M. pehpeiensis* Hu, 1943
20. *Thermocyclops crassus* (Fischer, 1853)
21. *Th. dybowskii* (Lande, 1890)
22. *Th. rylovi* (Smirnov, 1928)
23. *Th. taihokuensis* Harada, 1931 **
24. *Th. vermifer* (Lindberg, 1935) *

As can be seen, representatives of the subfamily Cyclopinae (24 species) predominated, marine and brackish water representatives of the subfamily Halicyclopinae were represented by only two species.

11 species turned out to be new to the fauna of Karakalpakstan (marked in the above list *), including 7 species - new to the fauna of Uzbekistan (marked **). If we compare this list with the list of cyclops noted by previous researchers (Table 1), then certain discrepancies are obvious.

So, we have not marked the following taxa:

1. *Halicyclops aequareus*
2. *Eucyclops macruroides*
3. *Macrocyclops fuscus*
4. *Cyclops strenuus*
5. *Cyclops* sp.
6. *Acanthocyclops vernalis* (Fischer)
7. *Microcyclops varicans* (Sars)
8. *Microcyclops* sp.

9. *Mesocyclops leuckarti* v. *pilosus* (Kiefer)

10. *Mesocyclops oithonoides*

What is the probability that these species are still present in the fauna of Karakalpakstan? To do this, it is necessary to consider each species separately.

Halicyclops aequareus (Fischer) is indicated for the Aral Sea by Meissner (1908). However, this definition was already disputed by Monchenko (1974), who pointed out that, judging by Meissner's drawings (short furcal forks, round shape of the 5th pair of legs), this researcher was dealing with *Halicyclops neglectus rotundipes* Kiefer. The latter taxon is currently considered as an independent species *Halicyclops rotundipes* Kiefer (Dussart and Defaye, 1985). The latter position is accepted by us.

Thus, it is likely that the Cyclops defined by Meissner as *Halicyclops aequareus* corresponds to the *Halicyclops rotundipes* Kiefer we are citing.

Eucyclops macruroides is indicated for the Aral Sea region by Akatova (1950) and Allaniyazova (1980). It is a northern Palaearctic species, common in water bodies of Western Europe (Einsle, 1993), Ukraine (Monchenko, 1974), Russia (Pidgayko, 1984) and not recorded in the more southern regions of Uzbekistan (Mukhamediev, 1986; Mirabdullaev et al., 1997).

The likelihood that this species was mistakenly identified with closely related species *E. macrurus* and *E. serrulatus* is low, due to the presence of sufficiently clear characters. Thus, the habitation of *Eucyclops macruroides* in the Aral Sea region is possible, at least in the recent past.

A similar situation probably exists with respect to *Macrocyclus fuscus*, which is quite distinct from the closely related *Macrocyclus albidus*. The habitation of *Macrocyclus fuscus* in Karakalpakia can also be considered probable.

Cyclops strenuus is also a northern species. In Uzbekistan, it was noted by old authors more than once (Islamova, 1974; Tashpulatov, 1972; Mukhamediev, Umarov, 1986). However, it is very likely that in these cases the researchers were dealing with a closely related species, *Cyclops furcifer*. The fact that it is the last species inhabiting our water bodies was indicated by the largest specialist in the taxonomy of this genus, U. Einsle. Thus, it is most likely not *Cyclops strenuus*, but *Cyclops furcifer*, inhabiting Karakalpakia.

Acanthocyclops vernalis (Fischer) is also a northern species. In the past, it has often been confused with *Acanthocyclops robustus* (Kiefer, 1976; Fryer, 1985; Dodson, 1994; Sramek-Husek, 1954). Its status is also unclear in the well-known monograph of Rylov (1948), which is obvious and could lead to the incorrect indication of *Acanthocyclops vernalis* for Karakalpakstan. Instead of this species, the similar *Acanthocyclops robustus* lives here.

Microcyclus varicans (Sars) has been repeatedly reported for Central Asia. However, as shown by us (Mirabdullayev, Turemuratova, 1996) and confirmed (Bazarova et al., 1998), *Microcyclus varicans* (Sars) is absent in Central Asia, being replaced by similar *Microcyclus pachyspina* and *Microcyclus rechtyae*. We also noted both species in Karakalpakia (Mirabdullayev and Turemuratova, 1996; Azimov et al., 1998).

Mesocyclops leuckarti v. *pilosus* (Kiefer) was recorded in Karakalpakia by Aripov and Mukhamediev (1967, 1974). This tropical form was described by Kiefer (1930) from the

reservoirs of Madagascar and is now considered as an independent species (Dussart and Defaye, 1985). Its presence in the fauna of Central Asia is practically excluded (Mirabdullayev, 1996; Alekseev, 1995). Obviously, in this case, domestic researchers dealt with *Mesocyclops aspericornis* (Daday), which also possesses pubescence of furcal branches and was repeatedly noted in water bodies of Asia (Dussart, Fernando, 1988; Reyd, Kay, 1992; Guo, 1999a), including Central Asia (Mirabdullayev, 1990; Mirabdullayev, 1996) and noted in this study (Mirabdullayev, Turemuratova, 1996).

Mesocyclops oithonoides was noted by Allaniyazova (1980) and repeatedly by Aripov and Mukhamediev. This is a northern Palaearctic species typical for water bodies of Europe (Einsle, 1993; Monchenko, 1974; Pidgayko, 1984), Kazakhstan (Dobrokhotova, 1975). This species was recorded for Uzbekistan (Mukhamediev, 1986). So, the finding of *Thermocyclops oithonoides* (this is how this species is now systematized) in Karakalpakstan is quite acceptable.

Thus, *Eucyclops macrurides* (Lilljeborg, 1901), *Macrocyclus fuscus* (Jurine, 1820), *Thermocyclops oithonoides* (Sars, 1863) are quite likely elements of the Karakalpakstan fauna.

Thus, taking into account the species registered in this study, the total number of Cyclopoida species in the Karakalpakstan region is 35.

Distribution of Cyclopoida of Karakalpakstan

Different types of cyclopids live in certain ecological conditions, which are associated with water salinity, temperature, current, depths, trophic conditions, pollution, interaction with other aquatic organisms. Since the ecological conditions are heterogeneous in space, the spatial distribution of aquatic organisms, including Cyclopoida, is also heterogeneous (Monakov, 1976; Konstantinov, 1986).

Below, we tried to identify the patterns of confinement of certain species of cyclops to certain regions, types of reservoirs and biotopes. The biodiversity of cyclops of different types of reservoirs turned out to be approximately the same - in lakes, ponds, checks and puddles, 18-23 species were found. Significantly fewer species were recorded in watercourses (canals and rivers) - 11, however, we have studied them much less. If we consider ponds and checks also as temporary reservoirs (which they really are), then the diversity of cyclops is noticeably greater here (29 species) than in lakes. Only three species - *Halicyclops spinifer*, *Mesocyclops leuckarti*, and *Eucyclops macrurus* - were found only in lakes. The first of them is a tropical species recorded in Lake Ayazkala (the only find in Central Asia), the other two are typically cold-water Palaearctic species (Rylov, 1948; Monchenko, 1974; Pidgayko, 1984; Dussart and Defaye, 1985).

Ectocyclops phaleratus, *Paracyclops affinis*, *Cryptocyclops linjanticus*, *Cyclops furcifer*, *Diacyclops bicuspidatus*, *Diacyclops odessanus*, *Thermocyclops* were recorded only in temporary water bodies (in a broad sense). *dybowski*, *Microcyclops karvei*, *Microcyclops rechtyae*, representing both Palaearctic and tropical zoogeographic complexes (Bening, 1938; Dussart and Defaye, 1985).

Regarding biotopes, overgrown forms were significantly more numerous than planktonic ones, which is also typical for other groups of aquatic organisms, reflecting more diverse conditions in the coastal overgrown biotope compared to the water column (Bening, 1938; Keizer, 1938; Konstantinov, 1986).

In relation to the mineralization of water bodies, 9 species are identified that can inhabit water bodies with salinity higher than 5 g / l: *Halicyclops rotundipes*, *H. spinifer*, *Apocyclops dengizicus*, *Acanthocyclops robustus*, *Cyclops vicinus*, *Mesocyclops ogunnus*, *M. leucklops* The *Thermocyclops Th. vermifer*. Moreover, the first three of them were recorded exclusively in brackish water conditions, i.e. are truly halophilic forms, which is confirmed by the literature data (Lepeshkin, 1900; Monchenko, 1974; Kiefer, 1936b).

The following 6 species were recorded only in water bodies of the north of Karakalpakstan (Muynak district): *Eucyclops macrurus*, *Cryptocyclops bicolor*, *Diacyclops bicuspidatus*, *Microcyclops rubellus*, *Mesocyclops leuckarti*. All of them are representatives of the cold water Palaearctic fauna and do not occur in the more southern water bodies of Uzbekistan. Such tropical species as *Microcyclops rechteya*, *M. karvei*, *Halicyclops spinifer*, *Cryptocyclops linjanticus*, on the contrary, are not recorded in the Muynak region and are common in the more southern regions of Uzbekistan (Afanasyeva, 1968; Stepanova, Pridatkina, 1971; Niyazov, 1974; Abdullaev et al. , 1990; Mirabdullaev et al., 1994; et al.)

Subfamily Cyclopinae, *Cyclops vicinus* Ulyanin, 1875

DESCRIPTION. Length 1200-1700 microns. Antennulae are usually 17-segmented. Characterized by lateral angles of the 4th and 5th thoracic segments elongated into wing-like outgrowths. The posterior margin of the urosomite bears spines. Furca is pubescent; its branches have a longitudinal groove on the dorsal side. L / W tucks 6.0-8.0. Base of s4 and lateral setae without spines. S1 is slightly longer than the furca, almost twice as long as s2, and more than twice as long as s4 and s5. Inner spine of Enp3P4 approximately equal to the segment and more than twice as long as the outer spine. P5 bisected, distal segment with apical setae and short, usually somewhat shorter than the segment, spine located in the middle of its inner surface. The outer seta of P6 in male is approximately twice as long as the middle one and four times as long as the inner spine.

Ecology. In contrast to the more southern regions of Uzbekistan, in Karakalpakstan, *C. vicinus* is common not only in spring and autumn, but also in summer. For more eutrophied water bodies, larger individuals with a relatively shorter peak an Enp3P4 spike and a large number of eggs in egg sacs.

Spread. One of the most widespread cyclops of Karakalpakstan. It inhabits both ponds and rice paddies, as well as lakes and reservoirs. Recorded by us in the lakes Kyrkkyz, Mailuzyak, in the rice paddies of the Kokdarya collective farm of the Kungrad region, in the ponds of the Muynak and Nukus fish farms.

Taxonomic notes. *Cyclops vicinus* was described by Ulyanin (Ulyanin, 1875) from the reservoirs of Central Asia. Individuals from Karakalpakstan are morphologically fully consistent with the original description and subsequent descriptions of this species (Einsle, 1993).

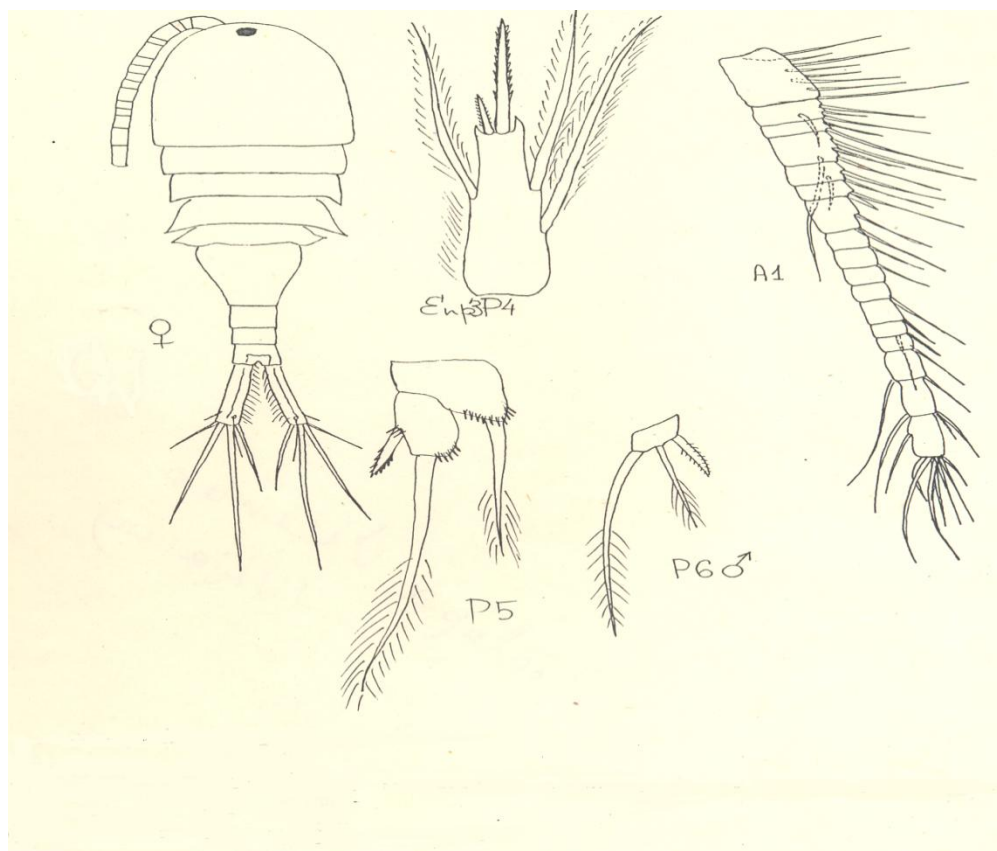


Fig. 1 *Cyclops vicinus* (Uljanin)

Cyclops furcifer Claus, 1857

DESCRIPTION. Body length 1200-1800 microns. The color is gray with a yellowish tinge. Antennulae 17-segmented. The posterolateral parts of the 4th thoracic segment are not elongated into pterygoid outgrowths; their posterior surface is characterized by a large tubercle. P1-P4 are three-segmented. P5 is two-segmented. Inner thorn free segment P5 considerably shorter than the outer setae, approximately equal to the segment length, and located in the middle of its inner edge. The inner spine of Enp3P4 is much longer than the outer one. L / W for trucks 4.5-6.5. Furcal branches with a chitinous fold on the dorsal side and hairs on the inner edge. S1 is noticeably shorter than a furrow and somewhat (usually no more than 1.5 times) longer than s4 and s5. Male P6 setae approximately the same length and twice as long as inner spine.

Biometric data are shown in Table 1.

Ekology. Inhabitant of temporary reservoirs. Recorded in autumn.

Spread. Recorded in temporary water bodies in the vicinity of Muynak.

Taxonomic notes. The morphology of individuals from Karakalpakstan is in good agreement with the morphology of the species from Europe (Monchenko, 1974; Einsle, 1993).

TABLE 2. BIOMETRIC DATA CYCLOPS VICINUS, CYCLOPS FURIFER, ACANTHOCYCLOPS ROBUSTUS, DIACYCLOPS ODESSANUS

Acanthocyclops robustus		Cyclops vicinus		Cyclops furcifer		Diacyclops odessanus	
Rice checks		Nukus.RH		Muynak.rn		Muynak.rn	
n = 12		n = 10		n = 10		n=10	
min-max	x	min-max	x	mn-max	x	min-max	x
Length, um	1079-1675			1525-1750		1700-2020	
Furka L:W	450-540		490	600-716		652	500-666
599							577
S1 : L fu	444-555		498	108-134		123	77-92
31							84
SI : s2	25-29		27	59-69		62	38-45
22							42
S1 : s3	36-43		39	68-78		71	44-50
35							48
S1 : s4	142-177		159	204-232		213	106-162
149							149
S1 : s5	166-255		206	192-217		207	171-206
200							185
Enp3P4:							
L art.:W art.	225-322		292	213-254		210	206-278
252							244
Int.sp.:ex.sp.	78-91		83	97-113		106	80-97
72							86
Int.sp.:L art.	104-137		123	225-290		255	162-207
82							184
Apocyclops dengizicus (Lepeschkin, 1900)							

DESCRIPTION. Body length 950-1200 microns. The body is widest in the cephalothorax. Antennulae 11-segmented. The third segment of the antennae bears 10 bristles. Labrum with 10-11 teeth. The lateral surfaces of the last thoracic segment have short bristles; the genital segment widens anteriorly. The first 3 abdominal segments bear transverse rows (sometimes intertwining) of minute fossae. The last abdominal segment and furcal branches bear short rows of spines. The posterior margin of the last abdominal segment bears groups of spines on the ventral side. Furcal branches are long and parallel, lateral setae located at the beginning of their last third. Base of external apical furcal setae with spines. Exo- and endopodites P1-P4 are two-segmented, spines 3.4.4.3, setae 5.5.5.5. Inner margin of P1 basipodite with long spine and setules. Inner margins of basipodites P2-P3 with setules, P4 bare. P1-P4 connecting plates with rounded outgrowths, more developed on P1, less on P4. The outgrowths bear the smallest spines. Connecting plates P1 and P3 bear 1, connecting plates P2 - 2, connecting plates P4 - 4 transverse

rows of spines on the caudal surface. The wide free segment of P5 bears a relatively short inner spine and a long outer seta.

Biometric data are shown in Table 2.

Ekology. Inhabitant of coastal, shallow and overgrown biotopes of brackish water bodies. It is rare in plankton.

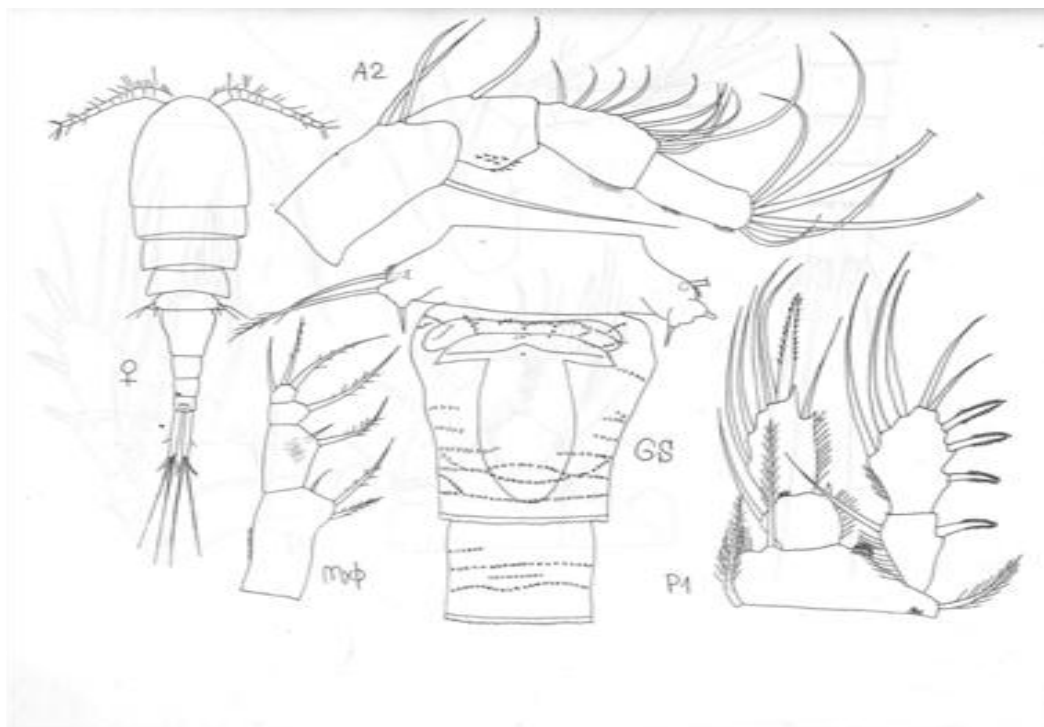


Fig. 2. *Apocyclops dengizicus* (Lepeschkin)

TABLE 3. MEASUREMENT DATA *APOCYCLOPS DENGIZICUS* (LEPESCHKIN, 1900

	lakes Atakul n = 10 min-max		lakes Karateren n = 10 min-max		Khorezm n = 10 min-max	
		x		x		x
Length, um	975-1100		950-1200		1175-1225	
Furka L : W	6.11-7.50	6.80	6.10-7.70	7.03	6.00-6.60	6.25
Seta 1 : L фурки	0.27-0.34	0.31	0.28-0.33	0.31	0.27-0.33	0.29
Seta 1 : seta 2	0.14-0.18	0.17	0.15-0.18	0.16	0.15-0.19	0.17
Seta 1 : seta 3	0.16-0.20	0.18	0.17-0.20	0.18	0.16-0.21	0.18
Seta 1 : seta 4	0.85-1.00	0.92	0.85-1.00	0.92	0.80-1.00	0.88
Seta 1 : seta 5	0.77-0.82	0.79	0.71-0.91	0.76	0.80-0.86	0.84
2EnpP4:						
L : W	1.67-1.80	1.72	1.67-1.90	1.73	1.57-1.80	1.66
int.: L	1.00-1.15	1.05	0.98-1.20	1.06	1.02-1.20	1.08

L apik brush:

L peak thorn:

1.23-1.40 1.34 1.16-1.40 1.30 1.15-1.35 1.26

Spread. In Karakalpakstan, recorded in lakes Atakul and Karateren, Akshakul. A new species for the fauna of Uzbekistan. It was also found in the Khorezm, Kashkadarya, and Surkhandarya regions (Mirabdullaev, Stuge, 1998). Finds of *Apocyclops dengizicus* from all continents are known; the species is considered cosmopolitan (Dussart and Defaye, 1985).

Taxonomic notes and c and e remarks. *Apocyclops dengizicus* was first described from Lake Selety-Tengiz in northern Kazakhstan (Lepeshkin, 1900) as *Cyclops diaphanus* var. *Dengizica*. This species was considered for a long time within the genus *Microcyclops* (Rylov, 1948) as *M. dengizicus*. A detailed description of this species from water bodies of the typical habitat (Mirabdullaev and Stuge, 1998) creates the basis for comparing populations from different regions of the world and solving the issue of cosmopolitanism of this species.

CONCLUSION

The conducted research showed the abundance and biomass of Cyclopoida in Karakalpakstan in comparison with the 80s and 90s decreased by several times compared to 2010 by more than a third. This indicates an initial sharp change in the ecological state of the reservoir.

The characteristics and morphology are presented and illustrated descriptions of 32 species are given, the key Cyclopoida of Karakalpakstan is compiled.

The fauna of the cyclopids of temporary water bodies was significantly richer than the lake fauna. In terms of biotopes, overgrown forms were significantly more numerous than planktonic ones, which reflects more diverse conditions in the coastal overgrown biotope as compared to the water column.

In relation to the mineralization of water bodies, 3 halophilic species (*Halicyclops rotundipes*, *H. spinifer*, *Apocyclops dengizicus*), 6 halotolerant species (*Acanthocyclops robustus*, *Cyclops vicinus*, *Mesocyclops ogunnus*, *M. leycarti*, *Thermocyclops*, *Rymiferi*) are identified.

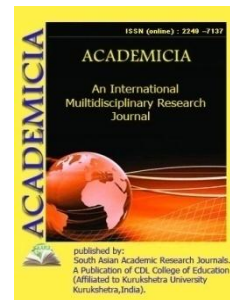
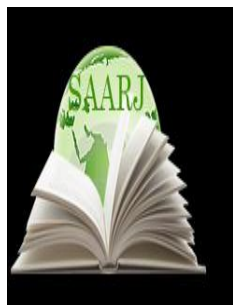
In the seasonal aspect, certain patterns can be traced in the development of the Cyclopoida of Karakalpakstan. In most cases, the development of tropical forms is limited to the summer months, while the Palearctic forms are limited to spring and autumn.

Cyclops occupy a significant place in the structure of zooplankton cenoses in water bodies of Karakalpakstan, usually accounting for 25-60% of the biomass of lacustrine zooplankton and 16-24% of the zooplankton biodiversity of lakes and ponds.

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CERTIFICATION AND CLASSIFICATION OF TISSUES BASED ON THEIR BIOLOGICAL PROPERTIES AND CHEMICAL COMPOSITION

Ibragimov Alijan Aminovich*; **Amirova Toiraxon Sheraliyevna****;
Karimova Sadoqat Abdullajonovna***

*Professor,
Doctor of Chemistry,
Department of Chemistry, Fergana State University,
Fergana, Republic of UZBEKISTAN

**Department of Chemistry,
Fergana State University,
Fergana, Republic of UZBEKISTAN

***Student,
Chemistry teaching Methodology,
Faculty of natural sciences, Fergana State University,
Fergana, Republic of UZBEKISTAN

ABSTRACT

The article presents materials and discusses the problems of certification and classification of various fabrics based on the biological properties and chemical composition of the material. For some fabrics, tensile strength and relation to certain chemicals have been determined. To obtain properties that more fully meet the needs of consumers, blended or combined fabrics are produced. This somewhat complicates their analysis for compliance with GOST and dictates the need to develop accurate express methods of analysis. At the same time, certification methods also require the attention of chemists, since the development of convenient methods for determining chemical components will significantly simplify the certification procedure.

KEYWORDS: Cotton, Linen, Silk, Wool, Artificial Fabrics, Synthetic Fabrics, Mixed Fabrics, Certification, Standardization, Classification, Product Nomenclature.

INTRODUCTION

The fabrics used in everyday life and technology are varied primarily in their chemical composition. They differ in the nature and mass of polymer molecules. In turn, polymers are divided into natural, artificial and synthetic. Natural polymers, as a rule, consist of molecules inherent in a living organism - proteins, carbohydrates. This is their biological compatibility with the body and the feeling of comfort when wearing clothes made of such fabric, for example silk, satin, cotton, flax. Today there is a wide range of artificial and synthetic polymer materials such as lavsan, nylon and others. In addition to the known disadvantages, the latter have some advantages over natural ones. First of all, it is strength, wear resistance. Therefore, most modern products are made from mixed fabrics. A variety of fabrics are used for technical purposes such as packaging material. In the classifier of CN FEA (commodity nomenclature of foreign economic activity), fabrics are placed in section X1. The criteria for evaluating fabrics are rather limited, they are mainly density, tensile strength and the percentage of natural and artificial or synthetic yarn. In our opinion, the inclusion of the above biochemical indicators in this series would make it possible to make a better assessment of the material as a product as an object of foreign economic activity. The same applies to the certification of fabrics, the GOSTs of which do not fully reflect the biochemical indicators directly related to the consumer properties of the material.

Main part

The purpose of the research is certification and classification according to the Foreign Economic Activity Commodity Nomenclature on the basis of their chemical composition of fabrics produced in the Republic of Uzbekistan or imported by import. The main purpose of fabrics is tailoring. Clothes - a product or a set of products worn by a person and carrying utilitarian and aesthetic functions [1]. Clothing can be made from fabric, knitted fabric, leather, fur and other materials. The appearance, structure and quality of materials used for sewing clothes determine the composition of the fibers from which they are produced [2]. The following groups are distinguished by the type of raw material: natural, which, in turn, are subdivided into fabrics of vegetable origin: cotton, flax - and animal: silk, wool; artificial, which are made by processing natural raw materials, most often wood pulp; synthetic, which are the product of the chemical transformation of monomers obtained from oil, coal or gas.

As a rule, the materials from which clothes are sewn do not consist of 100% of fibers belonging to the same group. To obtain properties that more fully meet the needs of consumers, blended or combined fabrics are produced. This somewhat complicates their analysis for compliance with GOST and dictates the need to develop accurate express methods of analysis.

Due to the natural origin of the fibers, natural fabrics are highly valued. This is facilitated by the advantages of the material: air permeability; hygroscopicity; high hygienic qualities; ease of care. Despite the insignificant thickness, cotton fabrics retain heat well, which is achieved due to the hollow structure of the fibers. The disadvantages include increased crease, lack of elasticity and low wear resistance. To improve the properties of cotton materials, artificial or synthetic fibers are added to them. Some canvases undergo a mercerization procedure - pre-treatment with a caustic soda solution, due to which they acquire strength and become resistant to premature wear.

Compared to cotton, linen fabrics that are used for sewing clothes appear denser and sometimes coarser. They are also characterized by all the positive characteristics noted above inherent in natural materials. Unfortunately, during the operation of linen products, problems arise: clothes wrinkle, and when wet, they shrink. In addition, fabric shedding is difficult to cut and sew. To reduce the negative characteristics, a small amount of polyester is added to pure flax.

Linen materials are classified according to the weaving method: linen, leno, jacquard, translucent. Clothes made of pure linen can not only be washed at high temperatures, but even boiled.

Woolen fabrics. The raw materials for the production of these materials are wool and down of various animals: rabbits, sheep, llamas, camels and others. They have high heat-saving properties and are quite expensive. However, it is these fabrics that take the lead among all the fabrics intended for warm clothing, since they have truly unique properties: hypoallergenicity, low crease, aeration, moisture absorption, durability. The big disadvantage of wool is the lack of elasticity. This problem is solved by introducing 5-10% elastin into the raw materials, due to which the clothes acquire better fit and elasticity.

In addition to purely woolen fabrics, semi-woolen fabrics are also used for sewing clothes, in which from 25 to 80% are cotton, silk or synthetic fibers. The properties of these canvases differ depending on the composition. Woolen fabrics are very diverse, for example: angora (angora goat fluff + acrylic), boston (merino wool). In order to understand whether the fabric is 100% wool or has impurities, there is a simple method. You need to pull the thread out of the canvas and set it on fire. Pure wool fiber will burn for a long time with the characteristic smell of burnt hair and leave behind a ball that can be easily rubbed with your fingers.

Silk fabrics have high hygroscopicity, air permeability, temperature regulation, wear resistance, durability. The disadvantages include deterioration in quality in bright sunlight and the appearance of unattractive stains on the surface when wet. They are due to the protein nature of silk. 100% silk fabrics include satin, gauze, crepe de Chine, organza, brocade, etc.

Artificial fabrics. As mentioned above, materials obtained chemically from natural components are considered artificial. Due to this origin, they are environmentally friendly and do not pose a danger to human health. It is noteworthy that for the production of these materials, not expensive raw materials are used, as is the case with natural linens, but wastes from the woodworking industry, that is, ordinary cellulose. Very often, artificial fibers are introduced into the composition of many cotton or wool fabrics in order to give them greater strength and durability. For example, we give some of them: acetate, corn, cupro, triacetate - the chemical name for cellulose triacetate. It is considered an improved type of acetate silk, as it can easily endure high temperatures and ultraviolet rays.

Synthetic fabrics. The beginning of the era of synthetic materials is considered to be 1938, when the specialists of the chemical concern "DuPont" obtained the first polyamide fibers - the "progenitors" of the famous nylon and nylon. The number of synthetic canvases currently known far exceeds the number of natural and artificial ones. The properties of these materials depend on the feedstock, but they all have such undoubted advantages: high strength; abrasion resistance; low degree of wear; durability; ease of care. Of course, synthetics cannot be compared with cotton, silk or wool in terms of the degree of aeration, hygroscopicity or safety. But it has

elasticity, extensibility and is not affected by mold and bacteria. Here are a few examples: faux suede, nylon, lavsan.

Knitted fabrics. They are knitted on special machines from fibers of various origins: both natural and artificial or synthetic. Despite the variety of shapes, knitted fabrics have common characteristics. The advantages of knitted materials include: pleasant tactile sensations; elasticity; hygiene; wide range of applications; practicality; ease of care; durability.

Currently, we have collected samples of individual fabrics produced in our country and imported from outside, as well as GOSTs, mainly Russian. Below are some of our experiments with some tissue samples. The main characteristics of fabrics were determined: density, tensile strength, hygroscopicity, interaction with chemical reagents.

Material method

Samples were taken from store shelves or from manufacturing enterprises in Fergana region. The experiments were carried out in the laboratories of the Institute of Sericulture in Margilan and the regional department of the state standard in July 2020. The tensile strength was determined on a T-250 device on the basis and along the weft, that is, along and across. The readings of the device in kg s were converted into Newtons in the usual way. The ability to absorb moisture was determined in a desiccator filled with water up to the partition, the humidity of the medium was 98%. The weight gain was used to determine the percentage of moisture absorption, that is, hygroscopicity. Name of fabrics: silk, adras (50% cotton, 50% silk), nylon, wool, cotton, viscose, camouflage (90% polyester, 10% cotton).

The tissue density was determined on a laboratory balance, the accuracy was up to the 2nd decimal place. A ruler was used to establish the size of the segments.

The discussion of the results. The experiments were carried out in accordance with GOST. So, for a sample of the tested half-woolen fabric according to GOST 28000-2004, the following methods of analysis were used: GOST 3811-72, GOST 3812-72, GOST 3813-72, GOST 3816-81, GOST 9733.4-83, GOST 9733.7-83, GOST 9733.27-83, GOST 30157.0-95, etc. For cotton and mixed fabrics according to GOST 29298-2005, research methods were used: GOST 3813-72 (ISO 5081-77, ISO 5082-82), etc. Table 1 shows the results of determining various characteristics and parameters of the studied tissues.

TABLE 1. MAIN CHARACTERISTICS OF FABRICS

parameter the cloth	Segment size	Density g/m ²	Breaking load (on the basis), H	Breakable Elongation,%	Hygroscopicity%
silk	5x30 sm	28	16kg.s·9,81=156H(duck 121H)	14 (duck15,5)	12,66
adras	5x30 sm	172	48,5kg.s·9,81=476H(duck 382H)	17(duck12)	6,54
nylon	6x30 sm	44	35kg.s·9,81=343H(duck 313H)	21	
wool	5x20 sm	258	709 H(duck 590H)		12,3
cotton	6x30 sm	12 0	40 kg.s·9,81 = 392H (duck 255H)	13,5 (duck10)	16,96
viscose	5x30 sm		31 kg.s·9,81 = 304H	15	16,0

			(duck 313H)	(duck25)	
camoufl age	6x30 sm	13 2	75kg.s.9,81 736H (duck 530H)	= 19,5% (duck14%)	14,2

The data obtained show that semi-woolen and cotton technical (coarse calico) fabrics meet the requirements of GOST in almost all parameters. However, the remaining 5 samples deviate significantly from the GOST requirements for finished products.

The ratio of fabrics to chemicals and solvents is shown in Table 2.

TABLE 2 INTERACTION OF TISSUES WITH CHEMICAL REAGENTS

Reagent The cloth	Acetone	NaOHd iluted	HNO ₃ c onc.	H ₂ SO ₄ c onc.	HCl (36%)	CH ₃ COOH icy	HCOOH (95-100%)
silk	ND	ND	ND	ND	ND	ND	ND
adras	ND	ND	ND	ND	ND	ND	ND
nylon	ND	DDB	ND	D	D	ND	D
wool	DDB	ND	DDB	D	ND	ND	ND
cotton	ND	ND	D	D	ND	ND	ND
viscose	ND	ND	D	ND	ND	ND	ND
camouflage	PDDB	ND	ND	ND	ND	ND	ND

Note. Legend: D - dissolves, DDB - dissolves during boiling, PDDB - partially dissolves during boiling, ND- does not dissolve.

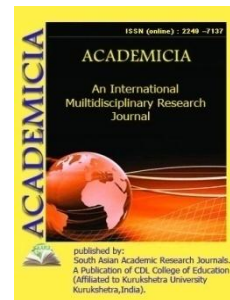
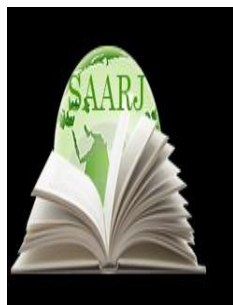
CONCLUSION

From the results of the experiment given in table. 2, it can be seen that most of the studied tissues are inert with respect to chemicals and solvents. Cotton fabric dissolves in strong acids as it chemically interacts with them. Capron stands out with good solubility among others: it dissolves in formic, hydrochloric, sulfuric acids, as well as in an alkali solution during boiling.

Summarizing the above, it should be noted that the classification of fabrics according to the Commodity Classification of Foreign Economic Activity needs to be detailed on the basis of the chemical composition, since it is the nature of the molecules from which the fabric is formed, their structure determines the consumer properties of the material. At the same time, certification methods also require the attention of chemists, since the development of convenient methods for determining chemical components will significantly simplify the certification procedure.

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THE MAIN OCCUPATIONS OF THE KYRGYZ AND KIPCHAKS IN THE KOKAND KHANATE

Boboyev Mirodillo Kasimjon Ugli*

*Student,
Fergana State University,
UZBEKISTAN

ABSTRACT

This article provides information on the labor activities, main occupations and lifestyles of Kyrgyz and Kipchaks living in the Kokand Khanate, as well as it explains the trade attitude of this Khanate. During the reign of Muhammadalikhan, the territory of the khanate expanded and the khanate was bounded on the north by the Russian Outer Siberian District, on the west by the Khiva and Bukhara Emirates, on the south by the Koratagin, Darvaz, and beyond - Shugnan, Rushan, and Vakhon (which was dependent on Kokand). In the Kokand khanate, the main part of the population of the capital and many other cities was engaged in handicrafts. Artisanship was specialized in the cities, and there were industries focused on the production of one type and part of products.

KEYWORDS: *Economy, Khan, People, Artisans, Agriculture, Animal Husbandry, Various Strata O the Population.*

INTRODUCTION

The economic traditions of the peoples living in the Kokand khanate were different. At the time of the establishment of the khanate, it included only the Fergana Valley. Later, as a result of military campaigns, its territory expanded and its population increased. The total population of the Kokand Khanate in the 1950s reached 3 million people. In the territory of the khanate, the majority of the population were Uzbeks engaged in sedentary agriculture. In addition to Uzbeks, Kyrgyz, Kazakhs, Tajiks, Kipchaks, and Jews inhabited the khanate. During the reign of Kokand khan Abdulkarimbi, because of the invasion of the khanate by the Dzungar tribes, the khan's relations with neighboring Kyrgyz tribes took the form of a military alliance, which led to the entry of many Kyrgyz tribes into the khanate. In this period, the Kyrgyz were mainly nomadic tribes, and their main occupation was cattle breeding. They played an important role in the socio-

economic life of the khanate. Livestock also played an important role in the khanate to provide the khan's army with horses.

Main part: At the end of the 18th century, the territory of the khanate consisted only of the Fergana valley, during which time it subjugated all the principalities and regions of the Norbotabi valley and subjugated them to Kokand. In his time, Andizhan and Margilan regions were the largest estates in the valley. During the reign of Alimkhan, the territory of the khanate expanded significantly due to Tashkent and the surrounding lands. In historical sources, the property of Tashkent is mentioned by the names of regions, cities, Tashkent and Dashti Kipchak regions. Its territories include Ahangaron, Chinoz, the outskirts of Tashkent, the city of Turkestan on the banks of the Syrdarya and its environs. The governors of this property are mentioned in the sources and documents with the terms governor, ruler, governor, deputy. During the reign of Umar Khan, a number of attacks were carried out on the lands around Khojand, Uratapa and Jizzakh, and in 1817 Uratapa was conquered.

During the reign of Muhammadalikhan, the territory of the khanate expanded and the khanate was bounded on the north by the Russian Outer Siberian District, on the west by the Khiva and Bukhara Emirates, on the south by the Koratagin, Darvaz, and beyond - Shugnan, Rushan, and Vakhon (which was dependent on Kokand). Kulyab and Kashgar border it in the east. The lands of the khanate included the Fergana region between Syrdarya and Korategin, Namangan, Khojand and other cities on the right bank of the Syrdarya, Kurama region between the Bukhara emirate and the Kokand khanate, Turkestan, Syrdarya. The lower reaches to Lake Balkhash are inhabited by Kyrgyz, the eastern foothills of Mount Billur, inhabited by nomadic Kyrgyz, and the western foothills from 1830 onwards.

In the Kokand khanate, the main part of the population of the capital and many other cities was engaged in handicrafts. Artisanry was specialized in the cities, and there were industries focused on the production of one type and part of products. Artisans are masters who have mastered the secrets of their profession and raised their products to a high level of art. Although the development of handicrafts was the same in almost all towns and villages of the khanate, production differed in some of its features, namely, the type and quality of products. Blacksmithing, jewelry, weaving, pottery and other branches of handicrafts are widely developed, and each city of the khanate is famous for its products in a certain field. Crafts, handicrafts and handicrafts in the khanate were mainly supplied by raw materials for cotton, silk, cattle breeding and mining. Raw materials needed for handicrafts were obtained from the territory of the khanate, as well as purchased from abroad. Gold, one of the main raw materials, is extracted from the upper reaches of the Syrdarya, the Kansuv River. Gold was also extracted from Kosonsoy, the Kukrev River north of Karatag, the Chirchik River, near Burchmulla, and the upper reaches of the Chatkal River. Artisans mined iron ore from the foothills of the Alay Mountains, lead and other ores from Karatov. According to sources, the extraction of mineral resources was so simple and scarce that it could not meet demand. That is why most metals are imported from Russia. Domestic and foreign trade relations were of special importance in the life of the Kokand khanate. Domestic trade is based on the exchange of traditional products between settled farmers, nomadic pastoralists and urban-rural artisans. Products made by manufacturers meet the daily needs of the population. All domestic trade was retail, and wholesale trade was almost non-existent.

Artisans were in close contact through trade. They often sold their products themselves. Farmers and herdsmen brought their cattle to the market on certain days of the week. Prices in the markets have not remained the same. Prices varied depending on factors such as peace in the khanate, wars, and declining productivity due to bad weather.

The main trade and commercial centers of the Kokand khanate are the cities of Kokand, Tashkent, Margilan, Andizhan, Khojand, Namangan, Osh, Uratapa, among which Kokand is not only a khanate, but also is one of the trade centers of Central Asia. According to the data, Kokand markets are characterized by the richness of their products and the fact that the price is much cheaper than in other cities. The city's walled bazaars have always been crowded with locals and foreign traders. Foreign trade also played an important role in the economic life of the Kokand khanate. The country has extensive trade relations with Bukhara, Khiva, Afghanistan, Iran, Turkey, and India in the west and south, China (via Kashgar) in the east, Dashti Kipchak migrants in the north, and especially Russia. According to some sources, Japanese and British merchants also came to the khanate.

The khanate exported mainly silk and silk fabrics, cotton, leather, precious stones, gold, silver, jewelry and other products. Mainly tea, metal, porcelain, household goods, ready-made fabrics, clothes, shoes and others are imported. The merchants of the khanate had regular trade relations with Bukhara and the cities on the borders of the emirate. The traders of both countries took an active part in trade, and the Kokand merchants supplied the Emirate of Bukhara with Russian iron, steel, and cast iron, tobacco, handkerchiefs, rice, and some Chinese or other goods necessary for economic life. Local silk fabrics, tea, and porcelain were brought, and merchants from Bukhara brought Indian tea, surp cloth, silk, dyes, opium (taryok), embroidery, yarn, and cloth to Kokand.

Russian chit played a special role in Bukhara's trade with the Kokand khanate. This fabric was brought from Orenburg or Petropavlovsk to Kazalinsk, and from there to Kokand via Bukhara, Samarkand and Khojand. The khanate also brought English fabrics from Mashhad, a small number of Kabul tunics and turbans, and Indian attire.

The trade relations of the Kokand khanate with Kashgar were similar to those of the Bukhara emirate, with opium, porcelain, silver, Chinese silk fabrics, fiber and carpets brought from Kashgar to Kokand. The subjugation of the Kazakh Juz to Russia led to the cessation of wars between the ruling classes, which led to a wide range of trade relations in Central Asia, including the Kokand Khanate with Siberia, the Urals and the Volga and this situation opened wide way for trading relations.

Khalik also has regular trade relations with India. According to sources, between 10,000 and 15,000 camels are shipped annually from India to Kokand, Tashkent, Bukhara and Kashgar via Kabul. Among them were yarn fabrics, silk, goat hair, horses, and so on. Horses were one of the most lucrative sources of trade. There are reports that Indian merchants lived in the cities of the khanate and engaged in trade and even usury.

Kokand-Russia trade relations also have a special place in the foreign relations of Kokand. According to sources, the rapid development of Russian industry after 1861, the growing base of raw materials and the need for foreign markets was one of the main reasons for the active occupation of the Kokand market in Russia and its unlimited use. Iron, copper, steel, cast iron and iron products, foreign and low-quality fabrics, small quantities of velvet, sugar, glass,

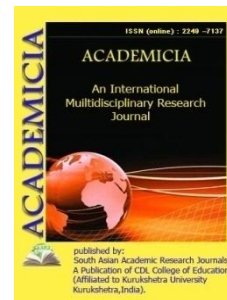
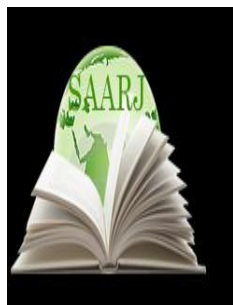
leather, sheep and skins from the Kazakh deserts belonging to Russia, leather and leather products, felt. Cotton was mainly exported from the khanate to Russia.

CONCLUSION: Governors and heads of territorial divisions were appointed from among the members of the khan's family, groups close to him, the upper class, and the chiefs of the leading tribes. For example, during the reign of Khudayarkhan, the khan's sons and close relatives ruled seven principalities. In turn, the governors divided the territory of the region among their children and relatives. In the system of administrative-territorial administration of the Kokand khanate the bek (governor, governor) and his middle had a special place. The governor and judge appointed by the khan had many powers.

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SOURCES OF MEDICAL AND SCIENTIFIC WORKS WRITTEN IN TURKISH LANGUAGES PROTECTED IN WORLD FUNDS

Toirov A. O*; A.Kh. Doniyorov**

*Graduate of the Master's Degree in Historiography,
Source Studies and Methods of Historical Research
Tashkent State University of Oriental Studies,
UZBEKISTAN
Email id: akoshgreat@mail.ru.

**Doctor of Historical Sciences,
Professor of "History and Source
Studies of the nations of Central Asia",
UZBEKISTAN

ABSTRACT

This article highlights the historical issues of the work done in the world on medical sources written in Turkic languages. Moreover, it provides a detailed description of the information provided in scientific works, catalogs and small scientific works of Turkish language medical sources. The difference between this catalog and the catalog published in Tashkent is that it includes works on pharmacology in the category of medical works. This can be explained by the lack of resources in this area in the museum fund. The University of Utrecht library also contains medical information in a Turkish source under the number Hs.1 F18, but this catalog does not specify which field of medicine it belongs to. The most complete preservation of the manuscript, which contains medical information in Turkish, is given in Chapter 15 of the catalog. It is true that his works also need to be critically examined and studied, but we believe that the situation with the scientific approach to the information contained in his works is only positive for the Hungarian scientist.

KEYWORDS: *Medicine, Turkish Language, Source, Catalog, British Museum, Leiden.*

INTRODUCTION

Medicine is one of the most crucial areas of the country's social sphere. The study of written sources on the development of medicine in all regions of history is of both scientific and theoretical and practical importance for the future development of this field. Therefore, we believe that today the object of this research is one of the most topical issues. Today, manuscripts on Turkic languages are available in many countries around the world. Due to their high interest in the history and culture of the peoples of the East, many manuscripts can be found in libraries, funds and collections abroad. Today, many originals or copies of Oriental manuscripts are available in the United Kingdom, the Netherlands, Russia, and the United States.

The main part

Most of the manuscripts written in Turkish are kept in the British Museum of the British Royal Academy. The special catalog of manuscripts on Turkic languages in the museum is the first work in this direction in the world. The catalog was published in 1888 by *Charles Riu*, a researcher at the British Museum. The catalog consists of 6 sections in total.

Chapter 1 is entitled "*The Theology of Mukhammad (prophet)*" and provides information about Turkish works from the Qur'an and hadiths [4: 4]. *Chapter 2*, entitled "*History*", deals with works on the history of the Islamic world from the creation of the world to the middle of the XIX century. *Chapter 3* is entitled "*Science and Art*" and provides information on sources in the fields of politics and management, astronomy, medicine, veterinary medicine, art and chemistry. *Chapter 4* is entitled "*Philosophy*" and contains a description of works on Arabic lexicography, Persian lexicography and Turkish lexicography. *The 5th section of the catalog* is devoted to Turkish art and is called "*Poetry*". *The last chapter*, entitled "*Turks or Eastern Turks*", provides information about Turkic works on the traditions and literature of the peoples of Central Asia. [4:5].

In Section 3 of the British Museum's Catalog of Turkish Manuscripts, we have mentioned that among the works in the field of science and art, there are also works in the field of medicine and veterinary medicine. The difference between this catalog and the catalog published in Tashkent is that it includes works on pharmacology in the category of medical works. This can be explained by the lack of resources in this area in the museum fund. As you provide information about each source in this catalog, you will see that there is a clear sequence and structure. According to it, each manuscript first contains information about the element number, and then about the number of pages, size, number of lines, type of letter, type of source decoration, period of writing, title of the work, about the author, a summary of the work and information about the incomplete pages of the work.

"*Catalog of Turkish Manuscripts in the Library of Leiden University Library and Other Collections in the Netherlands.*" This catalog consists of manuscript sources on Turkic languages kept in the University of Leiden and other collections in the Netherlands and is published as part of the Islamic Manuscripts and Books.

The collection was published in 2012 in Leiden, the Netherlands and Boston, USA. *Jan Schmidt* was instrumental in compiling this catalog. We used the third edition of the catalog. *Arnoud Vrolijk*, a professor at the University of Leiden, did a great deal of work in preparing the

second edition and enriched the catalog with additional information. The catalog was originally completed in 2003, but work continued until 2012.

The catalog consists of 433 pages, and its structure differs slightly from other catalogs in that it is based on where the source is currently stored, rather than on what area or period the source belongs to. Clearly, Turkish manuscripts kept in a total of 15 institutions, including the Amsterdam Museum in Amsterdam, the Royal Library in Groningen, the Museum of Ethnology in Leiden, the Moritime Museum in Rotterdam, and so on. That is, it consists of 15 sections.

The medical information contained in this catalog is contained in the Medical Monuscripts section. This information is taken from *RamazanSheshen, KemilEkipinar and JevadIzgin's "Catalog of Islamic Medical Monuscripts (in Arabic, Turkish and Persian) in the Libraries of Turkey" (Istanbul 1984).*

Section VII of this catalog contains information about the manuscript kept in the Hague Museum. The manuscript is written in Turkish and is encrypted with the number **Hs 10 E 30**. The manuscript was found by a German officer named *Fushchofer* near Beirut. The manuscript was later purchased by Baron *van Vestrenen* from bookseller *Friedrich Augus Helm*. This manuscript provides information on three prescriptions used in medicine. It contains information about the powder recipes that were widely used in local medicine at that time [1: 96-97].

Section XII of the catalog contains information on the availability of fragments of manuscripts in several Turkic languages stored in the library of the University of Leiden and the areas in which they cover. The museum has a text stored with the number *CodOr.977*, which is of great importance to us. This is because this text is an excerpt from the work of our ancestor *Abu Ali ibnSina, Al-Qanun fi-t-tib*, copied and commented on by *Abu al-Hazmib nan-Nafis* in 1288. The fragment contains information on respiratory and nasal diseases, as well as medical terms [1: 219-220].

Manuscript *No. Cod.Or.58* is a letter from one person to another that deals with daily problems, two different medical prescriptions in addition to different fatwas. However, it is not known exactly which diseases it is used to treat [1: 220-221]. The University of Utrecht library also contains medical information in a Turkish source under the number *Hs.1 F18*, but this catalog does not specify which field of medicine it belongs to. The most complete preservation of the manuscript, which contains medical information in Turkish, is given in Chapter 15 of the catalog. This manuscript is also kept in the library of the University of Utrecht and (2) ff. Encrypted with numbers 32p-48p. This book discusses the role of treatment in medicine. The main part of the manuscript contains the views of *Abu Ali ibnSina, Galen and Hippocrates* on medical treatment. It contains the authors' views on ways to treat cough, treatment and cure with amber, the role of the mummy in medicine and the healing of the disease with religious verses.

Oriental written sources issued in 1976 were published in a separate edition in 2007 in various libraries in Russia, in particular in the Bogchasaroy Historical and Cultural Archaeological Museum, and it was noted that it also contained medical and pharmaceutical sources. In 2002, *Dmitriev* placed *Akimushkin's* publication on Turkish manuscripts in a separate catalog. Among these manuscripts, *IbnSina's* medical sources included two small volumes of pharmaceutical recommendations written in Turkish, but their author is unknown. These resources are based on the general Manuscript *al-islamica Rossicanomi* on separate Internet networks. [7: 104].

Hungarian turkologist, orientalist and linguist *LazzloCaroly* has been working for many years on the languages, history and culture of the Turkic peoples. The scholar's book "*Central Asian Islamic Turkish Medicine*", published in 2014, deserves special mention.

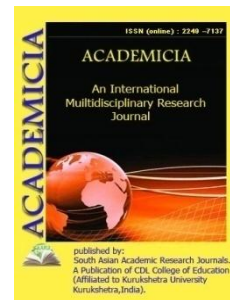
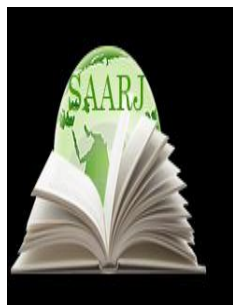
This literature provides a description of medical sources written in Turkic languages around the world, as well as an earlier description and in-depth scientific analysis of Turkic manuscripts written mainly in Central Asia during the Islamic period. The book contains not only the medical sources in the Turkic language kept in the Tashkent fund, but also a scientific analysis of the manuscripts written in this region, which are now in various funds around the world. A short critical text of Subhanqulikhon's treatise (1680-1702) "*Medical program-ilamal*" can also be found in this book [2: 7].

CONCLUSION

In conclusion, it should be noted that most of the work related to the study and identification of medical works written in Turkish languages is in the form of cataloging, short descriptions (commentary on their external features from the point of view of source studies). It is true that one of the best experts on them is *Lazzlo Caroly*. It is true that his works also need to be critically examined and studied, but we believe that the situation with the scientific approach to the information contained in his works is only positive for the Hungarian scientist.

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ANALYSIS OF DEVELOPMENT MONITORING THROUGH INNOVATIVE TECHNOLOGIES

Djuraeva Ra'na Bakhrombekovna*

*Department of "Modern Information and,
Communication Technologies"

International Islamic Academy of UZBEKISTAN

Email id: dzhuraeva.rano@mail.ru

ABSTRACT

This article is devoted to the development of testing methods that allow to diagnose the psychological predisposition of students to religious and scientific views. The aim of the work is to develop a convenient and effective software tool that allows you to determine and psycho-diagnose the predisposition of young people, especially students, to follow various misguided religious movements. In the "Terms" menu you can get acquainted with the Uzbek translation and interpretation of terms and terms in more than a few hundred fields of psychology. The "Recommended" menu is a small virtual library of national and foreign literature: lectures, works, textbooks, which serves to enrich the mental and spiritual world of various student

KEYWORDS: *Engineering Psychology, Psychological Testing, Psychological Diagnostics, Virtual Portrait, Virtual Psychologist, Psychological Prevention And Technical Logic.*

INTRODUCTION

There is no doubt that to organize the monitoring of mastery of student knowledge through a computer system, it is impossible to diagnose the quality of teaching in a modern education system, that is, to effectively manage the process and achieve a specific goal in education without diagnosing its condition. It is possible to determine the final knowledge and skills of students based on various criteria and approaches in the educational process, to check the validity of their compliance with didactic requirements as a result of the use of information technology in these processes. [1]

In it, pedagogical diagnosis includes determining the level of formation of knowledge, skills, and abilities of students, monitoring, evaluation, analysis of collected and statistical data, as well as predicting the future development of this process.

LITERATURE REVIEW

The strategy we used to create the search strings was as follows [4]: • Finding papers about engineering in education sector. Listing keywords mentioned in primary studies which we knew about. Use synonyms word (usage) and sub subjects of cloud computing in education such as (E-learning, management systems in education). Use the Boolean OR to incorporate alternative spellings and synonyms. Use the Boolean AND to link the major terms from population, intervention, and outcome. The complete search string initially used for the searching of the literature was as follows: psychological diagnostics AND psychological prevention and technical logic. It has been highlighted in [7] that there are two main issues on conducting an SLR search which are the sensitivity and specificity of the search. In our preliminary search, when we used the complete search string defined above we retrieved a very high number of articles. For instance, Google scholar, Scopus, ProQuest education, IEEEExplore, Science Direct, Springer Link retrieved more than two hundred results. Therefore, we have deepened our search and used this search string: (Adoption OR Usage) AND (engineering psychology OR — psychological testing) AND (virtual portrait, OR virtual psychologist). The revised search string has given us a reasonable number of studies and we finally selected relevant empirical studies

METHODOLOGY

Diagnostic tests in the educational process are important in that they help to some extent choose an effective methodology. When managing knowledge, its prognostic function serves to obtain information about the educational process, about its future, that is, about a situation that may be known in advance. [2]

At each stage of the learning process, it is possible to verify the prediction that the specific knowledge, skills and abilities intended for a particular piece of learning material are sufficiently formed or not formed. The results obtained from certain scientific predictions are used to create a model of students' future activities. Such a prediction is a great help in drawing clear conclusions for planning and implementing future training. [3]

Methods of psychology such as testing and analytical diagnostics effectively help in carrying out this work.

In the process of analyzing the results of activities, it is not the result itself, but the activity involved in generating that result that is psychologically evaluated. This method is widely used, especially in student psychology. By studying the activities of students, information about their psyche and development is obtained. [4]

In the era of computer and information technologies, in order to increase the efficiency, speed and convenience of psychological testing and diagnostics, two opposing areas, such as psychology and computer science, are currently mutually contradictory. working in communication and complementing each other. In the end, just as technical psychology exists, so psychology has its own technique. [5]

To be more precise, many modern technical devices, software of various psychological tests, diagnostics and analysis of other psychological processes and events are now available using a wide range of software tools with incredibly good capabilities that can be implemented in any field. and technical equipment is being created. [6]

Based on the above considerations, the Department of Modern Information and Communication Technologies of the International Islamic Academy of Uzbekistan has developed a program for psychological diagnosis "Psychological diagnosis of students' propensity to religious sciences (on the example of psychological diagnostic testing program)." This program is a diagnostic system that, unlike ordinary diagnostic programs, has the ability to determine the direction of the spiritual-enlightenment and religious orientation of students, diagnose it and direct it correctly. [7].

The program includes a set of psychological tests as a repository of data, based on the nature of the answers entered by the student after the test, the degree to which the student's consciousness has developed, the level of knowledge and the scope of knowledge, the direction of existing knowledge. (conscious) or false (unconscious), a tendency to deviate from the wrong currents in his verb, a diagnosis (diagnosis) of the presence or absence of extremist and terrorist ideas formed in the mental and intellectual world, the physical, mental and the formation of a virtual portrait of the mental trinity is then a "virtual psychologist" system that advises the student according to the result achieved. [8]

The main goals and objectives of the software system are:

- a) To study the personal (individual) psychological characteristics of the subjects of the educational process;
- b) Monitoring the development of students' social maturity and professional qualities;
- c) Determining the psychological and pedagogical readiness of students for vocational education;
- g) Identify the psychological causes of defects in the intellectual and personal development of students;
- d) Determining students' professional abilities, skills, competencies and attitudes towards their chosen profession;
- e) Determining the social role of students and their place in the group, and so on.

After the stage of psychological diagnosis, the process of psychological prevention is carried out and it includes:

Ensuring the personal development of the psychologist in collaboration with the team leader, medical staff and officials, while maintaining the individuality of the student;

Identify the causes of deviations (negative deviations) in student behavior and prevent such cases;

Identify and prevent the causes of stress, depression, conflict, negative emotional experiences;

Provides psychological support to students with disabilities.

Creating a program based on the right structure and logic will require the program to be perfectly linked in terms of both psychology and technical logic. Testing is a standardized, often psychodiagnostic method designed to identify individual psychological differences that are specific to a quantitative and qualitative type, limited in time overtime during the experiment.

The purpose of the test is to understand a weapon with a special feature that performs the function of assessing the psychological characteristics of individuals. It consists of a set of

conditions (tasks) or questions designed to reveal categories of different parts of behavior, taking into account a certain standard condition.

This psychological diagnostic test program serves not only as a system to diagnose the individual, unique features of the user's mental and spiritual world, to conduct additional interesting tests, to help him increase his knowledge in the field of psychology, to deliver useful literature. One of the biggest advantages of the system is that it runs both a test mode for the experimenter, a working mode, and a diagnostic mode for the experimenter.

That is, in this case, the test taker works by giving sincere answers to the test, thinking that he is taking the test just to get information about himself, because he is not given any notes or tests that indicate that his religious affiliation will be checked. However, the observer receives enough information to determine the level of his mental and emotional aptitude on the basis of the results, and the program automatically records them in the database.

Based on this, the main sections of the program consist of the following menus: "About the program" menu; "It's interesting" menu; "Terms" menu; "Recommended" menu; "Search" menu; "Start test" menu;

In the "About the program" menu: help with the installation and launch of the program, its purpose and rules of use. Information about the creators of the program will be available.

In the "It's interesting" menu: users are faced with a set of interesting, humorous tests on a variety of topics, which allow them to identify different aspects of their individual characteristics and behavior. Examples of such tests are: temperament detection, various picture and shape tests. They go through a testing process and are diagnosed on the surface of the results.

In the "Terms" menu you can get acquainted with the Uzbek translation and interpretation of terms and terms in more than a few hundred fields of psychology. The "Recommended" menu is a small virtual library of national and foreign literature: lectures, works, textbooks, which serves to enrich the mental and spiritual world of various students. It contains useful and interesting literature in the field of religion, psychology, spirituality, enlightenment and other areas.

"Search" menu - it is possible to search all the information contained in all available databases in our program in the form of a site. These include: psychological terms, useful literature, types of tests, user lists by administrator password, and so on.

The "Start test" menu is the main menu of the program, in which the process of diagnosing the level of religious affiliation of the student is carried out.

There is also a list of other similar software and websites that reflect the goals and objectives of the disclosure within our software tool, as well as the convenience of accessing them directly via a link.

By pressing the "Exit" menu button, the user can end the program and leave it.

The program view is in the form of a website, and its main window consists of four main parts: top, bottom, left and main parts. [7]

Unlike other psychological programs, the questions are not selected in a one-way and primitive form. The tests themselves are divided into five stages, which include:

Optional tests serve to reveal subtle points about a subject's inner psychological state, his or her character and behavior. Such cases include: his will;

Approved motivation (yes-no answer) tests - determine the degree to which the test taker's traits such as persistence, skepticism, honesty or deceit, cowardice;

Picture (aggression) tests help to determine the degree of irritability, that is, the nature of aggression, which has existed in the subject's character and behavior for a long time and occurs when faced with certain situations. The level of propensity is so high in a person with strong aggression

Logical tests - reveal how well the test taker's logical thinking ability has developed. Explains independent thinking, mental level, well-developed and well-formed logical thinking ability.

Formal or IQ tests are a collection of antique and very interesting tests that report IQ, that is, the level of intellectual ability developed in individuals, the speed of logical and mathematical thinking.

The main purpose of dividing the tests into such groups is: to increase the interest and courage of the test taker.

The program is based on web technologies, designed to attract users in terms of design, ease of interface, analysis of current psychological diagnostic data, using JavaScript, JQuery library, HTML, CSS, PHP, PhotoShop software and AJAX technologies.

CONCLUSION

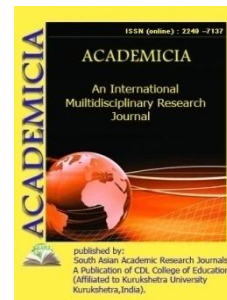
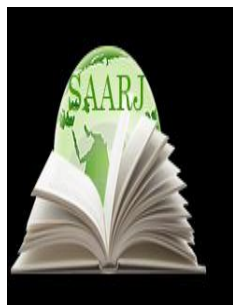
The above method is used for research purposes. In addition, some psychological methods are also used for testing purposes. The aim is not to introduce any innovations in the science of psychology, scientific knowledge, to discover the law. These methods are to determine the presence of a trait in the person being studied, its level of development, the degree of compliance with various criteria. The software system is used to study a person's professional ability, level of mental development, level of knowledge and voluntary inclinations. The effectiveness of the program is determined by the methodology on which they are based, the suitability of the test structure for many requirements, the conditions of conduct, and the adequacy of the requirements.

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GENDERED FAMILIALISM: NOTIONS OF CARE AMONG CARERS FOR CHILDREN SUFFERING FROM LONG-TERM ILLNESSES

Zuha Moideen*

*Post Graduate,
MA in English Studies,
IIT Madras, Kerala, INDIA
Email id: zuhamoideen@gmail.com

ABSTRACT

This paper is based on a minor study inquiring into the prevalence of the phenomenon of single mother led households, in Kerala, with differentially abled or terminally ill children. Instead of asking the question why the fathers desert these households, the paper explores the notions that hold the mother to the child through all hardship. The methodology involved a loose interview schedule keeping in mind Thomas's seven key variables that affect different ways in which care is conceptualized. An elaborate yet insufficient welfare regime that reinforces gendered familialism as well as a discourse of morality of care and responsibility are found to lead to not only a feminization of precarity but also to a feminization of the notion of care itself. The paper concludes that effective change can only be brought about by intervening and correcting the structural inequalities through shift in the intended direction of policy.

KEYWORDS: *care, childcare, feminization, gendered familialism.*

1. INTRODUCTION AND REVIEW OF LITERATURE

In an interview shot by Tv New in 2015, SheebaAmeer, a prominent social worker in Kerala, estimated that out of about 780 cases of child-patients registered under her organization 'Solace', around 300 are situations in which the father has deserted the mother and the ailing child(ren) (Tv New, 2015). Solace is a local NGO that facilitates curative and palliative care for children, from poor backgrounds, suffering from long-term illnesses. This was not the first time I had heard Ameer, a personal acquaintance, make such a statement. She had always been very vocal about the struggles of women as oftentimes the sole carers of the sick children. Even though exact figures are not yet available, the magnitude of the condition suggested by Ameer

recommends that this could be defined as a social problem. I was further intrigued by her emphatic statements that mothers do not abandon their children even when they have to guide the child through his/her most basic grooming throughout their lives, sometimes at the cost of their marriages. Even in cases where both parents are present, the mother undertakes the majority of the care requirements of the child. When fathers do fulfill these needs, as Tronto(1993) suggests we find “a pattern of exceptionalism” (as cited in Hughes, 2002, p. 110). What keeps the women so devoted to the care of the ailing child? Is Ameer’s conclusion a folk theory or can research support her claims?

According to Hughes (2002), care holds a contradictory and ambiguous place in existing feminist literature. It is viewed as an entrapment from which women must escape and also, contrarily, as essential to women, a hallmark of their difference based in the relationality of womanhood. However, most feminist theorizing agree that the structuring effects of women’s responsibilities for care result in cumulative economic disadvantages for women.¹ Most theorists criticize the role of policy in incurring those disadvantages;² however, keeping in mind the particular field this paper focuses on, it is Indian sociologists RajniPalriwala’s and Neetha’s appraisal of what they call the “residual welfare regime” (2011, p. 1050) of India, that holds interest. In their opinion, the implicit conceptualization of care as a familial and female responsibility guides public policy and this in turn affect the orientation and possibilities that the policies reinforce, create or foreclose. For instance, they comment, the 86th Constitutional Amendment in 2002 shifted the right to free and compulsory education from 0-14 years to 6-14 years (Palriwala&Neetha, 2011, p. 1061). This meant that the government was freed from the responsibility of care for children in early childhood, where caring and education are inextricably linked, and this was left in the hands of the family. Thus “familialism”(Palriwala and Neetha, 2011) dominates Indian public policy, the assumption being that the state need not deal with people as citizens but as members of households, the primary unit. Any internal inequalities or dynamics are seen as necessary to sustain this essential unit. It is important to stress that family ‘failures’ are considered the exception against the majority - the ‘normal’ mode of life. It is the prevalence of this exception that makes this paper all the more pertinent.

At the heart of familial responsibility lies women’s unpaid labour, both in the daily upkeep of the family and in the care of children. Women in Kerala, from lower classes, with ailing children, find it difficult to combine paid work with strict hours, with unpaid childcare. Additionally, despite legal dictates and discourse in the public arena, childcare facilities at worksite are almost entirely absent. Thus, these women prefer to work as unskilled labour in the informal sector sacrificing work hours, resulting in fluctuating pay, in the name of care responsibilities. The precarity of this situation is compounded by the dominance of low pay and job insecurity in the informal sector. Gutierrez-Rodriguez (2013) terms the situation the ‘feminization of precarity’, where precarious working and living conditions prevail and a “being in the world” shaped by constant uncertainty regarding life dominates female lives. Thus, the gendered nature of familialism with regard to provision of care forces not only a feminization of precarity but also a feminization of the notion of care itself. This conclusion is further supported by the ‘devaluation framework’ (England, 2005) which emphasizes that cultural biases limit state support for care work because of its association with women. In fact, care and womanhood are inextricably linked and a devaluation of care does not necessarily imply a conscious devaluation of women’s work, even though in effect this translates conversely.

A discussion of conceptualizations of care is incomplete without at least considering the host of cluster concepts it invokes. 'Responsibility' for care, for instance, lies in the connection between moral values and identity through which people craft themselves based on understandings of what it means to be a good mother or father and so on. Gilligan (1982) explains how women see conflicting responsibilities as a moral dilemma. A conventional interpretation of responsibility as responsive to others, Gilligan notes, impedes women's sense of themselves as autonomous subjects and renders care for oneself an act of selfishness (as cited in Hughes, 2002). Selflessness or self-sacrifice is thus another concept attached to the definition of care.

Devika (2008), on the other hand, views responsibility, and self-sacrifice to an extent, as the culmination of a long-term process of "domestication" (p. 16) in Kerala society. The idea is that people are directed to devote a majority of their time to their natural calling, parenting. Parenting or "handicraft" (Devika, 2008; p. 16) requires such attention that parents withdraw from the public sphere. In fact, participation in public is shaped in such a way that the interests of the family or household holds weight above that of the citizen. Again, it is the centrality of the family as the primary unit to which responsibility is owed, that is stressed in both Gilligan's and Devika's arguments. While the energies of men and women are guided towards the home, the home in itself is seen as a private matter and the work undertaken for its upkeep a personal virtue. Consequently, as Crozier (2010) maintains, people in caregiving roles tend to be marginalized.

A seemingly reasonable explanation of the level of responsibility felt and the self-sacrifice entailed in the care given, is the "intergenerational contract" (Crivello & Espinoza-Revollo, 2018, p. 149) by which carers expect their services returned by their children in their old age. The aim of feminist politics with regard to the matter of care, then seems to be not just mere voicing of caregivers' concerns but also to stress that life revolves around the "mutuality of interdependence" (Hughes, 2002, p. 119) or "shared experiences of vulnerability" (Crivello & Espinoza-Revollo, 2018, p. 142). Care is to be seen as a vital civic virtue, the responsibility of every citizen. Crivello and Espinoza-Revollo (2018), through their discussion of the "intergenerational contract" as extending within generations as well, bring in the often latent figure of the child in both care receiving and care giving roles. However, in the context of this paper, the 'contract' remains unfulfilled in terms of the absolute dependency of the children upon their parents. The care givers themselves do not expect the ailing child to support them even when they would grow old and infirm. What, then, accounts for the strong sense of responsibility and unstinting care given to the differentially abled or sick children? Do structural inequalities facilitated by dominant notions of care explain the phenomenon of single mother led households with sick children?

This paper is unique and relevant as it considers care outside its performance in 'normal' families. There is also a dearth of literature on care given and received at home in the society of Kerala.

2. METHODOLOGY OF RESEARCH

This paper is based on a minor study of conceptualizations of care in poor households with ailing children. A loose interview schedule was prepared keeping in mind Thomas's seven key variables (1993, as cited in Hughes, 2002, p. 111) that affect the different ways in which care is conceptualized. These variables include the social identity of the carer and of the recipient,

interpersonal relationships between carer and care recipient, nature of care, the social domain within which the caring relationship is located, the economic character of the relationship and the institutional setting in which care is delivered. The context of this paper determined early on that the caring relationship was not based on any economic advantage and that the care was given by the primary care giver mostly in a home based setting.

The schedule was divided into five parts – personal details of the carer, details of the care recipient, details of the process of caring, help provided and miscellaneous. Details like the occupation, income, education, age, relation to the recipient etc. were supposed to provide information regarding the social identity of the care giver. Likewise, details of the care recipient like education, age, illness or disability, treatment history and the like were to provide the social identity of the recipient. The details of the process of caring involved drew on a list of chores performed for the recipient's basic grooming. Each chore was stated to gain information on the carer who performs each task. It also included questions on difficulties faced during the process of caring, special needs of the child-patient, the way the child views his/her carer and so on. This section was meant to collect data on the interpersonal relationship involved and the nature of care. Particulars of help provided by outside forces were to determine the social domain in which the relationship was located.

The study focused on the patients registered under the NGO, 'Solace'. Out of around 1300 cases registered, 10% or 130 were to be selected as subjects for the larger study. As part of the current paper, fifteen responses to the interview were collected. 'Solace' also provided access to the files of these fifteen cases. The files contained information of their visits to solace to seek help at various times. It recorded their personal details, needs, grievances and the treatments undertaken or ongoing. The study also involved home care visits with members of 'Solace' to four of these fifteen households. SheebaAmeer, the founder of 'Solace', was also interviewed to gain a stronger understanding of the organization's vision, scope, forms of care provided, experiences and so on. The results were analyzed and compiled in the next section.

3. ANALYSIS

Taking into account their convenience, twelve mothers, two fathers and one sister of the fifteen cases of child-patients selected, were interviewed.³ Almost all of the cases identified the mother of the child as the primary care giver. Public policy in India aimed at the betterment of the poor is elaborate and many of the families of the child-patients selected made use of such provisions. For example, the Public Distribution System which offers essentials at low prices to families with the BPL (Below Poverty Line) Card is hugely popular. Many of them were aware of free healthcare provided by local government hospitals and make use of free education provided by public schools. Government policies such as Indira Gandhi National Disability Pension Scheme, *Aswasakiranam* which provides financial assistance to care givers, Widow Pension, various educational scholarships and monetary help for building houses as a part of the 'housing for all' policy of the housing department of the Government of Kerala were recorded as major interventions that help improve the lives of these families.

Unlike SheebaAmeer's claim that state welfare facilities are non-existent, the list of policies seem substantial until one takes a closer look. While all these schemes assist in providing care to children, they depend upon the persistence of mostly unpaid, full-time care workers in the form of mothers. Moreover, in the case of differentially abled children or those with terminal

sicknesses, the existing facilities are not adequately provisioned to meet their needs. Sajitha, whose four year old toddler has been diagnosed with Global Development Delay, explains that she could not leave her child in crèches or similar institutions as these require the child to be at least toilet-trained. *Anganwadis*, local government centers that provide childcare and education for those in early childhood, are also not equipped to deal with children with different needs. Sheeba Ameer also points out that the Mahatma Gandhi National Rural Employment Guarantee Act (NREGA) scheme, a social security measure aimed to provide at least 100 days of wage employment per year, is ineffectual in the case of single mother led households with ailing children. If the mother finds that she is unable to leave her child's side on the first day of a month, then she becomes ineligible to benefit from the scheme the entire month. As Gutierrez-Rodriguez (2013) upholds, not only is child care generally inaccessible and unaffordable, but increasingly deemed a private matter. Additionally, at least nine of the carers responded that they were either ineligible for benefits, have not yet obtained these benefits or receive them only sporadically. Complicated paperwork and elongated processes encumber these families from obtaining entitled benefits. For instance, Suhara, whose child also has Global Development Delay, couldn't acquire help from the local *Panchayat* bodies for building her own house as a relative in her joint family with the same ration card had already availed this policy.

Palriwala's and Neetha's (2011) account of gendered familialism as the driving ideology behind policy making is reinforced in this study. Both NREGA and PDS schemes view the family as their primary unit of intervention. Even the radical *Aswasakiranam* issues a negligible allowance for the care giver and also further strengthens the position of women as the primary care giver within the family. Ameer, while talking about an unrelated subject, told me that "our children (patients) do not need nurses, their mothers care for them". A word cloud of the aggregated catalogue of carers who perform different chores for the care of the child-patients revealed that a whopping total of 96 of 164 words was the term 'mother'. This role as the primary care giver of the ill child consumes the mother's life. At the very least five mothers more or less said that they could not go to work because they had to care for their children. Of the mothers who did find employment, most worked erratically. For instance, Sathi, who works as a household help, explained that she accepted whatever payment she was given each day as she worked irregularly and often lend money from her employers.

Reinforcing this notion of the mother as responsible primarily for the care of the child, is the deep seated belief that the mother's care is the best care. In Pameela's words, "no one can take care of her like I do". She is a single mother caring for her only daughter who has Down Syndrome. "Since maternal care is culturally treated as the 'real' care, all other childcare arrangements other than the same are labeled as 'substitute care'" (Thampi, 2007, p. 130). Anything else is substitution and naturally inferior. The result is that, for the mother spaces of living and caring overlap and even the conception of a separate self is problematic.

Ameer further establishes this argument by ascribing a morality of justice for fathers as opposed to the traditional morality of care and responsibility of the mothers. She emphasizes, "The mother knows every feeling, emotion and dream of the child. Men can't reach that level, their gender does not allow it. That difference exists. Women are stronger; more compassionate than men". In the mother's absence, the responsibility for care shifts to other mature female members of the family. There is a seemingly strict division of labour. The father is supposed to be the breadwinner, which Palriwala and Neetha assert is vital to the ideal and practice of familialism.

Most of the patients' files in 'Solace' lists the source of income for the family as arising from the father's employment. However, many of the mothers discreetly remarked that the fathers cannot/are not physically or mentally able to/do not find work regularly. Despite this, fathers never take on the role of primary carers. Even when involved in the child's direct care, the father performs traditionally masculine tasks like teaching the child, taking him/her to school or tasks that are physically strenuous like heaving the child to the toilet. Again, Ameer admits that Solace's 'family strengthening programs', which aim to facilitate home-based employment or businesses for the mothers of the patients, mainly target preserving the dignity of the mothers by ensuring at least a small income for them, rather than ensuring meaningful employment.

The entire family is affected by the sickness or disability of the child. Siblings usually undertake a significant amount of labour within the household, though their work is hidden and seen as secondary. "The everyday language of 'chores' and 'help' undermines the value of their contributions" (Crivello & Espinoza-Revollo, 2018, p. 143). However, the mother's 'presence' and silent supervision are required to maintain the household and care for the child-patient. The home and the private are her domains.

The constant uncertainty, indeed the precarity of their living conditions, makes these families constantly utilize kinship ties and social support networks. The 'intergenerational contract' is not a rationale for responsibility of care, as far as the families interviewed are concerned. Their motive appears to arise more from a sense of self-sacrifice and responsibility. The families follow a scheme outlined by public discourse – that of the father as the breadwinner, the mother as the care-giver and the children as potential breadwinners and care-givers. Non-fulfillment, which is a certainty in most of the cases discussed above, results in severe anxiety. Mohammed Shahrooq, a nineteen year old suffering from paralysis, fears that his parents suffer because of him and would abandon him. In fact, he is afraid to the extent that he resists staying in a place other than his home even for a night.

Love, perhaps, is the most overtly manifested cluster concept related to care. Love is articulated in the tiny spurts of actions, be it Ameer's example of a sibling upending coconut shells filled with water to ensure that mosquitoes do not linger and trouble his paralyzed brother, or Sharooq's guilt for imposing on his parents, or Sindhu's desire to fulfill her son's wish to learn to play the musical instruments of 'chenda' and 'mruthangam'. Love is also displayed through the relentless search of the family for the best treatment available for the child. In some cases, like that of Sinan who suffers from hearing loss, such a search leads to private, expensive hospitals even when equally good alternative treatments are available at a lesser cost. Conversely, love and care can also be articulated by favouring social prejudices over treatment for the child. For example, Nizam's mother was more concerned during the interview about her daughter. Her daughter, around 18 years old, was partially blind in one eye; however, her mother was more concerned about keeping the condition a secret because she was terrified that it would affect her daughter's prospects for marriage. Care, love, morality, responsibility are all linked in an intricate dance about public discourse. In an interesting turn of events, Ameer, who fights for women's rights and gender justice, stressed that she ensured that Solace's logo, which portrays a big person hugging a small person, was designed in such a way that the adult in the logo was gender neutral. However, the power of pervasive discourse is such that I still saw (albeit the fact that I paid only cursory attention to it) a woman or mother hugging a child.

4. CONCLUSION

Feminist research on care has focused on its gendered character. However, much of it usually sidelined discussion of care in households that do not fit the norm of the 'normal' family. Analysis of independent study conducted reaffirms the fact that gendered familialism drives policy and discourse in the discussion of care. Interventions are directed towards the primary unit of family and a scheme of gendered division of labour directs responsibilities within the family, resulting in pervasiveness of mostly unpaid, full-time care workers in the form of mothers. An opposition between the morality of justice and that of care and responsibility helps loosely explain interviewed mothers' devotion to their ailing children. In contrast to a morality that focuses on individual rights, many women's conception of self and others is based on relationships and responsibility. The strength of such a morality coalesce spaces of living and caring, making even the conception of a separate-self problematic. Reinforcing the morality of care and responsibility is the fundamental belief in the infallibility and superiority of mother's love and care. As a result, the mother's 'presence' and silent supervision is required to maintain the household and care for the child-patient. As Nelson remarks, dichotomizing habits of thought within the family is rooted in tacit assumptions about gender (as cited in England, 2005, p. 393). Structural inequalities facilitated by these assumptions lie at the heart of the single mother's struggle to care for her ill child. These assumptions ensure the functioning of the configuration of inequalities even in the wake of failure of the 'intergenerational contract'.

Change in the predominance of the phenomenon of female care giving as the primary, and oftentimes the sole, care for children suffering from long-term illnesses could only be brought about through structural changes in the functioning of the society. The first step would logically be a radical restructuring of childcare policy with specific emphasis on the intended populace who are a subject of the policy's reforms. State should take responsibility as the primary unit of provision of care instead of placing the entire responsibility on the gendered structure of family. A more comprehensive understanding of childcare incorporating the prevalence of non-'normal' families and thus a complete change in the dynamics of the family, is also necessary for effective change in policy.

It is the intensity of the feminization of precarity in the case of single mothers with differentially abled or terminally ill children that drives this study. A more elaborate study with a sizable sample, as mentioned above in the methodology, will be conducted in due course. Avenues for a more detailed study of notions of care in households with ailing children include exploration of the concept of "mutuality of inter-dependence" and of the sharing of vulnerabilities, apart from its material dimensions. An examination of the influence of caste and religion in perpetuating gendered familialism also could help in understanding the problem in depth.

ENDNOTES

1. These economic disadvantages including women's unpaid care of family members and resultant contribution to the maintenance of existing labour is discussed in the next paragraph.
2. For instance, Hughes (2002) cites Parker's work (1993) on "how gendered nature of public policies reinforce the economic dependence of women in relation to spousal caring relationships" (p. 115). Additionally, England (2005) provides the example of benefits conditioned on prior employment which offer little for the mother without previous

employment because she had been caring for her children (p. 384). Devika (2008) also comments on the 'withdrawing welfare state' in the context of policies on care.

3. The economic backgrounds of these families differed only slightly as 'Solace' verifies that their need for financial assistance is indeed dire. As regards the social background, four of the fifteen were single women led households. Most of the parents and relatives of the child-patient were employed in unskilled, informal sector.

ACKNOWLEDGEMENT

This paper compiles the findings of a minor study of the same name conducted under the guidance of Dr. Sara Neena T. T., Retd. Associate Professor and Head, Department of Sociology, Vimala College, Thrissur, Kerala. The article has not been submitted to any other publication.

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APPENDIX A**INTERVIEW SCHEDULE FOR CARE GIVERS OF CHILD-PATIENTS****I. PERSONAL DETAILS**

- 1) Name of carer
- 2) Age
- 3) Where do they live?
- 4) Members of family (names, age, education/employment)
- 5) Education
- 6) Employment History (if not employed, do they yearn to be employed. Why?)
- 7) Organization in which they work
- 8) Skilled or unskilled labour
- 9) Income
- 10) Dreams

II. DETAILS OF THE CHILD-PATIENT

- 11) Name of the child
- 12) Age
- 13) Illness
- 14) Treatment History
- 15) Current Treatment
- 16) Education

III. DETAILS OF CARING

- 17) Who takes care of the child?
- 18) Which activities do the carers perform, individually and collectively?
 - a) Who helps the child to bathe
 - b) Brushing teeth
 - c) Eating Food
 - d) Dress
 - e) Go to the toilet
 - f) Give medicines
 - g) Plays with the child
 - h) Takes the child out
 - i) Teaches the child
 - j) Takes the child to school
 - k) Takes the child to solace
 - l) Takes the child to the doctor

- m) Takes the child for physiotherapy
- n) Put to sleep

- 19) Does the child have any other special needs? Who performs them?
- 20) Difficulties faced in the process of caring
- 21) How do you manage caring with other household duties?
- 22) Do the siblings face difficulties due to the illness of the child?
- 23) How does the child see the carer?

IV. HELP PROVIDED

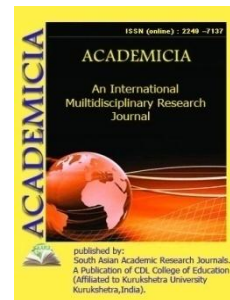
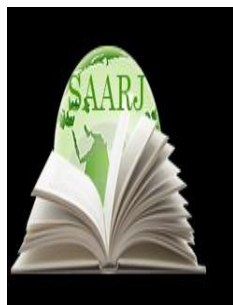
- 24) Do you receive support, monetary or otherwise, from any organization, agency, religious institution, independent people etc.?
- 25) How do they help you?
- 26) What help does Solace provide?
- 27) Are you satisfied with the help that Solace provides?

V. AWARENESS OF POLICIES

- 28) Which of the government policies benefit you in the care of the child?
- 29) Where did you gain information about these schemes?

VI. MISCELLANEOUS

- 30) Who do you think is responsible for the care of the child?
- 31) Do you think anything more could be done to achieve your dreams?



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ISSUES OF ENVIRONMENTAL PROTECTION AND COORDINATION OF THE SYSTEM OF RATIONAL USE OF NATURAL RESOURCES IN UZBEKISTAN

Shamsiddinova Gulchehra Dustmuradovna*; **Sayfullayev Asilbek Farhod ugli****;
Lobar Khalilova***

*Docent,
Candidate of Biological Sciences,
Navoi State Pedagogical Institute,
UZBEKISTAN

**Teacher,
Navoi State Pedagogical Institute,
UZBEKISTAN

***Magister,
Navoi State Pedagogical Institute,
UZBEKISTAN

ABSTRACT

Due to the fact that ecological problems have become one of the most important ones owing to their detrimental consequences during globalization, the attainment of sustainable development of ecology and state through the elimination of these ecological problems and their effects are analyzed in the current article. Coordination of work in the field of sustainable development education in educational institutions, enterprises and organizations, teaching of natural sciences in general education institutions in accordance with state educational standards, the impact of scientific and technical progress on the relationship between society and nature, Environmental Aspects of Sustainable Development, the Concept of Sustainable Development and Education Priorities, and the United Nations Millennium Development Goals for Sustainable Development and Development are all the more important in the current era of globalization. The rapid development of transport, population growth and urbanization, the chemicalization of agricultural production, the chaotic, unplanned development of lands, the uneconomical use of water resources, on one hand, will allow to use more of the republic's resources, on the other

hand, from ammonia to the environment, disrupting its natural balance. As a result, the region's air and water are being polluted, soil erosion is accelerating, some species of plants and animals are declining or disappearing, and natural monuments are being damaged. Preventing these situations shows that all countries must work together to maintain the ecological balance in nature.

KEYWORDS: *Environmental Aspects Of Sustainable Development And Prosperity, Concept Of Sustainable Development, Education Priorities, Environmental Protection, Agenda 21 Visit Agenda.*

INTRODUCTION

In the current process of globalization, the competitiveness of any country depends on the availability of natural resources in the region and environmental protection. In 1992, the governments convened the UNCED-92 Conference on Environmental Protection and Development, known as the "Summit on Land Issues" in Rio de Janeiro. "In addition to ensuring sustainable development, there are countries that can protect the environment, develop on the path to a clean future of the planet, based on mutual needs and common interests, as well as more industrially developed countries." to reach an agreement on laying the foundations for global cooperation. The UN emphasized the principle of the need to protect the environment, as an integral part of any activity aimed at economic development, without changing the current model of economic development, global economic goals cannot be achieved. Developed nations adopted the "Visit to the 21st Century" agenda at the 1992 Land Summit in Rio de Janeiro, where the United Nations has been tasked with implementing the program since then is taking steps to integrate the concept of development ecology. In the Republic of Uzbekistan on the basis of this program:

- Measures have been taken to curb the deterioration of the environment and to lay the foundations for sustainable living and development in the 21st century.
- In Rio de Janeiro, governments have developed detailed plans to implement the UN Visiting Agenda for the 21st Century program, to take the world out of its current model of unstable economic development, and to create activities that support and renew important environmental trends.
- Action plans have been developed for atmospheric protection, forest conservation, soil erosion and desertification, air and water pollution, prevention of depletion of fish stocks, and decontamination of toxic waste.

Awareness of the need to maintain stability and protect the environment is now being monitored through all areas of UN activity. Cooperation between organizations and governments, NGOs, academia, and the private sector, developed by all countries, helps to bring new knowledge and concrete action to address environmental issues.

In order to coordinate the system of environmental protection and rational use of natural resources in the process of globalization, and to implement the appeal of the Summit on Land Issues, all UNEP-sponsored countries should do the following:

- Adopt and work on a Global Action Plan for the Protection of Coastal Polluted Oceans since 1995;
- Development of international agreements on global and regional assessment of drinking water, coastal and marine resources, management of water systems of different countries in accordance with the Water Resources Program;
- Ensuring international cooperation in the implementation of the Global Action Plan for the Protection of the Marine Environment from Land Activities;
- Strengthening and developing the work of the UN Commission on Sustainable Development (launched in 1993);
- The Interdepartmental Committee on Sustainable Development (established by the Secretary-General in 1992), as an organization that cooperates within the UN and coordinates the implementation of the decisions of the Summit, is one of the first plans for the Visit to the XXI Century Agenda to monitor their activities and submit all reports to the UN General Assembly.

Environmental problems are scientifically based problems that threaten all mankind, and scientifically based the measures taken by states and peoples to preserve the environment, use nature wisely, protect it and increase its natural resources in the interests of all mankind. The Committees on Ecology and Nature Protection study environmental disasters caused by human error and seek measures to prevent them. Then nature will not lose its importance as the main source of material wealth for mankind.

The use of natural resources in Uzbekistan has its own characteristics, due to the fact that the main cities, villages, factories, cotton fields are located in the oases, Tashkent, Mirzachul, Fergana, Zarafshan, Surkhandarya, Kashkadarya, Lower Amudarya oases are industrial and domestic. -contaminated with municipal waste and agricultural residues of chemicals used in agriculture. "Agricultural reform and food security will undoubtedly remain one of the most important issues for us" [1,129].

The most active regions in the country's fuel balance are gas and oil from the North Sokh, South Olamushuk, Polvontash, Chimgan, Shursuv, Mingbulak fields, and in the Bukhara and Kashkadarya oases - Shortang (with reserves of 60 million tons), Zevarda, Mubarek. , Uchkir, Jarkoq and Kokdumalak (reserves 143.7 billion cubic meters). The explored natural gas has covered the republic's needs for 35 years and oil for 30 years, ranking third in Russia and second in Central Asia in terms of coal reserves, after Russia and Turkmenistan. The Angren, Shargun and Boysun coal seams contain clay, kaolin, sand, bentonite, shale and various other rocks of economic importance.

The country has huge mineral resources, ranking first in the world in terms of gold, copper, molybdenum, tungsten, lead, zinc, natural gas, precious stones, phosphorite, salt, sulfur, aluminum raw materials in the region and there is a large stock of building materials.

In Uzbekistan, iron ore deposits are found in the Sultan Uvays, Nurata, Chatkal mountains, which contain nickel, cobalt, bromine, platinum and other ores. The region has the Zarafshan, Korjontov and Morguzar manganese deposits, the third largest in terms of copper reserves after Kazakhstan and Russia. Copper deposits are found in Almalyk, polymer deposits in Surkhandarya region, Nurata, Qurama ridges.

Nature and man-made products are limited, and coal, oil, and natural gas have been around for hundreds of millions of years. Gasoline, diesel and rocket fuel used for vehicles are extracted from oil and used in coal plants to generate electricity, natural gas heating and engine start-ups, and as transportation fuel. In the current process of globalization, saving solid fuels is an important source to leave as a reserve for future generations, and their excessive burning leads to air pollution, which in turn leads to the destruction of natural ecosystems.

Solar-powered water heaters use solar energy through collectors. The production of mechanical or electrical energy from wind energy depends directly on wind speed. Minerals are a source of energy and fuel for human economic development, and their use is growing every year. If in the last 25 years the world's demand for coal has increased by 2, iron ore by 3, oil and gas by 6, manganese, potassium, phosphorus salts by 2-3 times, then the share of the population is 40%. Currently, the world produces 150 billion tons of minerals a year, and 15 billion tons of rocks flow into the oceans and seas due to erosion.

According to the UN, the world produces 32 billion tons of coal a year, 2.6 billion tons of oil, 6 billion tons of iron ore, 3.6 million tons of chromium ore, 7.3 million tons of copper ore, 3-4 million tons of coal. lead ore, 159 million tons of salt, 120 million tons of phosphates, 1.2 million tons of uranium, mercury, molybdenum, nickel, silver, gold, platinum ores are mined [2.28 b].

According to experts, if the mineral resources are used at the current rate, gold will be 30-35, zinc 36, antimony 70, potassium 40, uranium 47, copper 66, mercury 70, coal, oil, gases in 150 years may be exhausted. As a result, many developed countries: Japan, England, Germany, Italy, the Netherlands, Belgium and other countries, due to lack of raw materials, underground resources, recycle secondary waste and use the resources of other countries. According to Japanese scientists, due to the amount of metal in the ocean floor, the current level of consumption of world industry can reach 2,000 years with copper, 70,000 years with nickel and 14,000 years with manganese. Up to 20% of these resources are used for the needs of world industry. In addition, underground minerals are usually mined at the expense of 1 or 2 metals and the rest is released into the environment. M: 8 t aluminum from 100 t granite, 5 t zinc, 0.5 t titanium, 80 kg manganese, 30 kg chrome, 17 kg, nickel, 14 kg. The bath can be separated. At present, 150 billion tons of ore, the required elements are extracted and the remaining 95-98% is released into the environment.

More than 2,700 different prospects of Uzbekistan's mineral resources have been identified, of which more than 60 are involved in production. The proven reserves of more than 900 deposits in the country are estimated at \$ 970 billion, and the total mineral resources are estimated at \$ 3.3 trillion. The most important strategic sources are: oil and gas condensate, 155 prospects for natural gas, more than 40 for precious metals, 40 for non-ferrous, rare and radioactive metals, 15 for mining raw materials. Annually, about 5.5 billion soums are extracted from the country's deposits. \$ 6.0-7.0 billion dollars of worth of minerals are being mined. New reserves are being added. Uzbekistan has proven reserves of a number of minerals, including gold, uranium, copper, natural gas, tungsten, calcium salts, phosphorites, kaolin, not only in the CIS, but also in the world.

In Zafarabad, the Central Ore Department is conducting uranium mining on 170,000 hectares, rendering these areas unusable to varying degrees. The total area allocated for the second phase

is 16,000 hectares, and as a result of practical activities, the amount of ground salts has increased by 10-50 times, and the amount of some radioactive substances by 10-20 times.

Navoiyazot plant discharges its 570,000 cubic meters of toxic seeds into reservoirs with an area of 50 hectares, based on polymers 25%, rhodonites 10%, solid mixtures, containing zeonite 50 mg / l, ammonia 150, sulfate salts 15000, copper is 2500mg / l.

Waste of Navoi electrochemical plant composed of highly 7 800 000 complex organic compounds, covering an area of 125 hectares. In recent years, there has been a problem with the use of hydrogen in order to keep the environment clean and save natural fuel resources. The advantage of hydrogen is, firstly, that there is an increase in production on an industrial scale with unlimited reserves, and secondly, it is a universal fuel used in electricity generation, road transport, aviation, maritime transport in liquid and gaseous form.

Angren coal deposit (reserves of 1885 million tons), phosphorides (reserves of 100 million tons), black coal in the Fergana Valley (reserves of 30-35 million tons), 33 deposits of 32 types of non-ferrous metals have been launched. There are 16 mining and metallurgical enterprises. Of the 27 gold reserves, 16 are being explored and 7 are being exploited.

In accordance with the Law "On Waste", Uzbekistan annually generates more than 100 million tons of industrial waste, 14% of which belongs to the toxic category state control work is carried out.

CONCLUSION

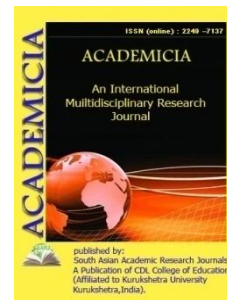
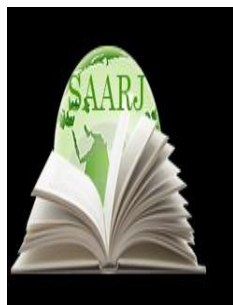
The issues of coordination of the system of environmental protection and rational use of natural resources are very important, and it is necessary to achieve healthy and sustainable development in nature and society by performing the following tasks:

- Improving economic mechanisms for the use of natural resources, developing programs for the management of protected areas;
- Identification of sources of environmental pollution, improvement of environmental certification control system based on environmentally friendly products and technologies;
- Creation of a database system for environmental information and environmental monitoring, development of international environmental norms and standards;
- Implementation of scientific and technical developments in various sectors of the economy, environmentally friendly technologies, waste disposal and development, as well as the continuation of scientific research;
- Strengthen cooperation with community environmental organizations on environmental protection and use of natural resources, and joint environmental decision-making.
- Reducing the amount of substances that are extremely dangerous to public health;
- Rational use of natural resources, transition to waste-free technologies;
- Saving raw materials in enterprises, their integrated use, production and recycling of consumer waste;

- Encouraging companies and organizations to release pollutants into the environment, inefficient use of natural resources, and encourage companies and organizations that comply with protection laws.

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CHALLENGES IN ASSESSING ENGLISH LANGUAGE PROFICIENCY (AS AN EXAMPLE OF UZBEK SECONDARY SCHOOLS)

Lutfiyev Nasimbek Gofurovich*; Abbosov Avazbek Abdulhamid ugli**

*Chief Specialist,

State Test Center under the Cabinet of Ministers,
Republic of UZBEKISTAN

**Chief Specialist,

State Test Center under the Cabinet of Ministers,
Republic of UZBEKISTAN

ABSTRACT

Children who speak the majority language, English, as their second or third language - English Language learners: ELLs are found in the caseloads of speech-language pathologists in Canada, the United States, Australia, the United Kingdom and elsewhere. Uzbekistan is a country in which the English language has been learnt as a foreign language for decades, nevertheless, step-by-step, English is almost getting the place of the second language. The significance of the English language is increasing in Uzbekistan due to the several factors: state policy, Internet usage, prestigious jobs and so on.

KEYWORDS: *Lingua Franca, Presidential Decree, CEFR, IELTS, Uzbek Model of CEFR*

I. INTRODUCTION

Approximately 375 million people speak English around the world and there are more than 50 English speaking countries, where English is either the official or the primary language. English is the third most common spoken language in the world. The English language which evolved from a combination of Old English and the German Anglo-Saxon tongue, began to be commonly used around the 5th century. It is the most widely learned second language in the world [1].

Today the role and influence of English are gaining a higher speed in the world as well as in Uzbekistan. Since the Republic of Uzbekistan declared its independence in 1991, the role of the language used in the country started to change, shifting in dominance and significance in all spheres of Uzbek people's life. The Uzbek language acquired its position as the only official

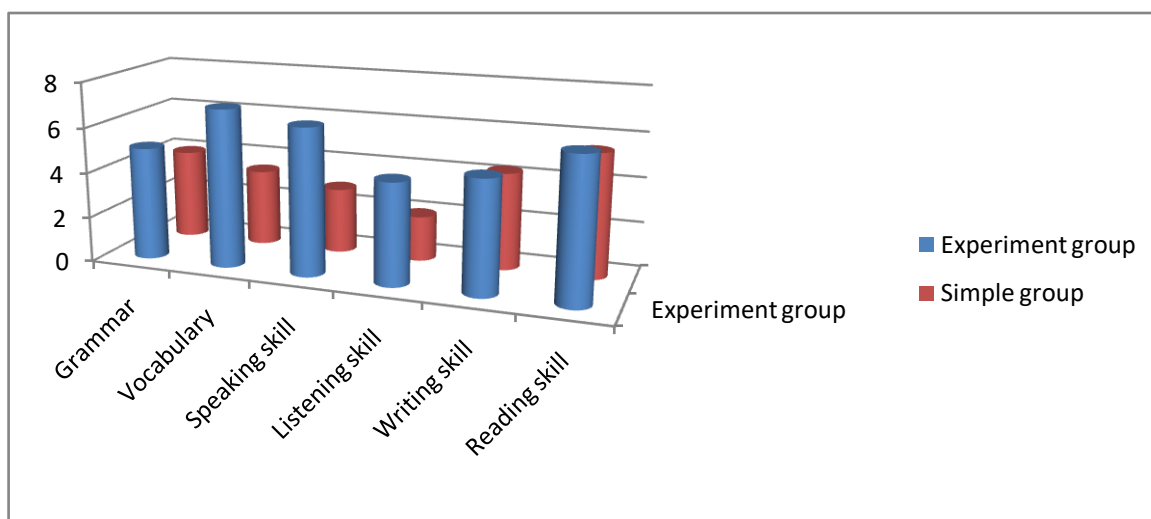
state language, while Russian was given the status of foreign language and lost its power as “Uzbek’s second mother tongue”. However, preserving its importance on communicational level and the function of lingua franca for ethnical minorities. English, in its turn has been continuously increasing in importance and acquiring the status of the most preferred foreign language to be learned.

The Presidential decree was enacted on the Resolution of the Cabinet of Ministers of Uzbekistan, which substantiates foreign language teaching significance comprehensively. It has got points for English language and affirms following: Firstly, from 2019 on all the applicants applying to the universities who puts in IELTS (5.5 band score) or TOEFL (IBT 72) certificates, plus the ones who has got B2 level on CEFR or FCE (Cambridge assessment English) are privileged to get the total high score in entrance examination on English as a primary subject. Secondly, the applicants taking exam on English as a minor subject must show IELTS (4.5 band score) or TOEFL (IBT 42) certificates either B1 level on CEFR or FCE in order to take a privilege for the total high score. In this research, secondary school pupils are taken as subjects, as most of the English test takers are considered to be the very secondary school learners. In the following, a scientific research will be held on English Language Assessment in secondary schools [2].

II. RESEARCH AND RESULTS

The Common European Framework of Reference (CEFR) is the internationally recognized framework for learning, teaching and assessment. This framework became the requirement in teaching and learning languages in Uzbekistan from 2013 onwards in the education system. Since then several reforms has been adopted in order to create domestic multistage of the CEFR in the country [3].

Now we discuss whether English Language Assessments mentioned above matches or not for the pupils of secondary schools. In order to reveal the given problem, the experience was held with the participation of 15-year-old school children in the period between September 2020 and October that year. About 15 pupils were selected for experiment and another 15 pupils was only for comparing the difference and improvement between them. The first group was assessed according to Uzbek model of CEFR and the other group according to IELTS. The results of the research are distinctly shown in the following diagram.



In the diagram there are given the improved degrees of pupils in per cents. Within the arranged period of time, the two groups were offered Uzbek model of CEFR and IELTS and as Uzbek model of CEFR assesses not only the four skills, but also grammar and vocabulary, the experiment group dominated the simple group. The used assessment strategies were helpful for the basic 4 English skills: reading, writing, listening and speaking, also grammar and vocabulary. They got accustomed to using new tools because they are widely being used in our daily life nowadays.

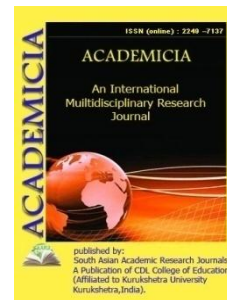
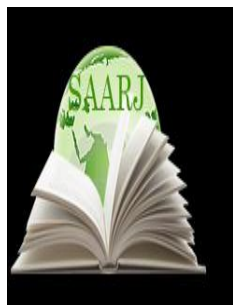
III.CONCLUSION

The experiment gives relatively good results despite the short period of study. They give a real opportunity to “break the pattern” and to enrich the English teaching process at secondary schools. Uzbek model of CEFR generally helps to assess:

- a) using grammar and vocabulary;
- b) knowing rules of speaking, i.e. how to begin and end conversations, what topics may be talked about in different types of speech events, which address forms should be used with different persons one speaks to and in different situations;
- c) knowing how to use and respond to different types of speech acts, such as requests, apologies, thanks, and invitations.

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BIOECOLOGICAL CHARACTERISTICS OF NEMATODES IN THE SOILS OF NAVOI REGION

Shamsiddinova Gulchehra Dustmuradovna*

*Docent,
Candidate of Biological Sciences,
Navoi State Pedagogical Institute,
UZBEKISTAN

ABSTRACT

Soil samples taken from industrial enterprises of Navoi region were tested in the laboratory. Representatives of soil nematodes were 401 nematodes belonging to 2 subclasses, 3 subgroups, 12 families, 4 small families, 2 subgroups, 22 genera and 51 species detected. It should be noted that some of these nematodes were found on the horizon at a distance of 1000 meters from the perimeter of the plant, and most of them were found in layers of 20-40 cm. Analysis of soil samples taken from the horizon at a distance of 1,500 meters from the plant also revealed the presence of several nematodes. The nematodes found were relatively numerous at both distances on the south and north sides of the plant, and the conclusions will be drawn from the study.

KEYWORDS: *Salinization, Saprobiotic, Multicellular, Biocenosis, Systematics*

INTRODUCTION

Navoi region is one of the largest regions of the Republic of Uzbekistan, with an area of 111,000 square kilometers. The region is one of the most industrialized regions in the country, which includes the largest industrial enterprises in Central Asia: Navoi Mining and Metallurgical Combine, Navoiyazot Production Association, Kyzylkum Cement, Navoi Electrochemical Plant and others. These enterprises emit more than 560,000 tons of various toxic substances into the atmosphere per year, and these wastes pollute the soil through sewage.

Currently, the waste of the Mining and Metallurgical Combine alone occupies 280 hectares of land, the plant emits more than 268,000 tons of toxic waste per year and regularly pollutes the air, soil and groundwater with cyanide, sulfuric acid, ammonia, nitrate and other wastes.

Navoi region has uranium ore deposits, which contain large amounts of uranium, which, due to its radioactivity and radon emissions, can pose a serious threat to public health. Industrially produced uranium radioactive waste and rock deposits are natural sources of radioactivity. The radioactive waste storage area in the region is also an environmentally hazardous source of pollution. The radioactive waste can be blown into the Dormon, Azamat and Turkmen villages, where the last part of the plant's waste is stored. This is dangerous for the livelihoods of the local population.

Due to the fact that the amount of mineral fertilizers produced by Navoiy Electro-chemical Plant is several times less than the volume of products produced by other industrial enterprises in the city, the amount of emissions into the atmosphere is relatively small, but these wastes contain highly toxic substances.

The level of air pollution in Navoi and its environs is generally considered dangerous, and due to the specific nature of the desert zones, the amount of dust particles in the air of these areas is always much higher than normal. (0.116 mg / m³, 0.8 PDK).

The region's arable lands drink mainly from the Zarafshan River, which is the most ecologically vulnerable river. Its upper reaches are the Anzob concentrator in the Republic of Tajikistan, the middle reaches are the Southern and Ingichka deposits in Samarkand region, and the lower reaches are Kattakurgan and Navoi regularly polluted by industrial wastewater.

Excessive tillage leads to salinization and contamination with mineral fertilizers, heavy metals, reduced humus content, increased erosion and other negative consequences. Land degradation in the region is mainly caused by the obsolescence of irrigation and drainage systems, the backwardness of irrigation equipment and technology, and wasteful use of water, which in turn leads to deterioration of land reclamation and soil salinity leads to extinction. Currently, 45-55% of the region is saline, and groundwater is very close in Karmana, Navoi, Navbahor and Kyzyltepa districts. In these areas, the drying up of crops and trees due to rising groundwater is becoming commonplace. Most of the pumps designed to draw groundwater have become unusable.

Structure and biological significance of nematodes. Nematodes are organisms that are adapted to living in a variety of environments and can be found in water, soil, and in the bodies of plant and animal organisms. A unique school for the study of nematodes - roundworms - has been established in Uzbekistan, which is named after the late Professor Ahror Tulaganov. Today, the work of the teacher is continued by many of his students.

Nematodes are the main part of multicellular organisms in the soil biocenosis and are an important link in the food chain in the soil. Nematodes are found in large numbers in the soil layers, the decomposition of any organic matter in the soil occurs in the presence of nematodes and the soil is saturated with organic and mineral substances. Many species of nematodes parasitize various organs of humans, plants and animals, cause many infectious diseases in humans and animals, leading to reduced plant productivity.

The body of roundworms is covered with a layer of mature cuticle, which protects them from any harmful substances. The mature cuticle layer is the main means of protection, allowing it to survive in a variety of environmental conditions. The movement of nematodes is also unique, they move differently in different layers of the soil.

EXPERIMENTAL PART

In order to study the vertical and horizontal distribution of nematodes in the soils of Navoi region, soil samples were collected around industrial enterprises. These are: Navoi Nitrogen Production Association, Kyzylkum Cement Production Association, Hydrometallurgical Plant of Navoi Mining and Metallurgical Combine.

Soil samples were taken from around the industrial enterprises, at depths of 0-20, 20-40 cm at a distance of 1000, 1500 and 2000 m along the four horizons, and a total of 108 soil samples were collected around the enterprises and laboratory nematodes were isolated by the Berman method. A metal net was placed over the water in the funnels, soil samples were placed through a two-layer gauze, and the funnels were kept for a day. In doing so, the nematodes in the soil floated in the water and settled to the bottom of the funnel. One day later, nematode water was separated from the funnels into test tubes containing 4% formalin, and a label was placed on the test tubes indicating where and when the soil sample was taken. From these nematodes were prepared permanent preparations in glycerin-gelatin by the methods of ES Kiryanova and EL Krall. To do this, the nematode water was gradually placed on a Petri dish and the nematodes were isolated using the MBS binoculars. Isolated nematodes were placed in a watch glass with clean water, mixed with 96% glycerin-alcohol and stored for one day. The body of glycerol-alcoholized nematodes is bright and can be easily seen under a microscope. After that, glycerin - gelatin is instilled on the glass of the object, nematodes are placed on it, covered with closed glass and permanent drugs are prepared. The location of nematodes is determined by a microscope and included in the ring with a black dream.

To study the taxonomic composition of nematodes using the prepared dry preparations were analyzed in the scientific laboratory "Soil Zoology" of the Department of "Zoology of vertebrates and invertebrates" of the Faculty of Biological Soil Science of the National University of Uzbekistan. Examination of soil samples taken around industrial enterprises in Navoi region revealed different changes in the number of nematodes on different horizons. The difference in the number of nematodes is due to the fact that industrial wastes are blown in different directions by the wind. The fertility of the soil where industrial waste falls is reduced and the humus layer is eroded. As the number of nematodes living in the surface layer of the soil decreases, industrial wastes migrate from one layer of soil to another, reducing their life activity.

Taxonomic role and ecological-trophic groups of soil nematodes in terms of species composition. Examination of soil samples around industrial enterprises revealed the presence of nematodes belonging to 51 species. The taxonomic role of nematodes was determined by the systematics of J.B.Goodey (1963), E.Kiryanova, E.Krall (1969-1971), M.H.Siddiqi (1971-1968), I. Andrassy (1976) and other scientists. All found soil nematodes belonged to two subclasses (Adenophorea, Secernentea.), to three subfamilies (Dorylaimida, Rhabditida, Tylencheda). There were 2 families belonging to the Dorylaimida detachment, 4 family members belonging to the Rhabditida detachment, and 1 family member belonging to the Tylencheda detachment.

These soil nematodes A. A. Paramonov (1962) and G.I. According to the classification of Solovyova (1989) are divided into 6 ecological-trophic groups. These groups differ from each other in the nature of nutrition, but the groups of all nematodes are a unique link in the general food chain and play a key role in the metabolism of substances in nature.

1. Typical parasites parasitize healthy plant tissues, destroy highly active enzymes and cause various specific diseases in plant tissues and organs.
2. Potential parasites. In addition to parasitizing plant tissues, they are also adapted to living in a saprobiotic environment.
3. Mycotrophs - they enrich the soil with nitrogen compounds and feed on fungal residues. *Aphelenchus cylindricaudatus* was found in this group.
4. Devisaprobionts - live in a saprobiotic environment. In the experiment, species such as *Cephalobus persegnis*, *Shiloplacus bibigulae*, *Cervidellus habibullae*, *Eucephalobus elongates* were encountered.
5. Algae - they live around the roots and live like single-celled algae. The type *Eudorylaimus monohystera* was found in the experiment.
6. Wild nematodes are single-celled organisms that live in the soil and are relatively rare in the study area.

CONCLUSION

Soil samples taken from industrial enterprises of Navoi region were tested in the laboratory. Representatives of soil nematodes were 401 nematodes belonging to 2 subclasses, 3 subgroups, 12 families, 4 small families, 2 subgroups, 22 genera and 51 species detected.

It should be noted that some of these nematodes were found on the horizon at a distance of 1000 meters from the perimeter of the plant, and most of them were found in layers of 20-40 cm. Analysis of soil samples taken from the horizon at a distance of 1,500 meters from the plant also revealed the presence of several nematodes. The nematodes found were relatively numerous at both distances on the south and north sides of the plant, and the following conclusions can be drawn from the study:

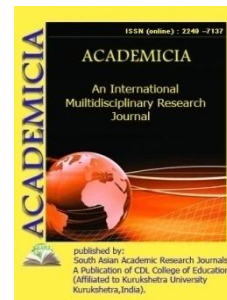
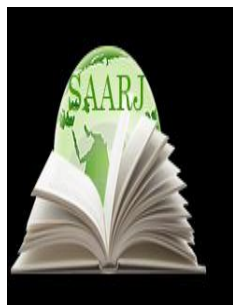
- Taxonomy of nematodes found in soil samples taken around the enterprise according to the systematics of such scientists as J.B. Goodey (1963), E. Kiryanova, E. Krall (1969-1971), M.N. Siddiqi (1971-1986), I. Andrassy (1976) According to him, the found nematodes belong to 2 subclasses and 3 squads.
- The higher the number of nematodes in the north and south, the greater the amount of dust and various gases emitted into the atmosphere from the plant by the wind to the east and west of the plant.
- Harmful substances fall into the soil, reducing soil fertility, leading to a decrease in the humus layer, and their reduction in species and numbers as a result of their impact on the organism of nematodes through the food chain in the soil;
- Relatively low number of nematodes in the 0-20 cm layer of soil, harmful wastes can fall on the top layer of soil and damage them, as a result of which nematodes can migrate from one layer of soil to another.

In order to improve the environment and reduce industrial waste in Navoi, the following suggestions can be made:

- Industrial enterprises located in the city area should be equipped with the latest, most modern equipment, strong filters should be installed at the end points of waste disposal;
- It is desirable to develop waste recycling technologies and turn the waste into environmentally friendly products.

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PEDAGOGICAL DIAGNOSTICS AND ITS ROLE IN THE EDUCATIONAL PROCESS

Umarov Saidnemat Burkhanovich*

*Associate Professor,
Department of Pedagogy,
Tashkent State Pedagogical University named after Nizami,
UZBEKISTAN

ABSTRACT

Based on the attention and requirements presented by society in the educational process, it is required to teach taking into account the individual, psychological and personal characteristics of students. For this, teachers need to know the diagnostic methods in accordance with modern requirements, as well as be able to put them into practice. It is pedagogical diagnosis that allows you to effectively use diagnostic methods in the educational process. The content of pedagogical diagnostics lies precisely in the methodological and pedagogical process, the speed of cognition and assessment, regulation and correction of the student or teacher, regardless of the level of activity.

KEYWORDS: *Diagnostics, Pedagogical Diagnostics, Diagnostic Functions, Diagnostic Tools.*

INTRODUCTION

In today's complex globalization, the focus of all reforms in Uzbekistan is the individual. That is why teachers have a great task to bring up a new generation that is ready to continue the reforms launched on the path to independence, to have their own ideas and worldview, modern knowledge and thinking. Only well-developed individuals can demonstrate the brightest human and civic qualities in the path of development and prosperity of the country. For this reason, in this article we have tried to explain the importance of using the opportunities of pedagogical and diagnostic activities in the education of students as fully developed individuals.

In the course of their work, educators should implement diagnostic tools taking into account the individual characteristics of each student. This requires that the educational process in educational institutions be organized on the basis of special curricula, in a logical sequence. An incorrect diagnosis can not only invalidate all the efforts of the specialist, but also lead to

another, more serious problem, eliminating the possibility of solving the existing problem. Correction of negative factors identified on the basis of pedagogical diagnostics, ie in the process of pedagogical therapy and correctional activities of the teacher is also important.

Pedagogical diagnostics, firstly, facilitates the process of individual education, secondly - provides and guarantees the correct identification of educational outcomes based on the needs of society, and thirdly helps to make a rational choice of specific educational direction and specialization. With the help of pedagogical diagnostics, the educational process is analyzed, the results and dynamics of change are determined, and science-based methodological recommendations are given.

However, in the information resource centers (libraries) of educational institutions there is not enough literature that reflects the current state of the world theory and practice of pedagogical measurements. Today, the first steps are being taken in our pedagogical universities to create and use professional methods and tools of pedagogical diagnostics in the training or retraining of personnel. The implementation of scientific and methodological work in this area will undoubtedly help to bring the quality and content of education in our country to the level of developed countries.

Now let's talk about the terms "diagnostics" and "pedagogical diagnostics". The term "diagnostics" (from the Greek "dia" - transparent and "gnosis" - knowledge) means a common way of obtaining initial information about an object or process being studied. Diagnostics is defined as a method of knowing, studying, and creating the various relationships, states, qualities, and characteristics of research objects.

Today, diagnostics is widely used in various areas of human activity, and the most widely used types include "medical diagnostics", "psychodiagnostics", "management diagnostics" and "technical diagnostics".

Pedagogical diagnostics means defining the essence of realities in the field of pedagogical activity, comprehensive study of processes, reflecting the complex movement of pedagogical factors. Its task is to provide the educator and the supervisor with fast and reliable information about the interrelated movement of causes, which of them is critical at the moment. Therefore, it is important to diagnose all components of the educational and methodological process. The content of pedagogical diagnostics means the rapid study and evaluation, regulation and correction (correction) of the methodological and pedagogical process, regardless of the level of activity of the child, the teacher or the leader.

According to A. Jurinsky, a scholar of pedagogical history, Abu Rayhan Beruni used several alternative answers in his work "At-Taqvim" dedicated to the teaching of geography, mathematics and astronomy. He raised the issue of learning concepts by asking comprehensive questions.

Psychologists first diagnosed the child to determine the level of intellectual development (KN Kornilov, MA Sikorsky, V.Shtern, RI Sunnatova), and then studied its formation as a full-fledged psyche and personality (Sh.Abdullaeva, L .A.Vengir, N.Dalimova, Z.I.Kalmikova, T.D.Morsinkovskaya, N.I.Nepomnyashaya, N.F.Talizina, Sh.Tulaganova D.B.Elkonin and others) [].

Until now, pedagogical diagnostics has been used to determine the appropriateness of teaching

methods used in the educational process (KN Buchgolts, R. Mavlonova, N. Rakhmonkulova, PAShevarev), and then began to be used to determine the results of the educational process. .

Pedagogical diagnostics is aimed at more effective implementation of the functions of the educational institution, including the study of the educational process and all the components and connections in the system of the educational institution on the basis of a system-functional approach. Therefore, pedagogical diagnostics is considered as one of the most important components of the educational process in the educational institution, as a theoretical and practical field of pedagogical science.

Pedagogical diagnostics, as a theoretical field of pedagogy, provides recommendations for the development and implementation of reliable diagnostic methods for determining the level of education and upbringing of a person, criteria for the level of formation of personality traits, interpretation of results and rules of their correct and effective use. In some cases, such rules may be a little easier to use, and in some cases they may be too complex, requiring additional knowledge, skills, and competencies from the educator.

The practical activity of pedagogical diagnostics is reflected in the use of diagnostic methods developed on the basis of theoretical research in teaching and educating students, monitoring the formation of traits in students, determining the direction and content of educational activities and correctional work.

The results of pedagogical diagnostics are shown in the table below.

The main functions of pedagogical diagnostics:

The feedback function in the educational process serves as a basic source of information for planning and developing future pedagogical processes based on diagnostic data on the level of upbringing and education of students at a certain stage of development, ie the analysis of previous pedagogical experience. Obtaining important information on the development of the educational process, the analysis of the results obtained will help to prevent and timely correct shortcomings that may occur in this process.

The assessment function is also important for pedagogical diagnostics. Modern and comprehensive assessment has many aspects: value-orienting, corrective, incentive, and measurable.

Value-oriented assessment enhances the student's views and perceptions of the person and himself or herself, allowing him or her to compare his or her spiritual, labor, aesthetic, and other qualities with the demands of society. Through pedagogical assessment, students change their values.

The corrective aspect of pedagogical assessment is that the educator helps to adapt his actions to the norms of society, to further develop the system of relationships with others.

The motivating aspect of pedagogical assessment is particularly high when it is consistent with the actual development and behavior of the learner. When the student sees the objectivity of his assessments, he tries to develop the positive aspects he has or to overcome the shortcomings.

The management function of pedagogical diagnostics is related to the main stages of development of the student community and individual student personality. Accordingly, three

types of pedagogical diagnostics can be distinguished: initial (primary), current (control) and generalizing (final).

Pedagogical diagnostics collects, records, identifies dynamic trends, predicts the further development of reality by determining the degree of formation of certain qualities in the personality of the student and assessing them at certain values, using specific methods.

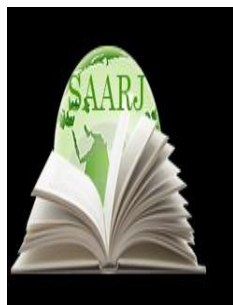
Pedagogical diagnostics is one of the most important components of the educational process in an educational institution and is considered as a theoretical and practical field of pedagogical science.

The object of pedagogical diagnostic activity is the interaction, cooperation of subjects of the pedagogical process, as well as the behaviors and attitudes that arise in this process.

1. The relationship between the conditions of individual and personal development in the field of education and the causes and consequences of future changes serves as the subject of pedagogical diagnostics.
2. Pedagogical diagnostics should also take into account the immediate social environment of students. In doing so, the study of individual students and groups of students should focus on identifying behaviors and their causes, rather than expressing evidence.
3. Diagnostic activities are carried out on the basis of clear principles, the effectiveness of which is determined not only by the quality of training. At the same time, the content of pedagogical activity, direction, quality of educational impact should be taken into account.
4. In order to achieve the planned results in the educational process, it is important to regularly diagnose in students not only personal and psychological qualities, but also the level of formation of spiritual and moral qualities. Fulfillment of this condition allows the educator to monitor the educational impact.

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WAYS TO DEVELOP CRITICAL THINKING IN ADOLESCENTS

Khodjjeva Farogat Oltievna*; **Eshonkulova Dilafruz Husenkizi****;
Saydullaeva Gozal Kamolkizi***

*Ph.D., Associate Professor,
"Pedagogy and Psychology",
Navoi State Pedagogical Institute,
UZBEKISTAN

**Teacher of "General Pedagogy and Psychology",
Navoi State Pedagogical Institute,
UZBEKISTAN

***Student of pedagogy and psychology,
Navoi State Pedagogical Institute,
UZBEKISTAN

ABSTRACT

The ability to think critically is one of the key skills of the 21st century. Every day we voluntarily or involuntarily absorb so much information that sorting, processing and evaluating it is absolutely necessary. The amount of information around us is growing exponentially. Even adults sometimes find it difficult to separate the necessary from the unnecessary, the truth from the lie. What does critical thinking lead to? Towards an affirmation in truth. It can be scientific discoveries, effective solutions to any business or everyday issues, overcoming crisis situations, the formation of personal beliefs and the acquisition of the meaning of life.

KEYWORDS: *Critical Thought, Processing, Evaluation, Adolescence.*

INTRODUCTION

The famous American psychologist and educator Diane Halper writes in her work "The Psychology of Critical Thinking": "The most expensive commodity in America is thinking and educated adults. The goal of the education system should be to have as many of them as possible." This statement characterizes as accurately as possible the current attitude of most developed countries to such an important social sphere as education. The top priority in it is not so much the

acquisition of a large amount of knowledge by students as the development of their intellectual and creative potential, which allows them to produce new knowledge in the future, which, in practical embodiment, will serve as a source of sustainable development of the state, nation, and allow it to gain technological superiority over other countries.

E. S. Polat in the textbook "New pedagogical and innovative technologies in the education system" notes: "The main, strategic direction of the development of the education system is in solving the problem of personality-oriented education, an education in which the student's personality would be in the center of the teacher's attention, a psychologist, in which the activity of learning - cognitive activity, and not teaching - would be leading in the teacher-student tandem, so that the traditional paradigm of education - teacher-student-textbook would be decisively replaced by a new paradigm - student-textbook-teacher. This is how the education system is built in the leading countries of the world. It reflects the humanistic direction in philosophy, psychology and pedagogy. "

The digital society aggressively imposes its living standards on people. The amount of information around us is growing exponentially. Even adults sometimes find it difficult to separate the necessary from the unnecessary, the truth from the lie. Being constantly involved in the Internet, people lose purposefulness of thinking and activity, cease to control themselves, wasting time in vain and wasting mental strength on momentary, unnecessary things. In order for life not to dissolve in the information space, it is necessary to keep oneself in tight-knit gloves and to be critical of every piece of information, every mouse click.

Even harder for children. Immature will and thinking make them literally rush to everything that is bright, dynamic and exciting. So, having not yet had time to form and determine, the personality dissolves, is carried away along information waves in an unpredictable direction, which sometimes leads to fatal consequences - involvement in dangerous communities, moral and moral corruption, digital dementia, gambling and Internet addiction (which is already officially recognized mental illness, akin to alcoholism and drug addiction). Much has been said and written about the negative impact of the Internet on children. Nevertheless, public education continues to pursue a course towards informatization and digitalization. Pupils are placed in such conditions that study becomes impossible without gadgets and the Internet.

How can children survive in such conditions? Following the principle "if you cannot change the situation, change your attitude towards it," the educational system offers to vaccinate children against all the evils of the information space - to form critical thinking in them. It would seem an excellent solution, because it is critical thinking that helps us to keep from trusting dubious sources and to keep ourselves under control, not clicking on random links.

However, critical thinking is needed not only for the intelligent consumption of Internet content and security in the network space. Children need it both in their studies and in building relationships with peers. Such thinking is necessary in order to resist harmful influences, overcome obstacles, adequately perceive their own mistakes and failures. Without it, a reasonable choice, self-development and the achievement of serious goals are unthinkable. Obviously, critical thinking was needed by people at all times and somehow it developed in them. But only now we are seeing how critical thinking is being forcefully and massively formed in children with the help of special technologies, starting from preschool age.

Why are children being artificially shaped to have critical thinking?

We have already identified one of the reasons - children's immersion in the Internet space requires the ability to filter out unnecessary, harmful information.

The second reason is the SES, which obliges that children in school do not acquire knowledge, skills and abilities, but “learn to learn,” that is, they set their own learning goals, achieve them and evaluate the results. Agree, this is not always possible for an adult - we ourselves attend professional seminars, trainings, fitness clubs and foreign language courses, and starting a new business, we are always glad if there is a mentor who can teach us using his rich experience. Naturally, such a super task from the SES requires mature critical thinking, and our education system has no choice but to try to form it en masse even in kindergarten.

Finally, the third reason is simply a fashionable theme that flourishes on parental and pedagogical vanity. It is very “cool” to be engaged in innovations and to be the owner of a special technology for the upbringing of “supermen” with superpowers. Such is the easily promoted topic. Pure marketing, nothing personal.

Real, mature critical thinking has nothing to do with the nihilistic debater who denies everything and everyone except his own opinion. For convenience, let's call this thinking pseudo-critical. At first glance, it looks like it is critical, but in fact it is not.

The purpose of critical thinking is to find truth and separate true information from false information. The pseudo-critical seeks not the truth, but "rightness", tries to argue with the opponent, push through its line, and achieve superiority.

Pseudo-critical thinking is subjective, impulsive and emotional; critical is reasonable, based on good self-control, and strives for objectivity.

Pseudo-critical thinking criticizes only the ideas of others; the critical is equally balanced about one's own and other people's thoughts. Possessing critical thinking, a person is ready to admit his own mistakes, reconsider false, unreasonable conclusions and abandon beliefs that have not withstood the test of reality and common sense. In pseudo-critical thinking, he is completely closed to the perception of judgments, facts and circumstances that indicate his mistakes.

Critical thinking is born of the need for truth, pseudo-critical thinking is born of protest. The latter is always the fruit of unstable self-esteem, a kind of psychological defense - self-affirmation, exaltation over others at the expense of righteousness, or simply preserving oneself, when the recognition of one's mistake is subjectively equivalent to the collapse of the personality. What does critical thinking lead to? Towards an affirmation in truth. It can be scientific discoveries, effective solutions to any business or everyday issues, overcoming crisis situations, the formation of personal beliefs and the acquisition of the meaning of life. Pseudo-critical thinking, when it absolutely prevails in a person's life, leads him to extreme egocentrism, worldview relativism, awareness of the plurality of "truths" or the absence of truth in general, and as a result can lead to despair and a sense of meaninglessness of existence.

If we understand thinking as the process of processing information and making decisions, then there will be no mistake in using this concept. The fact is that in our soul there is nothing separate, isolated. All mental processes are interconnected, and the younger the person, the more they are fused together. We know, for example, that a two-year-old child is dominated by manual or visual-active thinking (is it thinking? Or action?), And it will take three or four years before he learns to think without doing, but only observing or imagining images, and a few more years

before he can reason theoretically, without relying on an image. In this case, all the ancient "layers" of thinking will remain, only one more new, higher form of it, an additional opportunity will appear. In the same way, the younger the child, the more impulsive and merged with emotions his thinking, and only as he grows up does the ability to think objectively and impartially appear.

Critical thinking is not just the level of development of a particular mental process. This is a phenomenon related not only to thinking, but also to the individual as a whole. We think it will not be a mistake to say that critical thinking can be considered as one of the criteria for personal maturity. It would be absurd to try to invent a "technology" that will force a child to reach the psychological maturity of an adult already at preschool or primary school age - only time and life experience can do this. This means that it is a pointless task to form full-fledged critical thinking in a preschooler or younger student with the help of certain techniques and exercises. It will be an illusion. Soap bubble.

What is important to do as a teenager to develop critical thinking?

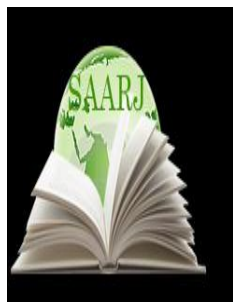
Teenagers, as a rule, are already able to express a personal attitude to phenomena, events, opinions, and they even like to do it. Opening up your own mind is very exciting. The teenager treasures him extremely, and it hurts painfully when his point of view is criticized or condemned. The task of a wise adult is to carefully lead the child a little beyond the limits of his black-and-white picture, to show (or rather, allow to see, as far as possible) the depth and complexity of the phenomenon in question. But to show so as not to hurt, to maintain trust, and so that the resulting understanding remains for the teenager real and his own.

All adolescent reactions, to which the child is prone by his psychological type, will be significantly aggravated, causing a lot of trouble for both the child himself and his parents and teachers.

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INFLUENCE OF PUPIL-TEACHER ATTACHMENT PATTERNS ON EMOTIONAL WELL-BEING OF PRIMARY SCHOOL PUPILS IN RIVERS STATE

Gloria Matthews*

*PhD

Department of Educational Psychology,
Guidance and Counseling,
Ignatius Ajuru University of Education,
Rumuolumeni, Port Harcourt, Rivers State, NIGERIA

ABSTRACT

This study investigates the influence of pupil-teacher attachment patterns on emotional well-being of primary school pupils in Rivers State. Three research questions and three hypotheses were formulated to guide the conduct of the study. The population comprised all primary six pupils in Rivers State. The research design adopted for the study is ex-post facto research design. The sample is made up of 1,000 pupils selected through multi-stage sampling technique. The instruments for data collection were Pupil-Teacher Attachment Pattern Questionnaire (PTAPQ) and Emotional Wellness Scale (EWS). The reliability of PTAPQ and EWS were determined through Cronbach Alpha method of estimating reliability. The reliability coefficient of PTAPQ is 0.84, while the reliability coefficient of emotional well-being (EWS) is 0.82 respectively. The validity of the instruments were determined by experts in measurement and evaluation. Mean and standard deviation were used to answer the research questions while two-way Anova was employed to test the hypotheses. The result indicated that, there is a significant influence of pupil-teacher attachment patterns on pupils' emotional well-being, there is no significant influence of pupil-teacher attachment patterns on pupils' emotional well-being based on gender and there is no significant interaction effect of pupil-teacher attachment patterns and gender on pupils' emotional well-being. Based on the findings, the paper recommended amongst others that teachers should establish secure pupil-teacher attachment pattern with all pupils irrespective of gender.

KEYWORDS: *Pupil-Teacher Attachment Pattern, Emotional Well-Being, Secure Attachment, Avoidant Attachment, Disorganized Attachment, Ambivalent Attachment.*

INTRODUCTION

Emotional well-being is related to mental, social and physical health. Research has established that there is a relationship between students' academic achievement and emotional wellbeing. The mental health foundation described emotional well-being as a positive sense of well-being which enable an individual to function effectively in the society and cope with the challenges of everyday life. It is characterized by emotional regulation, motivation, and self-awareness. Emotional wellbeing enables the individual to regulate emotions appropriately, function effectively in the society and adapt easily to learning environment. Consequently, teachers need to develop secure attachment pattern with their pupils, which will promote school adjustment and pupils' emotional wellbeing.

Keifer (2008) defined emotional well-being as a state of being physically, socially and emotionally balanced. In the same vein, Stewart-Brown noted that emotional well-being is more than a state of happiness; it encompasses the well –being of the soul, body and mind. The importance of pupils' emotional wellbeing cannot be over emphasized. Emotional wellbeing enable pupils to regulate their emotions, thoughts and behavior appropriately, it fosters resilience and the ability to cope with the challenges of everyday life. Furthermore, a pupil that is emotionally stable has the ability to accept task without avoiding them, have capacity to function independently without undue dependence on others and establish positive relationship with their teachers and peers. However, most primary school pupils are emotionally unstable which has affected their well-being, social skills and academic performance. Teachers and school administrator have a role to play in ensuring the emotional well-being of pupils. It would be practically and morally wrong for educators to emphasize on academic achievement when most pupils are emotionally unstable.

Emotions influence our perspective about life. Emotional well-being facilitates an individual's adjustment to his environment as well as assist the individual in making realistic decisions and live happily with maximum effectiveness and happiness. More importantly, the World Health Organization (WHO) states that emotional well-being is connected to physical health. This assertion has been supported by series of epidemiological studies. Diener and Chen (2011) noted that subjective well-being is associated with health and longevity. Emotional distress has multiple health implications such as cardiovascular diseases, stress and viral infections. Teachers and Educational administrators have a role to play in stabilizing students' emotional state. Pupils spend approximately six to seven hours a day in the classroom, as such the relationship that exist between pupils and teachers is critical to their emotional stability. A classroom environment that is tensed, lack psychological support and social support could have negative impact on the learner. It is absurd to focus on pupils academic achievement when they are emotional destabilized.

Emotion as a concept has varied definitions; Plutchick in Gray (2007) defined emotion as a subjective feeling that is mentally directed towards some object. The object in this instance is the teacher and the feeling refers to emotional experience. In the same vein, Durojaiye in Nnachi (2010) referred to emotion as an outward expression of inner feelings of an individual, it is a stirred up by a state in an organism. These inner feelings could be pleasant or unpleasant. A

feeling of pleasure could be experienced in a classroom where the teacher is encouraging, supportive and responsive. Conversely, negative emotions could be triggered by teacher's lack of responsiveness, apathy towards pupils' well-being and lack of interest in their general well-being. Plutchickin Nnachi (2010) identified eight primary emotions arranged in four opposites, joy versus sorrow, Anger versus fear, Acceptance versus defeat and surprise versus expectancy either of these emotions could be stirred up in a pupil depending on pupil-teacher attachment pattern. It is on this note that the emotional well-being of pupils are being studied. Pupils who are emotionally healthy are in control of their cognitive processes, they have adequate control of their emotions whether positive or negative. They are also able to manage and cope with the challenges in their environment, conversely, emotional distress trigger risk behaviors such as aggressiveness, drug abuse, decreased academic performance, low self-concept and lack of confidence in their abilities. Based on the foregoing, the paper investigates the influence of pupil-teacher attachment patterns on pupils' emotional well-being.

PURPOSE OF THE STUDY

The research centers on the influence of pupil-teacher attachment patterns on pupils' emotional well-being. The study intended specifically to achieve the following objectives:

1. Determine the influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being.
2. Examine the influence of pupil-teacher attachment pattern (secure, ambivalent, avoidant and disorganized) on pupil emotional well-being based on gender.
3. Examine the interactive effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant, disorganized) and gender on pupils emotional well-being.

REVIEW OF RELATED LITERATURE

Attachment is an enduring connection between two individuals, this implies that pupil-teacher attachment pattern refer to the level of connection or bond between a pupil and the teacher. Attachment relationship is pivotal for pupils' emotional well-being, social competence and academic performance. There is an established link between attachment and emotional well-being. Pupils who are not emotionally stable are at risk of diseases such as depression, anxiety and cardiovascular diseases. Merz and Consedine (2001) stated that the more secure the attachment relationship is, the higher the individual's emotional stability. It is apparent that socially and emotionally supportive relationship has effect on pupils' mental, physical and social development. Pupils are not likely to become emotionally stable, if there is no secure attachment relationship with their teachers. Attachment relationship could help the teachers to be proactively, instead of reactively interpret the emotional state of pupils and provide the needed remedial measure.

Bowl by in Matthews (2014) stressed the need for children to develop attachment relationship with a caregiver. He noted that, the type of attachment children formed during childhood could have an impact on subsequent relationships. Attachment in classroom is characterized by pupils seeking proximity to the teacher. Pupils that have established secure attachment pattern with their teachers regulate their emotions appropriately, they are self-confident and less prone to violent behavior. Also such pupils have correct perception about their selves and people around them (Matthews 2014). Conversely, pupils with insecure attachment pattern find it difficult to regulate their emotions appropriately, experience behavioral and emotional disturbances.

Ainsworth classified attachment into four types: Secure Attachment Pattern, Avoidant attachment pattern, Ambivalent attachment pattern and Disorganized attachment pattern.

Secure attachment pattern: This refers to an attachment pattern where there is an affectionate tie or bond between a pupil and a teacher. This attachment pattern is based on mutual trust and teacher's consistent responsiveness to the needs of the pupil. The bond between the teacher and the pupil help to build the child's confidence and enable him/her to engage in productive activities. Secure pupils are able to solve problems, explore the classroom and they are emotionally stable and resilient. Secure attachment enables pupils to regulate their emotion, motivate and improve their social skills.

Avoidant attachment pattern: Avoidant behavior is triggered by teacher's insensitivity, neglect and absence in the child's life which culminates to avoidance behavior. This attachment pattern is developed when a pupil is independent of the teacher. There is a feeling of indifference about the presence of the teacher. It is characterized by social incompetence, sudden outburst, avoidance of any form of assistance when distressed and inability to manage their emotions appropriately.

Ambivalent attachment pattern: This attachment pattern is triggered by teachers' inconsistent responsiveness and lack of interest in pupils' behavior. Ambivalent attachment pattern is characterized by passive, fussy, hyperactivity, attention seeking and difficulty recovering from distress. Pupils with this attachment pattern lack trust in the teacher which affects the bonding process and they often experience difficulties in adaptation.

Disorganized attachment pattern: It is characterized by display of disorganized behavioral pattern, feeling of worthlessness and hopelessness. Pupils with this attachment pattern have negative view about themselves and others around them, it stems from maltreatment, lack of responsiveness and care for the child. Such pupils have low self-esteem and feeling of unacceptance by others (Bergin & Bergin 2009, Bomber 2007, Greddis 2006.)

Dointe (2015) examined attachment relationship with emotional intelligence. The result indicated that there is a positive relationship between self-esteem, emotional intelligence and subjective well-being. This result is in conformity with previous empirical findings. In the same vein, Monaco, Schoeps and Montoya-Castilla (2019) investigated attachment styles and well-being of adolescents, the result indicated that emotional competence mediate relationship between parents' attachment and well-being. The study also pointed out that attachment to parents is vital to adolescents' well-being. In the same vein, Ruppel, Lievsch and Walter (2015) investigated the influence of psychological well-being on academic achievement and interaction effect of socio-emotional state. A sample of 508 boys and girls were used. A cross-sectional research design was adopted for the study, a Kidscreen-27 questionnaire was used for data collection, and multiple linear regressions was used for data analysis. The result indicated that negative emotions affected psychological well-being. However, it had an indirect positive effect based on school environment.

Interestingly, Karremon (2012) studied students' attachment style and psychological well-being. The sample used for the study was 632 students and the result indicated that secure and dismissive attachment pattern is connected to psychological well-being, this is in agreement with the present study. Similarly, in a study carried out by La Guardes, RyanCouchman and Deci (2000), it was established that attachment security is associated with subjective wellbeing.

Furthermore, Itong, Heubner and Hills (2013) found results that were in agreement with the above study using 201 middle school students to assess facts mediating between attachment and life. Satisfaction among adolescent, parental attachment and subjective well-being. The result indicates that secure parental relationship yield higher levels of subjective well-being.

STATEMENT OF THE PROBLEM

Recent studies have indicated that most pupils experience sadness, low self-concept, fear, worry, rejection and anger which are characteristic of negative emotions. These negative emotions have the capacity of interfering with learning and pupil's emotional well-being. However, adequate attention has not been given to pupils' emotional well-being. Negative emotions, if not regulated and adequate remedial measures taken could degenerate to depression, stress, anxiety and phobia which could affect the child's ability to function effectively and independently in the classroom and in the society. There is lack of awareness among school administrators, teachers, counselors and students about the influence of pupil-teacher attachment patterns on pupils' emotional well-being.

Furthermore, negative emotions if not controlled could lead to inability to cope with task presented in the classroom. This could culminate to high rate of school dropout, drug abuse, hooliganism, prostitution and armed robbery. In the light of the stated problems, it is presumable that the above situation could be given the desired attention if teachers are encouraged to establish secure attachment pattern with their pupils. Consequently, the study examined the influence of pupil-teacher attachment patterns on the emotional well-being of primary school pupils in Rivers State.

RESEARCH QUESTIONS

The following research questions were formulated to guide the conduct of the study.

1. What is the influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being?
2. What is the influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being based on gender?
3. What is the interaction effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) and gender on pupils emotional well-being?

HYPOTHESES

The following null hypotheses have been formulated to guide the study:

1. There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils' emotional well-being.
2. There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils' emotional well-being based on gender.
3. There is no significant interaction effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) and gender on pupils emotional well-being.

METHODOLOGY

The methodology discusses procedure used for the study, it is centered on the following subheadings: research design, population of the study, sample, sampling technique, instrument

for data collection, validation of instrument, reliability of the instrument and method of data analysis.

RESEARCH DESIGN

The Expost-facto research design was adopted for the study Nworgu (2006) remarked that Expost-facto research design does not provide the researcher control over the variables of the study, as such cannot manipulate the variables. The research design involves collecting and analyzing data from variables that are already in place without manipulation (Nwankwo, 2006).

POPULATION OF THE STUDY

The population of the study comprised all the pupils in Rivers State.

SAMPLE

The total sample for the study consisted of one thousand (1000) pupils drawn from 25 schools in the eight local government areas of Rivers State.

SAMPLING TECHNIQUE

Multi-stage sampling technique was used to select the sample from the primary schools in research area.

INSTRUMENT FOR DATA COLLECTION

Two instruments developed by the researcher were used to collect data from the respondents (a) Pupil-Teacher Attachment Pattern Questionnaire (PTAPQ) (b) Emotional Well-being Scale (EWS). The instruments consist of two sections. Section A consist of demographic data such as gender, age and class, section B consist of items raised to elicit information from the respondents, the items were responded to on a four point Likert scale Strongly Agree (SA) = 4; Agree (A) = 3; Disagree (D) = 2; Strongly Disagree (SD) = 1 respectively.

VALIDATION OF THE INSTRUMENT

The instrument (PTAPQ) and (EWS) were validated by experts in measurement and evaluation to ascertain their content validity. All the criticism and correction were made before making a final draft.

RELIABILITY OF THE INSTRUMENT

The reliability of the instruments were established through Crombach Alpha method of estimating reliability. The reliability co-efficient of PTAQ is 0.84 and EWS is 0.82 respectively. These values are considered adequate and reliable.

METHOD OF DATA ANALYSIS

Mean and Standard deviation were used to answer the research questions while the hypotheses were tested with 2-way Anova at 0.05 level of signifance.

SIGNIFICANCE OF THE STUDY

The findings of the study will be of immense benefit to the following:

Pupil: The study will help pupils in Rivers state to understand the relevance of attachment to their emotional well-being. It will play a vital role in improving their self-confidence, self-

concept and improve their academic performance; it will further assist in improving their social skills.

Teacher / School administrators: This paper will help to enlighten teachers and school administrators about the need to place priority on the emotional well-being of pupils; it will further encourage teachers to meet the emotional needs of their pupils by teaching students emotional skills and therapeutic counseling when needed.

Parents: The findings of the study will enable parents to establish secure attachment pattern with their children, which will in turn serve as a template for future relationship in the classroom.

Finally, the paper will serve as a reference point for academic purposes to subsequent researchers, students, lecturers and organizations carrying out research in similar area.

THEORIES OF ATTACHMENT

Harlows Monkey Theory of Attachment

Harlows theory is based on the premise that the primary purpose of attachment is to provide comfort as opposed to food. He conducted series of experiments with Monkeys. In one of the experiments he separated infant monkeys from their mothers for three months, six months, nine months and one year respectively. When reunited with other monkeys, they exhibited bizarre operant's like scratching, rocking, and mutilating themselves. Consequently, Harlow concluded that lack of attachment is destructive; the longer the isolation, the severe the abnormal behavior exhibited.

In the second experiment eight monkeys were kept in two separate cages with two surrogate mothers. One made a soft terry towel while the other is made of wire. All the monkeys could have access to food from the surrogate mothers. The experiment was carried out for 165 days. Harlow observed that the monkey only approached the wire mother when hungry and once fed goes back to the towel mother, when frightened he sourced for refuge from the cloth mother which served as a secure base. This lend credence to the evolutionary theory of attachment which asserts that sensitive response is more important as opposed to food.

Learning / Behaviorist Theory of Attachment

This was proposed by Dollad and Miller in Matthews (2014). They stated that attachment is precipitated by provision of food. The basic reason a child become attached to the mother is because the mother provided reinforcement which is food. They stated that an infant would form an attachment with whoever provided food. Consequently, certain behaviors like crying and smiling produce desirable responses from the caretaker, through operant conditioning they learn to repeat such behaviors that are followed by pleasurable consequences. This theory emphasized the role of reinforcement (food) in forming attachment relationship.

DATA ANALYSIS AND DISCUSSION OF FINDINGS

Data presented in the study is based on research question answered and the hypotheses tested.

RESEARCH QUESTION ONE

What is the influence of a pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being?

TABLE 1: MEAN AND STANDARD DEVIATION OF PUPILS ON EMOTIONAL WELL-BEING DUE TO PUPIL-TEACHER ATTACHMENT PATTERN

GROUP	N	MEAN	SD
Ambivalent	188	45.56	16.63
Disorganized	302	49.87	17.01
Secure	363	53.28	16.71
Avoidant	147	49.79	17.66

The result on table one revealed that the mean score of pupils on emotional well-being is as follows: pupils on secure attachment pattern had the highest mean score of 53.28, disorganized had a mean score of 49.87, avoidant 49.79 and ambivalent 45.56.

TABLE 2: MEAN AND STANDARD DEVIATION OF PUPILS' EMOTIONAL WELL-BEING DUE TO PUPIL-TEACHER ATTACHMENT PATTERN AND GENDER

GROUP	GENDER	N	MEAN	SD
Ambivalent	Male	103	45.22	16.70
	Female	85	45.98	16.64
Disorganized	Male	159	49.61	17.14
	Female	143	50.17	16.93
Secure	Male	199	53.15	16.30
	Female	164	53.44	17.24
Avoidant	Male	81	48.88	16.77
	Female	66	50.88	18.77

The result in the table above revealed that the males on ambivalent attachment pattern had a mean score of 45.22 and standard deviation of 16.70 while the female had a mean score of 45.98 and a standard deviation of 16.64 respectively. This indicates that the female had a higher mean score than the males by a mean difference of 0.76. The males in disorganized group had 49.61 and the female had 50.17 respectively, while the standard deviations are 17.14 and 16.93 respectively. The result indicates that the females had a higher mean score than the males by a mean difference of 0.56.

Furthermore, in considering secure attachment pattern, the males had a mean score of 53.15 and the females had a higher mean score of 53.44. This implies that the females had a higher score than the males by a mean difference of 0.37. The standard deviation of male and female score on emotional well-being are 16.30 and 17.24 respectively. Finally, for the avoidant attachment pattern, the mean scores for the males and the females are 48.88 and 50.88 respectively, while the standard deviations are 16.77 and 18.77 respectively. These results indicate that the females had a higher mean score than the males by a difference of 2.00.

HYPOTHESIS 1

There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being.

HYPOTHESIS 2

There is no significant influence of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) on pupils emotional well-being based on gender.

HYPOTHESIS 3

There is no interaction effect of pupil-teacher attachment patterns (secure, ambivalent, avoidant and disorganized) and gender on pupils emotional well-being.

The three hypotheses stated in null form are tested using analysis of variance (2-way Anova)

Source	Type of sum square	Df	Mean square	f-value	significance
Pupil-teacher attachment pattern	7,417.223	3	2,472.41	6.598	0.002
Gender	176.77	1	176.77	0.615	0.433
PTAP & Gender	78.55	3	26.18	0.091	0.965
Error within	285,251.28	992	287.55		
Total	292,992.20	999			

From the table above, the calculated f-ratio (6.598) for pupil-teacher attachment pattern was significant at 0.000 level which is lower than the chosen 0.05 level of probability. Hence, the null hypothesis was rejected. This implies that pupil-teacher attachment patterns have a significant influence on pupils' emotional well-being. The table further showed that the f-value was significant at 0.433 level which is higher than the chosen level of probability. Hence, the null hypothesis is accepted, indicating that pupil-teacher attachment patterns on pupils' emotional well-being is not significant due to gender.

The table also showed that the calculated f-value of 0.091 for the interaction effect of pupil-teacher attachment pattern and gender was significant at 0.965 level which is higher than the chosen level of probability. This implies that there is no significant interaction effect of pupil-teacher attachment pattern on the emotional well-being of pupils. However, since a significant influence of pupil-teacher attachment pattern was found, there is need to determine the direction of the significant difference. And this was done using Scheffe test of multiple comparison. After the analysis the result observed were presented below.

TABLE 4: SCHEFFE TEST SHOWING THE DIRECTION OF SIGNIFICANT DIFFERENCE IN THE INFLUENCE OF PUPIL-TEACHER ATTACHMENT PATTERN ON PUPILS' EMOTIONAL WELL-BEING

Groups	Mean difference	Significant	Result
Ambivalent and Disorganized	-4.310	0.059	NS
Ambivalent and Secure	-7.717	0.000	S
Ambivalent and Avoidant	-4.212	0.0169	NS
Disorganized and Avoidant	-3.407	0.084	NS
Disorganized and Secure	0.097	1.000	NS
Avoidant and Secure	3.506	0.216	NS

The result on the table indicate that the mean difference obtained when the following group means were compared were not significant at a level lower than the chosen level of probability, ambivalent and disorganized, ambivalent and avoidant, disorganized and secure. Their mean differences were significant at 0.059, 0.169, 0.084, 1.000 and 0.216 respectively. Hence the direction of significant difference did not emerge from them. Furthermore, from the table, it could be deduced that when ambivalent and secure group were compared, their mean difference was significant at 0.000 level which is lower than the chosen 0.05 level of probability, indicating that the significant difference in the influence of pupil-teacher attachment pattern resulted from ambivalent and secure group.

DISCUSSION

The result indicated that pupil-teacher attachment patterns significantly influence pupils' emotional well-being. When analysis of variance statistics was applied an f-value of 6.598 was found to be statistically significant at 0.05 level of probability. Furthermore, when Scheffe test was applied it was observed that the direction of significant difference emerged from ambivalent and secure attachment patterns. In answering the research question it was observed that the secure pupil-teacher attachment pattern had the highest mean score and influence on pupils' emotional well-being. Emotional well-being is a positive mental state which enables an individual to function effectively in the society and meets the demands of everyday life. The result further indicated that secure attachment pattern enhances pupils' emotional well-being, this is in contrast with other forms of attachment pattern. The result of this present study is in agreement with Monaco, Scheffe and Monteya-Castilla (2019) whose study indicated that secure attachment pattern to parents is positively related to emotional well-being. Similarly, research has established that secure attachment pattern positively correlated with emotional well-being.

The result of the present study is in disagreement with Lewis in Matthews (2014) whose findings indicate that there is a significant influence of pupil-teacher attachment patterns on pupils' emotional well-being based on gender. Finally, findings of the study also revealed that there is no interaction, effect of pupil-teacher attachment patterns on pupils' emotional well-being. The calculated f-ratio of 0.091 for the interaction effect of pupil-teacher attachment patterns and gender was significant at 0.0956 level, which is higher than the chosen 0.05 level of probability. Therefore, there is no significant interaction effect of pupil-teacher attachment pattern and gender on pupils' emotional well-being.

CONCLUSION

Based on the investigation carried out the following conclusion were drawn; the paper revealed that pupil-teacher attachment patterns influence pupils' emotional well-being. The paper further revealed that there is no significant influence of pupil-teacher attachment pattern on pupils' emotional well-being based on gender. The study further indicated that there is no interactive effect of pupil-teacher attachment patterns and gender on pupils' emotional well-being.

RECOMMENDATIONS

The following recommendations were made based on the findings of the study:

- Teachers should strive to meet emotional needs of pupils.
- Parents and guardians should ensure they establish secure attachment pattern with their children

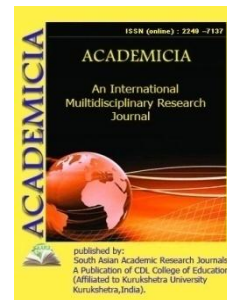
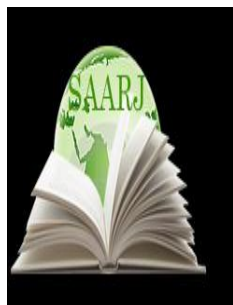
- Teachers should organize programs to teach pupils skills on how to regulate their emotions.
- Accurate knowledge of emotional intelligence is necessary; this will enable teachers to interpret and regulate pupils' emotions accurately.
- Teachers can improve the emotional well-being of pupils' by being responsive to their needs, encouraging and through empathy.
- Seminars and workshops should be organized to educate teachers on the importance of emotional health. A child who is emotionally unstable can't achieve much academically.
- Parents, teachers, school administrators and counselors should work together to promote pupils' emotional well-being.
- Attachment is not limited to any specific gender; as such teachers should establish secure attachment relationship with pupils irrespective of gender.
- Counseling services should be provided for pupils in emotional distress.
- Teachers should employ emotional coach to maintain pupils' emotional well-being.

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ENGLISH AND RUSSIAN VISUAL PERCEPTION VERBS EXPRESSING THE ASSESSMENT OF THE VISUAL PERCEPTION OBJECT

Barno Bobirqizi Karabaeva*

*PhD student of 2nd course,
Uzbekistan State World Languages University,
Tashkent, UZBEKISTAN
Email id: barnokhon.k@mail.ru

ABSTRACT

This article explores the verbs of visual perception which express the assessment of the object of visual perception in English and Russian languages. The verbs are compared from the point of semantics and lexis. The article presents the examples of usage of such verbs and their analysis. Each of these characteristics includes other sub-characteristics. Between the Russian and English verbs of visual perception, there are, of course, differences in the intensity of the formation of individual characteristics of a person, which we talked about during the analysis, but the main frame of these characteristics is common.

KEYWORDS: *Visual Perception Verbs, Assessment, Perception Object, Sight, Psychophysics, Vision, Semantics, Comparison, Lexis, Perception.*

INTRODUCTION

Perception is traditionally considered an object of research in psychology, where there are various approaches to determining the nature of perception, however, the study of the linguistic picture of the world is also inextricably linked with the study of the psychophysical activity of a person, which is formed in a certain ethno cultural environment.

There is a point of view that the perception of the world is determined by "innate tendencies and mechanisms" (Shiffman, 2003) and that "perception is the result of the learning process, which is based on interaction with the outside world and the experience gained in the course of this interaction" (Shiffman, 2003).

M. Wartofsky considers perception as a kind of cultural artifact: “Any human being grows up with certain culturally conditioned ideas about the world and about its people. We can never be free from this kind of cultural baggage ... which in its own way colors the way of our perception” (Wartofsky, 2007).

At the same time, a certain constancy of perception is obvious (Rubinstein, 2002), which is expressed in a certain coordinate axis (size, shape, color, taste, smell, etc.), and the comprehension of the realities endowed with these characteristics is already under the influence of many personal factors, such as ethnicity, social role, emotional state, character and temperament of a person. As H. Schiffman notes, “interest in controversial issues and problems associated with sensation and perception goes back to the origins of the intellectual history of mankind. Even the ancient Greek philosophers reflected on how exactly we cognize what is outside our bodies, that is, how we cognize the world around us (Schiffman, 2003).

In linguistics, the projection of the psychophysical properties of a person, which form his ability to perceive, onto the linguistic system is investigated and the way of structuring the corresponding linguistic units is understood. Such units form a functional-semantic polycentric field of perception (Geras, 2008). The procedural nature of perception determines the choice of the preferred linguistic means of its expression - verbs, the corresponding group of which has received the qualification of perceptual.

Main part

The study of assessment is closely related to the human ability to carry out rational and emotional activity (Avramova, 2004), therefore, there is no doubt about the analysis of the verbs of visual perception within the framework of the issue of the relationship between vision and a person as an intellectually active being. For further reasoning we would like to preface the remark of M.I. Popova:

[...] An important feature of perception is the interpretation and assessment of the information received from the point of view of the observer, who places himself at the center of the universe, involuntarily or voluntarily making himself “the measure of all things” (Popova, 2006).

There is no doubt that on the basis of visual stimuli, a person analyzes something, makes an assessment, establishes the nature, essence of something. This sign of the linguistic picture of the world is very noticeable in the meanings and use of the verbs of visual perception in both Russian and English.

Considering the issue of analyzing and assessing the components of the surrounding reality in relation to the verbs of visual perception, we propose to divide them into two groups. In the first of them, we placed those verbs that express the assessment of the object of visual perception; in the second group there are verbs that express the subject's assessment of the situation of visual perception. This subdivision is, of course, conditional, since, depending on the contextual use of this verb, it may turn out that it combines a double assessment aimed at both the subject and the object of visual perception.

A person with a sense of visual perception not only perceives objects, but also analyzes, evaluates them. Here the following verbs are analyzed: *взглянуть* – give a glance / look, *видеть* – see, *глядеть* – gaze, *любоваться* – admire, *засмотреться* – stare, look, admire, survey, look.

We suggest starting with the verb *присмотреться*—to examine. Both verbs imply a detailed analysis, an assessment of someone, something. Evaluation is directed here at the object of visual perception, compare:

Присмотреться 'Внимательно наблюдая, понять, изучить кого-, что-л.' *Присмотреться к делу, к работе. Присмотреться к окружающим. Присмотреться к новому сотруднику.*

*Абель надел очки без оправы. Пока он тщательно изучал бумагу, я имел возможность **присмотреться** к нему. Он выглядел очень неряшливо, как бросилось мне в глаза. На нем был помятый джинсовый рабочий комбинезон, и я сразу решил, что для появления в зале суда необходим приличный костюм, который сам по себе поможет ему выглядеть с большим чувством собственного достоинства.*

*Вся эта история заставляет меня **присмотреться** к нему внимательнее, я испытываю уважение и нарастающий интерес к этому человеку. Мненадоелипростыеисториииплоскиеоднозначныеперсонажи.*

Examine 'inspect (someone or something) thoroughly in order to determine their nature or condition'

*After some time, a dirty, dilapidated polonaise arrived. He slowed down; the driver **examined** the situation and parked his car nearby, completely incorrectly.*

*So these are my pupils, thought Joseph. He **examined** the encountered ones if they would be good companions in this difficult and dangerous way (KJP);*

*If I **examined** the revolutionary changes, I could form my own opinion, gather compelling arguments [...]*

If we are talking about the use of these verbs, it should be said that evaluation here is closely related to understanding. So, "examined the situation" presupposes a detailed analysis, study, understanding and, ultimately, an assessment of situation, the happening events. The assessment of the pupils in the second sentence is positive.

The English examples we have selected contain, in turn, an indication that, thanks to the sense of sight, the climber is able to assess the terrain, the public opinion research center analyzes and evaluates the family expenses, and representatives of the state treasury should evaluate the sale of textbooks.

In this case, taking into account the volume of our work, we gave only isolated examples of the use of these verbs of visual perception, but it is through the singular that we are able to comprehend the general.

Other Russian and English verbs of visual perception also make it possible to reveal the general rule that visual perception is closely related to evaluativeness. Here is a list of them along with examples of sentences expressing the assessment:

Peer 'look with difficulty or concentration at someone or something'

– So, what are you doing here? I asked, **peering** inquiringly into the eyes of the house manager and wondering if there was some kind of trap behind this.

And he sat on the edge of the chair and peered at me with a frowning condescension.

In the first sentence, assessment refers to an object of visual perception that causes the subject to mistrust the clarity of the situation. The second sentence contains the subject's attitude to someone (he peered with frowning condescension), this attitude, of course, is associated with an assessment.

It should be noted that some Russian verbs of visual perception have the meaning of assessment, while in English these meanings are represented by different verbs. If we take the Russian verb *рассмотреть* which has a meaning *to look closely, to scrutinize* related to visual perception (VP), and it has the second meaning – *to consider* – not related to VP. As we can see, two meanings of visual perception verb in Russian are expressed by different verbs in English. At the same time Russian verb *взглянуть* in the meaning of assessment is conveyed in English by VP verb *look* with the same meaning.

Assessment directed at an object is expressed by the following verbs:

Look at / view (взглянуть) 'pay attention to something, assess' – look seriously at the problem: We can look at this problem differently;

*If we **consider** (Если **рассматривать**) the obtained data as a cut of some indicators characterizing the understanding of parents of their children, then a rather sad picture emerged.*

*Already the first assessments given to this event show that the leaders of the EU countries **consider** (**рассматривают**) "the adoption of the text of the Constitution as a fundamental event that will allow the EU to be more transparent and democratic"*

*If you **look** (Если **взглянуть**) at the matter soberly, nothing and no one forces them to maim children;*

*[...] This completeness and liveliness is necessary so that the judge could **view** (чтобы судья **мог обозреть**) the case from all sides, penetrate into its very essence and form a firm conviction [...].*

In the first sentence, the assessment is negative (as evidenced by the words sad picture), in the second - positive (fundamental event).

The third and fourth sentences contain an indication of a detailed analysis and a general assessment of a difficult situation (look soberly at the case, view the case from all sides).

We should also mention the verb *look* – *смотреть*:

***Look** 'judge, treat someone, something in a certain way; manifest your attitude towards someone, something:*

*To look at someone with surprise, indignation, contempt. Look at someone distrustfully; 'Observe in order to form an opinion about something; to notice ':
To look at the involvement of subordinates. To look at the progress of the pupils.*

*I appreciate the importance of objective historical facts and what makes me **look** pessimistic about human history is what they mean;*

*I asked her not to tell others about my illness; I was afraid that people would start **looking** at me differently;*

The assessment of the object of visual perception is also expressed by the verbs that make up the core of the concept's nominative field, i.e. *see* and *видеть*.

видеть 'находить, обнаруживать; признавать, считать кого-, что-л. кем-, чем-л.': *В. героя в ком-л. В. в ком-л. своего преемника.*

*Мы должны **видеть** и в депутатах ГД прежде всего профессиональных партийных работников*

Они видели пристрастную однобокость в ведении следствия и требовали справедливого подхода к делу (НКРЯ);

Каким вы видите процесс отказа ведомств от не своих полномочий? (НКРЯ).

see 'consider as someone': To see someone as an enemy, rival, ally, friend (SWJP);

*Bobkowski mentions him with sympathy in one of his letters to him, and meanwhile he was attacked without mercy, **seeing** him almost as iconoclasm;*

*Simon, a young, bearded boy, turned to Tom Kaney, who helped in editing "The Message", **seeing** nothing wrong with the idea;*

*The matter may drag on indefinitely and the decision to temporarily suspend the film's broadcasting will still be in force. I **see** it as a threat to the freedom of speech - said in April 1998, MP Juliusz J. Braun [...] for one of the newspapers;*

The given dictionary interpretations of the verbs *see* and *видеть*, as well as examples of their contextual use, confirm that both in Russian and in English, these verbs can express an attitude towards someone, something, providing for the presence of an evaluative factor.

Within the problem of assessment in the context of visual perception verbs it is necessary to comment one of the meanings of the English verb *see*, which is:

See 'think, suppose, have some definite opinion about smth'.

*The way I **see** it, you have three main problems. — Как мне кажется, у вас есть три основные проблемы.*

English verb *peek* has a connotation of control from the point of visual perception, however any control to a certain degree expresses some assessment:

Peek 'look quickly or furtively'.

*This time she probably did not manage to **peek** in the mirror before she left and had to check her appearance in [...] a car mirror*

Within the framework of the question of evaluativeness, relating mainly to the object of visual perception, one should also say about verbs of the type: *to stare, to admire, засмотреться, любоваться, наглядеться*.

Most examples of the use of these verbs indicate that the subject of visual perception finds pleasure in what he/she sees, therefore, he/she considers the perceived object of visual perception to be good, positive. We suggest starting with the verb *to admire*.

Admire 'look at (something impressive or attractive) with pleasure': *I admire your garden; People admire the officer's carriage; A girl admires the new clothes.*// 'feel pleasure, admiration, observing someone's activities, actions, etc.': *Admire the work of great artist; Admire the game of favourite team.*

*From Lahti to Kuopio, you will **admire** the incredible blue of the Finnish Lakes;*

Admiring his daughter, he laughed, watching her deftly maneuver between fans that were unaware of each other's existence;

*Inorganic, he thought, **admiring** the pearly pink gloss of one vastness; this vertical breaks the soft line of the mountains, the plane of the lake;*

*For thousands of years, people have **admired** the stars and admired the beauty of the starry sky.*

So, the subject of visual perception likes the blue of the Finnish lakes, daughter, the gloss of the expanse of water and the stars. We can compare this verb with its Russian form – *залюбоваться – залюбоваться красотой природы; залюбоваться стройной ёлочкой и т.п.*

The evaluative factor can also appear in the contextual use of verbs *заглядеться, засмотреться, наглядеться и насмотреться*.

Заглядеться 'get carried away by gazing at someone/something': *заглядеться на море; заглядеться на ребенка; заглядеться на девушку;*

Засмотреться 'to forget oneself looking at someone/something': *засмотреться на пейзаж; засмотреться на парня;*

Наглядеться 'fully enjoy watching someone/something.': *наглядеться на картины в музее; наглядеться на закат;*

Насмотреться 'see many, enough': *насмотреться в микроскоп; насмотреться фильмов.*

*А доченька твоя как хороша! **Загляделась!** – How cute your daughter is! I got carried away (by gazing at her)!*

*Я невольно **засмотрелся** на нее: какова хороша! – I forgot myself looking at her: how nice she was!*

*Я был потрясен и не мог **наглядеться** на открывшуюся передо мной красоту – I was amazed and couldn't fully enjoy watching what I saw*

*Я не мог **насмотреться** на Катю – I couldn't see enough of Kate*

CONCLUSION

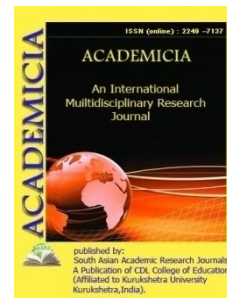
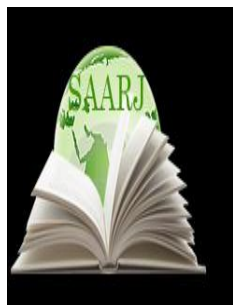
The analysis of the vocabulary meanings and contextual uses of Russian and English verbs of visual perception carried out in this chapter makes it possible to broadly cover the functioning of the sense of visual perception in the linguistic pictures of the world of Russians and Poles. Thanks to the analysis carried out, we achieve an understanding of the extent to which the concept of visual perception is related to other concepts. At the same time, the key point is the rich synonymy and polysemy of both Russian and English verbs of visual perception. The starting point of our analysis was the anatomical (perceptual) point of view, then, during the analysis, it turned into a functional point of view (see Bartmiński 1999: 79).

Observing the functioning of the verbs given in this article through the prism of the anthropocentric factor, it turned out that the concept of visual perception expressed at the linguistic level creates a picture of a person as a biological, experiencing, social and intellectually active being. Each of these characteristics includes other sub-characteristics. Between the Russian and English verbs of visual perception, there are, of course, differences in the intensity of the formation of individual characteristics of a person, which we talked about during the analysis, but the main frame of these characteristics is common. This is due to the fact that the analysis of the verbs of visual perception and their role in the formation of the linguistic image of a person is carried out taking into account the general human point of view. National differences, of course, do exist, however, in the context of the use of the verbs of visual perception, a person acts not so much as a representative of a certain nation, but as a representative of the human community in the world, a representative of the species *Homo sapiens*, for which eyes and vision constitute a natural prototypical device, which essentially determines his being in the world around him.

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LOCALIZATION OF ISBISKAT VILLAGE

Akbar Abdukarimovich Nazarov*

*PhD student,
Department of Archeology,
Samarkand State University,
Tashkent, UZBEKISTAN
Email id: akbarnazarov191@gmail.com

ABSTRACT

The article deals with the issues of historical topography and localization of the Isbiskat region, mentioned in Arab sources. The results of archaeological excavations carried out in recent years at the Navboghtepa monument, which is the center of Isbiskat, are also presented. One such town is the Navboghtepa monument, which is located 12 km northwest of the Afrosiyob monument in the ancient city of Samarkand, north of the village of Navbogh, on the right bank of the Siyob canal.

KEYWORDS: *Sughd, Isbask, Navbogh, Kunduz Sufi, Uzbek Village, Zarafshan, Siyob, Karasuv, Devori Qiyamat, Childukhtaron, Anhar, Samarkand, Localization, Stratigraphy, Planography, Cultural Layer.*

INTRODUCTION

Sughd is one of the largest cultural centers in Central Asia, where urban culture was formed from the early Iron Age and in later stages of development led to the formation of villages, castles and religious temples outside the central cities. One such town is the Navboghtepa monument, which is located 12 km northwest of the Afrosiyob monument in the ancient city of Samarkand, north of the village of Navbogh, on the right bank of the Siyob canal. The total area of the monument is 6 hectares, which consists of arches, shahrastan and rabot parts [1. 80-81;] (Figures 1 - 2).

Written sources, including Ibn Hawkal, note that on the wall of Rabad, which surrounded Samarkand at a distance of 2 miles, there were gates called Gavabad, Isbask, Suhashin, Afshina, Varsanin, Kuhak, Rivdad and Farrukhshid [2. 202;]. Al-Istakhri and al-Sam'ani acknowledged that the gate of Isbask was located in the north-west of Samarkand, 2 miles away from it, and between the gates of Ghadovad and Sukhashin [3. 93;]. At the same time, al-Sam'ani mentioned

that a scholar named Abu Hamid Ahmad ibn Al-Isbisqati lived in the district of Isbask [4. 161-162;]. In Ibn Yaqt's work, this gate is called Isbaskas [5. 221;].

Main Part

Isbaski gate T.I. Lebedeva localized the Wall surrounding the Samarkand rabbi with the Childukhtaron monument located northwest of the Wall of the Judgment Day [6. 13-14;]. The monument is currently located in Navbogh village of Samarkand district. Some researchers have localized Isbiskat with the Durmontepa monument, located east of Juma in the Pastdargom district [7. 56;]. However, in Arabic sources, Isbiskat is mentioned as a district (village), which is located 2 miles from Samarkand [8. 208;]. It is also mentioned in the foundation documents of the XV-XVI centuries that it was located near the village of Isbask-Motrid. Isbaskni V.L. Vyatkin mentioned that Kunduz was located near the villages of Sufi and Uzbek Kenti. In our opinion, the center of the village of Isbiskat, mentioned in Arabic sources, can be localized with the Navboghtepa monument. The village receives water from the Siyob and Karasuv canals. The Zarafshan River flows through the northern part of the village. Navbogh village was a part of Anhar district in the late XIX century [9. 41;], and its name is also mentioned in a 1891 map of the Samarkand region. In the etymology of the name Navbogh - the words "nav, nov, nova" in Sogdian "new" [10. 92;], i.e., "new garden".

The monument consists of two parts at a distance of 20 m from the other. The first hill is triangular in shape and faces north to south. The total area of the second part is 220x140 m.

Navboghtepa was founded in 1987 by T.I. Lebedeva, E.Yu. Registered by Buryakova [11. 127;]. Later, in 2002-2008, as a result of the activities of the joint Uzbek-Italian international expedition, it was re-registered, based on the findings collected on and around the V-VII, XIV-XIX centuries [12. 128;]. The first archeological excavations at the monument were carried out in 2019 in the form of planigraphic (1st excavation (RI) and stratigraphic (2nd excavation (RII) in the Shahristan part and in the Rabod part.

Excavation 1 (RI) is located in Shahristan on the northeastern side of the memorial arch, with an area of 5x5 m (figure- 3). The grass layer at the top of the excavation was removed. As a result, a medium-density soil layer was observed in the first tier, between which glazed and unglazed ceramic fragments, glass and metal fragments were noted. Two holes were observed at the excavation site.

The first pile was found on the northwestern side of the excavation and has an oval shape, 1.2x1.1 m in size and 0.9 m deep. Among the layers of soft soil and ash inside the jar, along with animal bones, fragments of colored ceramics and glass vessels from the X to XII centuries were recorded.

The second pit was found on the eastern side of the excavation site with a diameter of 0.95 cm and a depth of 1 m. Pieces of ash and raw bricks, as well as fragments of pottery of the X-XII centuries were observed in the middle. Although fragments of raw and baked bricks and pieces of cotton were noted in the excavation area, no construction-architectural remains were found. 2nd excavating 1st in the northern part of the pit, i.e. clearing works were carried out on the site formed as a result of excavation of the hill by the local population. As a result, it was found that there were 8 layers between the I tier and the XI tier (figure-4).

An initially light yellow area formed over a layer of loamy soil. Its cross-sectional height is 160-180 cm. A cotton wall has also been erected over the platform. Namely, a solid defensive wall with a platform typical of the early Middle Ages was created.

CONCLUSION

In short, the center of the village of Isbiskat, mentioned in Arab sources, is the Navboghtep monument, and as a result of archaeological excavations in the upper layers of the monument, handicrafts and remains of crafts from the times of the Samanids and Karakhanids were recorded. The name of the village of Isbiskat also appears in medieval foundation documents.

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Figure 1. View of Navboghtepa from above

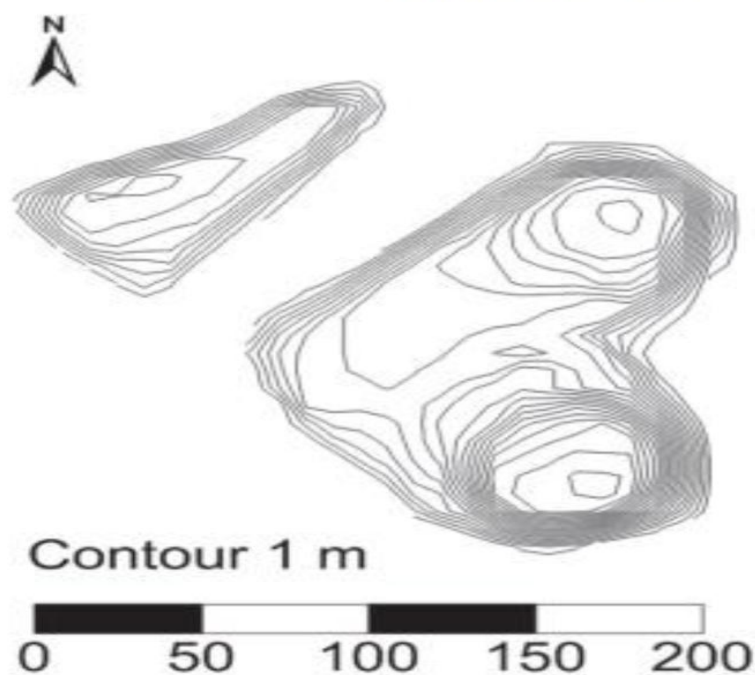
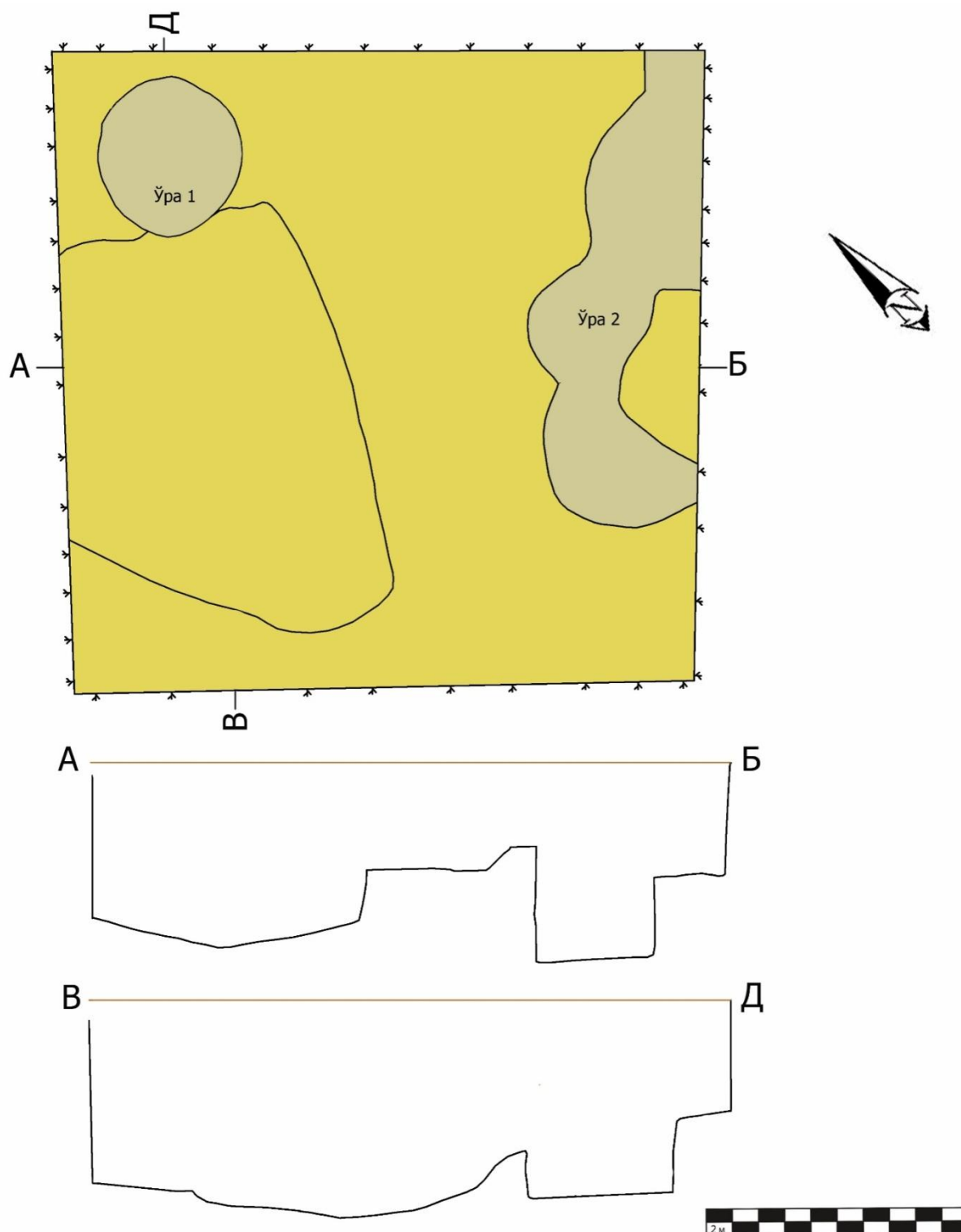


Figure 2. Topographic history of Navboghtepa.



3. 1 - History of excavations

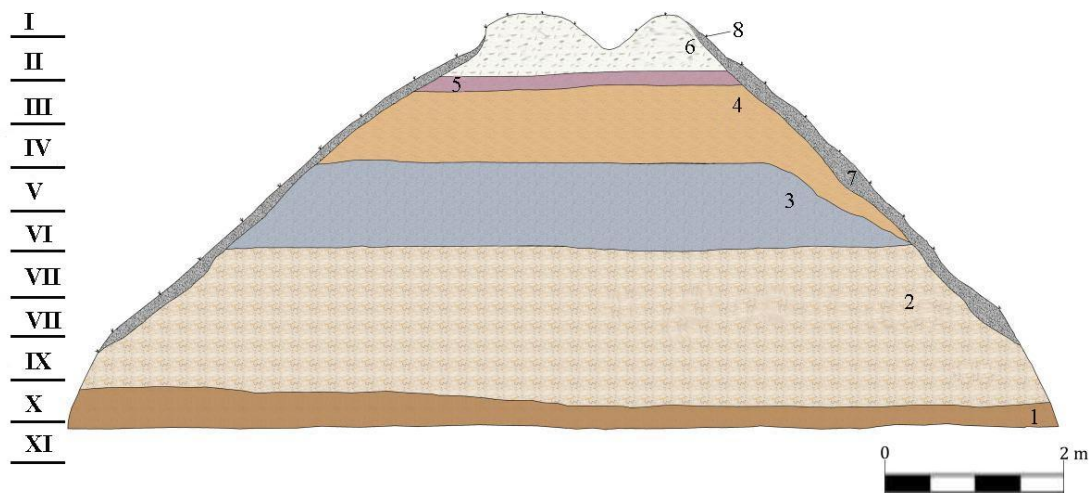
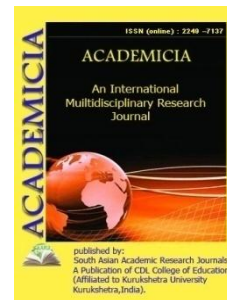
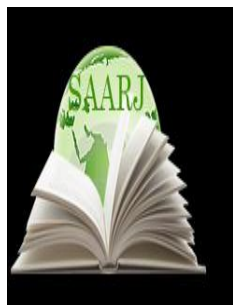


Figure 4. 2 - excavation section.



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THE ROLE OF MICROORGANISMS IN THE TREATMENT OF WASTEWATER FROM OIL AND GAS COMPANIES

Adolat Abduvasievna Urinova*; **Giyos Sadriddinovich Rustamov****;
Jamoliddin Jalgashevich Musirmonov***; **Salimjon Samedjanovich Buriyev******;
Lugmon Nayimovich Samiyev*****

*Director of Department of Biodiversity,
 Research institute of ecology and environmental protection under State Committee,
 Ecology and Environmental Protection, Republic of UZBEKISTAN

**Junior Researcher of the Department of Biodiversity,
 Research institute of ecology and environmental protection under State Committee,
 Ecology and Environmental Protection, Republic of UZBEKISTAN

***Junior Researcher of the Department of Wastewater,
 Research institute of ecology and environmental protection under State Committee,
 Ecology and Environmental Protection, Republic of UZBEKISTAN

****Scientific Secretary,
 Research institute of ecology and environmental protection under State Committee,
 Ecology and Environmental Protection, Republic of UZBEKISTAN

*****Doctoral Student,
 Research institute of ecology and environmental protection under State Committee,
 Ecology and Environmental Protection, Republic of UZBEKISTAN

Email id: lugmonsamiev@mail.ru

ABSTRACT

In the wastewater of oil and gas enterprises, destructive microorganisms that destroy petroleum, petroleum products, diethylene glycol (DEG), which have a strong negative impact on the environment, have been separated out and, their physiological and chemical properties have been determined. The microorganisms separated out from wastewater belong to the families Pseudomonas, Bacillus and Aspergillus and have been found to be the only source of carbon in petroleum and petroleum products. Due to the constant influx of organic and mineral substances into biological basins, a high rate of microbiological processes was observed. When the

wastewater from the Mubarak Gas Processing Plant was mixed with domestic wastewater, it was found to be rich in organic and mineral substances. In such an environment, there are sufficient conditions for the growth and development of heterotrophic bacteria and bacteria assimilate water-soluble organo-mineral substances during development.

KEYWORDS: Oil And Gas, Microorganisms, Waste Water, Household Water, Heterotrophs, Bacteria, Morphological And Cultural, Hydrocarbon Oxidizers.

INTRODUCTION

One of the most pressing environmental problems of the 21st century is to value every drop of fresh water and respect for it. Because clean water is as important to human life as it is to production. After all, industry, agriculture and production cannot be imagined without water.

Main part

There are currently several oil and gas fields in the country, and the oil produced from them is used for the welfare of our country. We know that in nature there are different levels of environmental pollution as a result of the impact of oil and related processes. Water is one of the key factors in ensuring human health. Not only harmful substances have a negative effect on the human body, but also the fact that the natural components of natural waters (Cuprum, Zinc, iron), necessary for a normal human life, are less or more than the norm. Human health also depends on the quality of drinking water. According to some experts, 50% of all diseases of the world's population are associated with the quality of drinking water they consume [1,2].

Together with water, a person receives from 1 to 25% of daily minerals. Chemical elements in the form of minerals that enter the human body through water are absorbed faster and easier than elements that enter food through food [3].

Water pollution from industrial and domestic waste is also one of the main causes of water scarcity. Water pollution is the presence of various chemical compounds that reduce its quality. For reuse, each m³ of contaminated industrial and domestic waste must be mixed with 10 m³ of fresh water. Sources of pollution of surface and ground waters are numerous and varied [4,5,6,7]. The pollution of the environment by oil and petroleum products from oil and gas companies is part of a complex chain that, in turn, affects the composition of water and soil, as well as soil microorganisms, flora and surrounding water bodies [8].

Contamination of water bodies under the influence of various factors is one of the technical, ecological-biological and urgent problems of our time. When solving the issue of providing the population with high-quality drinking water, of course, it is necessary to take into account the microflora of water bodies and their impact on water. In addition, pathogenic microorganisms, which are considered much dangerous from an epidemiological point of view, enter water bodies along with wastewater. All this requires careful laboratory monitoring of water bodies in order to protect public health and improve their water supply. The participation of the general public, the development of environmental education and training are essential for ensuring the rational use of water and protecting water bodies from pollution. In this regard, the protection of water bodies remains an urgent issue for mankind, which is required by the development of mankind throughout the world. To protect water bodies from pollution, it is of paramount importance to

limit the discharge of wastewater from industrial and municipal enterprises into the freshwater environment.

METHOD AND MATERIALS

In the wastewater of oil and gas enterprises, destructive microorganisms that destroy petroleum, petroleum products, diethylene glycol (DEG), which have a strong negative impact on the environment, have been separated and the Mubarak Gas Processing Plant was chosen to determine their physiological and chemical properties.

For microbiological analysis, samples of water in wastewater were taken from the filtration zone of the plant and the workshops of the plant. When analyzing the water samples taken, the methods generally accepted in microbiology were used, that is, methods of inoculation, cultivation and isolation of active microorganisms in elective nutrient media. When sampling water in industrial plants, special attention was paid to key environmental factors such as air temperature, water temperature, water purity and pH of the environment.

To study the microbial cenosis of wastewater from the Mubarek gas processing plant, 32 water samples were taken from the plant's workshops, including household and industrial water (workshops No. 1,6, 9,14), installation and equipment for complex gas purification.

To determine the purity of wastewater, the following groups of microorganisms were grown in the appropriate nutrient media and their number was determined: Meat-peptone agar was used to determine the total number of heterotrophic microorganisms, Vinogradsky's nutrient medium was used to identify nitrifying bacteria, and Raymond's nutrient medium was used to grow hydrocarbon-oxidizing bacteria.

When determining the total number of saprophytic bacteria, water samples were cultured several times by inoculation into peptone agar with fish and meat peptones, as well as into liquid elective media. The cultured microorganisms were grown in a thermostat at 280 ° C for 48 hours. For the cultivation of denitrifying bacteria, Giltay agar medium was used. In this case, bacterial growth is observed with the release of a certain amount of gas. When observing this process, special attention is paid to bacteria that grow in an oxygen-free solid agar medium in test tubes.

Destructive microorganisms that decompose oil and oil products were studied in the following order:

1. local strains of bacteria were isolated from wastewater from a gas processing plant;
2. The highly destructive bacteria were isolated by adaptation and immobilization on carriers.

Pure cultures of microorganisms were isolated from one cell colony using several transplantation methods. Isolated pure cultures were stored in liquid and solid nutrient media with oil, diethylene glycol, and gas condensate.

The experiments used mainly the bacterial species *Pseudomonas* and *Bacillus* and their associations (collections).

To determine the effect of oil and oil products on the viability of bacteria-destructors when mixing in different amounts, we used the method of inoculation of a culture suspension treated on a Petri dish in a solid artificial medium. The bacteria grown on Petri dishes were grown in a thermostat at 280 ° C.

To determine the physiological conditions for the growth of destructive bacterial cultures, 0.5-2% oil was added to the mineral medium and grown in a stationary (constant) mode at a rate of 180 volumes per minute at 28-30 ° C for 24-72 hours.

To identify fungi in wastewater, water samples were planted in Chapek culture medium and the fungi were identified. In the study of destructive bacterial selection as a result of a gradual increase in the concentration of oil and oil products in the nutrient medium, pure cultures of microorganisms were adapted to high concentrations of toxins. (oil from 0.5 to 2.0 vol. /%, diethylene glycol from 0.5 to 10.0 vol. /%). The morphological-cultural and physiological-biochemical properties of cultures of pure microorganisms that break down the extracted oil were studied by methods adopted in microbiology [9, 10, 11].

Identifiers Bergeys (1986) and Berg (1980) are used for identification of isolated hydrocarbon-oxidizing bacteria based on morphological-cultural and physiological-biochemical research results. [10].

The optical density of the growth rate of destructive bacteria in the culture liquid was determined on a photoelectric colorimeter in an FEC-2.

Potentiometric ionometry EV-74M revealed changes in the acidity of the environment and their oxidative potential.

The destructiveness of bacteria in relation to diethylene glycol was determined by gas chromatography on a CHROM 5 chromatograph (Czechoslovakia).

Microbiological analysis of wastewater containing oil products and diethylene glycol was carried out jointly with employees of the Central Laboratory of the Mubarek Gas Processing Plant.

Results and analysis

Refineries are water intensive industries. Wastewater from oil and gas enterprises is associated with progressive water and soil pollution. At present, a separate topic is their purification by biological methods, that is, with the participation of microorganisms. Industrial wastewater contains oil, petroleum products, diethylene glycol suspensions, emulsions and water-soluble ones. At the first stage of the work, oxidizing microorganisms were isolated from the waste of the oil and gas industry and their microbiological aspects were analyzed (Figures 1., 2.).

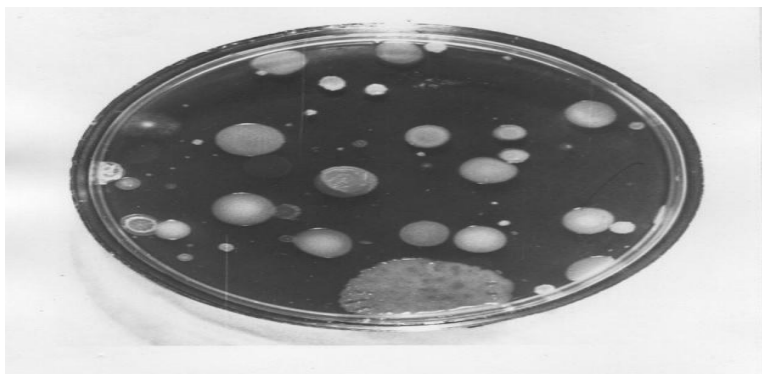


Figure: 1. Colonies of microorganisms growing on fish peptone agar.



Figure: 2. Microscopic colonies of fungi growing on Czapek's nutrient medium.

Bacterial species of the genus *Pseudomonas*, *Bacillus* and microscopic fungi of the genus *Aspergillus*, *Cladosporium* are the most typical representatives of microorganisms living in polluted water and soil. [12, 13]

Microbiological analysis of wastewater samples taken from a gas processing plant for the purpose of research showed that the same amount of bacteria oxidizing hydrocarbons in wastewater and in water in the evaporation zone. From March to autumn to November, the number of bacteria in fresh water ranges from 10^2 to 10^6 cell/ ml, the number of microscopic fungi ranges from 10 to 10^3 cell/ ml, the number of hydrocarbon bacteria ranges from 10^2 to 10^3 cell/ ml. From May to September, their number increases by 1-2 times (Table 1).

TABLE 1 MICROBIOLOGICAL CHARACTERISTICS OF WASTEWATER SAMPLES FROM GAS PROCESSING PLANT

Name of samples taken	Number of microorganisms, vol / ml			
	Heterotrophic bacteria	Microscopic fungi	Hydrocarbon oxidizing bacteria	Actinomycetes
Samples of water from the Mubarek Gas Recycling Plant	10^4	10^3	2×10^3	10
Sewage pumping station	10^5	10^2	5×10^3	10
Evaporation field	10^6	3×10^3	10^4	-

As can be seen from the table, a certain number of different groups of microorganisms are found in the toxic waste waters of enterprises.

The fish is always creamy in peptone and starchy ammonia environments and has a large number of brightly colored small colonies, after the fifth day of the experiment, some of them turn dark brown, and these pigments also pass into the agar medium. Spore colonies appear as mycelium on top of the agar. In addition, we observed the growth of individual bacteria around the colonies with the formation of light areas ranging in size from 0.3 to 1.0 cm.

Experiments were carried out with the participation of isolated bacteria to determine the resistance of oil and oil products to various concentrations. During the experiment, unstable bacteria die during transplantation, therefore our study was carried out only in the presence of 3 resistant microorganisms, that is, 3 bacterial strains and 2 strains of microscopic fungi.

According to the literature, the main bacteria involved in the decomposition of oil and oil products are aerobic and facultative aerobic microorganisms. [14, 15]

Of these, *Pseudomonas* and *Bacillus* are the most common bacteria in the decomposition of toxic substances in water and microscopic fungi include *Aspergillus* and *Cladosporium*. [16, 17]

In our subsequent research, we observed their characteristics as well as the growth of microorganisms in oil and oil products (gas condensate). (Table 2)

TABLE 2 GROWTH OF BACTERIA AND FUNGI IN WASTEWATER POLLUTED BY OIL AND GAS INDUSTRY

Pollutants	<i>Bacillus</i>	<i>Pseudomonas</i>	<i>Aspergillus</i>	Bacterial organizations
Oil	++	+++	++	+++
Gas condensate	++	++	+	++

Note: not well developed - +; average - ++; good - +++

As can be seen from the table, the activity of pure offspring of microorganisms is manifested differently in different hydrocarbons. Bacteria of the genus *Pseudomonas* grow well in both oil and gas condensate, and the bacterial community grows well only in oil. When we grew 1-2% of bacteria in a nutrient medium in Raymond, their number was 10^8 cell/ ml in 3 days, and their initial number was 10^6 cell / ml.

Pseudomonas bacteria thrive in petroleum products, while *Bacillus* bacteria thrive in processed gas products. Bacteria and fungi found in the wastewater from a gas processing plant have been shown to be effective in degrading oil and gas condensate and degrading it on a daily basis (Table 3).

TABLE 3 BACTERIA AND MICROSCOPIC FUNGI BREAK DOWN OIL AND GAS CONDENSATE BY DAY

Microorganisms	Oil			Gas condensate		
	Days					
	3	7	15	3	7	15
Bacteria of the genus Pseudomonas	+	++	+++	-	++	++
Bacteria of the genus Bacillus	+	+++	+++	-	+	++
Aspergillus авлоди замбуруглари	-	+	++	-	-	+

Note: not well developed - +; average - ++; good - +++

The table shows that bacteria belonging to the genus *Pseudomonas* grow well in oil and gas condensate, The growth of microscopic fungi was slower than that of bacteria and only at 15 days of development was their growth better.

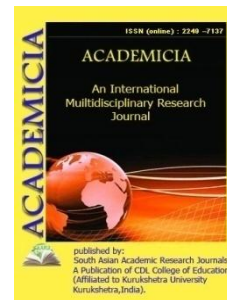
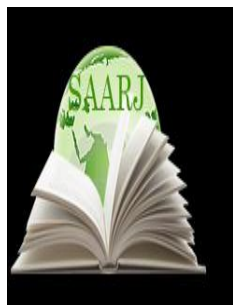
CONCLUSIONS: Based on the results of research on the identification of microorganisms in the effluent from the workshops of the Mubarak Gas Processing Plant and the study of their importance in wastewater treatment, the following conclusions were drawn:

1. Wastewater samples from the Mubarak Gas Processing Plant were found to contain mainly the spore-forming bacteria *Bacillus* and the non-spore-forming bacteria *Pseudomonas*, which produce a blue-green pigment.
2. *Pseudomonas* bacteria are well absorbed by oil products, and microscopic fungi - by gas processing.
3. Unlike microscopic fungi, bacteria did not lose their ability to break down oil and oil products, and gas processing products during our research
4. Seasonal dynamics of the number of bacteria in the wastewater of the Mubarak GPP depending on the season, i.e. change in the number of microorganisms in spring, summer and autumn, i.e. the number of bacteria ranged from 10^2 cell/ ml to 10^6 cell/ ml, the number of microscopic fungi from 10 cell / ml to 10^3 cell/ ml, and the number of hydrocarbon-oxidizing bacteria from 10^2 cell/ ml to $10^3\%$ / ml.

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THE PLACE OF THE “HAND” AND THE THEME OF MEDICINE IN THE SOURCES OF ISLAM AND CHRISTIANITY

Lazizakhon Abbasovna Alidjanova*

*Lecturer,

Department of UNESCO Chair in the Religious Studies and the Comparative Study of World
Religions, Faculty of Islamic Studies,
International Islamic Academy of Uzbekistan,
Tashkent, UZBEKISTAN

ABSTRACT

The human head has unique sensory organs. For example, the nose is a sensory organ, such as the ability to smell, see the eyes. It also has sensory features in the legs and arms. A person feels changes in the liver, kidneys, pancreas, heart and other organs in their body, their activity. At the same time, external factors - smell, taste, time, place, people, age - old, woman - man, child - adult - perceive millions and billions of similar and different emotions and receive them as information. The current situation on the planet Earth, the state, the city, the societies in which we live, evokes various emotions and sometimes affects the human emotion and destroys it. More or less a person tries to control these emotions, but cannot fully control them. At this point, the increase in body temperature is an absolutely normal reaction of the sick person to the unhealthy state of the human body through the senses. Body temperature accurately shows who, how, when and with what extent and to what extent it has affected the human heart. An increase in human temperature is not only associated with illness, but also with violations of moral norms, mistakes, and anger. Therefore, "thermo" is the level of angry emotions, and "meter" is the radius of emotions.

KEYWORDS: *Islam, Christianity, Medicine, Medicine Of An-Nabawi, Imam Bukhari, Bioenergy, Hand, Sunnah, Sahih Al-Bukhari, Kitab At-Tibb*

INTRODUCTION

It is not difficult for a person to recover from an illness. However, when the body temperature rises, especially in these children, many panic and all activities related to consciousness are

inhibited. In this case, one must be able to control oneself. Because it is the person in this balance who comes to the rescue first. We know that human palms and fingers are very sensitive. We get a lot of new information in life through the inspection, feeling, touching and feeling of our hands. This makes us capable of so many things. It helps a person achieve sincerity and confidence with what they want. On the contrary, the insecurity within us stops him from moving and drives him away from the goal.

When a person's palms join together and contract, and the palms begin to heat up. But, in fact, the temperature of both hands is 36.6 degrees. The question arises as to why. Between the palms, a person's existing thoughts collide, and they, too, are heated. The more the palms are squeezed and held, the warmer they become. Human emotions and psyche are not stable. As time goes on, seconds, minutes pass, emotions collide with emotions, thoughts collide with other thoughts and exchange. One thought multiplies by another, one by two, two by two, ten by ten. It is their movement that causes our palms to heat up.

The palm of the human right hand has a plus charge and the left palm has a minus charge. Therefore, the combination of the two palms has properties such as revitalization and protection in the body. Today, leaders in various fields of medicine are turning to religion and religious sources along with biology, anatomy, chemistry, physiology to treat or prevent disease. Indeed, the study of the points that unite religion and medicine is developing rapidly.

MAIN FINDINGS AND RESULTS

In the study of bioenergy in human hands discussed above, scholars focus on some aspects of Christianity and Islam. In particular, the religious source of Christianity in the Bible is as follows:

But Jesus said, "Someone touched me." I felt a force come out of me. (Luke 8:46)

And Jesus took the damsel by the hand, and said, - Little girl, arise, and I will shew thee. The girl came to life. He got up at once ... (Luke 8:54, 55)

And he put forth his hand, and touched him, saying, I will be thou clean. The man with the skin disease was immediately relieved of his pain. (Matthew 8: 3)

The fever subsided as Jesus touched her hand. And she arose, and ministered unto him. (Matthew 8:15)

Why don't your disciples follow the traditions of our ancestors? Why don't they wash their hands before eating? (Matthew 15: 2)

These examples also show the importance of the hand in healing methods in Christian sources.

Islam also emphasizes medicine. The Sunnah of the Prophet (peace and blessings of Allaah be upon him), especially the issues raised in medicine al-Nabawi, are still recognized today by modern medicine.

Medicine an-Nabawi is treated according to the principles of disease, along with verses from the Qur'an, the hadiths of the Prophet (S.A.V.), and prayers, along with natural herbs, consumer products, and medicines. The doctor must also have mastered the correct method of treatment. It was narrated on the authority of Amir ibn Shuayb (may Allah be pleased with him) from the

Prophet (peace and blessings of Allah be upon him): “A person who does not have a medical education is responsible (for any harm) when he provides medical care.”

Allah says in Surat al-Baqara 269: “He gives wisdom to whomever He wills. Whoever is given wisdom has indeed been given much good. Only the wise will take notes.”

In the study of medicine an-Nabawi, much attention was paid to prevention, rather than treatment of the disease. The basis of prevention is cleanliness, hygiene, washing hands before eating, eating with the right hand, and a number of hadiths in medicine al-Nabawi on such issues. In particular, there are a number of hadiths from the Prophet (saas) regarding eating with the right hand and starting deeds with the right hand. In particular, 'A'ishah (may Allah be pleased with her) narrated: He loved to start from the right, which is all right. ” The Prophet (peace and blessings of Allaah be upon him) also ate with his right hand when he ate and licked and cleaned the fingers of his right hand after eating.

The question of why Muslims use the right hand more than the left hand has been sought by scholars in scientific research and studies. According to him, if a person takes an unfamiliar object in his right hand or does something for the first time with his right hand or right foot, the left hemisphere of the human brain is responsible and activated for these actions. This means that when a person performs an action, he first activates the left hemisphere of the brain. Below we review scientific findings about the right and left hemispheres of the brain.

Recent scientific studies have shown that human hands (especially the right hand) contain enzymes present in human saliva. In short, the process of digestion begins with the fingers as soon as a person touches food while eating. Scientists demonstrate the effect of the right hand on the digestive process in the following simple ways:

1. Fill two identical glass jars with water, one of which is filled with the right finger and the other with the left finger, so that changes in the water are observed for some time. As a result, it can be seen that the changes in the water in which the right finger is placed are greater than in the vessel in which the left finger is placed. Scientists have concluded that these changes are due to digestive enzymes.
2. In the next step, different vegetables are evenly stuffed into the above bowls, as well as the fingers of the right and left hands are stuffed again. After a while, it can be observed that the vegetables in the bowl with the fingers of the right hand are much softer than those of the left. From this it can be seen that our right hand has more digestive enzymes than our left and that is why according to the sunnah we are commanded to eat food with our right hand.
3. The sunnah of licking the fingers after a meal by scientists is also very useful, and this process is also helpful in digesting food.

When it comes to the human brain, scientific research suggests that exercise can help maintain the health of the human body. There are different types of exercises for each part of the human body, and if these exercises are performed regularly, this part of the body will be more active than the others. There are exercises that also develop the human brain. The human brain is made up of two hemispheres, the right and left.

In 1960, the American psycho-biologist Roger W. Sperry developed the "Right and Left Hemispheres of the Brain, the Concept of the Development of Thought." At the end of his

research, he discovered that the human brain is made up of two parts that perform completely different activities (functions). According to him, the left hemisphere of the brain is responsible for the activity of the right side of the body, and the right hemisphere of the brain is responsible for the activity of the left side of the body (this process is called the cross-sectional system).

The human right hemisphere simultaneously imagines information and responds to it with emotions. It focuses first on the information as a whole and then on the individual details. The right hemisphere of the brain is also often referred to as the analog brain. It mainly responds to a person's three-dimensional perception, creativity, artistic perception, and activity.

It can be seen that the right hemisphere of the human brain is more prone to imagining things or receiving information emotionally. The important thing is that both of these processes take place at the same time. The right hemisphere is mainly adapted to activities in a wider area (which can be done in a few steps) and is responsible for processes such as recognizing people's faces and working with music. He performs a number of mathematical but also approximate and comparative operations. The right hemisphere of the brain also helps a person understand images correctly and perceive what they see. The most important feature is that it is important in speech, especially in interpreting text and in human tone of voice.

The left hemisphere of the human brain analyzes information verbally and analytically sequentially. It also examines the fragments first, then combines them into a whole. Sperry was awarded the Nobel Prize in 1981 for this discovery. However, these studies later refuted the simple assumption that the brain was first divided into poles.

The right hemisphere is called the "analog brain," while the left hemisphere is called the digital brain. This "digital brain" controls reading and writing, arithmetic, and logical thinking.

The left hemisphere is responsible for verbal representation of objects and re-editing of data, analysis and study of work, orderly sorting of data, and continuous performance of actions.

In general, the left hemisphere of the brain dominates in the processing of information heard in speech. It is also responsible for performing logical and precise mathematical calculations. If a person tries to remember a piece of information, it is the left hemisphere that finds it and transmits it from memory. As mentioned above, the right hemisphere of the brain controls the muscles of the left side of the body, while the left brain controls the muscles of the right side.

According to the observational research of psycho-biologists, people with right-handed dominance are more logical and deep-thinking, advanced in mathematics, master of calculations, active in language acquisition, orderly use of words in speech, good analysis of various activities and data, as well as beautiful calligraphy people. Left-handed people are creative thinkers who express themselves fully, that is, who pay attention to all aspects of information at the same time, who are innovative and artistic, who have a wide imagination, often unattractive, and who are systematic and consistent.

From the above considerations, it can be concluded that when a person uses his right hand more in accordance with circumcision, at the same time he exercises the left hemisphere of the brain more, resulting in increased mental intelligence, clarity of thinking ability. This is one of the foundations of the Sunnah of the Prophet (S.A.V.) and medicine an-Nabawi. However, it should be noted that a person who prays uses both hands at the same time, that is, he knows both the

heart and the mind of the worshiper during prayer, so that both hemispheres of the brain work equally with ordinary hands.

The field of medicine al-Nabawi, which studies the hadiths of Kitab at-Tibb in the Sahih al-Bukhari collection, has been studied on the basis of a number of sources. For example, the verses of the Qur'an, the hadiths of the Prophet (peace and blessings of Allaah be upon him), the folk medicine of the Arabian Peninsula at that time, and the medical knowledge that came from the communities of other nations in Mecca and Medina during the time of the Prophet (peace and blessings of Allaah be upon him) serves as sources. In this study, the hadiths of the Prophet (S.A.V.) are taken as the main source. Imam Bukhari collected 129 hadiths directly related to medicine in his collection Sahih al-Bukhari. Imam Bukhari divides medicine into two books, Kitab at-Tibb and Kitab al-Maraz (Book of Diseases). However, Sahih al-Bukhari contains other hadiths that are partially related to medicine al-Nabawi. It should be noted that in other authentic collections of hadith, medicine has a special place for al-Nabawi. Many muhaddith scholars have collected hundreds of hadiths related to medicine an-Nabawi. However, scholars such as Abu Nuaym (336 / 944-430 / 1038), Ibn Qayyum (d. 751/1359) and Imam Jalaliddin Suyuti (d. 911/1505) summed up the medicine of the Prophet. They also researched and wrote reviews from a medical perspective. Even today, this topic has not lost its relevance. Separate articles and pamphlets have been written by many scholars on the subject. Ibn Qayyum, in his Tibb an-Nabawi, singled out many of the diseases used by the Prophet (peace and blessings of Allaah be upon him). He also interprets each of the medical knowledge of his time with separate hadiths. In reviewing the hadiths in the Sahih al-Bukhari collection, it is necessary to study al-Nabawi's medicine, which is appropriate for every age and place, using modern medical knowledge and the Sunnah of the Prophet (peace and blessings of Allaah be upon him). We can draw a firm conclusion in this regard.

The classification of the Prophet's (S.A.V.) Sunnahs related to medicine requires the acquisition of knowledge primarily about changes in time and space. For this purpose, Imam Jalaliddin Suyuti wrote Tibb an-Nabawi. In his work, he divides medicine into three parts, traditional, spiritual, and prophylactic. According to Imam Jalaliddin Suyuti, medicine was the most developed and widespread form of preventive medicine in its time. There is no doubt that the knowledge of the Prophet (S.A.V.) in this area was undoubtedly inspired by Allah. Imam Suyuti explains measures such as nutrition and physical exercise during the coverage of preventive medicine with hadiths and gives examples from medicine an-Nabawi. The study of medicine an-Nabawi shows that it has a spiritual basis for healing and restoration of health. Also, reading the Qur'an, praying and supplicating, and remembering Allah play an important role in this. Psychosomatic illnesses may be responsible for spiritual and mental approaches. Therapeutic medicine, on the other hand, includes the treatment of various wounds, which consists of the teachings of the Prophet (saas), as well as measures such as consuming honey and black seed for a number of ailments. The application of Ruqyah (recitation of Surat al-Fatihah, Muawwizatayn) has been included in both physical and mental therapy, and the application of Ruqyah is being proven today. Modern medicine has proven that the human psyche controls the immune system, which protects against disease. This is because the hadiths on reciting du'aa are given in chapters 30-33 of the Kitab at-Tibb in the Sahih al-Bukhari collection. For example, A'ishah (may Allah be pleased with her) narrated that when the Messenger of Allah (may peace be upon him) was ill before died, he used to recite the mu'awwizayn and pray for (dam solmoq –

in Uzbek) himself. When his pain became severe, I would bless him and rub his hands with his hands so that he would be blessed. ” Ma’mar said, “How did they dua (dam solmoq)? “When I asked Zuhri, he said, “They would dua (dam solmoq) with both hands and then wipe their faces.”

Ibn Qayyum enumerates many diseases in which the methods of treatment are clearly stated in medicine an-Nabawi. Medicine an-Nabawi instructs to treat the diseases mainly by natural means, in particular, fever, diarrhea, diet, spinal pain, epilepsy, wound erosion, itchy skin, pain in the brain and cerebral hemisphere, inflammation of the lining of the lungs , colds, sore throats, enlargement of the heart area, eye pain, skin rashes, food poisoning, lice and warts, and other ailments are examples of this. Ibn Qayyum also mentioned the following diseases in the Sahih al-Bukhari of medicine, which clearly state the methods of treatment: plague, leprosy, inflammation of the eyes, throat and tonsils, diarrhea, diseases of the abdomen, fever, snake and scorpion venom, food mosquito bites, headaches, nosebleeds, toothaches, coughs, dehydration, fluid fractures, stray dog bites, eye contact, and similar illnesses are also listed. In medicine an-Nabawi, the above diseases are treated in three main ways: natural, spiritual and natural, and spiritual harmony. The above treatments used mainly honey, cold water for fever, diet, milk, camel's milk, hijama, burning methods.

CONCLUSION

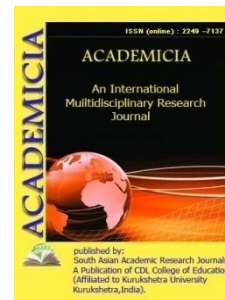
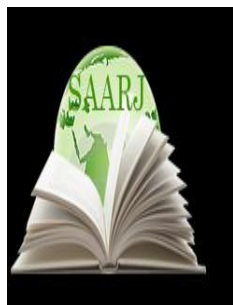
Today, there is a great scientific interest in the study of Medicine al-Nabawi in the fields of hadith and medicine. Engineers and doctors are doing a lot of research together. One of the biggest projects today is the work of major research institutes on the importance of the black sedan. According to the interpretations given to the hadiths by Islamic scholars, modern physicians have come to clear conclusions, especially about the black sedan and other healing herbs recommended by the Prophet (saas). For example, laboratory experiments on a black sedan have led to the scientific conclusion that it cures rheumatism and related inflammatory diseases. The Prophet (S.A.V) said about the usefulness of the sedan 15 centuries ago.

From the above studies, it can be concluded that medicine an-Nabawi is compatible with the real and practical medical system. It is advisable to apply the general principles of this system everywhere and at any time. Also, all the healing methods and medicines recommended by the Prophet (S.A.V) serve against the disease and are beneficial. However, they cannot be applied today without clear empirical research.

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SOLID EDGE ST "ISUZU NP 37" PROGRAM TO STRENGTHEN THE MECHANISMS OF THE BUS SUSPENDED RESISTANCE TESTING

M.A. Ruzimatov*

*Assistant,
Andijan Machine Building Institute,
UZBEKISTAN

Email id: ruzimatov1991@inbox.ru

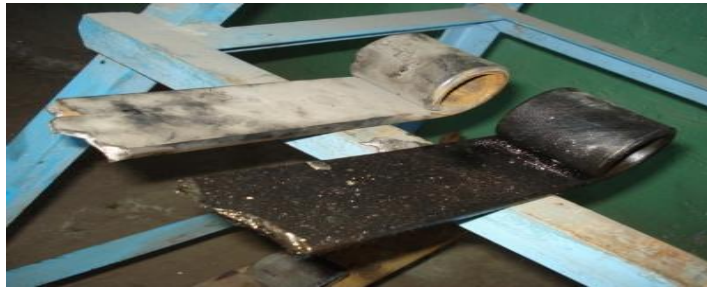
ABSTRACT

A spring is an elastic device used by vehicles (cars, wagons, tractors) to dampen vibrations caused by uneven roads. As far as we know, springs are the most common as an elastic part of the suspension. The presence of sheets of different lengths and curves causes the sheets to be gypsum closer together when the spring is assembled and the main sheet to be less loaded, as well as holding the sheets as well. In heavy-duty vehicles, an additional spring is attached to the spring in addition to the spring. The reason for its installation is to improve the smoothness of the car by changing the height of the spring to suit the load. The longevity of a spring is directly related to its durability. The article describes the design of the spring of the bus Isuzu NP-37 using the program Solid edge ST, testing its durability. As a result of the calculations, we can see that the spring breaks at a pressure of 2.7062 Pa. It should be required to create an optimal model of the suspension mechanisms of the Isuzu bus based on the operating conditions. The result of the calculation and actual operation was that the spring was broken.

KEYWORDS: Bus, Computer Program, Project, Suspension, Spring, Spring List, Bending, Bending, Stiffness, Equivalent Spring Tension, Loading, Deformation, Beam, Elasticity, ANSYS 12.0, Fixed Support, Simulation..

INTRODUCTION

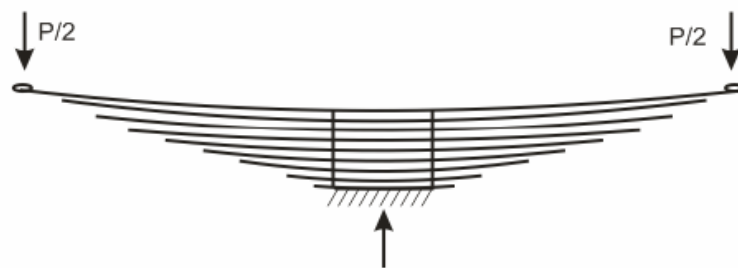
Depending on the nature of the defective spring list, they can be repaired or replaced. Characteristic shortcomings of spring coils include reduced cooling due to loss of spring elasticity. This will cause cracks and break some of the sheets. In addition, their bushing holes, the edges of the ears, and the thickness of the sheets themselves are eaten away. The core lists of the spring work in heavier conditions than the others. That's why they try so hard (Figure 1) [1].

Figure 1. Spring faults.

The fracture state of the spring can be attributed to the fact that it exceeds the force acting on the road conditions and the spring, ie the load.

The spring of the Isuzu bus was analyzed by taking into account its fracture state under force and the virginity of the spring. This is done as follows.

Forces acting on the spring:

*Figure 2. Forces acting on the spring.*

We can take the spring in this picture as a beam. The length of the beam is $L = 1350$ mm, width $b = 70$ mm and thickness 10 mm. Shot in the middle. The spring is subjected to a force $R = 39839$ N (Figure 2).

Let's go back to the design of the beam and see how the static load acting on the beam affects it. It can be said that geometrically, the stress and the displacement are evenly distributed along the beam. The force acting on a sheet spring can be characterized by bending, bending fr and stiffness sr [2]

The maximum bending and tension of symmetrical semi-elliptical multi-sheet springs are calculated by the following formulas:

$$\sigma_u = \frac{1.5P_p L}{nbh^2}, \quad \sigma_{unepe0} = \frac{1.5 \cdot 14541 \cdot 1350}{7 \cdot 70 \cdot 10^2} = 601 \frac{H}{mm^2}$$

$$\sigma_{u.3.} = \frac{1.5 \cdot 39839 \cdot 1300}{10 \cdot 70 \cdot 10^2} = 1110 \frac{H}{mm^2}$$

$$f_p = \frac{\delta P_p L^3}{4Enbh^3},$$

$$c_p = \frac{P_p}{f_p} = \frac{Enbh^3}{4\delta L^3},$$

$$f_p = \frac{1.25 \cdot 14541 \cdot 1350^3}{4 \cdot 2.05 \cdot 10^6 \cdot 7 \cdot 70 \cdot 10^3} = 11.13 \text{ mm}$$

$$f_p = \frac{1.25 \cdot 39839 \cdot 1350^3}{4 \cdot 2.05 \cdot 10^6 \cdot 10 \cdot 70 \cdot 10^3} = 19.06 \text{ mm}$$

$$c_p = \frac{14541}{11.13} = 1306.5 \frac{H}{MM}$$

$$c_p = \frac{39839}{19.06} = 2090.1 \frac{H}{MM}$$

METHODS

Today, the finite element method (CEU) is widely used in solving technical problems and conducting scientific research. Therefore, Solid Edge ST and ANSYS 12.0 from CHEU were used to determine the spring virginity. programs were used [1].

To do this, the spring lists are designed in the Solid Edge ST program (Figure 3):

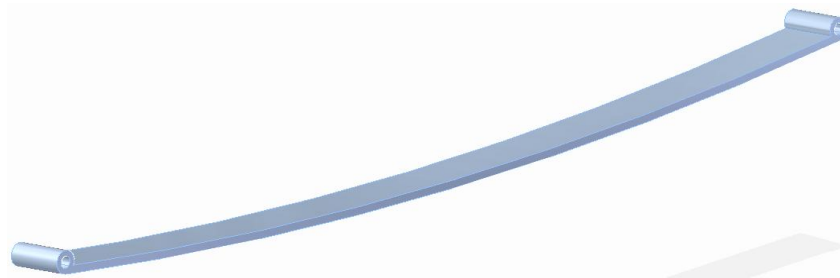


Figure 3. Korennoy list

The remaining lists of Isuzu bus springs were then sequentially designed in the Solid Edge ST program and assembled (Figure 4) [3].

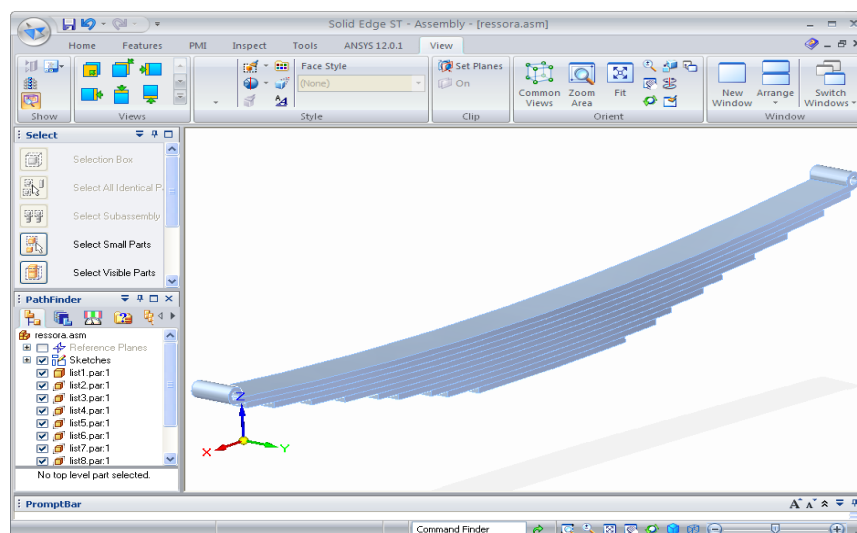


Figure 4. Resource compiled in Solid Edge ST.

Then add the finished spring to ANSYS 12.0. We export to the program:

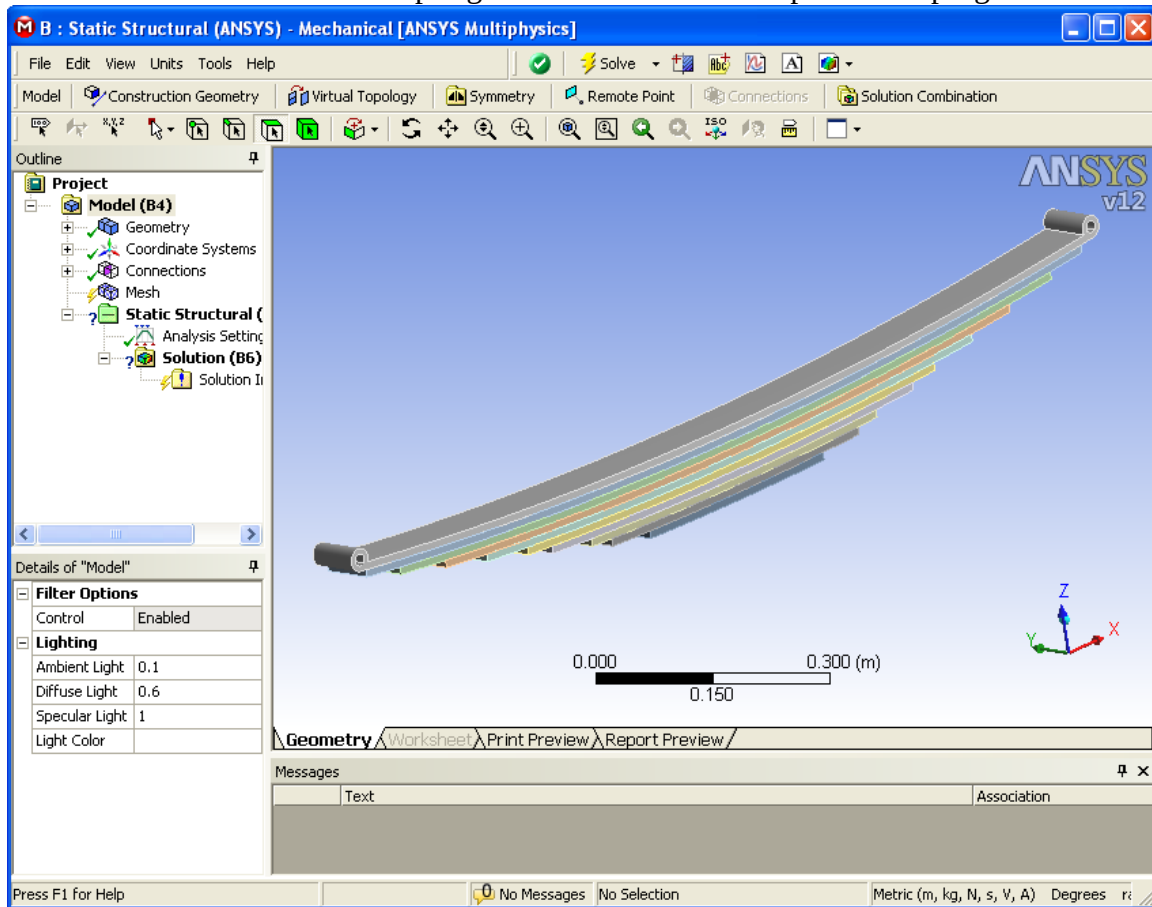


Figure 5. ANSYS 12.0. view of the source exported to the program.

ANSYS 12.0. you will need to attach the tag part of the spring exported to the program. To do this, ANSYS 12.0. In the program, press the Fixed Support button in the Supports section and select the tag part of the spring (Figure 6).

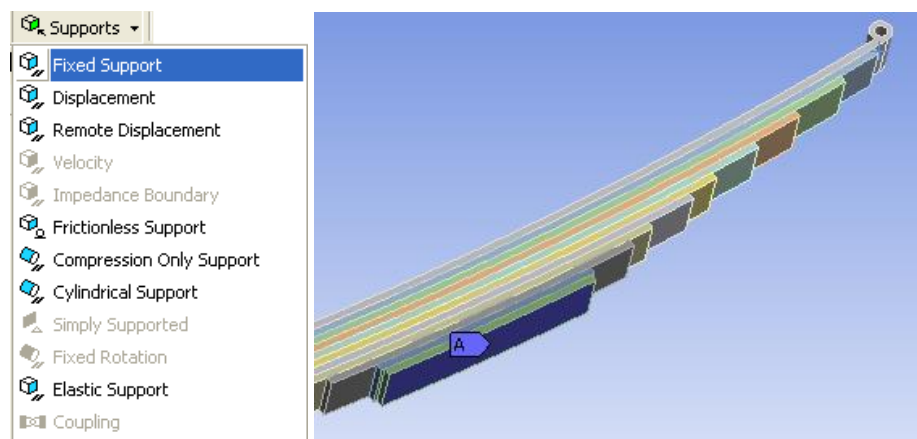


Figure 6. Fixed position of the spring tag part using the Fixed Support button .

A force is then applied to the frame of the spring and simulated. This can be seen in Figure 7.

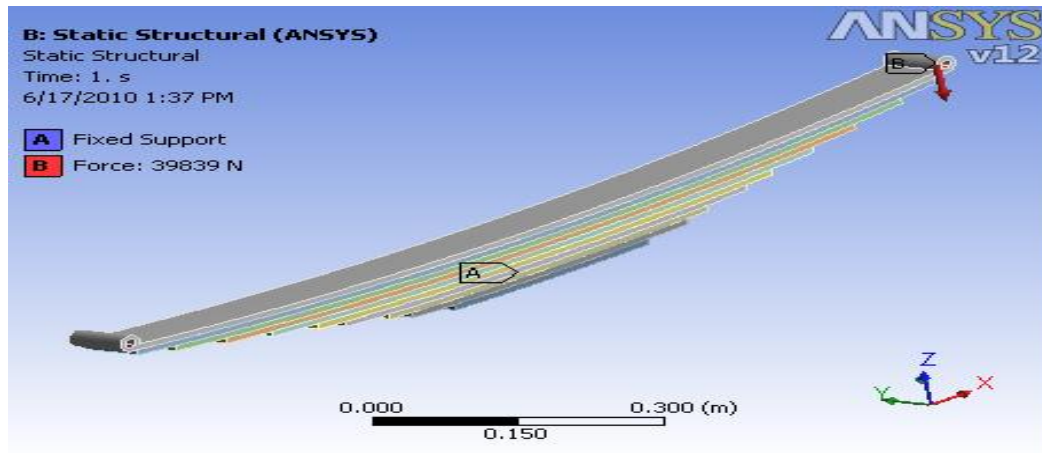


Figure 7. The force applied to the spring and the condition of the fixed spring.

ANSYS 12.0. By simulating the spring in the program, you can get the results of the equivalent stress of the spring, the total deformation and the Safety Factor. The results of this simulation (Figure 8) determine how much force the spring can withstand and where it will break.

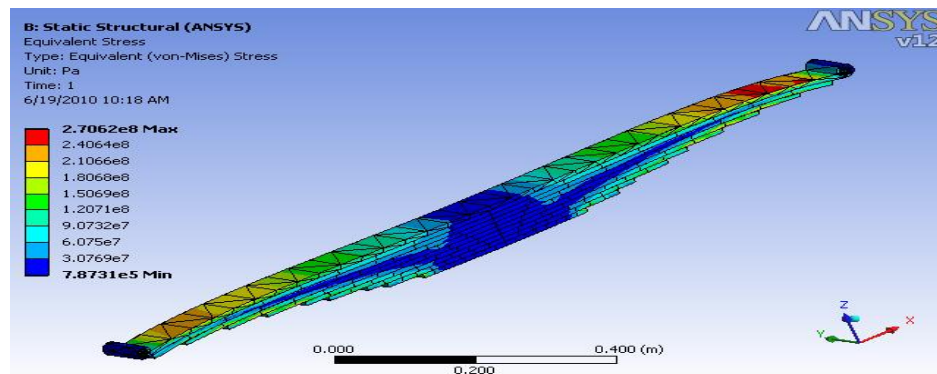


Figure 8. Source simulation view.

RESULTS

In the Solid Edge ST program, we can see that the computational work breaks when the spring is pressed at 2.7062 Pa. It is necessary to create an optimal model of the suspension mechanisms of the Isuzu bus based on the operating conditions. The result of the calculation and the actual operation correspond to the broken condition of the spring. We can see this in Figure 1 above.

DISCUSSIONS

Graphite is absorbed to prevent the springs from rusting and to reduce friction between the sheets. Cars have mirror inserts between the sheets. The ends of the spring-loaded main sheet are hinged to the frame, so that its length can change during movement. In heavy-duty vehicles, an additional spring is attached to the spring in addition to the spring. The reason for its installation is to change the spring load to suit the load, thereby improving the smoothness of the car. These factors increase the service life of the spring.

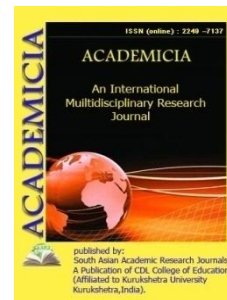
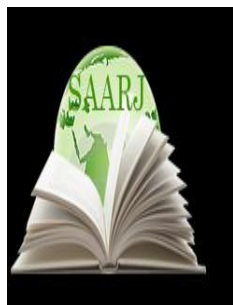
CONCLUSION

In conclusion, we have considered the durability of the Isuzu NP-37 bus spring by designing it using the Solid edge ST program. We observed that the spring breaks at a pressure of 2.7062 Pa.

As a result, overloading the spring with the maximum weight will cause it to break. It should be required to create an optimal model of the suspension mechanisms of the Isuzu bus based on the operating conditions. The result of the calculation and actual operation was that the spring was broken.

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ECONOMIC CONDITION OF PANIPAT REGION UNDER THE GREAT MUGHALS

Dr. Shashi Kiran*

*Associate Professor History,
CISKMV Fatehpur Pundri,
Kaithal Haryana, INDIA
Email id: kiransashi123@gmail.com

ABSTRACT

Panipat remained a place of strategic location and significance in Indian history. It was on the high road from Sarhind to Delhi and very close to the capital of India during the Great Mughals. Panipat formed a link in marching the armies of invaders or the kings of Delhi for their success and three decisive battles were fought. The economic life of people subsisted on agriculture. Panipat had a few industries on a cottage scale, engaged a minority of population. The rabi and the kharif were the two harvests of the region. Much of the land was irrigated by inundation (salabi) and the richness of soil was remarkable. There were three types of soil sandy, clay and kallar. The irrigation system of Panipat area can be divided in two main categories i.e. river works and lift irrigation. Due to uncertainty of rain the people restored the artificial methods of irrigation and the chief of which was the wells, a traditional method and as old as the farming. The methods employed for irrigation was rahat (arhat), well-gear and charas. A channel was excavated that diverted water by way of Panipat and sonipat to the north western part of the subah of Delhi. To pay revenue to the government zabti system was in use. Peasant's income consisted of agricultural produce, part of which they consumed while the rest was sold or bartered to buy things like salt, clothes, utensils and money to pay the revenue. In the village society the local elite groups had achieved a remarkable control over the surplus. Famines were frequent in those days due to lack of artificial irrigation, droughts, floods or heavy rain-falls, improper means of communication. The government policies of prevention were not adequate enough. Wool spinning and weaving had been one of the major cottage industries. Panipat has been an important blanket weaving centre. Drums, ropes, scale-pans, oil jars (kuppas and kuppis) were also made at Panipat. Special kind of glazed-art pottery was made at Panipat.

Kagazi pottery was made by kuzgars in and around Panipat. Makers of this pottery were different from kumhars. Saltpeter was manufactured here. For transporting merchandise the oxen and camels were used but most of the people moved from one place to the other on foot. Panipat was on the trade route (land) of Lahore to Fatehpur. There were two categories of the towns, one was hatt or markets where rural commodities were brought and sold and the other where both rural as well as urban commodities were brought but sold in other regions. Panipat was a big town. The rural market was very much a feature of the intra-local trade of the period. A considerable traffic was also carried on by the cultivators themselves. Delhi traders often sent their agents for purchasing of cotton, ghee and other commodities from villages. This local traffic was of immense advantage to the farmers who could eliminating the agency of middle men, the local dealers, and always get a good price for their produce. So, one of the specific features of the medieval Indian economy was the trade relationship between rural and urban areas. The traditional village community was based on connection of agriculture and crafts and it was supplied to the urban market in large scale by the peasants.

KEYWORDS: Strategic, Trodden, Appearance, Inundation, Interruption, Emptied, Gallon, Perd, Palanquin

INTRODUCTION

Panipat remained a place of strategic location and significance in Indian history. It was in the year 1580 when the entire territory under the mughal authority, was parceled out in the twelve divisions called subahs by the mughal Emperor Akbar. Panipat was included in the subah of Delhi. But during the British period it was under the province of Punjab. After the formation of Haryana it was included in district Karnal. At present it is a district headquarter in Haryana State. It was on the high road from Sarhind to Delhi and very close to the capital of India during the Great Mughals. Infact the whole of the tract from Punjab to Haryana up to Delhi had been the cockpit in Indian history. It was a place of high antiquity. It formed a link in marching the armies of invaders or the kings of Delhi for their success and because of its nearness to Delhi it decided the fortune of India again and again. While tracing the geography of Panipat the main point strikes in the mind is that, was there any geographical factor, involved in the location of Panipat. The possible routes to Hindustan through its North-west frontier were the Khybar and Bolan routes. The Khybar route has been more frequently trodden. It leads directly between the desert and the mountains up to Delhi and panipat had the strategic location on the high road from Sarhind to Delhi. In marching army and communication Panipat formed the link with their homelands. The geographical identity of Panipat has kept on changing in the various periods of history. It was a place of great importance because of three historical and decisive battles. Babur with mughal army marched on Delhi, mounting his horse at Ghraunda-sarai, Babur led his army to Panipat, which he selected for the battle-field, as the town would cover one of his flanks. On 21 April, 1526 Ibrahim Lodhi forces advanced to the attack, were utterly routed and persuaded by Babur's army to Delhi while the conqueror remained and encamped for a week to the west of Panipat. He considered the place a fortune one and treated the people well. Then he made Muhammad Angluli, who had assisted him with troops, governor of Panipat. After defeating him

the power of Lodhi dynasty was destroyed and transferred the empire of India from Afghan dynasty to the Mughal dynasty. In 1556 in the second battle of Panipat Akbar defeated Hemu the Hindu general of Adil Shah, the ruler of Delhi. In 1761 in the third battle of Panipat Marathas were defeated by Ahmadshah Abdali.

The economic life of people of Panipat, was likewise the other parts of Northern India, subsisted on agriculture. The cultivation depended mostly upon rainfall and partly on wells. There were two harvests the rabi or spring and the kharif or autumn. The autumn harvest was being nourished with less rain on the other hand the spring crops were grown even if there was no rain falls. Much of the land was irrigated by inundation (salabi) and the richness of soil was remarkable. The soil was classified in three categories, sandy, clay and kallar or rehi. The sandy soil was also called retli soil. This kind of soil was mostly found near the bank of Yamuna River. Little cultivation was possible in the sandy soil areas. The second type soil clay was also called kankar which was found in Naili and in some patches of Panipat area. The clods of clay were not easily broken and did not yield the autumn crops. The land could only be ploughed immediately after the heavy floods. This soil was suitable for paddy if properly managed. The third type of soil kallar or rehi was found in stretches of varied extent almost through-out Panipat area. The appearance of the landscape of this type of soil was just like a white floor with brownish-black background having alkaline salts of three to four inches depth over the surface.

The irrigation system of Panipat area can be divided in two main categories i.e. river works and lift irrigation. Due to uncertainty of rain the people restored the artificial methods of irrigation and the chief of which was the wells. Under the great Mughals like other parts of North India people of Panipat mostly depended upon the well irrigation. A rich underground water reservoir and nearness of the water table made well irrigation more feasible in the area. It was a traditional method and as old as the farming. Two types of wells were found in the region, kachcha wells and pakka wells (brick-lined wells). Another method employed for irrigation was rahat (arhat), well-gear or the Persian wheel. It consisted of a continuous chain of buckets passing over a vertical wheel fixed over the top of the of the well and rotated by means of a wooden and an iron gear which wore by a pair of bullock walking round a circular called perd. This device was extensively used here. The other method used in the region was the charas or mot and it suited to lift the water from deeper wells. It consisted a large leather bag(charas) holding thirty to forty gallons of water, fastened to one end of a rope which passes over a small strong wheel(bhaun) fixed over the well. When the bag has been lowered, the other end of the rope is attached to the yoke of a pair of bullock that then walk down a ramp of a length approximately equal to the depth of the well. The driver used to sit on the rope near the yoke to keep it in position. By the time the bullock arrives at the end of the ramp, the bag has been drawn up to the top of the well; its water is emptied into the cistern by a person who used to stand nearby. This method was also in use in Panipat as well as in the adjoining areas.

It is also pertinent to say that some canals were excavated during the mughal period and arrangements were made to distribute water from canals to irrigate land. During Akbar's period there were some inundation channels of the river Indus. Firuz Shah constructed the canal called canal of Firuz Shah. It was the oldest canal of the area and incidentally irrigated the tract from it passed through. It was re-excavated in Akbar's reign to supply the water from Yamuna to soils the Chitang on to Hansi and Hisar. A channel that diverted water from Hansi-Hisar by way of Panipat and sonipat to the north western part of the subah of Delhi was also excavated and it

covered a distance of 78 miles. The canal flowed throughout-skirts of the city and called Shah-Nahar or Nahar-i-Faiz and entered Delhi. The canal proved boon for the cultivators along its route. In 1639 Emperor Shahjahan visited Punjab, the subahdar of Punjab and Kashmir, Ali Mardan Khan suggested for the digging of a canal which was known as Shah-Nahar. After giving the permission by the emperor canal was constructed and later on, its water was diverted to Delhi the capital city. The water was led along the drainage line through Panipat and Sonipat to Delhi. Its water flew with few interruptions from 1707-1740 and it gradually silted up during the decline of the Mughal Empire. The principal spring or rabi crops were wheat, kur-rice, barley, poppy, saffron, linseed, mustard, carrot, onion, muskmelon, ajwain etc. And the autumn or khraif crops were sugarcane, indigo, pulses, jowar, lobiya, hinna, etc. and hemp or bhang was also cultivated. Betel leaf or pan was grown practically all over India. A considerable traffic was also carried on by the cultivators themselves.

The details regarding revenue administration of panipat is not found as such, however, a picture of revenue administration of panipat can be traced on the basis of revenue administration of subah of Delhi. The sub-division of the land for the revenue purposes was called dasture, but it went out of use in the official histories after Akbar. Zabti system was implemented in the productive portion of Northern India. In this system Akbar fixed his claim one-third of the gross produce. And his government officials determined the average yield of every crop grown in the region to realize the revenue. The main feature of ten year of scheduled rates, which has been given in Ain record, is that the demand rates of all crops were fixed in cash not in grain. The parganas were grouped as assessment circles with a dasture for each circle. There was a wide gap between jama and hasil. In this time assignees were the most important class of intermediaries between the emperor and the peasants. In this area likewise other parts of Delhi subah revenue was paid mostly by crop-sharing and by bigha. Considered in relation to the total revenues Panipat area was the one of the highest. Under the system it would have been hard to make a living by growing only grains and oil seeds. The superior crop like cotton paid the peasants better than food grains. On the other hand peasant's income consisted of agricultural produce, part of which they consumed while the rest was sold or bartered to buy things like salt, clothes, utensils and money to pay the revenue. In the village society the local elite groups had achieved a remarkable control over the surplus. Famines were frequent in those days due to lack of artificial irrigation, droughts, floods or heavy rain falls, improper means of communication and even the government policies of prevention were not adequate enough. During these difficulties free kitchens were opened in the affected areas and sometimes revenues were also remitted by the Government.

The main occupation of the region was agriculture however, a few industries and that on a cottage scale, engaged a minority of the population. Agriculture production, particularly raw material helped in the growth of industry in this period and also led to the growth of trade and trading centers in the region. The state extended its patronage to manufacturers. AKbar took special interest and paid much attention to various stuffs. He employed skilful masters and workmen to teach people the important methods of manufacturing. Arrangements were made for importing new material and to create the demand of home industry. Akbar had also ordered to the people of certain ranks for the purchase of certain articles. Price of such things depended upon the raw material and artistic skill spent upon them. So these crafts could never flourish without imperial patronage. The craftsmen and the peasants produced these commodities for the

nobility and the rich people who could pay enough prices of the goods. As a result the economy extended during medieval period in Haryana region.

Wool spinning and weaving had been one of the major cottage industries of the area. Panipat has been an important blanket weaving centre. The weavers used handspun yarn. The wool was brought here from Punjab, Rajasthan and the south. The blankets of ordinary quality were exported to the other regions of India. Drums, ropes, scale-pans, oil jars (kuppas and kuppis) were also made at Panipat like other parts of north India from hides of cattle, horses and camels and the skin of goats and sheep etc. Betel nut cutters (sarotas) were made in fanciful forms, the handles being of brass with quaint projections, in which small mirrors and pieces of coloured glass were fixed. Scissors are similarly ornamented; the handles were made of brass with bits of coloured glass rudely simulating jewels set therein. These articles were made for export. Panipat has been noted for small wares in metals of various kinds. A peculiar kind of bead- like ornament known as motis or pearls, skillfully made in thin silver was one of the specialities of the place. There was no chasing of ornaments of any kind, but silver was of good colour and the beads were perfectly round. There were glass-blowing factories at Panipat and a certain amount and special variety of glass-blowing was done here. The glass was used for mirror-worked walls and also sewn into phulkaris. Panipat was also noted for kumkuma. Brass, an alloy of zinc and copper were made here. Panipat had been famous for the manufacturing of copper and brass Utensils and these were largely exported to the market of Delhi. Panipat had been famous for its Pottery. The village pottery was as old as the country itself and the ordinary vessels for villagers i.e. earthen buckets for Persian wheels and small bricks were made by village potters. Special kind of glazed-art pottery such as tea-pots, cups and other fancy articles were made at Panipat. Kagazi pottery was remarkable for its thinness and was made by kuzgars in and around Panipat. Makers of this pottery were different from kumhars. The industries had great importance at that time and there were a number of potters who had changed their profession to agriculture.

The area was well known for several occurrences of saltpeter. It was manufactured around Panipat by the indigenous process. It was used for preserving meat and fish and chiefly employed in lac and cochineal dyeing, as a flux in glass making. Different mineral products found in this region were very useful. One of the important mineral products of the plains, found in most of the areas, was kankar or conglomerated nodules of the lime stone that was used for metalling roads. Carbonate or barilla of rods was made from the ashes of the lana plant and those of the kangankhar. It was also found in the crude form called sajji from leh or roda-soils by washing. Sajji was used in washing and dyeing clothes. It was also applied to injuries sustained by camels and horses and was used to clarify sugar.

There were different trade routes in India that linked the different trading and commercial centers. From Lahore many roads branched off to different towns and countries. The land routes were demarked by avenue of trees. At intervals there were walled enclosures of bricks and stones where travellers and merchants could stay in the night in security. On the road from Agra to Lahore pillars were built at every kos (kos minar) and a well at every three kos with trees on both sides of the roads. Sarais were also erected along the high-way for the stay of travelers. The usual means of conveyance were horses, bullocks-cart and occasionally camel-carts. For transporting merchandise the oxen and camels were used but most of the people moved from one place to the other on foot. They travelled only on rare and special occasions i.e. paying visit to holy places, in the functions of the close relatives and on the death of a relative or a friend and

that too in groups. Rich people used palanquins and litters for their women. There were no permanent bridges on the rivers. Panipat was on the trade route (land) of Lahore to Fatehpur. There were two categories of the towns, one was hatt or markets where rural commodities were brought and sold and the other where both rural as well as urban commodities were brought and sold in the other regions. Panipat was a big town of this region. The rural market was very much a feature of the intra-local trade of the period. The commodities i.e. all kind of handicrafts, articles, grains, vegetables, fruits and many other goods were needed in village shops were produced by the local peasants and artisans and merchants, at small rural market called hatt, hawked these commodities. There was agriculture and non agriculture production, called rare commerce. The local trade was principally conducted through the village dealers who dealt with the bigger traders at the mandis of Panipat, Karnal, Kaithal, etc. A considerable traffic was also carried on by the cultivators themselves. Delhi traders often sent their agents for purchasing of cotton, ghee and other commodities from villages. This local traffic was of immense advantage to the farmers who could eliminating the agency of middle men, the local dealers, and always get a good price for their produce.

In internal trade in the good season surplus grain of Kaithal was sent to Delhi through Panipat and from this area jowar, bajra, sarson, til, moong were sent to the outside markets. The perfume of rose flowers and rose water was produced at Pinjore and exported to Delhi and Agra through Panipat. Copper and brass Utensils were largely exported to the market of Delhi. So, one of the specific features of the medieval Indian economy was the trade relationship between rural and urban areas. The traditional village community was based on connection of agriculture and crafts and it was supplied to the urban market in large scale by the peasants. They were mainly engaged in agricultural pursuit which in turn sustained industrial production and trade to a large extent.

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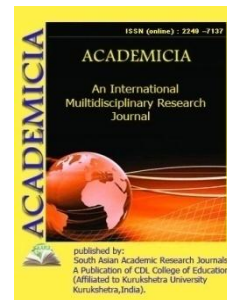
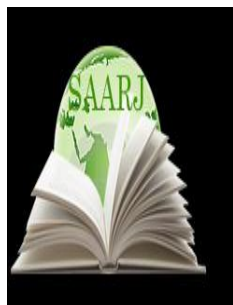
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THE ELEMENTS THAT MAKE THE VISUAL EXPRESSION OF THE FEATURE FILM

Kadirov Behzod Bahodirovich*; Karimova Nigora G'anievna**

*Teacher of the National Institute,
Fine Arts and Design named after Kamoliddin Behzod,
Tashkent, UZBEKISTAN
Email id: behzodqodirov1975@gmail.com

**Scientific Adviser,
Doctor of art Sciences,
Tashkent, UZBEKISTAN

ABSTRACT

The article considers the elements of visual expression used in Uzbek feature films and creating the artistic content of the film. Uzbek cinema has more than a century of history. Between these years, the era of production of silent black and white films to digital high-tech films began. The visual expression of films shot at different periods was inextricably linked to image processing technology.

KEYWORDS: *Close-Up, Light And Colour, Mise-En-Scene, Montage, Perspective, Symbol And Gestures (Metaphor), Time And Space, Visual Expression.*

INTRODUCTION

This is the most powerful influence tool that was invented in the early days of cinema, this is a close-up. The close-up was mainly a means of influencing the viewer by the creators in the era of silent films. The composition of a large frame plan, based on the task assigned to it, is reduced to an image taking into account the precision of the selected lens. This is the most powerful influence tool that was invented in the early days of cinema, this is a close-up. This tool causes the viewer a strong emotion, an important message - if there is a human face, it shows aspects of his facial expression that cannot be displayed in the most subtle and average general plans. For example, a close-up of the hero in the film "Ikkinchi xotin" ("Second Wife"), shot by the cameraman Dobrzhansky in 1924, in the hope of seeing the child "Adolat" (Rachel Messerer),

was based not only on the editing connection but also on the fact that the viewer became a partner and participant in the event in the desire of the actress.

In the era of silent films, they were mainly used as a means of influencing a widescreen plan. Despite the numerous implementations of the means of expression, in 1966, director A. Khamraev's appeal to the excessively a close - up of the Princess (SayyoraIsoeva) in the film "Laylakkeldiyozbo'ldi" shows that the viewer will remain an effective means if a close-up is applied. And yet, if you look at the fact that the film was shot on a wide-format film, then it was difficult to correctly and based on the necessary details correctly fill the wide-format personnel composition. Even though the director has several elements of visual expression at hand, the image of the Princess's face in this form shows that the close - up is always relevant. In this regard, S. Eisenstein claimed that "The main task of close-ups, not scaling, but a demonstration, express and show. It is much more significant in semiotics than the general and average plan and is an incomparable form of image language on the screen. The usual close-up serves as the culmination of the phrase in the assembly and allows you to increase dramatic tension". [1, 5].

MATERIALS AND METHODS

The mise-en-scene in front of a film camera is more inextricably linked with the operator than with the mise-en-scene on the stage of the theatre. No episode takes place without a camera (that is, a cameraman) filming from a point of view. The creation of a mise-en-scène is built with full coverage of the elements of visual expression (lighting, decor, texture, clothing, makeup, editing). Mise-en-scene - (fr. Mise en scene - the location on the stage), represents the interaction of actors and their surrounding material environment on the set, in nature or the pavilion. It is permissible to interpret the mise-en-scène as a fixed "section" of a certain moment of movement. But it is more accurate and theoretically significant to interpret the mise-en-scène as a dynamic space-time unit that represents a specific author's idea in a certain section of the film. In fictional cinema, mise-en-scène is one of the most important directorial tools for defining the ideological and figurative content of a drama. A mise-en-scene is a director's interpretation of a work in many ways. But unlike the theatre, which directly determines the final look of the mise-en-scene, the mise-en-scene in the cinema is a prerequisite for the construction of a permanent mise-en-scene (a term proposed by S.M. Eisenstein). That is, a view added to a sequence of frames included in the composition on the vertical surface of the screen.

Therefore, when developing a cinematic mise-en-scène, the director, artist and cameraman take into account not only the movement of the actor but also the movement or stability of the film camera, the type of lens used, the shooting angle, the dynamics of lighting, etc. [2].

A. Tarkovsky - "When creating a mise-en-scene, the director must proceed from the psychological state of the main characters, find and reflect this situation in the entire internal dynamic structure of the situation and return it to a single reality, as if directly observed, and its textured uniqueness. Only in this way does the mise-en-scene combine the accuracy and ambiguity of the original truth. The mise-en-scene personifies not thought, but life "[3].

The relationship between mise-en-scène and cinematography is different. The mise-en-scene can end with a frame shot with a still, panoramic or moving camera. Can be the basis for a sequence of scenes recorded by one or more cameras from different points; the frame can combine several mise-en-scenes steps by step or simultaneously (simultaneously). In the process of development, the film has mastered various forms of mise-en-scène. From the earliest years of the silent film

era, great filmmakers, using advanced stage experience, began to eliminate the one-sided design of the traditional *mise-en-scène* for the “stage mirror,” while moving the *mise-en-scène* both within the frame and by moving the point of view.

Movie *mise-en-scène* has always depended on the improvement of technologies used by the creators. After all, the convenience of technology (capture of cameras from a tripod), an increase in quality indicators (standards of film sensitivity) allowed artists to create interesting and meaningful *mise-en-scènes*.

For example, in the 1966 film “Insight” (“Прозрение”) directed by Sh. Abbasov, the camera in the hands of the operator randomly moves along an unlimited trajectory, showing the tricks of dogfighters. Or, for example, in the film “Laylak keldi - yoz bo‘ldi” directed by A. Khamraev, there are many deeply meaningful, absolutely stable, balanced scenes, including the episode of Mehriniso's mother and her husband (Hikmat Latipov). When we divide the frame into two equal parts, the left side of the frame composition is the old woman and her husband, sitting on a box away from the camera. Why he is so far away becomes clearer at the end of the episode, when the old man leaves the room and is left alone. To the right of the frame is a clock hanging on the wall and an empty plate on the table, next to the camera. The two details on the right complement each other. In many films, the clock in the frame represents life. Likewise, a clock hanging on the wall fills the conversation between them with a sign that Mehriniso is approaching the end of his mother's life. A plate next to the camera indicates that the filtered food has run out, and the light in the frame is illuminated in proportion to the old woman's handkerchief to maintain balance. In the *mise-en-scène* of the objects in the frame, we can also see that the opposite perspective, that is, the gaze and the conclusion, are inverted. In the end, if they are reversed, the progress line (i.e., the growth line on the chart always runs from left to right) will be oriented. With regard to the placement of the actors, as already mentioned, we observe a regression line. As for the exposure of the frame, the clock and the plate on the right also complement the words of Mehriniso's mother. This placement method also shows the reverse perspective mentioned above. The old woman is in the last place in the arrangement of the actors of the *mise-en-scène*. The viewer's attention is also drawn to the portrait lighting in the control panel from right to left, and Mehriniso's mother is the best lit. All pins (two straight lines connecting parts) in the centre of the frame connect the shelves. Despite the stagnation of such a seemingly simple episode, it is full of inner excitement and contradiction. We will discuss this episode in more detail in the following chapters.

Editing.

It is impossible not to agree with the widespread misconception that montage is the main form-forming element of a film. According to this idea, the film is supposedly created on the editing table. Any art requires assembly, assembly, disassembly and alignment of parts. So what is the role of editing? Editing has a concept often described by proponents of the concept of “editing cinematography”, but rather divides time-filled footage into parts. In general, playing with concepts is the prerogative of cinematography as a whole; therefore there are no concepts of the essence of cinema in editing. The language of cinema is the absence of language, concepts, and emblems. Any film is completely embedded in the frame, and we think it's safe to say how talented the person who made it was just by watching one frame. To grasp the law of proportions, the ratio of frames is sometimes difficult (especially when an episode is filmed

indistinctly) - this is a laborious process of finding the principle of connecting frames, and not just a mechanical connection of parts on the timeline. During this process, gradually, step by step, the essence of the object embedded in the material becomes more and more evident while the photography is still in progress. There is a kind of feedback here: the structure placed in the frame appears in the editing as separate properties of the material placed in the frame during photography. In editing, the material expresses its nature, which is reflected in the nature of the combinations themselves, in their casual and emotional logic [4].

Partly the fact that editing is a very important means of expression in cinema belongs to L. Kuleshov. Ricotto Canudo and Louis Delluc, who wrote about cinema before Kuleshov, were only approaching an understanding of editing, thinking about movement and rhythm.

L. Kuleshev's invention is significant in that he looked to the future, and not to the experience of pre-revolutionary Russian cinema. In the articles of 1917-1919 and the study "Flag of Cinematography" (1920) L. Kuleshov gave a theoretical substantiation of the importance of editing. Soon Dziga Vertov came closer to understanding the role and uniqueness of editing, combining chronological images of filmmakers on the front side. In his zealous manifestos of 1922-1925, he described the propaganda possibilities of editing structures. L. Kuleshov, experimenting with fragments of the old tape, discovered the effect of assembling frames, which gives them a different meaning, changes their content.

Then he comes to the surprising conclusion that with the help of montage it is possible to create events that do not exist, and even images that do not exist. ("The Kuleshov Effect"). For all groundbreaking films of the 1920s, the opportunity to master the endless magical possibilities of editing is unique.

It is no coincidence that film historians call this period "montage".

The experience of staging four classic films – "Uprising", "Potemkin", "October", "Old and New" - allowed Eisenstein to express the opinion that "Cinema is, first of all, editing". Everyone who wrote about the film came to the same conclusion - V. Pudovkin, S. Vasiliev, S. Timoshenko, B. Balash and many others. The montage has been mentioned only silently in general theoretical books on the spirituality of the art of cinema in recent decades. There are no special studies other than interesting ones based on the experience of L. B. Felonov's work. Also, the word "editing" is rarely used in monographs and film reviews by directors. Most worrisome is the fact that, except Andrei Tarkovsky, Gleb Panfilov, Otari Ioseliani, Aleksandr Medvedkin, Vadim Abdurashidov, Tengiz Abuladze, Eldar Shengelay, Nikita Mikhalkov and some others, editing opportunities in the creative practice of most filmmakers are practically absent. Some producers leave the task of recruiting to editors who are not usually looking for creative solutions. The length of editing works, the length of remarks, the performance of actors, musical tones are often determined by uncreative considerations, the influence of rhythm, tempo, asynchrony, in a word, the problems of editing images are forgotten. This is the boring, lengthy, meaningless nature of contemporary feature films and documentaries [5].

Our opinion is confirmed by the film "Ikkinchi khotin" ("Second Wife") (1927) directed by M. Doronin and V. Dobriansky, filmed in the first silent periods, which was not included in the substantive element of the film. The subsequent introduction of JUMPCUT into the stylistics of films used by the creators of the new French wave brought a unique aesthetics into the internal structure of Uzbek feature films. Rapid, Stopshot, internal frame assembly, incl.

Angle.

(FR. *raccourcir* — to shorten). The basic concept of directing and cinematography is a significant, but little-studied, formative phenomenon and is associated with the technical organization of space-time filming in the framework of creating a metaphor as the basis of an artistic image. The analysis of special literature and experiments on film production revealed the following features in the meaning of the relationship between the cameraman's (cinematographer's) perspective and the metaphorical (content) perspective. The connection between the cinematographic (operator) angle and the metaphorical (content) angle as the main link for cinematography has been shown by many well-known cinematographers, including cameramen V. S. Nielsen V. N. Zheleznyakov, V. Storaro Yu. A. Zhelyabuzhsky and others [6].

An example of the dialogue between Baikaro and Sardor in the film “Alisher Navoi” (1948) directed by K.Yormatov and cameraman M.Krasnyansky is the most meaningful and meaningful of the angular images. It is in this episode that we observe how the angle is a significant and influential element. In the movie “Sinfdozlar” (Classmates) (2013) directed by Kh.Nasimov and cameraman B.Qodirov, a camera installed around the eye of businessman Allahshukur (S. Khamrakulov) descends to the ground after rumours to show on the screen that he is disrespectful to his neighbours. It is a visual expression of the goal that the creative team wants to convey to the audience.

Light and colour.

Light and shadow are the bright expressive means of “cinema”. The operator, using light, conveys the texture, size, shape of the photographed object. The light amplitude is measured by the intensity of the light and is applied to take into account the drama of a particular episode, as well as the genre of the film.

The ability to combine different light intensities allows the operator to create the necessary climate of events (mysterious, festive, poetic (lyrical), tense and others). Light, shadow, colour, foreshortening, close-ups are used by the operator together to create a cinematic image of the characters and scenes of the film [7].

Cinematic theory suggests that viewers who watch a dimly lit film will interpret overly dark, gloomy and contrasting images with feelings of danger, abstraction, depression, mystery, and evil. Characters in this order should be interpreted as malicious, deceitful, and untrustworthy characters.

Comedy filmmakers use bright lights, less contrasting and flowing shimmering scenes to create an emotional relationship of joy, light, honesty, and a sense of happiness. The characters depicted in this way are interpreted as kind, interesting, heroic characters. Purely realistic lighting. Filmmakers use this lighting approach to enhance the plot, characters, theme, style, and overall mood of a film. “We can say that the technical capabilities and expressiveness of the director's or cameraman's work are primarily manifested in the lighting” [8]. Several elements of visual storytelling are as effective and powerful as light and colour (which will be discussed in more detail in the following chapters). The above elements can affect the viewer on a purely emotional level. This gives these elements an additional opportunity to influence the audience to one degree or another, at the same time, the consciousness of the audience interprets the presented story at a completely different level of consciousness [9].

As a means of signifying light, we point out that at the end of the conversation between grandfather and Zuhra in the film “Tohir va Zuhra”(“Tahir and Zuhra”)one candle in the frame (placed closest to the camera) destroys Zuhra's future.The frequent exchange of light and shadow resulting from the flickering of a candle performed by Muminmirzo in Alisher Navoi's film further increased the fear and panic in the audience.The use of light and colour as a means of visual expression, taking into account the drama of the film, we will see in more detail in “Insight” (“Прозрение”) by Shukhrat Abbasov, “Inson qushlar ortidan bormoqda”(“A man follows the birds”) by Ali Khamraev, “Triptix” and in the following chapters.

Symbols and gestures.

In every frame of an episode of films shot by experienced artists, there are also meanings that directly express the meaning of the event and, therefore, arise as a result of thinking about it and are visible to a discerning audience.In addition to the interesting and authentic development of the outstanding aspects of films that are considered good films, they evoke inner feelings and some thoughts.The role of symbols and gestures in awakening these feelings and thoughts is invaluable.The use of symbols in films is to create a frame that impresses the viewer more than a simple understanding of the appearance, the content of the plot.In the images, we see explicit or hidden symbols of the elements, depending on the purpose, application of the creators (artist, operator, director).This is a symbol that we can openly see in the film, for example, the life of Justice (Rachel Mexerer) in “Ikkinchi khotin”(“Second Wife”), a bunch of peppers hanging from a pole, or hidden gestures that form in the mind of the viewer while watching a film. Although hidden gestures are not presented as a single image, they are formed in the mind of each viewer with the participation of all means of visual expression during the episode. Colour is also important in expressing characters. Each colour has its meaning. For example, in the drama of a colour plot, contrast can be a means of creating contrast. The scene of the wedding of Amu Darya (DiloramKarimbayeva) in the film “Inson qushlar ortidan bormoqda”(“A man follows the birds”) is mainly in the predominance of red and turquoise colours, while in the same film Farrukh (JakhongirFayziev) is depicted alone in the snow, colorless nature. In the film “Triptix” we do not see bright colours. This is a visual reflection of creativity, manifesting post-war difficult times.

Time and space.

Einstein said: “The experience we teach gives us only a one-time criterion that distinguishes three types of perpendicular criteria that allow us to find a good path in space. We attach only one important to the concept of time and consider it as a space between the past and the future...” [10, 11].In fact, a concise lens is an insurmountable and irreversible force in a specific sense: it cannot return to giving up smoke or lead.But when a person quot; turns to its internal sensory quot; then the work goes in a completely different way; here its blurry, diverse, and sometimes contradictory effects do not obey a single and certain criterion.Often in the memory of a person immersed in our time, the flow of time stops... irregularity, the uncertainty of the feeling of time experienced to proceed from the fact that we perceive “our image” with the help of very complex, diverse and inaccurate internal feelings.” In such a thin, unstable and at the same time sinister system, a person first received weapons and the potential to control modernity: in fact, a movie set can not only accelerate or slow down the course of events, but also return the course of events, and the first steps of cinema - from such a potential film set. [10, 11]

As Balasz points out, editing gives us three concepts of time: the time the film is shown on the screen (the length of the film), the time of action (the length of the film's plot), and the time of sensation (the perception of different levels of subjectivity and subjective duration perceived by the viewer). It is necessary to distinguish between date and duration, studying the ways of expressing time in cinema [12]. Cinema, literature, theatre, television belong to the genre of contemporary art. "When you start moving the camera during the filming process, neither the events nor the people can be nothing more than a fable - but at the same time there is a space limited by the frame and the slippage of the film," says Polish researcher M. P. Pilipyak [11]. Time is one of the key elements of the existence and artistic reflection of the script. Cinematic time has a dual nature, which is also defined as the ratio of the duration of the film (projection) and the time of movement in the film (plot), in general, the temporal category in cinema manifests itself in three different forms:

- 1) physical time is the objective duration of the film, which corresponds to the exact timing (90, 120 minutes, etc.) and the time the film is projected onto the screen.
- 2) Psychological time is the subjective length of the film, which reflects the degree of the viewer's involvement in the viewing and cannot be measured. Besides, psychological time usually does not correspond to physical time. On the contrary, it can speed up or slow down. For example, when the viewer "sticks" to the screen, the tape appears to be moving quickly. The opposite may be true. That is, the viewer looks at the clock every minute, comparing his perception of the slow pace of events in the film with its exact duration;
- 3) Artistic time by its nature is the most significant and complex ordered event, and this is a spiritual phenomenon.

Artistic time is inherent in any narrative that "records the film, directs it to another scene, tells the story of action time, which creates a sense of another world. It seems to us that this time has the same logic as the time in the calendar "[12, 14].

Artistic time is a way of organizing plots, choosing and combining fairy-tale material, forming the structure of certain parts of a film. Shortening and lengthening, slowing down and accelerating, stopping and a sudden "jump" forward - all these are the qualities of artistic time that open up wide opportunities for building an expressive, imaginative field of filmmaking [1]. The category of time in cinema is not limited in duration but includes structural relationships such as the ordering of events, their sequential appearance. Consequently, the next stage of artistic time in cinema can be defined as a sequence of events. There are several ways to combine events into one screen label:

1. Chronological method - the sequence of events in the plot consists of the sequence of situations from their creation to resolution (S. Eisenstein's armour "Potemkin").
2. Simultaneous method - events occur simultaneously, but are displayed sequentially on the screen; this multi-tonality is achieved both due to compositional and dramatic solutions ("Toqatsizlik" by D.W. Griffith, "Mystery Train" by D. Jarmusch) and due to multiple screens ("Qoch Lola, qoch" by T. Tikver).
3. Nochronological method - the order of events is formed by introducing retrospective episodes (memories), introspection episodes (fantasies, dreams). (B. Bertolucci "Конформист" ("Conformist"), A. Rene "Хиросима, менинг муҳаббатим" ("Hiroshima, my love")). It is difficult to compare the sequence of events over time using the achronological method. The episodes, filmed at different times and in different places of the day,

combined with the general mood, the viewer cannot understand their temporal principle (“Andaluziya ko‘ppagi” by L. Buñuel). These four ways of organizing the sequence of events (with the exception of the chronological method) in their pure form are very rare in the art of cinema ... The next stage of artistic time in cinema is the time of events. The time of this event reflects the natural coordinates in which this or that plot develops, as well as the seasons, time of day. In other words, the time of the event is similar to the objective time in which the main character is present and moves.

Finally, you need to set aside narration time. This creates a kind of stereoscopic effect because the moment of the story is always secondary to the moment of the event is told. The time of the narration always coincides with the time of the author or the main character, if the story is conducted on his behalf. Thus, artistic time in cinema is formed by the interaction of four layers, each of which reflects one of the aspects of the development of the plot in time and the uniqueness of the story. Due to the interconnection of the four layers “... the viewer forgets where he is: but loses this connection and plunges into the world of narration, which is another layer, and builds and imagines its continuation, entering the time layer of the fable presented to him.” The concept of space in the cinema is not synonymous with the category of time by analogy; it also includes the auditorium, i.e. a specially adapted room for watching films in the cinema (classic cinematic communication). This is the place where the screen and the object of the hall are objectively present (according to Hegel's definition). But unlike theatre, there is a psychological process of comparing the viewer with the character on the screen about the real space in the hall (the effect of complete darkness) and the outcome of the event, which is called the “attractive” power of cinema. In general, the artistic space in the film is formed by combining the micro-spaces in the frame into a single macro-space of the film. At the same time, this space is the result of creating the viewer's imagination, which, when viewing the film, uniquely connects individual frames. The artistic space of a Film work and artistic time consists of several mutually intertwining layers, which include:

1. Space of events - is directly related to the plot of the film and characterizes the place of movement (exteriors, interiors, Plein air). At the same time, it should be noted that there is a certain contradiction between the venue and the narrative: showing the scene slows down the story, and, conversely, the emphasis on the rapid development of the action limits the role and weight of the venue.
2. Expressive space, or inner spiritual space of the protagonist - an audiovisual image of the character's psychological state. Italian master (teacher) M. Antonioni is a master of creating expressive space on the screen. With the help of colours, characteristic landscapes, musical minimalism, the Italian director always expressively and vividly expresses the mood of his characters on the screen.
3. The symbolic space is the author's space of the film. It is framed by the director as a transition from a clearly visible space to an abstract, modelled space. Such migration is carried out with the help of allegories, metaphors, and emblems [1].

Control by creators of the concept of time and space in cinema began to manifest itself in films made during the era of the first silent films. Moreover, the elements of visual expression were an additional medium. For example, if editing was used to shorten lengthy scenes, the talent of the creators and technological advancement was a sign that time had passed from replacing ordinary daylight with evening light. While the time in “Nasriddin Buxoroda” is a multi-day event, in the film “Alisher Navoi” Navoi is portrayed as a student, minister and enlightened old man in three

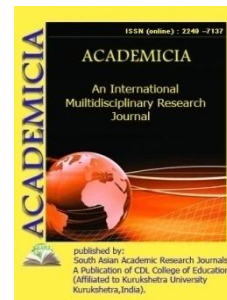
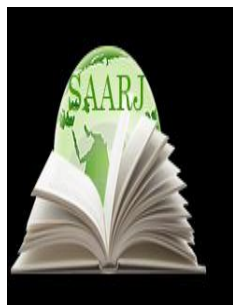
different periods. Replacing daylight with evening light can also indicate a time shift. The camera shoots the same scene first in daylight and then in evening lighting. But this alone is enough to show the passage of time. The public understands that time has passed. Then you can introduce the characters into the scene and continue moving [14].

CONCLUSION

In conclusion, it should be noted that the elements of visual expressiveness in the composition of feature films have not yet been fully studied. The range of expression elements used in films is much wider than we mentioned. Various technological innovations in filmmaking are currently taking their visual expression to a new level. The creative team (director, cameraman, artist) develops new methods of influencing the audience, based on their volume and capabilities. This helps to improve the aesthetic level and competitiveness of feature films. This will provide an opportunity for a deeper study of the subject in the future and a new scientific approach.

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THE INFLUENCE OF CORROSION OF THE MATERIAL OF THE PIPE BARREL AND IMPREGNATION ON THE BEARING ABILITY OF PILES

Yunusaliev E.M*; Akbarov F**

^{1,2}Ferghana Polytechnic Institute,
Fergana, UZBEKISTAN

ABSTRACT

The effect of concrete corrosion on the bearing capacity of short driven reinforced concrete piles in saline soils is substantiated. Based on the results of experiments on testing corrosion products, shear resistance f_0 in the thickness of the soil layer in which active corrosion of concrete is expected is determined. Given the influence of the corrosion process on the load-bearing capacity of piles in medium, highly aggressive environments, primary and secondary methods of protection are recommended.

KEYWORDS: *Aggressive Environment, Concrete Corrosion, Bearing Capacity Of Piles, Resistance To Corrosion Products, Primary And Secondary Protection Of Concrete.*

INTRODUCTION

Corrosion of the surface of the material of piles affects their bearing capacity. Moreover, the influence of the factor depends on the degree of stress-strain state of the near-pile space, the material of piles, the aggressiveness and temperature of the medium, as well as the rate of filtration of ground or surface water. The work indicated [1] that in the process of interaction between an aggressive environment and cement stone, calcium oxide is neutralized, which is 60 ... 70% in cement stone, as well as oxides (silica, alumina and iron oxide), which provide a significant effect on the shear resistance of corrosion products. Based on this, it should be expected that the desired values of the concrete corrosion resistance to shear are conveniently determined in laboratory conditions by testing corrosion products on a single-plane shear device taking into account the methodology [2].

MATERIALS AND METHODS

The studies were conducted in an aggressive environment characteristic of the soils and groundwaters of Central Ferghana. The composition and content of aggressive ions in the

solution are as follows: $SO_4^{11} = 3520 \text{ mg/l}$; $cl^1 = 105 \text{ mg/l}$; $HCO_3^1 = 10 \text{ mg/l}$; $Ca^{11} = 230 \text{ mg/l}$; $Mg^{11} = 30 \text{ mg/l}$; $Na^1 + K^1 = 3485 \text{ mg/l}$.

Below are the results of experiments on testing corrosion products of the material of the base.

TABLE 1. TESTING CORROSION PRODUCTS

№ experience	Shear resistance τ (f_0) at σ MPa			
	0	0,1	0,2	0,3
1	0,064	0,13	0,17	0,17
2	0,060	0,102	0,200	0,200
3	0,073	0,120	0,143	0,250
4	0,080	0,102	0,175	0,220

Based on the obtained data, the values of shear resistance f_0 of concrete corrosion products within normal pressure $\sigma = 0-0.3 \text{ MPa}$ can be represented as follows:

$$f_0 = 0,05\sigma + 7 \quad (1)$$

From expression (1), it can be noted that with an increase in compressive stresses, the effect of concrete corrosion products on the bearing capacity of a pile decreases. If we take into account that the most active corrosion processes occur in the aeration zone (zones of alternate wetting and drying), then the influence of the above factor occurs within certain limits along the length of piles. It is obvious that the predicted area of active corrosion along the length of piles should be assigned according to the lithological structure of the soil, the level of groundwater (including the predicted) and the aggressiveness of the environment. Based on this, determining the resistance along the lateral surface of piles f_0 in the area of active corrosion of concrete in accordance with the lateral pressure of the soil at the contact of piles with soil at the considered depth.

Pile resistance in the area of possible corrosion damage of concrete Φ_K , taking into account (1), can be written as:

$$\Phi_K = m_K u_K (0,05\sigma + 7) l_K \quad (2)$$

m_K – a safety factor of 1.2;

u_K – pile perimeter taking into account the predicted corrosion of concrete, m;

σ – normal pressure acting on the lateral surface of the pile shaft in the considered layer depth;

l_K – thickness of the soil layer in which active corrosion of concrete is expected, m.

Given the influence of the corrosion process on the bearing capacity of piles in medium, highly aggressive environments, methods of their protection are used. The primary protection of concrete and reinforced concrete in aggressive soil environments is to increase the ability of concrete, reinforcement and reinforced concrete to resist the effects of a corrosive environment by changing the composition and structure of concrete before or during the manufacture of structures. This is achieved by the selection of stable starting materials, concrete compositions, additives, types of reinforcement and concrete, methods of manufacturing and calculation of structural elements.

Secondary protection consists in increasing the corrosion resistance of concrete after its manufacture by partially or completely filling the pore structure with various chemically resistant materials (surface or full impregnation), using surface protective coatings or by artificially lowering the level of aggressive groundwater.

Currently, for the anticorrosive protection of reinforced concrete piles, foundations, and other underground structures in natural highly aggressive soil environments, impregnating compositions based on styrene-indene resin, pyroplast and K* polyisocyanate, urea-formaldehyde resin, Hydrocex Penetrating, bitumen, etc. are widely used. Depending on the type of groundwater aggressiveness, Portland cement is usually used as a binder for concrete intended for subsequent impregnation. In areas with saline soils and highly mineralized groundwater, sulphate-resistant Portland cement should be used for concrete.

Reinforced concrete piles exposed to dynamic shock loads during driving must be made of dense concrete with a water resistance grade of at least B-6 since a decrease in the initial density of concrete leads to a sharp decrease in the number of impacts before failure and an increase in micro-damage in the concrete of piles after driving.

When carrying out impregnation in areas with a hot climate, it is necessary to provide measures that protect the impregnation baths from direct heating by sunlight, since under these conditions the possibility of evaporation of the solvent increases and, as a result, the viscosity of the impregnating composition increases. The maximum temperature of the impregnating composition should not exceed 25 °C.

The surface of reinforced concrete products before impregnation is pre-cleaned and dust-free by compressed air.

Before impregnating products in bathtubs, a laboratory test of the impregnation regime is carried out on cube samples with an edge of 10 cm. If, after impregnating for 8 hours when splitting control samples, the depth of the impregnated layer is at least 10 mm, then the products are impregnated.

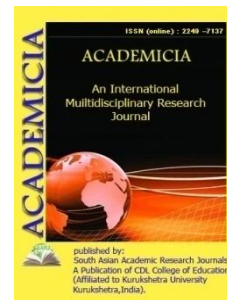
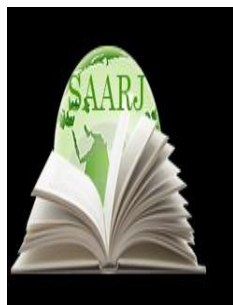
CONCLUSION

The influence of impregnation on the resistance along the lateral surface of piles is established by the results of tests of piles [1]. It is known that when testing reinforced concrete piles with various anti-corrosion coatings after driving, the protective properties of anti-corrosion coatings are reduced. In turn, protective coatings will have various effects on the process of immersion of piles in the ground, and for “hanging” piles on the value of the bearing ability of the structure as a result of changes in soil friction along the side surface of the pile. It is known that hanging piles protected with bituminous mastics in clay soils reduce the bearing capacity compared to unprotected piles by more than 30%, and when piles are coated with urea-formaldehyde resin up to 20% [3].

Based on the data obtained, parameters taking into account the effect of impregnation of sandy and clay saline soils are proposed to be taken in the range of 0.8-0.9. Here the lower limit of the parameter corresponds to saline sands.

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THE SPIRITUALITY IN THE WORKS OF AHMAD A'ZAM

Qodirova Ma'rifat Abdullayevna*

*Independent Researcher,

Department of Theory of Literature and Literature of the Period of Independence,

Samarkand State University, UZBEKISTAN

Email id: qodirovamarifat@mail.ru

ABSTRACT

The article examines the features of the work of Ahmad Azam, the non-standard style of the writer, his mood and feelings. This style led to the emergence of a new direction in modern Uzbek literature - the postmodern style.

KEYWORDS: Literature, Ahmad A'zam, Novel, Postmodern, Worldview, Non-Objectivity, European Literature, True Literature Sample, Goodness And Evil.

INTRODUCTION

Literature educates a person directly and indirectly. He cultivates his taste, his worldview, his level, his attitude to man, nation, world, good and evil. So, if I read Kafka, it means that his views directly "infect" me, and his conclusions about society and the person affect my level, my taste, and perhaps even shape it. We can say that Kafka can be replaced by any talented writer.

This is the task of literature. Regardless of whose work you are reading, the task of a work is whether it is a true example of literature. For example, literary scholars say that a person who remembers Navoi gazelles and sings them will have a delicate character. Navoi affects not only taste, but also the human psyche, upbringing and worldview. If we look at the work of Ahmad Azam, this situation is obvious. In his works, we see the features of European literature. The inner psyche of a person is clearly reflected.

MATERIALS AND METHODS

The work of the Japanese writer KaboAbe had a great influence on the formation of the poetic style of Ahmad Azam. His novels "Qumdagixotin" ("The Woman in the Sand") and "Yashikodam" ("The Man in the Box") attracted the attention of many readers for their unconventional approach to human life and work. In all his works, large and small, Ahmad Azam, like Kabo Abe, observes the movement, the psychological evolution of the character.

History does not play a significant role in the work of Ahmad Azam. We do not see a traditional plot in his work. ...[1,2]

The unconventional nature of the writer's style is that it often focuses on understanding and listening to the subtleties of the human mind, foundations of states of mind and experience that defy common sense. Therefore, the stylist's ability to perceive reality and a person, to find truth in their hearts and express it figuratively in words is the art of creating individual tasks. "Style always proceeds from the entire existence of the writer-poet, and in each of his works he revives the living light of this unique world - humanized feelings, shares them with many, acts as an educator of good feelings".[5]

His novel "Ro'yoyohud Gulistongasafar" ("A Dream or a Journey to Gulistan") begins with the author's memoirs and enters another world, the writer's style is like a rainbow, focuses on social and spiritual problems of society, tries to find solutions. one of the life-giving features of thought is the transition from observation to reflection into the realm of imagination.

In the creation of the novel, we see the living influence of the works of F. Kafka and A. Kamyu, representatives of absurd literature. It is in this direction that a new concept has entered modern literature - the term postmodern. The term was coined in the 1970s by the American theologian H. Kons to use the term "postmodern theology" in his study of religion in Latin America. The term "postmodernism" became widespread after Jenks's book "The Language of Postmodern Architecture". The author gives a completely different meaning to this term, which has long been used in different senses.[3] He notes that postmodernism marks the beginning of a new era in the history of architecture, and that the use of previous methods in architecture, if necessary copying from the past, giving a new look to existing buildings with minor changes can be considered creative. Such approaches have been used in architecture, possibly since the 1970s, in all fields of art and literature. Since 1979, when Lyotard's book "The Postmodern Situation: A Lecture on Knowledge" was published, the term has also been used in a philosophical sense.

In the same way, Ahmad Azam made a significant contribution to Uzbek literature. Post modernism is an expression of the creative pain and suffering of today in the state of mind, thinking, paper, construction, cinema and stage in a state of globalized civilization. In general, postmodern artwork uses situations such as imagination, dreams, and the unconscious as an object and means of depiction to create a postmodern landscape of chaos, chaos, transience and ignorance of the world. So we can see this in the work of Ahmad Azam. His novel "Ro'yoyohud Gulistongasafar" is an example of this. In this play, he says: "Time is infinitely greater than we know it, and it is infinite within.[4]

On the way to Jizzak, three or four seconds later, he moved to Gulistan, where the servant fell in love with Gulia, unknowingly stuck a stick into Gulia's nest and again went the same way. I came back or they sent me because I was useless and again I entered with ease. But why is it shown on the speedometer, and it doesn't make sense for a girl to get pregnant in a second or two? "

It is clear from this sentence that the use of the correct word in a play is often aimed at creating an artistic situation that is only a one-time use of the same situation, that is, to create a one-time text. Such literary creativity is more often expressed in verbal games in artistic discourse. There are also cases of dreams and fantasies in the play:

"This is all my dream, so my conscience does not torment, I again went to Gulistan in a dream, I fell in love with a girl, I return to my dream and live to see its continuation. My whole life is a long dream, a dream of myself. So, my family, my children, my relatives - whose dream is this?"

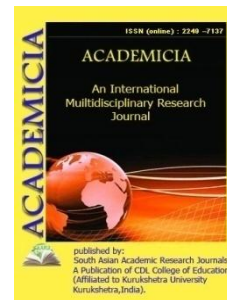
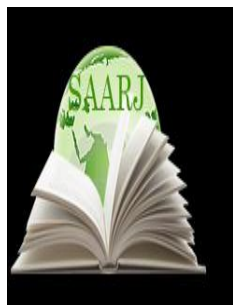
CONCLUSION

Style is a product of the writer's active attitude to the social events of his time, the main factor indicating creativity, its difference from other writers. The more talented the writer, the brighter his style, the more he monitors the psychological progress, the state of lateness in his works. In the works of Ahmad Azam, the event does not occupy such a significant place. In his work, we do not see the traditional plot.

The unconventional nature of the writer's style is that he often focuses on understanding and listening to the subtleties of the human mind, the fundamentals of the state of mind and experience, which do not yield to common sense. This style led to the emergence of a new direction in modern Uzbek literature, the postmodern style. Thus, style is the art of a writer to perceive reality and a person, to reveal the truth in their heart and express it figuratively through words - it is the art of creating tasks in an individual ("original") way.

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RESEARCH OF SORPTION PROPERTIES OF HIGH SILICON ZEOLITES FROM BENTONITE

Fayzullaev Normurot Ibodullayevich*; **Mamadoliev Ikromjon Ilkhomidinovich****;
Pardaeva Sokhiba Bo'riyevna**

*Professor,
Doctor of Technical Sciences,
Samarkand State University, UZBEKISTAN
Email id: fayzullayev72@inbox.ru;

**Assistant,
The Department of Medical and Biological Chemistry,
Samarkand state medical institute, UZBEKISTAN
Email id: ikromjon.mamadoliev@mail.ru; sohiba.pardayeva@mail.ru

ABSTRACT

During the study, textural characteristics and surface morphology of high-silica zeolites obtained from local natural raw materials were studied. Effect of kaolin and bentonite activation on colloids and sorption capacity was investigated. The experiments determined the wetting temperature, the amount of adsorbed bound water and the effective specific surface area. Field of study of process parameters (temperature, heating rate, etc.) Determined experimentally. The obtained regression equation allows the calculating value of selected criteria at any combination of investigated factors in the studied range, to analyze the influence of intensity of each factor on process parameters and to determine optimal conditions for the process.

KEYWORDS: *Kaolin, Bentonite, Experiment, Temperature, Regression Equation, Surface, Sorption Vessel, Adsorption Bound Water, Porosity, The Heat Of Wetting.*

INTRODUCTION

In recent years, natural and artificial zeolites have been widely used in hydrocarbon processing. Adsorption methods are one of the most common hydrocarbon purification methods in the industry.[1-6] Their use allows returning to the production of several valuable compounds. The study of zeolites is devoted to many works. Zeolites are a micro porous substance with the

correct crystal structure and a controlled size not exceeding 2 nm. Zeolitic scaffolds are lattices consisting of tetrahedral T-atoms (T=Si, Al, etc.), Connected by atoms in oxygen. More than 200 types of synthetic zeolites of various structural types are currently known [7-9]. However, no more than 10% of all known structures are produced in industry, and only 5 structural types are used as catalysts [10-13]. The most important requirements for adsorbent materials are high specific surface area, selectivity and ease of regeneration [14-15]. The adsorbent must also be inexpensive and harmless, non-corrosive, capable of maintaining its adsorption properties for a long time and having high mechanical strength. One of the most common adsorbents is activated carbon, which is available in various brands. One of the most important directions today is the development of environmentally friendly sorbents, preservatives and catalysts based on local raw materials [16-27].

MATERIALS AND METHODS

The dynamic activity of adsorbents is always lower than the statistical one, depending on the operating conditions of the adsorbent. The dynamic activity of adsorbents is a key indicator of adsorber size and sorption cycle time. [24-31]

Adsorption experiments were carried out as follows. The $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$ system was heated in a muffle furnace at 400°C for 2 h and then cooled in a desiccator. The natural gas purification process was carried out in a flow-through apparatus. The dynamic activity was calculated using the following formula:

$$A_g = C_0 \cdot W \cdot \tau$$

where C_0 is the initial concentration of H_2S , CO_2 and NO_2 in the solution g / 100 g; consumption of W-gas, m / s; time of the protective action of the τ -adsorbent, the height of the layer of the h-adsorbent, m. We use adsorption isotherms of CO_2 , H_2S and NO_2 on activated carbon (SKT); We studied zeolite NaX and $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$. [31-43]

TABLE 1. Isotherms of adsorption of activated carbon CO_2 , H_2S and NO_2 (SKT); Results of studies of zeolite NaX and $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$.

Adsorbents	Activated carbon (ACT)			Zeolite NaX			$\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$		
Components	H_2S ,	CO_2	NO_2	H_2S ,	CO_2	NO_2	H_2S ,	CO_2	NO_2
Static activity, g/100g	9,22	7,23	7.02	12,78	10,95	9,95	16,46	13,98	12.84
Dynamic activity, g / 100 g	7,02	5,36	5.03	9,96	8,74	8.06	14.6	11,64	10.92

Model compounds of the following composition were prepared for absorption into the $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2 / \text{HSZ}$ system:

TABLE 2. $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ composition of model mixtures designed to study absorption in the system.

Content	Mass composition, in %		
	№1	№2	№3
Hydrogen sulfide	2,85	3,05	2,80
Carbon dioxide	-	2,90	5,93
Nitrogen	97,15	94,05	91,25

Experimental tests were carried out at the Bukhara refinery at a semi-industrial plant with a mass fraction of hydrogen sulfide of 2.9% and a mass fraction of sulfur in mercaptans of 0.5%. The absorption process was carried out by supplying petroleum gases to an adsorber with an adsorbent height of 100 cm and a diameter of 5 cm. To potentiometric determine sodium sulfide and mercaptides, a Drexel flask filled with a 10% sodium hydroxide solution was installed at the outlet of the reactor.

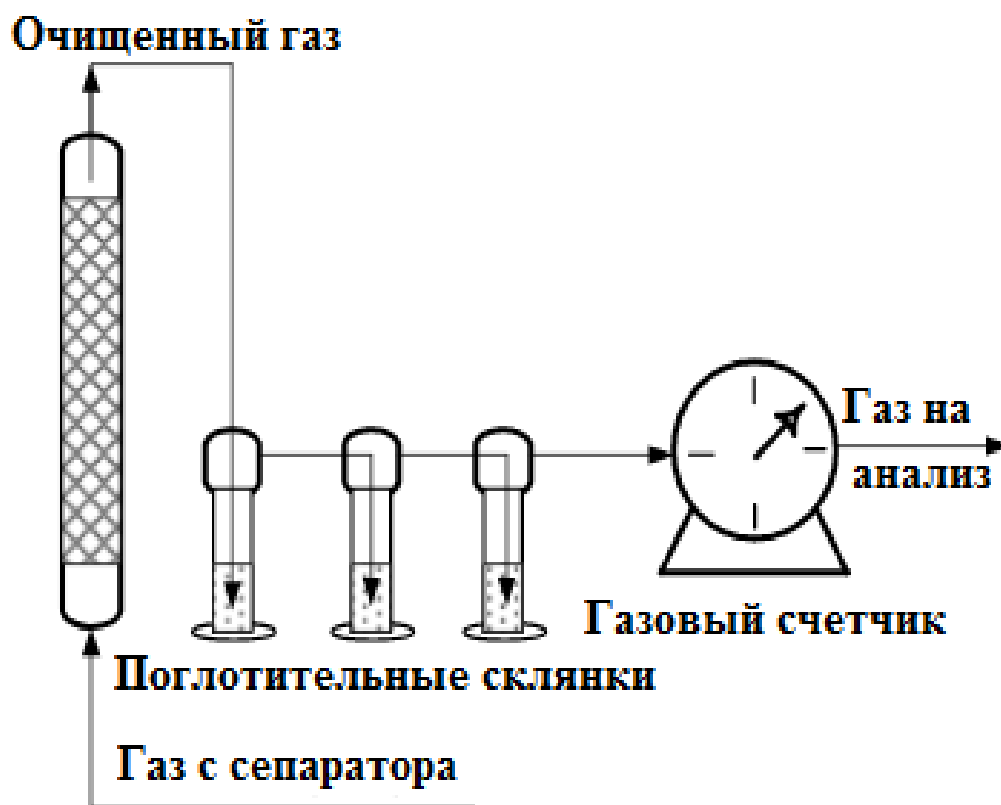


Figure 3. An experimental adsorption device for purifying petroleum gases from hydrogen sulfide.

Studies have shown that the total sulfur content of $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ for hydrogen sulfide is 14.3% (by weight). The sulfur capacity is 11.3% at a dynamic concentration of 1000 ppm. From the experimental data, it can be concluded that in a unit with a gas flow rate of 4000 m^3/day , this sorbent can be used continuously for 1.5 weeks.

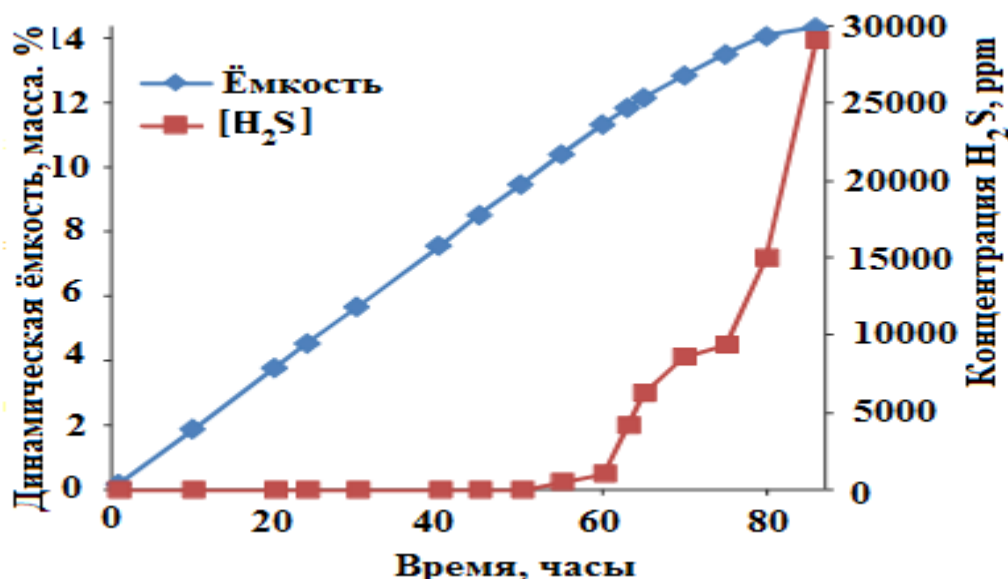


Figure 4. Changing the dynamic capacity of the chemisorbed $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$ at the outlet of the adsorber over time.

To confirm the possibility of using $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$, the experiment was tested at the Bukhara Oil Refinery at a pilot plant filled with a 2-ton adsorber with a diameter of 1.2 m and a height of 8 m. When we tested the gas containing 3.5% of H_2S on weight on an industrial facility, concentration of hydrogen sulfide at the exit in 24 hours after the beginning of an experiment made 180 ppm of the adsorber. According to the tests, the dynamic capacity of $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$ with respect to hydrogen sulfide was 2.76% by weight. The total dynamic capacity of the adsorbent by H_2S was higher than 20-25%. Sorption isotherms were used to calculate thermodynamic and equilibrium adsorption constants per sorbent $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ - CO_2, NH_3, H_2S$.

For this, sorption values (1/g) and reverse (1/c) concentrations were calculated, isotherms of the linear Langmuir form were compiled. Table 3 below shows the thermodynamic characteristics of adsorption of CO_2, NH_3, H_2S sorbent $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$ at various temperatures.

TABLE 3. thermodynamic characteristics of adsorption of CO_2, NH_3, H_2S to a sorbent of $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$ at various temperatures.

Sorbates	Temperature			$-\Delta H$, kJ/mol	$-\Delta G_{295}$, kJ/mol	$-\Delta S$, kJ/mol	G, g/g
	295	323	335				
SO_2	1,0	3,70	20,0	61,50	1,129	17,05	0,64
H_2S	1,50	4,10	25,0	57,71	1,220	15,43	0,30
CO_2	1,10	3,95	23,50	62,66	11,52	174,03	0,38

Sorption isotherms were used to calculate thermodynamic and equilibrium adsorption constants on the $CaCl_2 \cdot ZnCl_2 \cdot MnCl_2/HSZ$ sorbent CO_2, NH_3, H_2S . To do this, linear Langmuir isotherms were built by calculating the inverse values of sorption (1/g) and concentration (1/s).

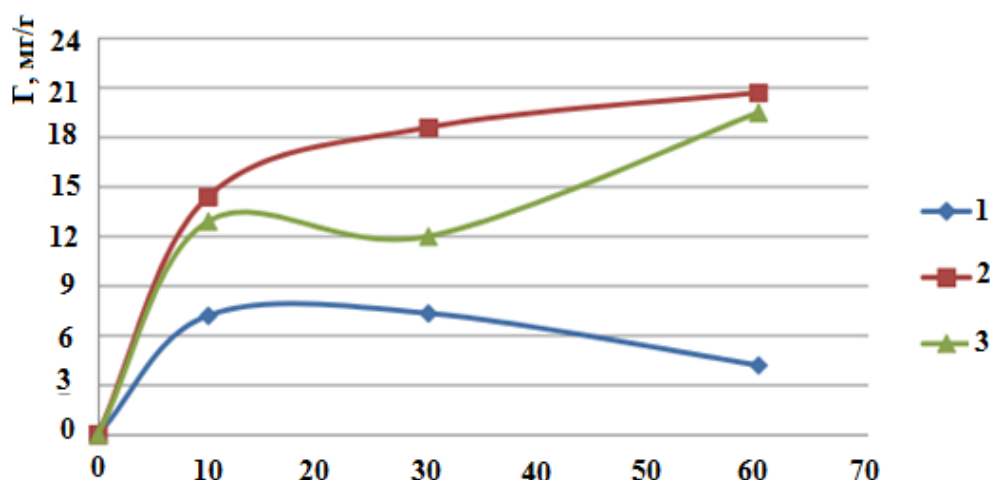


Figure 5. Kinetic curvature of carbon dioxide sorption, where: 1-natural bentonite; 2-bentonite is a high silicon zeolite treated with a 1% solution of hydrochloric acid and sodium carbonate; 3- high-silica zeolite treated with bentonite with a 10% solution of sulfuric acid and sodium carbonate.

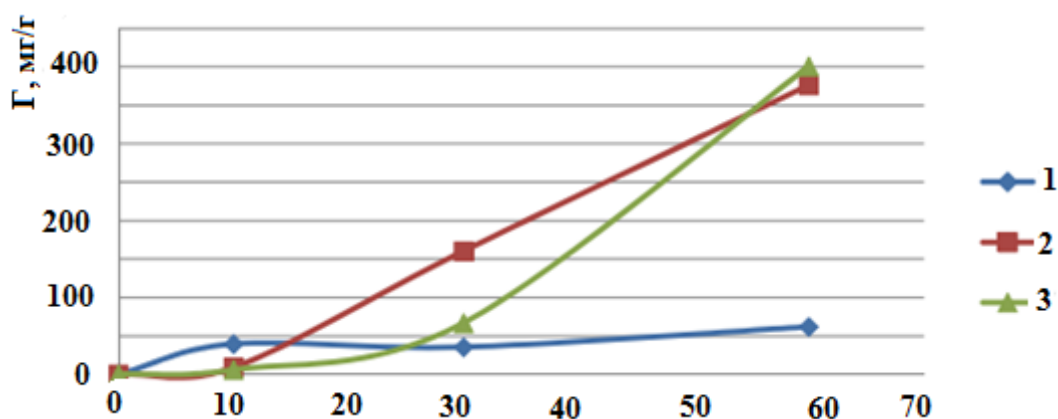


Figure 6. Kinetic curvature of hydrogen sulfide sorption, where: 1-bentonite is natural; 2-bentonite is a high silicon zeolite treated with a 1% solution of hydrochloric acid and sodium carbonate; 3- high-silica zeolite treated with bentonite with 10% solution of sulfuric acid and sodium carbonate.

CONCLUSION

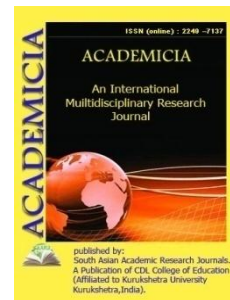
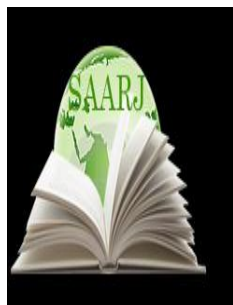
Thus, sorption, texture and physicochemical characteristics of a high-silica zeolite obtained from bentonite and kaolin were studied. Based on the obtained results, adsorption of gases CO_2 , H_2S and NO_2 by absorption of a mixture of salts $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ into a synthesized sorbent was studied. According to the results of the experiments, the dynamic capacity $\text{CaCl}_2 \cdot \text{ZnCl}_2 \cdot \text{MnCl}_2$ /HSZ with respect to hydrogen sulfide was 2.76% by weight. The total dynamic capacity of the adsorbent by H_2S was higher than 20-25%.

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PHOSPHORIC-POTASH FERTILIZERS BASED ON SULFURIC ACID PROCESSING OF PHOSPHORITE FLOUR AND POTASSIUM CHLORIDE

Abdurakhmonova N. K.*; Nazirova R. M.; Mirsalimova S. R.***;**

* Associate Professor,
Candidate of Technical Sciences,
Branch of Russian State University named after I. M. Gubkin,
Tashkent. UZBEKISTAN

**Doctor of Technical Sciences (PhD),
Department of “Technology of Primary Processing of Agricultural Products”,
Fergana Polytechnic Institute, Fergana, UZBEKISTAN

***Associate Professor,
Department of Chemical Technology,
Candidate of Chemical Sciences
Fergana Polytechnic Institute, Fergana, UZBEKISTAN

ABSTRACT

For the scientific substantiation of the technology for producing PP-fertilizers, the process of decomposition of unprotected phosphorite flour with concentrated sulfuric acid at its norm of 50-90% of stoichiometry for producing monocalcium phosphate was studied. The resulting dry decomposition product was treated with a saturated potassium chloride solution. Studies show that an increase in the sulfuric acid norm leads to an increase in the commercial properties of granulated PP fertilizers.

KEYWORDS: Biogenic Elements, Complex Fertilizers, Solubility, Potassium Metaphosphate, Sulfuric Acid, Decomposition, Granule

ABBREVIATIONS: SC - Soda-Calcified, PP-Phosphorium-Potassium

INTRODUCTION

Phosphorus and potassium are the most important biogenic elements necessary for all organisms. To date, much is known about them: chemical and physical properties, a fundamental role in plant physiology, the most important compounds in the form of which they participate in vital processes. These elements form the basis of mineral fertilizers, without which agriculture cannot exist. With crops, intensive removal of nutrients occurs. The deficiency of these elements in soils needs to be replenished by adding fertilizer, taking into account the digestibility of various forms of active substances, which is largely determined by the degree of their solubility.

The production methods and technology of complex phosphorus-potash fertilizers have been quite well studied, but their industrial production faces several difficulties. Thus, the production of potassium orthophosphates (mono- and three potassium phosphate) by neutralizing orthophosphoric acid with hydroxide or potassium carbonate is associated with the isolation of chloride compounds, which create difficulties in their subsequent processing.

MATERIALS AND METHODS

The most concentrated PP fertilizer is potassium metaphosphate (KRO_3), containing 39,87 % K_2O and 69.1% P_2O_5 , i.e., consisting almost only of nutrients. Despite the high nutrient content, good physical properties, potassium metaphosphate has not yet found wide use due to the high cost of its production.

However, there is still an unresolved problem - the disposal of the resulting hydrochloric gases, which is one of the main reasons that hinder the production of potassium met phosphate from potassium chloride. Nitrogen fertilizers introduced for autumn ploughing are almost completely lost. Therefore, it is not advisable to add nitrogen-containing fertilizers during this period. They are usually introduced when growing almost all crops during sowing and feeding. The most effective agricultural technique is the application of single phosphorus fertilizers for autumn ploughing. When growing all crops except rice, the main part of the annual norm of phosphorus fertilizers (60-70% for cotton, 50% for corn, 75% for vegetable and potatoes, 100% for cereals) is added during this period. The rest of the fertilizers are usually added with sowing and during the feeding of plants. The most effective period of potash fertilizer application is also during the autumn ploughing period. When growing cotton, maize usually contributes 50% of the annual norm of potash fertilizers and the rest during the growing season, and when growing the rest of the crops, the full annual norm of potash fertilizers is introduced under the ground. Thus, the bulk of phosphorus and potash fertilizers must be introduced under autumn ploughing.

In the republic, the range of complex fertilizer is extremely limited, i.e. there is practically no production of complex fertilizers, in particular PP with a given composition and properties and satisfactory technical and economic indicators, effective in growing all crops. Therefore, an important problem remains the development and introduction of fundamentally new, more economical (non-traditional) technologies for processing low-grade local phosphorite and potash ores, including off-balance-sheet raw materials, into high-efficiency complex fertilizers with the best quality indicators. For the first time, a high-tech intensive technology for the production of single and complex fertilizers based on the sulfuric acid decomposition of high-carbonate phosphorites in the presence of potassium chloride has been developed. The technology originality lies in the fact that decomposition of the non-enriched phosphorite flour is carried out with concentrated sulfuric acid with intensive stirring for 5-7 minutes. Then products of

sulphuric acid decomposition are mixed with potassium chloride, granulated and dried. To save deficient sulfuric acid, the non-enriched phosphorus was treated with concentrated sulfuric acid at its norm of 50-90% of stoichiometry to obtain monocalcium phosphate. The results of the analysis (Table 1) show that the decomposition products of phosphorus with sulfuric acid contain 12-15% P_2O_5 , the decomposition coefficient of phosphorus is 60-93%.

TABLITSA1. CHEMICAL COMPOSITION OF SULPHURIC ACID DECOMPOSITION PRODUCTS, %

Norm H_2SO_4 , %	P_2O_5	CaO total	$CaSO_4$	CaO Assi.	CO_2	H_2O
50	14,51	36,28	35,57	14,64	6,63	1,03
70	13,46	33,66	46,18	19,02	3,65	1,82
90	12,74	31,85	56,17	23,13	1,58	1,45

The resulting dry product was treated with a saturated solution of potassium chloride. The latter is both a nutrient component of a complex fertilizer and a binder solution for the granulation of products of sulfuric acid decomposition of phosphate flour. The results of the chemical analysis are shown in tables 2-3-4. The resulting complex fertilizers based on the decomposition of phosphate rock with sulfuric acid at its rate of 50% are poorly granulated. The granules are of low strength. An increase in the rate of sulfuric acid leads to an increase in the commercial properties of granular PP fertilizers.

TABLE 2. CHEMICAL COMPOSITION OF PP FERTILIZERS OBTAINED BY DECOMPOSITION OF PHOSMUCH SC 50% NORM, %

Ratio		P ₂ O ₅	K ₂ O	CaO total	CaSO ₄	CaO Assi.	CO ₂	H ₂ O
P ₂ O ₅	K ₂ O							
Before drying								
1	1	10,42	10,42	26,06	25,55	10,52	4,74	12,93
1	0,7	11,34	7,93	28,36	27,81	11,44	5,16	10,97
1	0,5	12,09	6,04	30,23	29,64	12,20	5,52	9,16
After drying								
1	1	11,68	11,69	29,21	28,64	11,79	4,86	2,41
1	0,7	12,36	8,62	30,82	30,23	12,43	5,21	3,23
1	0,5	13,01	6,49	32,52	31,87	13,12	5,63	2,32

TABLE 3. CHEMICAL COMPOSITION OF RK FERTILIZERS PRODUCED BY THE DECOMPOSITION OF PHOSMUCH SC 70 % NORM, %

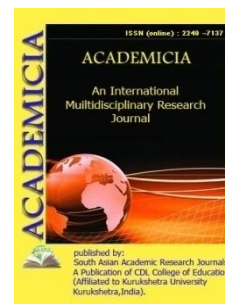
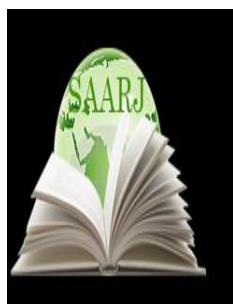
Ratio		P ₂ O ₅	K ₂ O	CaO total	CaSO ₄	CaO Assi.	CO ₂	H ₂ O
P ₂ O ₅	K ₂ O							
Before drying								
1	1	9,79	9,78	24,51	33,61	13,84	2,65	14,42
1	0,7	10,62	7,43	26,56	36,45	15,01	2,88	12,48
1	0,5	11,10	5,54	27,77	38,10	15,69	3,01	12,23
After drying								
1	1	11,65	11,66	29,13	40,01	16,47	2,74	3,57
1	0,7	11,82	8,25	29,51	40,53	16,67	2,95	2,75
1	0,5	12,47	6,22	31,20	42,81	17,63	3,13	4,29

TABLE 4. CHEMICAL COMPOSITION OF PP FERTILIZERS OBTAINED BY DECOMPOSITION OF PHOSMUCH SC 90% NORM, %

Ratio		P ₂ O ₅	K ₂ O	CaO total	CaSO ₄	CaO Assi.	CO ₂	H ₂ O
P ₂ O ₅	K ₂ O							
Before drying								
1	1	9,35	9,34	23,38	41,24	16,98	1,16	14,28
1	0,7	10,12	7,08	25,30	44,61	18,37	1,25	12,27
1	0,5	10,74	5,37	26,85	47,36	19,51	1,33	10,52
After drying								
1	1	10,62	10,63	26,57	49,86	19,28	1,22	2,59
1	0,7	11,24	7,86	28,11	49,56	20,41	1,31	2,52
1	0,5	11,67	5,84	29,18	51,48	21,19	1,39	2,72

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REVIEW ON THE TITLE OF PARTICIPATORY (QUALITATIVE) POVERTY ASSESSMENT

Suleyman Abdureman Omer*; **Nuradin Abdi Hassen****

*Rural Development and Agricultural Extension Department,
College of Agriculture and Environmental Sciences,
Institution of Haramaya University,
Oromia Region, ETHIOPIA
Email id: suleymanabdureman65@gmail.com,

ABSTRACT

A PPA is a process that starts with grass-roots participatory analysis and dialogue, and culminates in better policies and more effective action for poverty reduction. A PPA is not just a new type of study of poverty and its causes. The principles that makes the participatory approach different from other research approaches. First, the PPA methodology engages respondents actively in the research process through the use of open-ended and participatory methods. The rationale for Participatory Poverty Assessments (PPAs) is that for the policies to work, the voices of poor and marginalized people and their understandings of poverty need to be included. There are different key Principles of Participatory poverty assessment Learning and Action.

KEYWORDS: *Grass-Roots, Dialogue, Culminates*

1. INTRODUCTION

A Participatory poverty assessment (PPA) is the approach to analyzing and reducing poverty by incorporating the views of the poor. PPAs attempt to better understand the poor, to give the poor more influence over decisions that affect their lives, and to increase effectiveness of poverty reduction policies. PPAs are seen as complements to traditional household surveys by helping to interpret survey results, and aim to capture the experiences of the poor by being more open-ended (Mitekaro, 2016).

A Participatory Poverty Assessment is an iterative and participatory research process that seeks to understand poverty in its local, social, institutional, and political contexts, incorporating the perspectives of a range of stakeholders and involving them directly in planning follow-up action. PPAs can also include decision makers from all levels of government, civil society, and the local

elite in order to take into account different interests and perspectives and increase local capacity and commitment to follow-up action. Because PPAs address national policy, micro level data are collected from a large number of communities in order to discern patterns across social groups and geographic areas. It is carried out by different bodies like NGOs, academic institutions, government extension workers, or local consulting firms. They use a variety of participatory research methods, including community mapping, flow diagrams showing links and causes of deprivation, seasonal calendars, matrix analysis, and rankings of wealth or wellbeing (Narayan, 2002).

The principles that makes the participatory approach different from other research approaches. First, the PPA methodology engages respondents actively in the research process through the use of open-ended and participatory methods. And the second one is it assumes that the research process will empower participants and lead to follow-up action. PPAs continued to be designed and carried out with the principal objective of supplying more accurate information to policy makers; others placed equal emphasis on strategies for increasing the participation of multiple stakeholders, encouraging national ownership of the process, and supporting policy influence beyond the Bank. There are several examples of these latter processes, each of which used a different model to generate information and to influence policy (Chambers, 2012).

2. MAIN DISCUSSION

2.1. Concept of Participatory Poverty Assessment

The definitions PPAs have been carried out in many countries in Africa, Asia and Latin America during the 1990s. The term PPA has been used to describe a wide range of processes, and is defined in various ways by different commentators. But the two well-known definitions are shown below, one from the World Bank, and one from the Department for International Development United Kingdom these definition are a PPA is an iterative, participatory research process that seeks to understand poverty from the perspective of a range of stakeholders, and to involve them directly in planning follow-up action. The most important stakeholders involved in the research process are poor men and poor women. PPAs also include decision makers from all levels of government, civil society and the local elite, thereby uncovering different interests and perspectives and increasing local capacity and commitment to follow-up action. PPAs seek to understand poverty in its local social, institutional and political context. Since PPAs address national policy, micro level data are collected from a large number of communities in order to discern patterns across social groups and geographic areas, and across location and social group specificities (Narayan 2002).

The second well known definition of participatory poverty assessment (PPA) is an instrument for including the perspectives of poor people in the analysis of poverty and the formulation of strategies to reduce it. Its purpose is to improve the effectiveness of actions aimed at poverty reduction. PPAs are generally carried out as policy research exercises, aimed at understanding poverty from the perspective of poor people, and what their priorities are in terms of actions to improve their lives. PPAs can strengthen poverty assessment processes through: broadening stakeholder involvement and thereby increasing general support and legitimacy for antipoverty strategies; enriching the analysis and understanding of poverty by including the perspectives of the poor; providing a diverse range of valuable information on a cost-effective, rapid and timely

basis, and creating new relationships between policy-makers, service providers and people in poor communities (Toulmin& Quan, 2000).

A participatory poverty assessment, or PPA, has been defined as an instrument for including poor people's views in the analysis of poverty, and in the formulation of strategies to reduce it. A PPA is a process that starts with grass-roots participatory analysis and dialogue, and culminates in better policies and more effective action for poverty reduction. A PPA is not just a new type of study of poverty and its causes. It aims to achieve four things: better understanding of poverty, new constituencies for anti-poverty action, enhanced accountability to poor people, more effective policies and action (Booth, 2003).

2.2. Rational and Approach for Qualitative Poverty Assessment

Governments and their development partners formulate and implement a range of poverty reduction policies, frameworks and strategies. The rationale for Participatory Poverty Assessments (PPAs) is that for these policies to work, the voices of poor and marginalized people and their understandings of poverty need to be included. Failure to respect and respond to how poor people experience poverty and what they see as causing it can contribute to poverty reduction interventions missing their targets. They are three cases for their use became apparent:- Poor people have the right to participate in the design of policies targeting them, PPAs generated new insights about poverty, PPA processes opened spaces for poor people to influence policy. In many cases the process of carrying out a PPA built new relationships between government, aid actors, civil society organizations (CSOs) and ordinary people. PPAs are not only used to design appropriate policies, but can also help in implementing and monitoring them, providing a baseline for follow-up studies (Gilmour and Stancliffe, 2004).

2.2.1. Key principles of participatory poverty assessment learning and action

According to Chambers (2006) key principles of Participatory poverty assessment Learning and Action are the following:-

2.2.1.1. The right to participate

That all people have a right to play a part in shaping the decisions that affect their lives sounds obvious, but is not easy to achieve. Maximizing the participation of the less powerful is a key feature of PLA.

2.2.1.2. Hearing unheard voices

Using PMs involves seeking out unheard voices and creating the safe spaces that allow them to be heard. It is often people who have the least say in decisions about their lives that are most affected by using the methods.

2.2.1.3. Seeking local knowledge and diversity

Local people have their own expert knowledge of their community, and this should be the starting point for outsiders using PMs to work with them. But it is also crucial to recognize that there are always different perspectives and realities within communities, with every individual bringing their own unique experiences and interpretations.

2.2.1.4. Reversing learning

PMs are about letting go of preconceptions in order to learn from the wisdom of community members. This means being prepared to unlearn what has already been learned.

2.2.1.5. Using diverse methods

Using a range of PMs Helps draw in as many people as possible to undertake learning and analysis on an equal basis.

2.2.1.6. Handing over the stick (or pen, or chalk)

The phrase ‘handing over the stick’ came out of some of the early work using PMs with communities in South Asia and Africa. It involves those considered ‘expert’ – or powerful, or of higher status – sitting back, keeping quiet and allowing space for others to participate. Thinking about the relationships between more and less powerful people, and what those relationships imply for who can speak and who cannot, is an important aspect of using PMs.

2.2.1.7. Attitude and behavior change

Changing the attitudes and behaviors of the powerful is a vital aspect of participatory practice. As this principle PRA approaches and methods spread, the prime importance of facilitators’ behavior and attitudes became clear. Again and again, outsiders wagged their fingers, criticized, lectured, interrupted, suggested what should be done, put forward their own ideas, and contradicted and put down local people. All these were inhibiting. All made local people appear, to outsiders and themselves, incapable. So the new imperatives became to establish rapport, to sit down, listen and learn, to be patient, to respect, to facilitate, to be nice to people, to learn not to interview, to know when not to speak and when not to be present. The task for outsiders became to hand over the stick, to empower local people, to enhance their confidence, to enable them to define, express and analyse their reality, and not to reflect that of the upper (outsider).

2.2.2. Importance of PPA

Participatory poverty assessment involves a number of actors and stakeholders from within the community as well as outsiders. And Enable people concerned with the issue at hand to take action after appraising the situation and realizing the development problem or challenge. PPA Explore in-depth information in a holistic manner and Use a number of techniques for data collection, enabling the generation of both qualitative and quantitative data, therefore triangulating the information generated. It makes it possible to measure trends, which cannot be captured by pre-determined indicators. Like the Household Budget survey can only say the percentage of people living below the poverty line, but they do not describe the context specific realities of poverty and the way it is experienced by the poor. Statistical surveys cannot go beyond the indicators. Have the function of informing policy and decision makers on the day-to-day realities/experiences of poor people in a powerful and accurate manner, thereby drawing their attention to policy gaps and impact. PPAs provide a great opportunity to CSOs. CSOs may use PPAs in the monitoring of the PRSP, in the process; CSOs may generate case studies, which may be used for advocacy purpose to influence policy (Chambers, 1998).

2.2.3. Characteristics Qualitative Approach

The characteristics of qualitative approach according Carvalho and White (1997) describes in different nature that makes it different from quantitative poverty assessment approach these are the following:-

- ✓ **Definition given for poverty** -Poor people define what poverty means, broader definition of deprivation resulting from a range of factors (not simply lack of income/consumption) adopted.
- ✓ **Philosophical underpinning: qualitative approach Rejection** of the positivist paradigm: there are multiple forms of reality and, therefore, it is senseless to try to identify only one
- ✓ **Determination of poverty: qualitative approach determination** through an interactive internal–external process involving facilitator and participants.
- ✓ **Nature of variables for which data is collected: Qualitative approach** Perception variables reflecting attitudes, preferences, and priorities. The number of similar responses with respect to each variable can be numerically added–up, but the variables themselves cannot be quantified.
- ✓ **Interview format:** - Open–ended, semi–structured, interactive
- ✓ **Sampling technique:** Purposive sampling

2.2.4. Participatory poverty assessment methodologies

Participatory methodologies involve active exchange of ideas and role taking and play, based on equitable and institutional partnerships between researchers and representatives of target groups. Participation begins with initial identification of the problem, diagnosis of the problem and design, actual research/analysis, report preparation and dissemination of findings. Where the target populations are rural communities, for example, their consultatively selected representatives work together with the researchers to formulate the training and data gathering methodologies, leaving none of the tasks exclusively in the hands of the “experts”. As such, there are no experts.

Participatory approaches simply imply equitable incorporation of the target group representatives in the delivery process, without undue dominance on the part of the facilitators. Participatory analysis or research promotes collaborative action between communities and other target groups with governments, donors and resource persons. It promotes ownership for intervention, promotes collaboration and cooperation between researchers, practitioners and lay people.

Common participatory approaches to poverty assessment, among others, include the following:

2.2.4.1. Focus Group Discussions (FGDs)

This approach begins with selection of social groups, with specific social category delineation. Participants’ composition is guided by homogeneity, cohesiveness and knowledge of the issues involved. Examples of these groups include: groups of women only; groups of men only; groups of youth (girls or boys only); groups of female elders; and, groups of male elders, among others.

It is important to separate the groups in order to pertinently capture and reflect the views and experiences of particular social categories such as sexes and age-groups, as will be found in given poverty set-ups. Ideal group size is 10, but can vary between 5 and 12. Discussion topics

include identification of major problems in the area (e.g. poverty in terms of definition and coping strategies) and proposed solutions.

Discussion is moderator-facilitated/generated through raising pertinent/topical issues for debate, keeping discussion interesting, encouraging non-talkers and controlling dominant individuals. FGDs are a good pre-research method for identification of main study indicators, post-research explanation of trends and variances, reasons and causes through participants' mutual stimulation and exchange of views, and they can act as change agents changing group members' opinions through direction, intensity and content of the discussion. They are also a good source of valuable information on dominant values, beliefs and norms.

2.2.4.2. Timelines

These are lists of key events in the history of the communities or target groups that facilitate identification of the past trends and problems facing the group, focusing more on those related to poverty. Key among these would include droughts, famines, and unpredictable commodity price fluctuations and inflation. Useful timelines for the last 30 years or so in the history of the areas in question could be reconstructed with facilitation of key informants and talented community members.

2.2.4.3. Trend analysis

These differ from timelines in the sense that they address the key changes that have taken place in the area in question, in relation, for example, to affordability of essential goods and services. Participating group members should also be asked to provide underlying reasons for such variations. This helps in identification of goods and services important to them and how the changes relate to poverty onset, experiences and outcomes.

2.2.4.4. Gender analysis

This approach can take the form of visuals depicting household properties and roles performed by women and men, such as cultivation, baby care, herding, shoe repair, laundry, carpentry, and tailoring, ploughing and house construction. More telling would be ownership visuals depicting farming tools (pangas, jembes, shovels and axes), houses, ornaments, cattle, land, radio, children, money, utensils, cattle and money. The reasons given for different associations and categorization of ownership, use and roles are important for inferences regarding gender differentials in terms of poverty and its impacts.

2.2.4.5. Social mapping

This represents a geographical representation of the locally available community resources and services. The villages or represented community members are in small groups instructed to draw the social maps of their areas. Small coloured Manila paper markers are then used to show households and key resources, located in different places. Various features to be included could include roads, swamps, valleys, rivers, wells, boreholes, mountains, schools, churches and health facilities. The combined visual impacts and analysis tells a lot about poverty presence or absence.

2.2.4.6. Seasonal calendar

This consists of community or village-based seasonal calendars drawn by the community representatives, indicating seasonal variations on an annual/12 month calendar, with specific reference to poverty or other strongly notable community livelihood features. The seasonal calendars can be used to indicate visual appearances of when the highest and lowest supplies regarding rainfall, certain or all food commodities, incomes, diseases, and other acute problems are/were recorded, followed by poverty-related analysis based on the information extracted from the exercise.

2.2.4.7. Wealth ranking

This is often based on social mapping, following which households are identified alongside various socio-economic groups. The households or individuals owning them are therefore ranked according to community perceptions of wealth and the lack of it, to identify the rich, poor and the very poor individuals and households

2.3. Case studies from Ethiopia.

This part reflects different case studies conducted in Ethiopia for the purpose of reducing poverty and bringing development especially in rural development (Gebreselassie *et al.*, 2012). These case studies are:

Case study 1. Income generating activities (IGA) shows how the intervention can increase people's incomes, improve their livelihoods and impact on other human development outcomes, such as improved health and education

Income generating activities in Oromia and Somali Regions

The project was a co-operation between Islamic Relief and Pastoralists Concern Association Ethiopia (PCAE). The project aimed to increase IGA among cooperatives established between 2008 and 2009, to complement agricultural production and provide a buffer against possible food shocks.

The evaluation found:

- 12 cooperatives were successful in supporting members through IGA on resins and gum processing and trade.
- 14 cooperatives supported small scale irrigation and agricultural product marketing. 655 beekeepers were assisted through IGA.
- 9 cooperatives were supported through IGA to improve milk quality, availability, processing and Commercialisation.

The evaluator noted that some IGAs would take longer than two years to come to fruition. For instance, while most co-operatives had begun to generate income this had not always had an impact at the individual household level.

Case study 2. How combining bridge construction with the provision of technical skills and community participation can result in improved access to services and markets as well as maintenance systems in place for sustainability.

Building pedestrian bridges in Arsi and Bale Zones Oromia Region

Helvetas, the CSO, worked with Oromia Rural Road Authority and the local communities between 2007 and 2008 to construct two suspension bridges. The main objective of building the bridges was to end social isolation of remote communities by providing access to health and education services and markets, to mobilize the community to participate in the activity and also to give local technicians the skills and know how to make further constructions. Each community was asked to contribute to the construction with a symbolic 8,000 Birr per bridge.

The evaluation found:

- ✓ Two out of the three planned bridges were completed in Workesa in Arsi and Worga in Bale. The third was not constructed due to problems in reaching agreement with the local community.
- ✓ The Workesa Bridge is 65 meters long and gives access to social services and markets to 8,000 rural people, saving several hours of walking.
- ✓ The Worga Bridge is 45 meters long and serves 5,000 rural people saving at least 2 hours of daily walking.
- ✓ Government technicians in both sites are able to make repairs.
- ✓ Local committees are responsible for the maintenance.

The project demonstrates the ability of CSOs to respond to the local situation and act as a catalyst for social mobilization, bringing together communities and the Government to pursue locally agreed objectives. The potential savings for the people of these remote communities are considerable, given that walking time can be used for farming and other socially and economically productive activities.

Case study 3. Shows how support to the agricultural value chain results in improved food security and has the potential to realise greater benefits over time, especially if emphasis is given to assessing demand and marketing.

Linking poor households to micro finance and markets: Oromia, Tigray and Amhara 2008 - 2010

This project falls under the national Productive Safety Net Program (PSNP) and aimed to link poor households to markets, through the development of different types of commodity value chains. The evaluation covered the work of three CSOs: CARE, REST and SCF UK.

The evaluation in East Hararghe found:

- 500 households were supported under the honey value chain, 1,600 under cereals and 1,800 under white pea beans.
- Households received assets, including modern bee hives, and support for production.

The evaluation noted that there needs to be a longer time span for impact to be fully realized from the value chains and that the emphasis has to shift from production to assessing demand and marketing. It also noted that food security had increased as a result of the project but that greater benefits would probably be realized over time.

2.4. Strength and Weakness of Qualitative Poverty Assessment.

According to Carvalho and White (1997), stated that the qualitative poverty assessment has its own strength and weakness. Therefore following are the strength and weakness of participatory or qualitative poverty assessment.

2.4.1. Strength of qualitative poverty Assessment

2.4.1.1. Richer Definition of Poverty

The qualitative approach is particularly suited for identification that is to address the question "who are the poor?" It can more readily measure the wider dimensions of poverty, including for example, vulnerability, lack of dignity, and autonomy. Most importantly, the qualitative approach allows the community itself to analyze its own poverty and determine what the most important manifestations and solutions to poverty are for them. At the project or local level such information may be critical for the design of projects and policies aimed at reaching the poor.

2.4.1.2. Explaining Causal Processes

The qualitative approach enables causality to be introduced between variables. Some of the variables used in the qualitative approach tell about the processes through which people became poor and about their vulnerability in the future (Baulch, 1996). Moreover, qualitative work is particularly suitable for uncovering the reasons for the observed levels of supply response or service up-take by beneficiaries. As the example the qualitative work for the country Zambia and Kenya Poverty Assessment highlighted the rudeness of health staff and problems in fee exemption schemes as an important factor which discouraged the use of health facilities.

2.4.1.3. Accuracy and Depth of Information

The qualitative approach can draw out accurate responses to certain questions. People are more appropriate to talk candidly in a conversational setting than to an enumerator conducting a pre-worded questionnaire. The information obtained through qualitative work may be more accurate because the interviewer develops rapport and trust with the interviewee (Salmen, 1995). The researcher can ask follow-up questions, and probe for responses. Non-verbal responses can be recorded which may supplement (or even contradict) verbal responses. Moreover, some things that cannot be asked in preset questionnaires may emerge automatically in conversations during qualitative research. In many instances, especially when an interpretive understanding of a phenomenon or process is required, qualitative methods are more successful in obtaining relevant data, ideas, or recommendations. In addition, the open format of the interview under the qualitative approach allows adding or dropping questions according to the context. The qualitative approach provides flexibility to the investigator to explore new ideas and issues that may not have been anticipated in planning the study.

2.4.2. The Weakness qualitative Approach

2.4.2.1. Inability to generalize beyond the research area

The small size of the population covered the use of non-probability sampling to select that population, the changing content and focus of each of the interviews depending on circumstance, and the open-ended nature of responses often make aggregation and summarization of qualitative data difficult. Qualitative data can give a relatively accurate picture of the prevalence

of a phenomenon but not necessarily of its extent or pervasiveness. For example in South Africa qualitative poverty study discusses the difficulties faced in generalizing the results of qualitative work. Qualitative research can run the risk of being excessively specific to local conditions and needs. As a result, while the recommendations which are made may be appropriate to the particular circumstances in a community or to a particular issue, they are not readily generalizable to the national or cross-sectoral level. Special efforts may be required to analyze the key findings of the Participatory Poverty Assessment and interpret these into issues to be brought into the process of policy formulation (Julian, 1996).

2.4.2.2. Difficulties in Verifying Information

In view of the subjectivity involved in collecting and analyzing the data under the qualitative approach, the data cannot be easily verified. The subjectivity results from the nature of the information sought, non-structured interview formats, and the flexible response-recording and response-analysis methods. The chances that the moderator may bias results by providing cues about the desirable types of responses and answers are higher under the qualitative approach than under the quantitative method.

2.5. Policy implication.

Policy Implications towards poverty reduction in case of PPA shows that social and economic change is occurring in Ethiopia, but at quite a leisurely pace, and hedged about with a considerable amount of social and administrative unwillingness to allow greater social and economic diversity, and more spatial mobility across the country. Rapid enough economic change of the type that will deliver rising living standards will require more responsiveness and flexibility than this. Freedom of action for economic purposes should not be confused with political dissent. Above anything else, economic change needs government that works with, rather than against, people's energy and enthusiasm to construct better lives for themselves and their families. The PPA brings to the forefront some important policy challenges that Ethiopia is likely to confront as the government seeks to move forward with its poverty reduction agenda in the future. These challenges can be grouped as follows: land shortage, low mobility and low non-farm dynamism in rural areas, gender equality and future options, livestock disease and veterinary services and rural-urban transitions & urban economic growth According to Ellis and Woldehann (2005).

This synthesis offers a review of experiences in applying participatory approaches to macro-level policy formulation, implementation and monitoring in poverty reduction. The participatory experiences are drawn from research initiatives, donors' country strategies, aid coordination processes, policy advocacy campaigns, institutional change processes, budgetary analysis and formulation and citizens' monitoring mechanisms. The review highlights significant challenges that must be overcome in order to establish participatory, sustainable, country-owned poverty reduction strategies (Bird, 2013). The policy has been informed by a set of guiding principles based on the major elements of the new conceptual and strategic framework.

3. CONCLUSION

A Participatory Poverty Assessment is an iterative and participatory research process that seeks to understand poverty in its local, social, institutional, and political contexts. The principles make the participatory approach different from other research approaches. First, the PPA

methodology engages respondents actively in the research process through the use of open-ended and participatory methods and the second one is it assumes that the research process will empower participants and lead to follow-up action. The rationale for Participatory Poverty Assessments (PPAs) is that for the policies to work, the voices of poor and marginalized people and their understandings of poverty need to be included. There are different key Principles of Participatory poverty assessment Learning and Action. These are the right to participate, Hearing unheard voices, Seeking local knowledge & diversity, Reversing learning, Using diverse methods, Handing over the stick (or pen, or chalk) and Attitude & behavior change.

The **Participatory** poverty assessment use various methodologies such as Focus Group Discussions (FGDs), Timelines, Trend analysis, Gender analysis, Social mapping, Seasonal calendar and Wealth ranking. PPA has its own strength and weakness. The strength are Richer in definition of Poverty, Explaining Causal Processes and Accuracy and Depth of Information. Even though the weakness of PPA are like Inability to generalize beyond the research area and Difficulties in Verifying Information. The policy Implications towards poverty reduction in case of PPA shows that social and economic change is occurring in Ethiopia, but at quite a leisurely pace, and hedged about with a considerable amount of social and administrative unwillingness to allow greater social and economic diversity, and more spatial mobility across the country. Rapid enough economic change of the type that will deliver rising living standards will require more responsiveness and flexibility than this. Freedom of action for economic purposes should not be confused with political dissent.

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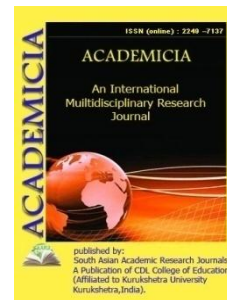
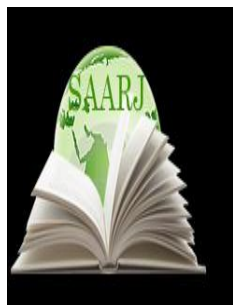
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EFFECT OF WATER, FERTILIZER (NPP) NORMAL RELATIONSHIPS ON MEDIUM FIBER "PORLOQ-1" COTTON YIELD IN LITTLE GRAY SOIL CONDITIONS

Boynazarov O. Sh*; Boltaev S.M; Imamov F.Z*****

*Junior Researcher,
Research Institute of Cotton Breeding,
Seed Production and Agricultural Technologies,
UZBEKISTAN

**Doctor of Agricultural Sciences,
Tashkent State Agrarian University,
Termez branch, UZBEKISTAN

***Tashkent State Agrarian University
Termez branch assistant, UZBEKISTAN

ABSTRACT

This article provides information on the irrigation regime of medium-fiber "Porloq-1" cotton variety in the conditions of light gray soils of Surkhandarya region, the impact of mineral fertilizer standards on productivity. An analysis of the research revealed that because of each agro-technical measure, a slight difference in volume weight was observed at the end of the season. Soil water permeability was determined based on 6 hours of observation.

KEYWORDS: Soil, Cotton, Variety, Irrigation Fertilization Standards, Productivity, Nitrogen Phosphorus Potassium (NPP), Limited Field Moisture Capacity (LFMC)

INTRODUCTION

Today, the economical, rational and efficient use of available land, water and natural resources plays an important role in the further development of agriculture and deepening economic reforms in our country. In addition, the cotton sector plays a special role in achieving the production of cheap and high quality, competitive agricultural products that fully meet the requirements of world standards.

Therefore, in each region only in the climatic, soil, reclamation, hydrogeological conditions of this region, the selection of fast-ripening cotton varieties and setting their norms of mineral fertilizers is one of the most pressing issues facing the science of cotton growing.

Indeed, one of the most pressing issues today is the development and implementation of new regional and promising agro-techniques for the care of cotton varieties. These issues, according to the results of scientific research conducted by our scientists and experts in the field, it is important to study the impact of water-nutrient (NPP) norms and irrigation regimes on high yields of cotton varieties. It is known from the literature that the results of scientific research conducted by local and foreign scientists show that each cotton variety has different needs for water and nutrients during its growth, development and harvest. Many studies have been conducted over the years by researchers to study these problems.

DeTar, William R. in a study on the effect of cotton on growth-development and yield in sandy soils in different irrigation regimes in the United States, it was noted that maximum values were obtained at high irrigation regimes in sandy soils [4].

O. Cetin and L. Bilgel studied the effect of known irrigation methods on cotton yield, it was observed that the yield was 43.8 c / ha, 36.3 c / ha, 33.8 c / ha when drip, tillage and rain irrigation [5].

In this regard, G. Kurbanova (2002) obtained irrigation of water and fertilizer (NPP) standards for cotton varieties "Akkurgan-2" and "Armugon" in the conditions of barren and barren soils of Surkhan-Sherabad oasis, soil moisture at 70-70-60% and NPK 250; 175; Achieved a high cotton yield at a rate of 125 kg / ha [2].

According to M. Tojiev, in Surkhan-Sherabad oasis, "Akkurgan-2", "Bukhara-6", C-2 and Denov cotton varieties were irrigated with 70-70-60% moisture relative to *L_{FM}C* in the order of humidity, 1-3-2 irrigation system, mineral fertilizers NPP 200 ; 140; 100 and 250; 175; The application of 125 kg / ha emphasizes the expediency [3].

Before the introduction of each new and promising cotton variety created by our breeders in the country, it is necessary to develop a set of optimal care agro-measures, taking into account the biological characteristics of the variety, and only with strict adherence to this set of agro-measures high quality of any new and promising cotton varieties. Irrigation and feeding are one of the main agricultural measures in the cultivation of cotton varieties [1].

Taking into account the above problems, scientific experiments were conducted in 2016-2018 in order to develop and implement optimal irrigation and feeding regimes of medium-fiber "Porloq-1" cotton variety in the conditions of light gray soils of Surkhandarya region.

Experimental methodology

The research was conducted in 2016-2018 on the farm "BEKTEPA MERSAJ", located in Bandikhan district of Surkhandarya region, in the conditions of weak saline gray soils with a groundwater level of 1.5-2.0 meters.

In our experiments, consider that the level of soil fertility, N-150 in the norms of fertilizers from two varieties; R-105; K-75 and N-200; R-140; K-100 kg / ha, with two different seedling thicknesses of 80-90 and 110-120 thousand bushes per hectare were studied.

Research results

One of the main factors determining soil fertility is its agrophysical properties, namely: limited field moisture capacity (*LFMC*), water permeability, volume weight, porosity, and granularity. The organic dependence of aquatic nutrient regimes on plants on the agrophysical properties of the soil was studied on the basis of field experiments, and high yields were obtained from the studied cotton varieties. In 2018, in the conditions of light gray soils of Surkhandarya region, the weight of soil volume in the spring is 1.32 g / cm^3 in the 0-30 cm layer, 1.40 g / cm^3 in the 30-50 cm layer, 1.46 g / cm^3 in the 0-70 cm layer. The 0-100 cm layer was 1.39 g / cm^3 . Application - Analysis at the end of the growing season shows that pre-irrigation soil moisture is 65-65-65% relative to *LFMC*, $0.03\text{-}0.04 \text{ g / cm}^3$ in the 0-30 cm layer of the soil, $0.07\text{-}0.08$ in the 30-50 cm layer g / cm^3 , $0.03\text{-}0.04 \text{ g / cm}^3$ in the 0-70 cm layer, 0.01 g / cm^3 in the 0-100 cm layer, irrigation regime in the irrigated variants at 70-75-65%, driving in the 0-30 cm layer 0, $0.04\text{-}0.05 \text{ g / cm}^3$, $0.08\text{-}0.09 \text{ g / cm}^3$ in the 30-50 cm layer, $0.05\text{-}0.06 \text{ g / cm}^3$ in the 0-70 cm layer, 0.01 g / cm^3 in the 0-100 cm layer was observed. When the pre-irrigation soil moisture was 65–65–65% relative to the *LFMC*, the volumetric mass of the soil at 70–75–65% differed by 0.01 g / cm^3 in the drive and subsoil layers.

An analysis of the research revealed that because of each agro-technical measure, a slight difference in volume weight was observed at the end of the season. Soil water permeability was determined based on 6 hours of observation. In the 2018 experimental field, the water permeability of the soil was determined at the beginning of the season. In 65-65-65% of the experimental field soils, the onset of water permeability was $315 \text{ m}^3 / \text{ha}$ in 1 hour, $699 \text{ m}^3 / \text{ha}$ in 6 hours, and an average of $116.5 \text{ m}^3 / \text{ha}$ in 1 hour. $167 \text{ m}^3 / \text{ha}$ in 65-65-65% and $197 \text{ m}^3 / \text{ha}$ in 70-75-65%, respectively. Because of the study, an increase in the volume weight of the soil and a decrease in water permeability were observed with an increase in the irrigation regime from 65-65-60% to 70-75-60%.

"Porloq-1" cotton was irrigated 2 times in 0-2-0 system at 65-65-65% relative to pre-irrigation soil moisture, 3 times at 0-2-1 system at 70-75-65% relative to pre-irrigation soil moisture.

In the experiment, the following indicators were obtained on the norm of mineral fertilizers, irrigation regime and the impact on cotton yield on the three-year average yield. Irrigation of "Porloq-1" cotton variety with soil moisture at 65-65-65% relative to *LFMC*, mineral fertilizers N-150; P-105; Yield in the 1st variant was 25.9 c / ha , applied at the rate of K-75 kg / ha. In the same irrigation order, the norm of mineral fertilizers is N-200; R-140; K-100 kg / ha was applied, in variant 2 it was 30.5 c / ha , and 4.4 c / ha of additional yield was obtained due to mineral fertilizers.

Mineral fertilizers N-150 at 70-75-65% of pre-irrigation soil moisture *LFMC*; P-105; In variant 3, applied at the rate of K-75 kg / ha, an additional cotton yield of 1.1 c / ha was obtained due to irrigation compared to 65-65-65% of irrigation. Pre-irrigation soil moisture is 70-75-65% relative to *LFMC*, mineral fertilizer norm is N-200; R-140; K-100 kg / ha, when applied, in 65-65-65% of the irrigation regime in option 4 (option 2) compared to 1.5 c / ha , due to mineral fertilizers (option 3) compared to 5 c / ha , high yield obtained.

TABLE 1

B	Norm of mineral fertilizers kg / ha			Irrigation system	Productivity of over the years c / ha				The effect of various factors on productivityc / ha	
	N	P	K		2016 й	2017 й	2018 й	Average	Fertilizer	Water
65-65-65 percentage of soil relative to <i>LFMC</i>										
1	150	105	75	0-2-0	25,4	27,6	24,6	25,9		
2	200	140	100		29,6	33,3	28,7	30,5	4,4	
70-75-65 percentage of soil relative to $LFMC$										
3	150	105	75	0-2-1	26,6	28,6	25,9	27,0		1,1
4	200	140	100		31,1	34,7	30,1	32,0	5,0	1,5

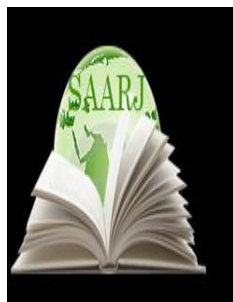
CONCLUSION

The results of the study show that the highest yield in the "Porloq-1" cotton variety was irrigated at 70-75-65% relative to the soil moisture *LFMC*, mineral fertilizers N-200; P-140; K-100 kg / ha was observed when used in moderation.

Based on the results of the experiment, it can be concluded that in the conditions of light gray soils of Surkhandarya region in the cultivation of high-quality cotton of medium fiber "Porloq-1" cotton yield pre-irrigation soil moisture at 70-75-65% relative to *LFMC*, N-200 with mineral fertilizers; P-140; K-100 kg / ha is recommended for normal feeding and care.

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THE USE OF METAPHORS AND ANAPHORAS IN THE EPIC "SONG ABOUT GAYAVATA" AND IMPORTANT FEATURES OF POETIC SYNTAX

Elova Umida Ruzimurodovna*

*Basic Doctoral Student of Samarkand State,
Institute of Foreign Languages,
UZBEKISTAN

ABSTRACT

This article describes the harmony of the image of man and nature in the epic "Song about Gayavata" and how this harmony feels each other. It is especially important that integrated into the whole text. The peculiarities of the folklore genre gave the epic a special uplifting spirit.

KEYWORDS: *Apostrophe, Metaphor, Anthropography, Romantic Expression, Folklore Traditions, Emotional Expressive Effect.*

INTRODUCTION

In The Song of Gayavata, just like in folklore, man lives in harmony with nature, nature breathes, feels, speaks to man:

...the forest and the rivers sang and shouted at his coming [Longfellow 1967:45];

... The squirrel, Adjidaumo, ... Coughed and chattered from the oak-tree, Laughed, and said between his laughing, "Do not shoot me, Hiawatha!" [Longfellow 1967:183];

... The blue-bird, the Owaisse, Envious said, "O Chibiabos, Teach me tones wide and wayward" [Longfellow 1967:77];

And the sun, from sleep awaking, Started up and said, "Behold me!..." [Longfellow 1967:83].

A special type of vivid depiction in the poem — the apostrophe — represents man's attitude toward natural phenomena, animals, birds, and his other creatures as a conscious being. A clearer example of this method can be found in Hiawatha's Sailing in G. Longfellow's poem, in which he

appeals to the nature around Gayavata (birch, cedar, spruce, hedgehog) to make a pie (a long narrow boat).

The anthropomorphization, animation, and anthroposophy in the song are "based on the inner content of the whole text of the image" [Naer 1983: 174]. Metaphor-animations are based on the content of the poem, its folklore background, from which it is derived. The poet presents to the reader the world of his heroes through the way of perceiving their world, being, that is, people who are inspired by nature, who have the idea that not only animals but also plants have human characteristics. The main role of metaphor-animations in the "Song of Gayavata", in our opinion, is to show the harmony of man with nature. This task is inextricably linked with the romanticism of G. Longfellow's work.

Longfellow, a narrow but wide-ranging traditional artistic medium from the treasury of folk poetry, has received a parable, creating a unique twist of parables by illuminating things from different angles and giving them a comprehensive polish.

In the system of figurative expressions of the poem, according to its frequent use, parables come third after epithets and metaphors. (There are about 160 analogies in the song). Longfellow realistic scenes and situations: Picture-Writing, The Famine, Hiawatha's Lamentation - the number of analogies in the described chapters is drastically reduced. In particular, there are no analogies in the Picture-Writing section. The same goes for Hiawatha and Mudjekeewis, The Son of the Evening Star, The White Man's Foot, and more.

The song of Chaybayabos is a vivid example of the widespread use of figurative parables; In this Hiawatha's Wedding Feast chapter, 7 of the 9 verses are built on analogies. This is largely explained by Loenfello-Romantic's propensity for folklore traditions, which are reflected in the language and style of The Song of Gayavata since G. Longfellow saw in Indian folklore the fundamental foundations for the creation of American national literature.

The following short parables abound in Longfellow's poem:

Always coughing like a squirrel [Longfellow 1967:122];
Tall and lithe as wands of willow [Longfellow 1967:122];
And their tails like fans unfolded [Longfellow 1967:126];

However, there are also a large number of diffuse (spread) analogies. For example:

**When thou smilest, my beloved,
 Then my troubled heart is brightened,
As in sunshine gleam the ripples
 That the cold wind makes in rivers.**
 [Longfellow 1967:118];
**Came Mondamin for the trial,
 For the strife with Hiawatha;
 Came as silent as the dew comes,
 From the empty air appearing,
 Into empty air returning,**

[Longfellow 1967:71];

Poem analogies in terms of location in a sentence are, as a rule, in the end, in the final part of the sentence (93 analogies):

... He lay ... like a rock with mosses on it [Longfellow 1967:42];

... The sweat of the encounter stood like drops of dew upon him [Longfellow 1967:71];

... His strong heart leapt within him, as the sturgeon leaps and struggles, In a net to break its measles [Longfellow 1967:73];

The author often uses parables at the beginning of a sentence to give them a strong impression (67 parables):

Like a tall tree in the tempest Bent and lashed the giant bulrush [Longfellow 1967:63];

Like a ring of the fire around him Blazed and flared the red horizon [Longfellow 1967:73];

The analogies often come in pairs, placed side by side, and there are two different analogies between them:

1) The second analogy clarifies the first and expands it. This kind of analogy is always associated with repetition in an appropriate way. For example:

**... his cloudy tresses,
Gleamed like drifting snow his tresses,
Glared like Ishkoodah, the comet,
Like the star with fiery tresses.**

[Longfellow 1967:60];

**Down he hewed the boughs of cedar,
Shaped them straightway to a framework,
Like two bows he formed and shaped them,
Like two bent bows together.**

[Longfellow 1967:83];

1) The second simulation helps to fully reveal the object being simulated, while at the same time bringing additional features to the perception of it. For example:

**... Saw the remnants of our people
Sweeping westward, wild and woeful,
Like the cloud-rack of a tempest,
Like the withered leaves of Autumn!**

[Longfellow 1967:194];

**From the brow of Hiawatha
Gone was every trace of sorrow,
As the fog from off the water,
As the mist from off the meadow.**

[Longfellow 1967:196];

In The Song of Gayavata, there is a real series of side-by-side analogies intertwined with anaphora. It should be noted that the traditional folklore methods necessary for the creation of parallelism and repetition, which are widely used in Longfellow's poem, are an important feature

of the poetic syntax of "Song". Such an analogy serves as the main method of image clarity and poetic melody. For example:

**And again the wigwam trembled,
Swayed and rushed through airy currents,
Through transparent cloud and vapour,
And amid celestial splendours
On the Evening Star alighted,
As a snow-flake falls on snow-flare.**

The analogy can also encompass, wrap around the author's story, while at the same time completing the narrative in a compositional way. Chapter VII, entitled Hiawatha's Sailing, may be one such example "**Like a yellow of autumn Like a yellow water-lily**" begins and ends the story of Gayavata making a pie (narrow and longboat) with an analogy.

The introduction to folklore in the poem, though rare, reinforces the constant analogies. In particular, the glistening reflection of the river, the lustre, and the hair that Mejekivis has ruined are likened to the light of a comet (... **Glared like ishkoodah, the comet**), (... **Like the sunbeam in the water**), (... **Painted like the leaves of Autumn, Painted like the sky of the morning**).

Folklore traditions are also reflected in the choice of analogies. Their source is, first and foremost, the life of the Indians in the heart of primitive nature. In G. Longfellow's poem, man and nature acquire a whole; which is the specific basis for analogies, such as the transfer of human life, activities, behaviour, the human condition to nature, or, conversely, the transfer of human characteristics to nature.

Just as the poetic revival of the world around is a feature of ancient folk mythology, the sources and origins of G. Longfellow's poem "Song of Gayavata" are Indian myths and legends taken mainly by the American historian and ethnographer G.R. Sculkraft. The main realities of the parables in The Song of Gayavata can be classified as follows:

I. household items of the Indians (53 in total), which include hunting and fishing (a bow, f bow-string, a cord, an arrow, a birch-canoes, paddles), warfare (a war-club, a lance, an arrow), household appliances (a wigwam, a heart-stone, curtains of a wigwam), and b.q.

II. the surrounding fauna and flora (48 in total) - animals (a bison, a panther, a deer, an antelope, a wolf, an otter, a squirrel), birds (an eagle, a flamingo, a crow, a magpie, a robin), insects (a wasp, a spider, a cricket, a battle, a hornet, a dragon-fly), trees (a willow, a birch, an oak tree, a pine-tree), flowers, grasses, shrubs (a water-lily, a lily, prairie, grasses, reeds, rushes);

III. natural phenomena (24 in total) - waters (far-off waters, water, a river, a streamlet), sun and moon, sky, stars, wind, rain, fog, snow, thunder, etc.

Most of the analogies are original, only in the style of the song, without silence, and blend into the author's fluent, calm story about the life and heroism of Gayavata. In addition to individual analogies, Longfellow often uses such traditional analogies: "**... her hair was like the**

sunshine", "... the singing, fatal arrow, Like a wasp it bussed and stung him" "Light he thought her as a feather".

The author shows the total animate and inanimate nature in motion and in the process of development - natural phenomena are compared with the life of man and animals. Longfellow Po-Pok-Kiwis dances create spectacular views of rising sandstorms (**... the sand was blown and sifted Like great snow-drifts o'er the Landscape, Heaping all the shores with Sand Dunes – XI, 116), (... And the Fir-Tree... Rattled like a shore with pebbles – IV, 84)**and create other landscapes.

In descriptive analogies, the image of the sun is relatively common and can come as a subject as well as an object of solar analogy. The subject of the analogy is Hiawatha and Mudjekeewis, a vivid expression from Chapter IV:

**Where into the empty spaces
Sinks the sun, like a flamingo
Drops into her nest at nightfall
In the melancholy marshes**

[Longfellow 1967:64];

In this example, the sun is now the object of simulation:

**On their faces gleamed the firelight,
Painting them with strokes of crimson,
In the eyes of old Nokomis**

Here the image of the sun is used by the author for a romantic description of the hero's appearance.

The analogies in The Song of Gayavata combine with a system of other figurative expressions and figurative expressions to enhance their emotional and expressive effect on the reader. For example, the analogy highlights a metaphor and concretizes its significance.

**Many a daylight dawned and darkened,
Many a night shook off the daylight
As the pine shakes off the snow-flakes
From the midnight of its branches;**

[Longfellow 1967:178];

Due to the method emphasized by the anaphora and amplified by the analogy, the metaphorically of the passage becomes more pronounced and the impression of the tragic nature of the situation is obtained:

**All the earth was sick and famished;
Hungry was the air around them,
Hungry was the sky above them,
And the hungry stars in heaven
Like the eyes of wolves glared at them!**

The main task of figurative simulation in The Song of Gayavata is to provide figurative expressiveness. "Analogy," says I.R. Galperin, "is a powerful tool for describing appearances and objects, just like a metaphor, and helps the author's worldview to be strongly expressed by clarifying the writer's attitude to the facts of objective reality" [Galperin 1958: 167].

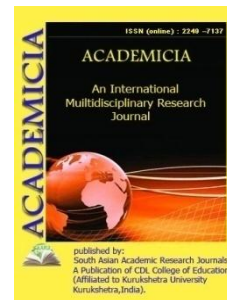
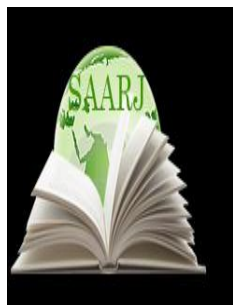
The distinctive style of Longfellow's poem "Song of Gayavata" is evident when observing an expressive medium such as repetition (lexical, syntactic, and phonetic).

The variety of repetition is one of the leading stylistic features of folk oral poetry of different peoples. For example, in folk tales, "repetition is the main principle of building a work, which is primarily associated with the repetition of content" [BES 1998: 521].

Exact repetitions The style of Longfellow's poem provides a variety of folklore. The poet subtly used repetition in putting Indian folk singing poetry into his style.

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HEART-SHAPED LINDEN (TILIA CORDATA)

Rustamova Mekhrinigor Ibrokhimjon kizi*

*Zoo Techniques Faculty,
Technology of cultivation and,
Processing Medicinal Plants Department,
Fergana State University, UZBEKISTAN
Email id: fate040498@mail.ru

ABSTRACT

The article provides an overview of the use of linden in scientific and folk medicine. In the work anti-inflammatory, antioxidant, wound healing, and antitumor properties of linden are investigated. Linden flowers" are used as a bactericidal agent for rinsing the mouth for angina and other diseases. In folk medicine, infusions and teas of linden flowers are well recommended as a diaphoretic, diuretic, weak antispasmodic, secretolytic agent for fever and colds, as well as for inflammation of the kidneys and bladder. These kinds of plants include tannins, carbohydrates, glycosides, essential oils, bitterness, fats, proteins, alkaloids, colorants, vitamins, enzymes, resins, trace elements, and phytoncides. It has anti-inflammatory, antipyretic, diaphoretic, expectorant, diuretic, analgesic effect. There is a moderate bactericidal, anticonvulsant and sedative effect, mild choleric and antispasmodic properties in linden. It promotes the elimination of toxins and metabolites.

KEYWORDS: *Medicinal Forms, Tilia Cordata, Pharmacognosy, Heart-Shaped Linden Flowers, Phytopreparations, Biological Active Substances, Folk Medicine.*

INTRODUCTION

To get rid of any disease, a person often makes a choice in favor of drugs that include elements of plants. Since ancient times, people have tried to get cure from what grows around them. Since then, most plants are considered medicinal, having a positive effect on human health. At the same time, each of them refers to flowers, herbs or shrubs. Plants that are used for medicinal purposes contain many chemical compounds that are responsible for healing properties. These kinds of plants include tannins, carbohydrates, glycosides, essential oils, bitterness, fats, proteins, alkaloids, colorants, vitamins, enzymes, resins, trace elements, and phytoncides. One of the most

important issues of modern healthcare is to provide the population with safe, effective, high-quality and affordable medicines.

Currently, the domestic pharmaceutical market is experiencing a significant increase in the supply of herbal preparations, which in turn requires improved quality control of the original plant raw materials and the range of dosage forms made from. In medicinal products, it is difficult to overestimate the role of various phytocompositions, especially in this regard are long-known plants that are re-evaluating their importance and demand.

Main Part: The expediency of anti-inflammatory drugs contained phytocompositions confirms the current popularity of herbal preparations. As for medicinal forms, syrups are in great request today. Preparations from medicinal plants have such positive properties as the presence of complexes of biologically active substances.

They are widely recommended in the complex treatment of various diseases, characterized by low toxicity, softness and reliability of action, the possibility of long-term use without the risk of side effects. The components of phytocompositions, each of which has a certain pharmacological spectrum, potentiate the action of each other, usually without causing side effects. One of these objects is the heart-shaped linden flowers. The range of the heart-shaped Linden extends from southern Britain and Central Fennoscandia to the Central regions of Western Siberia, the Caucasus, Bulgaria, Italy and Spain. The Northern range of natural distribution of a Linden heart-shaped: in Norway at 66° nl, in Finland and Arkhangelsk region is near to 64° nl., in Sweden and the Republic of Karelia at 63° nl., in the republic of Komi - about 62° nl., in the Khanty-Mansi autonomous district – Ugra - in the vicinity of 61° nl., in Tomsk region — 57°47' nl. The common lime is a large tree up to 25-30 m with a spreading crown. Young branches are with a smooth bark, old ones are with a deep-spreading gray-black bark. The leaves are alternate, long-stemmed, somewhat unequal, and heart-shaped with a long pointed tip, serrate, dark green above, glabrous, light below, grayish-green, with tufts of hairs in the corners of the veins. Stipules are paired, reddish, falling off early in spring. The flowers are collected 3-15 in half-cones with a large yellowish-green bract leaf, yellowish-white, fragrant. Calyx consists of 5 free sepals; Corolla consists of 5 separate petals. The stamens are numerous, fused into bundles: a pistil with an upper ovary, consisting one column and 5 stigmas. The fruit is a rounded, pubescent single-or double-seeded nut. It blooms in late June; fruits ripe in September.

RAW. Medical uses have dried inflorescences with Linden bracts, called "Linden flowers" (Flores Tiliae). The raw material is whole flowers in half-columns; their peduncle is fused with the Central vein of the bract leaf. The bract leaves are elongated-lanceolate with a blunted tip. The color of the raw material in the mass is greenish-yellow, the smell is weak, pleasant, and the taste is sweet, with a feeling of mucus, slightly astringent.

DISTRIBUTION AND HARVESTING

It grows in deciduous and mixed forests of the foothill zone, low-mountain and mid-mountain zones. Most often found as a companion breed in mixed and oak forests. It is often bred in parks, on the streets of localities and in roadside alleys.

Stocks of raw materials are significant, but the collection of flowers is very labor-intensive and practically carried out only from the lower branches of detached trees. The collection of flowers

is carried out for 10-15 days during the blooming period of most of them, as the faded flowers turn brown when dried. Expiry date is 2 years.

CHEMICAL COMPOSITION

Inflorescences contain glycoside tiliacin, containing phytoncidal activity, flavonoid glycoside hesperidin, ascorbic acid (up to 31.6%), essential oil, which includes alcohol farnesol, tannins, saponins, mucus, carotene, sugar, wax. The flowers contain: sugar, essential oil (0.05%), which includes sesquiterpene alcohol farnesol C₁₅H₂₆O (the main component of the essential oil); polysaccharides, including galactose, glucose, rhamnose, arabinose, xylose and galacturonic acid; triterpene saponins; flavonoids, carotene, flavonoid glycoside hesperidin C₂₈H₃₄O₁₅, tiliacin glycoside, tannins, ascorbic acid, carotene, wax, mucus, phytoncides, bitter substances close to rutin, retinol, etc.

APPLICATION

"Linden flowers" have a diaphoretic and bactericidal effect. In medical practice, "Linden flowers" have long been used as an infusion as a diaphoretic for various colds. They are part of sweatshop fees (teas). "Linden flowers" are used as a bactericidal agent for rinsing the mouth for angina and other diseases. In folk medicine, infusions and teas of linden flowers are well recommended as a diaphoretic, diuretic, weak antispasmodic, secretolytic agent for fever and colds, as well as for inflammation of the kidneys and bladder. In all cases, an infusion is used, prepared from a handful of linden flowers, brewed with a glass of boiling water (strain after 10 minutes). It is recommended to take 2-3 glasses of hot linden tea a day. Linden flowers are used to prepare poultice compresses for boils, as well as to strengthen hair. Chopped fresh buds or leaves are applied to burns, inflamed mammary glands, and inflamed skin areas as an anti-inflammatory, emollient. Powder of linden leaves is used to stop nosebleeds. Linden tar is smeared eczema affected areas. Wood in a calcined and finely ground form is taken inside for flatulence and poisoning. Nevertheless, not a single study reflects the technology of obtaining polyfractional extracts based on linden flowers. Therefore, the purpose of our work was to study the presented official medicinal forms of Linden cordate in the pharmaceutical market.

PHARMACOLOGIC EFFECT

It has anti-inflammatory, antipyretic, diaphoretic, expectorant, diuretic, analgesic effect. There is a moderate bactericidal, anticonvulsant and sedative effect, mild choleric and antispasmodic properties in linden. It promotes the elimination of toxins and metabolites. It is interesting to note that taking linden infusion in healthy people does not cause increased sweating.

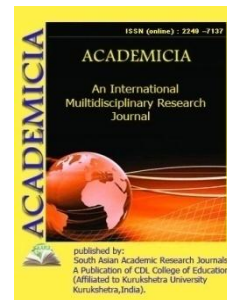
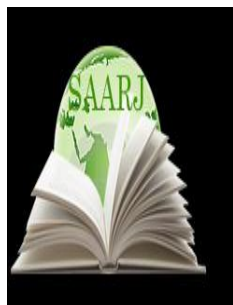
CONCLUSION

The wide popularity of herbal medicines testifies to the special need to develop natural preparations of linden cordata, including the use of polyfractional extraction.

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THE CONTENT BASED APPROACH IN TEACHING FOREIGN LANGUAGES AND ITS ROLE IN THE FORMATION OF MULTILINGUAL PERSONALITY

Khamidova Nazokat*; Turdiyeva Nargiza Mardonovna**

*Master Student in Tourism Management of “Silk Road”,
International University of Tourism Samarkand,
UZBEKISTAN

Email id: Aysunadoniyor1993@gmail.com

**Senior teacher of SL,
“Silk Road” International University of Tourism,
Samarkand, UZBEKISTAN

Email id: nargizaturdiyeva94@gmail.com

ABSTRACT

Content-based learning has gained broad prominence in the teaching of second and foreign languages. Despite its recorded benefits, many English teachers do not completely leverage its benefits for language learning that in the sense of the material the language being studied and used is taught. In this article, an approach to language teaching based on content and how it can be used to develop a multilingual personality are discussed. This article aims to connect theory to experience, help teachers to identify what can be considered as a content and how CBI can be used in teaching process. Furthermore, it is going to discuss whether content based approach can be one of the first steps of multilingual education. Finally, we are presenting a real-world project tailored for intermediate EFL students. The design and suggested activities might be easily transferable to other settings.

KEYWORDS: Multilingual Education, Multilingual Personality, Content Based Approach, Teaching Methods.

INTRODUCTION

A Czech proverb that translates to 'You are as many times human as you know the languages. Often people find themselves involved in two, three or even more cultures (business trips abroad, tourism, mobility of young scientists, interethnic marriages, etc). Speaking in several foreign languages has become today's key to success in the professional, and personal, sphere. Therefore, multilingualism that becomes a significant factor in social mobility and causes the intent of language education to shift. Now proficiency in language is not a target goal anymore. The purpose is to bring up multilingual personality of a new type. In order to build up multilingual personality multilingual education has to be implemented into National Educational system. Let's face that implementation of this educational system takes a huge amount of effort and time. For the first step the attention should be paid into method of teaching L2. Content based approach of teaching foreign languages is considered to be the most appropriate method to achieve our goal and alternative variant for multilingual education.

Multilingual education: Multilingual education typically refers to "first-language-first" education, that is to say, mother-tongue-started education and transitions to foreign language¹. Since English is distributed worldwide, education mostly aims to teach English but also includes national languages and minority languages. Through education languages are taught, preserved, and improved. Schools should provide lots of opportunities for multilingualism because of the amount of hours and years children spend in school². For minority language speakers or low status languages, multilingual education that aims to preserve and improve the first language along with other languages is correlated with the best results not only in the L1 but also in the L2 and other curriculum areas. Meta-analysis of longitudinal findings on minority children in the United States published by Genesee and Riches (2006) indicates that students receiving some primary-grade L1 reading instruction are at least at the same level quality and even higher success rates in L2 reading in some cases than learners with similar linguistic and cultural backgrounds who did receive only initial English literacy and instruction. Mohanty (2006) points out that psychological and educational social aspects exist benefits if the first language and other languages in India are preserved. In addition to this, UNESCO promoted multilingual education for these reasons:

- It sets stable base for learning
- It improves learning outcomes while encouraging dialog and interaction with improved contact and cooperation between learners and teachers comprehension
- By stressing comprehension and imagination rather than repetitive memorization, it increases the standard of education³

Stages of an MLE Program

A broad understanding of the MLE programs (UNESCO, 2003, 2005) indicates that teaching should take place in the following stages:

- Phase I-The learning takes place entirely in the home language of the child
- Phase II-developing mother-tongue fluency. Oral introduction L2.
- Phase III-oral fluid buildup in L2. Literacy introduction on L2.
- Phase IV-lifelong learning using both L1 and L2.

In case of Uzbekistan Russian – Uzbek or English – Uzbek classes could be implemented from nursery schooling. However, a big issue would be a great obstacle on this way. Firstly, educators and teachers must be educated in a multilingual/ multicultural environment. Consequently, there is lack of multilingual teachers. This leads to the second issue that teachers should be given appropriate training to enable them to teach in the mother tongue of learners (L1) and in the second language (L2). These changes should be made step by step as it takes long time and foundation. As some researches show that the one of the proper way of implementing multilingual education is Content Based Approach or Content Based Instruction. A strategy aimed at ensuring the 1 + 2 formula (i.e. knowledge of two additional languages in addition to the first language) involves the combination of early exposure to the first additional language, both through conventional formal training and additional hours of integrated language and content (Perez-Vidal,2009). Today, academic institutions can enhance communication skills in several languages by three obvious means: firstly, through CLIL⁴ and ICLHE⁵; secondly, through the organization of group exchanges; thirdly, through the use of the Internet to link local learners to learners from various countries (Prieto – Arranz, et al. 2013). Consequently, in case of Uzbekistan, firstly implementing Content Based Instructions in teaching languages is considered a proper first step to creating multilingual environment and personality.

Content Based Approach or Content Based Instruction:

Content-based teaching has become increasingly common in recent years as a way of learning linguistic skills. Lyster (2011) defines the word CBLT as "an educational approach in which non-linguistic material, including topics such as social studies or mathematics, is taught to students through the use of a language that is not their first language, so that when they are already learning curriculum content, they also learn a foreign languages". Lyster(2011) continues, Although the use of a second language to teach content is no stranger to the educational landscape, content-based language teaching (CBLT), which combines language teaching and subject learning, stands out as a highly effective and efficient way to funnel resources towards language acquisition without placing further pressure on an already heavy school curriculum. It has strong ties to project work, task-based learning and a comprehensive approach to language instruction and has become increasingly popular within the secondary education field of state schools. Students are focused on learning about something during the lecture. From a serious science subject to their favorite pop star, or even a topical news story or movie, this could be anything that interests them. Using the language they are learning to learn, rather than their native language, they learn about this subject as a method to gain awareness and thus improve their language skills in the target language. It is considered to be a more normal way of learning language capacity and one that more closely relates to how we learn our first language originally.

What does a lesson on content-based instruction look like?

Stoller (2002) lists eight practices that allow for natural content integration:

- Extended input, practical output, and language and content understand feedback.
- Gathering, processing and reporting of information Integrated skills (use of reading , writing , speaking, and listening in natural classroom activities)

- Task-based activities and project work, enhanced by the principles of cooperative learning, Strategy training (to produce strategic learners more metacognitively).
- Strategy planning (to develop strategic learners with greater metacognitiveness)
- Visual help (i.e. photos, maps, language ladders etc.)
- Guidance on contextualized grammar
- Culmination of synthesis activities (written and oral knowledge shown)

The creation of a CBI lesson can be approached in many ways. This is one way to go: Preparing

- For classes, select a subject of interest.
- Find three or four appropriate sources addressing different aspects of the topic. These may be web pages, reference books, lecture audio or video, or even actual people.

While having the lesson

- Divide the class into small groups and assign a small research task to each group, and use a source of knowledge to help them accomplish the assignment.
- And after they do their work they form new groups with students that use other sources of information and exchange and compare their information.
- There will then be some output as the end result of this knowledge exchange which may take the form of a community report or some kind of presentation.

F.ex, instead of teaching that bun is bulochka in Russian or bread is xleb, in content based approach it would be “Russian cuisine” and all of the vocabulary related this topic. Giving the grammar topic would be contextualized as well, like

What food would you rather eat in Russian Cuisine?

I would rather have

I would rather not have..... (Just tell that it's synonym of prefer)

By these questions and answers students can easily understand and use the structure Would Rather without any grammatical explanation. As well as use different vocabulary from the lesson.

Some issues which can be found in CBI:

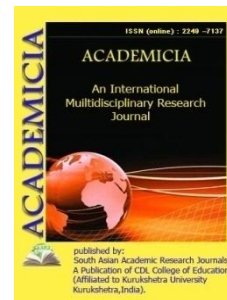
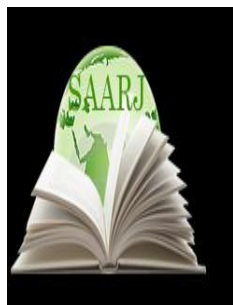
- In monolingual classes in particular, overuse of the native language of the students during parts of the lesson can be an issue. Because the lesson isn't explicitly focused on language practice students find using their mother tongue much easier and faster. Seek to share with students the reasoning and clarify the benefits of using the target language rather than their mother tongue.
- It can be difficult to find sources of information and texts that can be understood at lower levels. Even the exchange of information in the target language may cause significant difficulties. One way around this at lower levels is either to use texts in the students' native language and then get them to use the target language for exchanging information and end product, or to use texts in the target language⁶

CONCLUSION:

In this article we have highlighted that multilingual language skills enables people to communicate and work adequately in different circumstances, especially in academic achievements and social purposes. We have noticed the contribution of Content Based Approach of teaching foreign languages to the promotion of multilingualism. It seems to be motivating for both teachers and learners. While for the teacher and the students CBI can be both stressful and hard, it can also be very energizing and gratifying. The degree to which you adopt this approach may well depend on your students' desire, the institution you work in and the available resources within your environment. Try to get the students in there. Get them to help you decide which topics and topics the lessons are based around and find out how they feel compared to your usual lessons. They'll be the test of your performance in the end. The existence of some trends in the process of implementation of these learning methods are true, however languages for everyone and national competitiveness for everyone.

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MANUSCRIPTION COPIES OF "BIRRUL VOLIDAYN" WORK

Bobonazarov Davronbek Toranazar Ugli*

*Master,
UZBEKISTAN

Email id: bobonazarov.d.94@gmail.com

ABSTRACT

This article provides information about manuscript copies of "Birrul Volidayn" work, as well as hadiths and treatises on respect for Islamic morality, especially for parents. Accordingly, the last hadith can be understood as follows: A woman is a great conspirator for a man when she prevents him from doing good to his parents, seduces her husband and separates him from his parents. The work is a wonderful collection of small pamphlets of famous scholars on various topics. It carried out by Sayyid Abdulhay Kattani (1302-1382 / 1884-1962) who was Western scholar and historian.

KEYWORDS: Hadith, Islamic Morality, Abu Abdullah Muhammad Ibn Ismail Bukhari, Manuscript Work, Parents.

INTRODUCTION

Respect for parents is reflected in the Qur'an and hadiths. In each period, special attention was paid to this issue. Books have been written on this subject, and a separate chapter or section has been devoted to the collections of hadith.

Main part: Books, pamphlets, and works on Islamic morality, especially those devoted to respect for parents, began to be written in the eighth century AD. Our great compatriot, Sultan of Hadith Abu Abdullah Muhammad ibn Ismail Bukhari (194-256 / 810-870), wrote one of the first independent works in this direction. Haji Khalifa said in "Kashfuz-zunun": "this book belongs to Abu Abdullah Muhammad ibn Ismail al-Bukhari, who died in 256". Muhammad ibn Zakrumah Varraq narrated this book from him. This is one of the existing classifications of that person" Ibn Hajar mentioned. In addition, following ancestors Hafiz Ibn Hajar in "Al-Mu'jamu-l-mufahras", "Fatxu-Boriy", Hafiz Shamsiddin Sahavi in "Al-Qovlu-l-badi'u, Ruvdani in "As-Silatu" and Siddiq Hasankhan in "Al-Hittotu" are said that "Birrul Volidayn" belongs to Imam Bukhari.

It has been discovered that two copies of the work are kept in libraries around the world today. The first copy is currently kept in the "Maktabatul Qasri al-Maliki al-Amir" library in Morocco under number 452. The work is a wonderful collection of small pamphlets of famous scholars on various topics. It carried out by Sayyid Abdulhay Kattani (1302-1382 / 1884-1962) who was Western scholar and historian. The collection consists of 270 pages and is written in Nasx.

Publications copied or prepared from the manuscript were found and studied through the websites. According to this, the titles of 26 works are included in the content of the complex together with the name of the author. The table of contents is written in four rows. In a top-down sequence, Imam Bukhari and his "Birrul Volidayn" are ranked 17th. The work begins on page 144 and ends on page 151. Lines are between 20-21. The beginning of the hadiths, حدثنا (haddasana), is highlighted in red. The first page reads:

كتاب بر الوالدين.

تأليف الامام ابو عبدالله محمد بن اسمعيل بن ابراهيم البخاري.

رواية ابو بكر محمد بن احمد دلويه عنه.

رواية ابو يعلى حمزة بن عبد العزيز المهلبى عنه.

(Translation ... "Birrul Volidayn" book.

The work of Imam Abu Abdullah Muhammad ibn Ismail ibn Ibrahim Bukhari:

Narrated by Abu Bakr Muhammad ibn Ahmad Dalliwayh:

Narrated by Abu Ya'la Hamza ibn Abdulaziz Mahlabi.)

Starting from the second page of the collection of pamphlets, two pages of "Birrul voliday" are placed on one page. At the top of the first page is the word بسم الله الرحمن الرحيم (Bismillahir rahmanir rahim). After that, 4-5 lines were left and the hadith began directly:

أنبأنا أبو يعلى حمزة بن عبد العزيز المهلبى أنبأنا أبو بكر محمد بن أحمد بن دلويه الدقاق رحمه الله في شهر سنة 328 حدثنا محمد بن إسماعيل البخاري أبو عبد الله الجعفي قال...

(Translation ... Abu Ya'la Hamza ibn Abdulaziz Mahlabi informed us. Abu Bakr Muhammad ibn Ahmad ibn Dalliwayh Daqqaq (may God have mercy on him) informed us in 328. Muhammad ibn Isma'il Bukhari narrated the hadith of Abu Abdullah Jufi and - said).

Here are the names of Imam Bukhari, his disciple, and his grandson's disciple. Then, each hadith begins with the word حدثنا (haddasana) by Imam Bukhari.

The first hadith:

حدثنا أبو الوليد هشام بن عبد الملك، حدثنا شعبة، عن الوليد بن العيزار: سمعتُ أبا عمرو الشَّيباني، يقول: أنبأنا صاحب هذه الدار، وأوماً بيده إلى دار عبد الله- يعني ابن مسعود رضي الله عنه قال: سألت نبيَّ ﷺ: "أيَّ العمل أحب إلى الله تعالى؟ قال: "الصَّلَاةُ عَلَى وَفَّيْهَا"، قلت: ثم أي؟ قال: "ثُمَّ بَرُّ الْوَالِدَيْنِ". قلت: ثم أي؟ قال: "الْجِهَادُ فِي سَبِيلِ اللَّهِ". قال: حدثني بهن، و لو استزدته لزدني.

(Translation ... Abul Walid Hisham bin Abdulmalik (h 133-227) narrated the hadith to us.

He said, "Shu'bah narrated it to us." He said, "Valid ibn Ayzar informed me." He said that Abu 'Amr al-Shaybani said, "The owner of this yard told us a hadith," referring to 'Abdullah's yard. He said, "The Prophet, may Allah bless him and grant him peace, was asked, 'What is the most beloved thing to Allah Almighty?' I asked. He said, **"Prayer at the right time."** "Which one after that?" I said. He said, **"Do good to your parents."** "Which one after that?" I said. He said, **"Then strive in the way of Allah."** "They told me this, and if I asked more, they would add it again.")

Imam Bukhari began the "Kitab al-Adab" section of "Al-Jame 'as-Sahih" and "Al-Adab al-Mufrad" with the same document and text. This hadith fully demonstrates the importance of doing good to one's parents. Probably from this point of view, the muhaddith has always put it first.

The latest hadith:

حدثنا آدم بن أبي إياس، حدثنا سعيد، عن سليمان التيمي، قال: سمعت أبا عثمان النهدي، عن أسامة بن زيد، عن النبي ﷺ قال: **"مَا تَرَكْتُ بَعْدِي فِتْنَةً أَضُرُّ عَلَى الرِّجَالِ مِنَ النِّسَاءِ"**.

It is narrated on the authority of Usama ibn Zayd that the Prophet, may Allah bless him and grant him peace, said, **"I did not leave behind me a conspiracy that is more harmful to men than to women."**)

Imam Bukhari used his method in quoting the hadiths in the work. That is, the play narrates hadiths that are directly related to the subject and hadiths that require research. As in "Al-Jame 'al-Sahih", a person who reads some hadiths in "Birrul Volidayn" will not know how to relate them to the subject. But all the hadiths in the work state that doing good to one's parents is one of the best deeds, what to do is good for both of them, what cannot do good to them lead to, and what can prevent them from doing good. Accordingly, the last hadith can be understood as follows: A woman is a great conspirator for a man when she prevents him from doing good to his parents, seduces her husband and separates him from his parents. It is also said that a man should not be prevented from doing good to his parents by listening to his wife.

The following sentences are written at the end of the copy:

آخر الكتاب و الحمد لله على كل حال

عَلِّقَهُ لِنَفْسِهِ الْعَبْدُ مُحَمَّدُ بْنُ مُحَمَّدٍ بْنِ مَنْصُورِ بْنِ عَلِيٍّ الْحُسَيْنِيِّ الْحَلَبِيِّ نَهَارَ الثَّلَاثَاءِ 28 شَوَّالٍ لِسَنَةِ 887 بَعْلُو جَامِعِ الْأَزْهَارِ بِالْقَاهِرَةِ حَمَاهَا اللَّهُ تَعَالَى. اللَّهُمَّ صَلِّ عَلَى سَيِّدِنَا مُحَمَّدٍ وَآلِهِ وَصَحْبِهِ وَسَلِّمْ.

(Translation ... "The end of the book. Praise be to Allah for all! it (ie, Birrul Volidayn) was poor Muhammad ibn Muhammad Mansur ibn Ali Husseini Halabi on Tuesday, Shawwal 28, 887. Al-Azhar University in Cairo (Allah Almighty) O Allah, peace and blessings be upon our Master, Muhammad, his family and his Companions".

Thus, the work ended. The full name of the calligrapher who copied it is Abu Ja'far Muhammad ibn Muhammad ibn Ali ibn Hashim ibn Mansur Husayn Musavi Halabi Hanbali. He was born in 863. He received his first education in Halab. He then traveled to Damascus, Cairo, Mecca and Yemen in search of knowledge. In 895, he is said to have been alive. The year of his death is not clear.

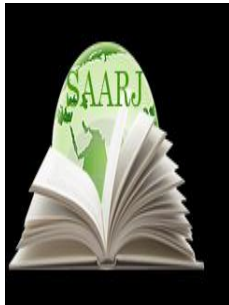
The second copy is kept under number 1545 at the “Al-Jihad al-Libya” Research Center in Libya. It is called the Book of Hadith {كتاب في الحديث}. Its original name and the name of its author are also unknown. However, according to the first copy, this is also a copy of Imam Bukhari's “Birrul Volidayn”, because the hadiths in it correspond to the hadiths of the first copy. This source, like the previous one, begins with a narration by Imam Bukhari from Abul Walid Hisham bin Abdulmalik.

CONCLUSION

The hadiths that encourage one to do good to one's parents are mainly found in the works of Imam Bukhari, such as “Al-Jame 'as-Sahih”, “Al-Adab al-Mufrad”, and “Birrul Volidayn”. In fact, the scholar could have limited himself to narrating the most reliable, well-known hadiths in “Al-Jame 'as-Sahih”. However, the muhaddithin, who deeply understood how important it is to do good to one's parents, wanted the hadiths on this subject to be in a separate collection. The form of the work is compact and the number of hadiths in it is small, but it is a source that is complete and of high interest in its subject matter.

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CSR PRACTICES IN STATE BANK OF INDIA AND ITS IMPACT ON CREATING LOYAL CUSTOMERS: A STUDY IN MANGALURU CITY; KARNATAKA

Ms. Sowmya Hedge*

*Assistant Professor,
SDM College of Business Management,
Mangaluru, INDIA

ABSTRACT

The objective of this research paper is to study the perception of customers towards CSR practices and its impact on creating loyal customers. The study found that all the respondents are having moderately positive perception towards the CSR practices of the Bank and the independent impacting variable of customer satisfaction and ethics are significantly influencing on the dependent variable that is customer loyalty. The findings of the study can assist the bankers to concentrate more on CSR practices, so that customers will be having positive approach towards the bank and they will be loyal. The study can assist the scholars in upcoming studies related to CSR and customer loyalty.

KEYWORDS: *Corporate Social Responsibility, Customer Perception, Customer Satisfaction, Ethics, Customer Loyalty.*

INTRODUCTION

Responsibility towards society is an idea that has been of concern to mankind for many years. Corporate social responsibility is not about money contributed by the companies to charity, it's all about companies overall involvement in community activities that improve the quality of people's lives. In the international business community, CSR has become one of the prominent subject and progressively becoming a mainstream activity. Over the last two decades it has become an increasing concern to the business world. It is not an option but it is mandatory for all the business entities to maintain high ethical standards.

The concept of CSR has evolved considerably since the time when concerns for society first surfaced in 1950 (O'Riordan and Fairbrass 2008; Carroll 1999; Freeman 1984). Frederik (1960) referred to CSR as willingness of the business entity to use the resources for the wide benefits of the society and not for achieving personal goals of the company. World Business Council for Sustainable Development (WBCSD) (2003) defined it as, "Corporate Social Responsibility is the continuing commitment by business to contribute to economic development while improving the quality of life of the workforce and their families as well as of the community and society at large."

According to European Commission CSR as "the responsibility of enterprises for their impacts on society". To completely meet their social responsibility, enterprises "should have in place a process to integrate social, environmental, ethical human rights and consumer concerns into their business operations and core strategy in close collaboration with their stakeholders" This definition asserts the need to assimilate the investor fears into the business operations and the core policy of the business.

CSR practices of SBI towards customers:

SBI has committed to improve community wellbeing through various CSR activities primarily in healthcare and education. Bank has contributed towards environment protection, sports, rural development and disaster relief. The focus of the CSR activities is to help underprivileged section of people to meet their basic requirements and spreading to them opportunities to fulfil their desires for better life.

The Bank has implemented highly robust grievance redressal system and instrument to enable its customers to voice their concerns and response. Bank has launched web-based complaint Management System (CMS) designed to serve as a Single point online grievances housing and restoring system for its customers. While the Bank attempts to achieve the highest standard in customer service, it has also put in place a Board sanctioned compensation Policy to compensate the customer financially in the unlikely event of any slippage in services extended. The Bank ensures that the aggrieved customer is compensated without having to ask for it. State Bank of India intensely believes that a satisfied customer is the most powerful factor for the prosperity of its business. The Bank was the first in India to introduce a code of Fair Banking Practices called "Towards Excellence". The code imitated the commitment of the Bank to provide Banking services of a high order to individual banking customers. The Bank had adopted code of Fair lending practices and it is providing banking services in a professional way, no discrimination among the customers on the basis of caste, religion, sex etc. Bank is fair and honest in advertising and marketing the loan products and timely revelation of terms, costs, rights and liabilities as regards loan transaction. Bank is scattering general awareness about possible risks in contracting loans and encourages customers to take independent financial advice and not act only on representations from banks.

REVIEW OF LITERATURE:

(Irshad & Rahim, n.d.) Conducted a sample survey from government sector employees, private sector employees and university students, to examine the influence of CSR factors on Customers Satisfaction and Loyalty in the presence of corporate Image as a moderator in economy of Pakistan. There is positive effect of Corporate Social Responsibility on the Customers

Satisfaction and Loyalty and moderating effect of corporate high image results more strong relationship between CSR and Customer Satisfaction and Customer Loyalty.

(Lei Wang and Heikki Juslin 2011) The authors determined the effects of personal values on individual perceptions of CSR issues. The authors investigated 980 Chinese young people, finding that: Chinese youth displayed a mixed value structure of traditional and emerging western values, stronger self-transcendent values than self enhancement values, and stronger openness values than conservation values. Personal values have a significant effect on perception of Chinese youth of CSR. The practical ethical contribution of this research suggested that value cultivation is a good way to develop ethical behavior and responsibility, which in turn affect the development of CSR in china.

(Perrini et al., 2010; Lee et al, 2012) CSR has found to have a positive effect on consumer loyalty which refers to the repeated purchase/use of a product or service over a period of time. Since enhancing consumer loyalty is of crucial importance for companies because of its direct link with financial performance, companies can leverage the effect of CSR in order to survive and prosper.

(Pérez & Del Bosque, 2015) This study result supports that CSR perceptions influence customer affection and behavior. The results of this paper contribute to a better understanding of how CSR perceptions can positively impact customer recommendation and repurchase behaviour, especially through the triggering of customer satisfaction. CSR initiatives seem to be reporting better results for savings banks because of their long CSR tradition. However, some interesting effects of CSR perceptions on customer emotions are also observed in the commercial banks subsector.

(Osakwe & Yusuf, 2020) Conducted a survey for selected customers of bank in Nigeria. The study has contributed towards influence of CSR beliefs on customer loyalty by considering the factors like brand trust and bank reputation. CSR beliefs foster brand trust and brand trust in turn fosters bank loyalty. The study revealed that brand trust is the more powerful mediator and it will foster bank loyalty.

Statement of the problem:

Regardless of the scope of business, customer loyalty is considered as lifeblood of a business. An entity can create a loyal customer by serving in the society ethically and by satisfying its customers continuously. It is less expensive to maintain an existing consumer portfolio than to create a new one with the acquisition of new consumers. Loyalty is consumers' positive attitude which in turn increases an organisation's financial performance. By being socially responsible how a company can create a loyal customer is a topic for discussion.

Objectives of the study:

To study the perception of customers towards CSR practices with reference to SBI and its impact on creating loyal customers.

Scope of the study:

The population for the study are customers of the SBI in Mangaluru city, Karnataka. The variables in the study are customer loyalty (dependent), Impacting factors of CSR that is

customer satisfaction and ethics (independent variable). Data on these variables were collected through the administration of questionnaire (likert scale).

Methodology:

Gathering information in this study is based on five point likert scale questionnaire. Information is gathered from selected 34 customer of SBI in Mangaluru city. Constructed hypothesis is tested by using simple linear regression model in SPSS (20).

Research Hypothesis:

H1: Customer satisfaction has positive relation with customer loyalty

H2: Ethics has a positive effect on customer loyalty.

Data Analysis:

Out of 34 respondents, 48 percent were female and remaining 52 percent were male.

Figure 1: Descriptive statistics of customer perception towards CSR

	N	Mean	Std. Deviation	Std. Error Mean
I think bank is socially responsible one	34	3.74	.751	.129
I believe that bank carries out a lot of socially responsible activities for customers and society	34	3.65	.849	.146
I feel that bank follows good moral principles	34	3.62	.817	.140
I believe that bank has the ability to deliver what it promises.	34	3.50	1.052	.180
I have a more positive perception towards SBI's CSR practices	34	3.53	1.051	.180

To identify customer perception towards CSR practices, descriptive statistics were considered. Table 1 shows in detail the results of the descriptive analysis of each variable of customer perception. Highest mean score is represented in item 1, where the customer think bank is socially responsible one, with a mean score of 3.74 and lowest mean score is represented in item 4, where customer believe that SBI has ability to deliver what it promises, with a mean score of 3.50. The overall mean score of 3.608 indicate that the respondents have moderately positive perception towards the CSR activities of SBI.

Hypothesis Test:

Linear regression analysis

Simple linear regression is used to examine the relationship between dependent and independent variable. Model fits the hypothesis and it is accepted. The figure 2 shows the result of simple linear regression of Hypothesis 1: customer satisfaction variable of CSR has positive relation on customer loyalty.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
	.870	.757	.750	.699

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	48.822	1	48.822	99.834	.000 ^b
Residual	15.649	32	.489		
Total	64.471	33			

a. Dependent Variable: customer loyalty

b. Predictors: (Constant), customer satisfaction

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.604	1.393		1.151	.258
customer satisfaction	.813	.081	.870	9.992	.000

a. Dependent Variable: customer loyalty

Figure 2: simple linear regression analysis

Data in the above figure shows that, the dependent variable is Customer loyalty and the independent variable is customer satisfaction. From the table we can observe that Beta is .813, and t value is 9.992 $F(1,32)=99.834$ and the p-value $0.000<.005$. R square value is 0.757, which means that this model explains 75.7% of the variance. This implies that independent variable significantly influencing on the dependent variable. Therefore, customer satisfaction is positively and significantly related to Customer loyalty, and Hypothesis 1 is supported.

Model	R	R Square	Adjusted Square	Std. Error of the Estimate
	.856 ^a	.733	.725	.734

The figure 3 shows the result of simple linear regression of Hypothesis 2: Ethical variable of CSR has positive effect on customer loyalty.

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	47.251	1	47.251	87.810	.000 ^b
Residual	17.219	32	.538		
Total	64.471	33			

a. Dependent Variable: customer loyalty

b. Predictors: (Constant), Ethics

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.348	1.512		.891	.379
Ethics	.818	.087	.856	9.371	.000

a. Dependent Variable: customer loyalty

Figure 3: Simple linear regression analysis

From the above figure it is understood that all the variables of ethics are significantly influencing customer loyalty. From the table we can observe that Beta is .818, and t value is 9.371, $F(1,32)=87.810$ and the p-value $0.000<.005$. R square value is 0.733, which means that this model

explains 73.3% of the variance and fits. Therefore, ethics is positively and significantly related to Customer loyalty, and Hypothesis 2 is supported.

Figure 4: Correlations table

Variables	Customer loyalty	Customer Sa.	Ethics
Customer loyalty	1		
Customer satisfaction	0.870**	1	
Ethics	0.856**	0.796**	1

**correlation is significant at the 0.01 level (2-tailed)

Figure 4 shows the correlation among all the variables are significant. In this study correlation between all the factors are significant with correlation coefficient range from 0.796 to 0.870.

CONCLUSION AND RECOMMENDATIONS

The study reveals that customers of the bank are having positive perception towards the CSR practices. The result obtained from this research has proved that there is relationship between customer satisfaction practices and ethical practices and customer loyalty. If bank in following ethics in all its activities and satisfying its customers, then it can create loyal customers. Creating loyal customer will help the bank to gain competitive advantage in the market.

In this globalised economy to sustain the market an organization need to focus more on CSR practices. Improved CSR practices will improve the image of the bank and bank need to give more promotion about its CSR activities.

Limitations of the study:

The major limitation of the study is data was collected from the customers of SBI in Mangaluru city. The study result may change if the study is conducted in different place with different impact factors. And convenient sampling is used.

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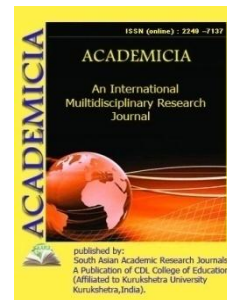
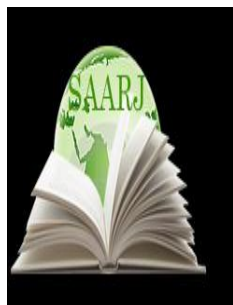
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RIDDLE AS A MEANS OF SPEECH DEVELOPMENT IN PRESCHOOL CHILDREN

Rakhmonkulova Kholida Bosimovna*

*Teacher,

"Department of Preschool Education Methods",
Djizzakh State Pedagogical Institute,
UZBEKISTAN

ABSTRACT

The article emphasizes the relevance of speech development in preschool children, the importance of the formation of such speech qualities as accuracy and expressiveness. The author proves that a folk riddle will be an effective means of developing the speech of a preschooler. An innovative pedagogical technology for the development of speech of older preschoolers in the process of familiarization with various types of riddles is presented.

KEYWORDS: *Pedagogical Technology, Speech Development, Speech Accuracy, Speech Expressiveness, Preschool Child, Folk Riddle, Communication, Preschool Educational Institution.*

INTRODUCTION

Fiction and folklore are important means of forming a child's personality and developing speech, a means of aesthetic and moral education of children.

A preschool educational institution is the first and most responsible link in the general system of public education. Mastering the native language is one of the most important acquisitions of a child in preschool childhood.

The problem of the development of speech of preschool children by means of small forms of oral folk art is of particular importance today.

One of the small forms of oral folk art, in which the most vivid, characteristic signs of objects or phenomena are given in an extremely concise, figurative form, is a riddle.

Solving riddles develops the ability to analyze, generalize, forms the ability to independently draw conclusions, inferences, the ability to clearly highlight the most characteristic, expressive

signs of an object or phenomenon, the ability to brightly and concisely convey images of objects, develops a "poetic view of reality" in children.

Riddles are varied both in topic and content. They reflect human life, flora and fauna, objects of labor and everyday life. There can be several riddles about one and the same object, phenomenon, animal, each of which characterizes it from its side. The main feature of the riddle is that it is a verbal-logical task. To guess a riddle means to answer a question, i.e. perform a complex logical operation.

When working with preschool children, riddles can be used in the classroom, in work and play, in everyday life. They encourage the child to observe, reflect, and learn. Solving riddles requires active work of thought, search. The entertaining form of the riddle makes learning interesting and exciting, makes it easy and effortless to train the child in the use of lexical and grammatical language means. There are several types of riddles:

- riddles - comparisons where the enigmatic object is compared with another object, or a phenomenon that it looks like, or is somehow different;
- riddles - descriptions where an object or phenomenon is described; combined riddles are a combination of riddles - descriptions with riddles - comparisons;
- plot riddles are riddles composed by children using a logical sequential plot.

When working with riddles - comparisons, it is necessary to teach children to consciously highlight and memorize various signs of what was hidden. To achieve this goal, children in their environment find similar objects according to one common feature, and then compare and generalize them.

For example: The owner knows, he walks with him. (Dog.) Barks, bites, does not let him into the house. (Dog.) The preschooler names the guessed animal, proves the answer, says whether it is domestic or wild. The topic of riddles can be about domestic and wild animals, about clothes, about products, about natural phenomena, about transport, etc. These kinds of riddles are offered to children of younger and middle preschool age.

In working with children of older preschool age, more complex types of logical problems are proposed: comparison, exclusion, comparison. This happens especially when solving and explaining those riddles, the content of which can be interpreted in different ways, for example: I only hold on while walking, and if I get up, I will fall. (A bike). On the road, legs go and two wheels run. (A bike). In such cases, it is recommended not to seek traditional answers from children, but, seeing the correct course of their reasoning, emphasize the possibility of different answers and encourage them.

The use of riddles in working with children contributes to the development of their speech-proof and speech-description. The riddle becomes not just entertainment, but an exercise in reasoning and proving, i.e. an important means of teaching children to speak coherently.

Proof speech requires special, different from the description and narration of speech turns. The point of creating reasoning is the ability to pick up arguments. Children should be interested in the process of proof, in reasoning, in the selection of facts and arguments. When guessing a riddle, set a specific goal for the children: not just guess the riddle, but be sure to prove that the guess is correct.

Examples of such riddles can be: The master of the forest Wakes up in the spring, And in the winter, under a blizzard howl, Sleeps in a snow hut. (Bear) Motley fidget, Long-tailed bird. Talkative bird, The most talkative. (Forty.) Children, relying on figurative comparisons, explain their guess, first putting forward their proof, and only then the answer.

At the senior preschool age, children show a great sensitivity to the semantic shades of the word, they begin to understand the meaning of figurative expressions in literary works.

The characteristics of objects and phenomena in riddles can be brief: only one or two signs are named, according to which it is necessary to restore the whole and draw a conclusion based on reasoning. This form of riddle includes a riddle-description. It contains many opportunities for enriching the children's vocabulary with new words, phrases, figurative expressions.

It helps children develop their ability to understand and create descriptive speech. Examples of such riddles are the following: A white tablecloth covered the entire field. (Snow) Tall, thin, spotted. (Giraffe) Green, not grass, round, not the moon, with a tail, not a mouse. (Watermelon.) Mastering the skills of descriptive speech is carried out in the process of everyday life, as well as in special correctional classes.

Their goal is the formation of skills to own speech-description.

An important role in this is played by the questions of an adult, helping children to compose their riddle. The content of the questions influences the choice of speech means, its composition, artistic features. If in the riddle a description of the appearance of an object or animal was given, then when examining it, one should pay attention to its shape, size, color, as well as to those speech means by which these signs are usually expressed. If we want children to name the movements, actions of the object, then when examining the picture, one should pay attention to these signs.

After a careful acquaintance with the subject, children of older preschool age move on to independently compiling riddles according to the proposed plan, and in the future to inventing riddles about it. Classes on teaching children to invent riddles are closely related to classes on describing objects. The child is asked to describe the object without naming it, the rest of them recognize this object by the description.

The most successful forms of such activities are games, for example, in the form of the game "Wonderful bag". The teacher motivates the children by showing a wonderful bag of toys, offers to guess what is inside. The teacher complements the children's answers: "You can also make a riddle about what is in the bag, that is, ask about something, tell what object it is, but not name it." In the Toy Shop game, the child buyer must describe the toy in detail using a sample or plan, and the seller must guess which toy it is and sell it. A condition for receiving a toy, in addition to a description, may be the requirement to name the department, the shelf on which it stands. If the description of the toy does not meet the requirements, the seller-educator suggests thinking about how to make the story more complete and interesting. The ability to identify and name the various actions of an object is a prerequisite for creating riddle stories.

Solving riddles can also be used in theatrical activities (games - dramatization, concerts, holidays), where the ability to tell is consolidated in children, vocabulary is activated, expressiveness and clarity of speech are developed.

A systematic appeal to the riddle brings the child closer to understanding folk and literary speech, provides a faster mental, speech and artistic development of the child. The structure of the riddle requires specific linguistic means, so you should pay attention to the construction of the riddle: "With what words does the riddle begin? How does it end? What does it ask about?" Such questions develop children's sensitivity to language, help to notice expressive means in riddles, and develop the child's speech.

It is important that children not only memorize the figurative expressions of the riddle, but also create a verbal image of objects themselves, that is, they try to find their own versions of descriptions.

Riddles can be used not only at the beginning and during the activity, but also at its end. For example, examining objects, comparing and contrasting them, finding similarities and differences between them, children come to conclusions and express them in words. At the same time, the riddle can serve as a kind of completion and generalization of the process of activity, helping to consolidate the signs of the object in the minds of children. This technique helps to concretize children's ideas about the characteristic properties of an object or phenomenon.

Thus, riddles help children understand how succinctly and colorfully, using language means in different ways, one can say the same thing. The development of coherent speech in the classroom using riddles should take one of the central places. Vivid images are emotionally perceived by children, awaken their imagination, imagination, develop observation and interest in everything around them, are an inexhaustible source of the development of children's speech.

It is advisable to make riddles for children in the appropriate situation. The riddle can be used for a walk, in games, in everyday life, at work. It makes the child think, develops observation, the desire for reflection and knowledge of the surrounding reality. The very form, riddles, attracts the attention of children and makes the teaching interesting, unobtrusive.

Riddle: - this is not only a game, but also an exercise in reasoning, in the ability to prove. But in terms of content and structure, the riddles are such that they allow them to develop the logical thinking of children, to form their skills of perception and use of speech-proof, speech-description.

Thus, a riddle is not only a game, but also a means of educating, teaching, developing children, an exercise in reasoning and the ability to prove. Correctional and developmental possibilities of the puzzle are diverse. The most important of them are:

- Education of resourcefulness, ingenuity, speed of reaction; - stimulation of mental activity;
- Development of thinking, speech, memory, attention, imagination; - expanding the stock of knowledge and ideas about the world around;
- Development of the sensory sphere.

Types of riddles with examples

1. Direct riddles, in which a hidden object or phenomenon is described with the help of allegories, direct and indirect features. They can be both colloquial and poetic. Conversational form: What is it: does not bark, does not bite, but does not let it into the house? Answer: the castle. Poetic form: Gray neck, Yellow sock, Floats in the river Like a float. Answer: duck.

2. Rhyming riddles. Guessing them is incomparably easier because the right word just asks for the tongue. But the benefits of such word games are enormous. They contribute to the development of the baby's intellect, wake up fantasy and imagination, but, most importantly, help to get the first ideas about rhyme. The smallest "guessing" - simpler riddles. They love oranges and bananas very much ... (monkeys) I lost a sock, took it away ... (puppy) There is a big fight in the river: two quarreled ... (cancer) There are a lot of windows in it. We live in it. This is ... (house) I'm not afraid of the word "scatter" - I'm a forest cat ... (lynx)

3. Trompe l'oeil riddles also rhyme, but that's the whole trick. The answer must be chosen not in rhyme, but in meaning. If you say the last word in rhyme, you get ridiculous nonsense. Such riddles teach children to think and be attentive, not to succumb to deception. They also develop a sense of humor. An example of a children's trompe l'oeil puzzle: Who gnaws a cone on a branch? Well, of course, this is ... (bear, squirrel) From the palm tree down to the palm tree again Deftly jumps ... (cow, monkey) Whinnying in the field in the morning Long-Mane ... (kangaroo, horse) I even heard a foreigner - Everyone in the forest more cunning ... (hare, fox)

4. Riddles on imaginative thinking are usually solved if the question is considered not literally, but figuratively or broadly. Include in the decision plane the factors that may be implied due to the ambiguous interpretation of the question or the words that are used in it. Thirty-two warriors have one commander. (Teeth and tongue) Twelve brothers roam one after another, do not bypass each other. (Months) He wanders importantly in the meadow, Out of the water comes out dry, Wears red shoes, Gives soft feather beds. (Goose) I have a hedgehog in my room for a year. If the floor is waxed, He will rub it to a shine. (Polter) They knock, knock - they don't tell you to get bored. They walk, they walk, and everything is right there. (Clock)

4. Mathematical riddles are solved by counting, but often involve the use of both figurative and logical thinking. And sometimes, it is pure mathematics, but framed in figurative folk speech.

For example: Soon 10 years of Alisher - Amin is not yet six. Amina still cannot grow up to Alisher. And how many years younger Amin Boy is than Alisher? (for 4 years) Near the forest, at the edge of the forest, three of them live in a hut. There are three chairs and three mugs, three beds, three pillows. Guess without a clue who the heroes of this tale are? (Mashenka and three bears). The five brothers are inseparable, they are never bored together. They work with a pen, a saw, a spoon, an ax (fingers). Black, but not a crow. Horned, but not a bull. Six legs without hooves. Flies buzzes, falls - digs the earth (beetle). Principles for selecting riddles for older preschool children When selecting riddles for working with older preschool children, it is necessary to take into account sufficient life experience, developed observation, the ability to reason, it is necessary to offer the child riddles that require a deep thought process and the application of their knowledge reflect the content of the program of cognitive and speech development ... Riddles about natural phenomena, about extraordinary properties that we do not notice in everyday life, but for children this is a whole discovery. Winter glass flowed in the spring. Answer: ice. Fluffy carpet Not with fabrics, Not sewn with silks. In the sun, in the month, it shines with Silver. Answer: snow. Grow green. Fall turn yellow. Lie. Black. Answer: (leaves) For older preschoolers, riddles with possible several correct answers are especially good, where evidence-based speech can develop in the discussion. Brother and brother sit next to each other all their lives, see the white light, but each other is not. Answer: eyes There is a bath in the belly, a sieve in the nose, a navel on the head, a hand on the back. Answer: kettle. The puzzle for older

children can be used both as part of the lesson and as a whole lesson. For example, riddles that give an idea of the ambiguous meaning of a word carry so much information that playing it out will take the whole lesson. Guess what word every tailor has? Instead of a fur coat, a hedgehog wears this word on his back. This word, along with the tree in the New Year will come to me. Answer: a needle Such riddles will certainly find their continuation in the visual activity of children. In working with riddles, it is not so important how quickly her children guess, the main thing is to interest the children, involve them in the process of comparison, comparison, discussion and search for answers. Questions, disputes, assumptions - this is the development of speech, creative imagination, figurative thinking.

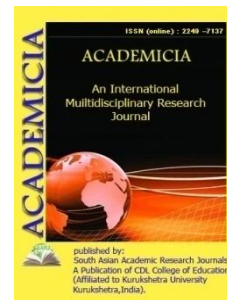
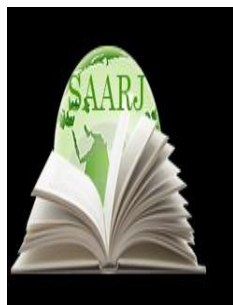
Learning to guess riddles begins not with guessing them, but with the education of the ability to observe life, perceive objects and phenomena from different sides, see the world in various connections and dependencies, in colors, sounds of movement and change.

The development of all mental processes of the preschooler is the basis for guessing the riddle, and the preliminary acquaintance of children with the objects and phenomena that will be discussed is the main condition for understanding and correctly guessing the riddle. The teacher also needs to know the main mistakes of children when guessing riddles. Children are in a hurry to answer, do not listen to the end, do not remember all the details. In younger preschoolers, attention is often drawn to some bright object, already well known and the thread of attention is torn. Children single out several minor objects at once, but they miss the main feature. Children deliberately skip one of the signs named in the riddle, replacing it with their own, as it seems to them, correct and, as it were, adjust to the answer, distorting it.

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UZBEK FOLK TRADITIONS AND CUSTOMS AS A MEANS OF FORMING THE SPIRITUAL AND MORAL QUALITIES OF CHILDREN IN PRESCHOOL EDUCATE

Saidov Zhurat Sodirovich*

*Lecturer,
Jizzakh State Pedagogical Institute,
UZBEKISTAN

ABSTRACT

This article reveals the content of educational programs for preschool education of the Republic of Uzbekistan, based on the system of basic national values and contributing to the spiritual and moral development of the child's personality. The article analyzes the problems, explains the possibilities of their successful solution precisely in preschool childhood; the tasks, principles, content, forms and methods of developing interaction between adults and children, aimed at the spiritual and moral development of preschoolers, and the possible positive results of this activity are revealed.

KEYWORDS: *Way Of Life, Personality, Spiritual And Moral Development, Education*

INTRODUCTION

Childhood is a wonderful and fragile world. In this most important period of a person's life, the foundations of his physical and mental health are laid, creative abilities develop and, most importantly, the basic spiritual and moral qualities of a person are formed. Thanks to this, the ability to distinguish between "good" and "evil", moral standards is formed, the spiritual culture of one's people is comprehended. Therefore, it is so important to exclude distortions in the spiritual and moral development of the individual during preschool childhood. And for this, a systemic spiritual and moral education of the child is necessary, because, finding itself without proper upbringing, bearing the traditions of the domestic cultural environment, the child's soul is filled with a surrogate content of the external and virtual world, terrible images and ideas, and sometimes overt occultism.

The spiritual and moral component in the structure of the main educational program of a preschool educational institution determines the content and organization of the educational

process for preschool children and is aimed at the spiritual, moral, social and personal development of children, contributes to solving the problems of education and upbringing based on the values of folk culture.

Currently, there is a need for a comprehensive and deep study of the influence of folk traditions and customs on the educational process in various social institutions: family, preschool institutions, general education schools, as well as in higher educational institutions.

Interpretation of traditions and customs as social norms and rules of behavior is found in ethnology, culturology, philosophical, sociological, demographic and a number of other branches of scientific research. In these studies, the concepts of "tradition", "custom" are defined taking into account the tasks of each branch of social sciences. This is due to the fact that in the scientific literature there is no single, generally accepted definition. We have the right to note that many researchers approach the solution of the issue from different positions, primarily from the point of view of the problems of interest to them. Traditions cannot be only norms and principles of social relations, methods of social activity, heritage of the past or norms of people's behavior. They consolidate the results of both past and modern social practice. They express the nature of social relations inherent in the community of people - nations, ethnic and social groups, collectives, etc.

Traditions are social and cultural heritage that is passed down from generation to generation and reproduced in certain societies and social groups for a long time. In our opinion, the upbringing and educational function of traditions is the main way of inheriting the social accumulated experience of mankind in the field of upbringing and personality formation in different periods of an individual's life. Customs - a rule of social behavior, reproduced in a particular society or social group, rooted in the habit, life and consciousness of their members. The custom plays an important role in upbringing, contributing to the introduction of the child to spiritual culture, forms an inherited stereotyped way of behavior, acquaints with patterns of behavior (this should be done or this should not be done).

The term "tradition", "custom" is often identified with the term "rite", "ritual", "ceremony". The ceremony, being a traditional symbolic action, accompanies important moments in the life and work of an individual, a group of society, and requires a certain type of behavior. It has emotional and psychological effects.

An important social function of the rite, which includes a ritual, ceremony in its structure, is the formation of the moral qualities of a person. The rite can act as a norm of behavior, implements the norms of law, forms stereotyped behavior, habits, which, in turn, have regulatory influences on people's lives.

Practice shows that for centuries, traditions and customs have been and remain one of the effective means of introducing new generations to the life of society, the formation of a certain type of personality. The peculiarity of their educational impact lies in the fact that they are not limited to any one age period of a person's life. Each person, living in a society, is always in the sphere of action of its customs and traditions. Fulfillment of their requirements and prescriptions has a significant and constant impact on the formation of the world perception, culture of feelings and behavior of the individual, on her relationship to the world around her.

Traditions and customs as pedagogical creativity of the people represent various forms and methods of pedagogical influence on the feelings, will, consciousness and behavior of children. As a public phenomenon, traditions also act in the form of principles, norms and rules governing the relationship of people in society and personal life, they are approved and supported by public opinion.

A comprehensive study and public assessment of the common foundations of the national traditions and customs of the Uzbek people, like other peoples of the world, is the most important task of modern pedagogical science. It should be noted that many of her questions, which have not received important coverage in the historical and pedagogical science, are in dire need of in-depth, all-round creative development, especially the issues of moral, labor and artistic and aesthetic education of children in a preschool institution.

The problem of preschool education of children in accordance with generally accepted spiritual values is of particular importance in the period of changes in social structures and socio-economic relations. It should be noted that the events of recent years and changes in society are hard for the adult generation. This also affects the younger generation. Children strive for self-affirmation and individuality. It is folk traditions and customs that play the role of regulating the behavior and activities of adults and children in society, form the foundations of moral qualities, contribute to the revival of new spiritual values, and enrich the cultural heritage of the people.

Preschool education as a stable social community is an important factor in the formation of personality. It was and remains the most important educational institution, a source of transfer of social experience from generation to generation. Especially in preschool age, it plays an important role in the socialization of a child. The foundation of personality is laid precisely in the family. The first ideas, concepts, skills, attitudes towards people, moral norms of behavior, feelings are formed in the family.

It should be noted that for a certain time the problem of folk pedagogy was ignored, many traditions and customs were considered in the historical aspect, and not as educational values.

It is necessary to search for pedagogical technologies that will ensure the child's acceptance of the meaning of the transmitted values, concepts, norms that will be reflected in his behavior. One of the significant conditions in our work is the creation and implementation of a structural and functional model of spiritual and moral education in a preschool institution, focused on acquaintance with the works of art of national cultures of different peoples.

The means of spiritual and moral education are literary texts (fairy tales, proverbs, parables, fiction), fine arts, musical works, architecture.

Methods and forms of educational activities with children: conversation, reading and discussion of literary texts and parables, viewing works of art, listening to musical works, watching films, making cartoons, games with rules, cultural practices, thematic exhibitions, acquaintance with the traditions of spiritual holidays, theatrical performances, handicrafts, creative artistic activities, charity events.

In organizing work on spiritual and moral education during the experiment, we used active forms of activity: organization of joint living of events by adults and children; classes using active teaching methods; games (role-playing, directing, theatrical, didactic); thematic conversations on

a dialogue basis; watching slide films, videos and using other technical teaching aids; family holidays, leisure.

A full-fledged national upbringing and education of a child is a daily work to educate children in love for the motherland, folk traditions, etc.

In the formation of a child's personality, great importance was attached to play as an effective means of spiritual and moral development of preschool children in a preschool educational institution. In organizing play activities, we focused on traditional folk games, original author's didactic games. For the successful organization of this process, it is also important to recreate the children's play tradition and the development of modern methods that contribute to the creation of a spiritualized children's play space.

Play is the basis for the normal development of children. L.S. Vygotsky argued that when children are busy playing, they are at a level close to their optimal level of development. Joint activity is a condition for the emergence and manifestation of one of the most important abilities of a child - his kind, humane attitude towards his peer as towards himself. And on the nature of the interaction and communication between children, the individual style of relations with people that will manifest itself in adulthood largely depends.

On the contrary, the weakening of the game forms of joint activity transforms the children's community into a "community of underplayed", for whom in the future adult life family relations will lose their full value, the boundaries of good and evil will lose clarity and certainty. The loss of inner harmony of a child in today's world of individualists, cynics and cruel people will lead to a morally crippled and empty world of an adult. The spiritual and moral upbringing of a child is the upbringing of his relationship with the objective world and the surrounding nature, with other people - adults and peers, with himself as a subject.

The main means of ensuring a full-fledged spiritual and moral education is the creation of a spiritually renewing and personality-forming educational environment, in which an adequate hierarchy of goals and values of a person's life and the necessary components of his full-fledged life are laid. The attitude towards others, including peers, is manifested by preschool children in joint activities. Their interaction in games also determines the tone of future relationships. In order to harmonize the children's picture of the world, it is necessary to create a play space within which the child will gain the skill of good relationships and protection from the negative influence of the external environment. Individual moral experience of communication arises primarily in play.

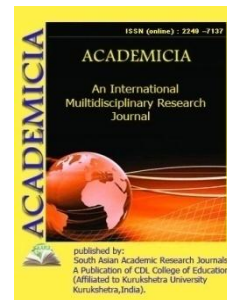
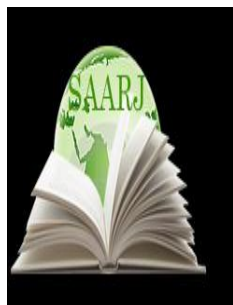
Thus, in determining the level of moral education of preschool children, it is advisable to use various methods, including taking into account information received from children, from their parents and teachers.

Middle, senior and preparatory preschool ages are characterized by the needs:

- In communication with relatives and peers;
- In self-service, in mastering play, visual and work activities;
- in the knowledge of the world and the principles of world perception;
- in moral guidelines in relations with people and the world.

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INNOVATIVE MECHANISMS FOR THE FORMATION OF A PERSON'S WORLDVIEW IN FAMILY RELATIONS

Sharipova Surayo Burxanovna*

*Teacher Department of Pedagogy and Psychology,
Uzbek State University of World Languages,
UZBEKISTAN

ABSTRACT

The article poses the problem of determining the worldview feelings of a person, as one of the stable mental structures of a person along with attitudes, value orientations, established relationships, beliefs. As the main factor in the formation of worldview feelings, it is proposed to consider a person's experiences throughout his life path. The article highlights the issues of improving the pedagogical mechanisms of the family and educational institutions in the development of the spiritual culture of the younger generation of social and legal risks. And also on the basis of the author's approach, the main directions, principles, innovative methods, the pedagogical mechanisms of the development of the spiritual culture of youth were studied, conclusions and recommendations were developed.

KEYWORDS: Experience, Worldview Feelings, Worldview Experiences, Family. Methodology, Innovative Methods, Educational Tools, Pedagogical Diagnostics, Pedagogical Requirements, Pedagogical Mechanism.

INTRODUCTION

The family is a historically specific system of relationships between spouses, parents and children, as a small group linked by marriage or kinship.

Parents, family, and childhood have a huge impact on human development. In the family, the first years of a person's life usually pass, which are decisive for the formation, development and formation. Jan Amos Kamensky reasoned: "If parents teach their children to eat, drink, walk, talk, adorn themselves with clothes, then all the more they should take care of imparting wisdom to children." And in "wisdom" the most important is, firstly, the knowledge of the real world, and secondly, "the ability to carefully and reasonably manage oneself." The family largely determines the range of his interests and needs, views and value orientations. Moral and social

qualities are laid in the family. The future of the child depends on the educational influence of the family, on what qualities will be developed and formed.

American sociologist M. Elmer noted that "the family is a social institution that provides a mechanism through which social inheritance works. The family as a social institution is built and modified by folk customs and morals. " According to the American researcher of the family R. Linton, the family "will exist in any form as long as people exist." Le Play believes that in order to understand society it is necessary to understand the family. According to Le Play, it is in the family that all the features of society, the seeds of its stability or instability are laid.

The importance of the family is recognized at the state level, and sociological research in the field of family relations serves as a solid basis for the development of state social policy.

Every person, regardless of age, needs a strong, reliable family. The socializing function of the family is decisive in the development of the human personality. A child is born with a predisposition to sociality and during his life becomes an active member of society. It is known that the process of the formation of the civic identity of the younger generation includes a set of social roles and norms of behavior. At the same time, the absence of a stable worldview, a clear image of the state model in the minds of young people leads to the conflict in their social behavior.

A worldview is a special system of ideas, knowledge about a person and the world, outlook on life, with the help of which a person determines his actions. Its components include knowledge, emotions, norms, assessments, values, etc. A worldview helps a person to organize knowledge about the world around him and determine acceptable ways to achieve goals.

It is especially important to study it due to the fact that the worldview has a social and practical orientation, affects the behavior of the individual, his choice. The behavior of individual individuals, the peculiarities of their worldview, affect the changes taking place in society.

The worldview is formed as a result of knowledge of the surrounding world. It is the outlook of a growing child that is formed in the family. Various factors have an impact on its formation. This is the cultural environment, media, fashion, education, family, etc. At the same time, it is important to note that such social institutions as family and education play an ever smaller role in the formation of the world outlook of young people in the modern world. But an increasing place in this process is taken by the media, the Internet and fashion. This process carries with it a certain danger, since certain components of the worldview are imposed on young people, bringing negative consequences for their carriers in the future.

Values are one of the most important components of a worldview. We consider "value" as a relation to an object, phenomenon or process, which expresses its significance for the subject. By a value system, we mean a certain set (or hierarchy) of human values.

The value system of modern society is formed through institutional influences and the latest, not yet sufficiently studied, influences (the Internet, social networks, etc.) and represents a certain hierarchy. Moreover, the hierarchy of values is based on the idea that the order of values depends on the influence under the influence of which a person is able to refuse them. The stronger it is, the higher the order of value. In the process of life, most values change their position in the value system many times, but the higher the order of values, the less their ability to change it.

The importance of the value system lies in the fact that it is the basis of culture. It also, in many respects, determines the features of the functioning of social institutions and systems. It should be noted that in society one can distinguish value systems of individual social strata, communities, groups, classes and generations. This phenomenon must be taken into account, since it carries a certain danger. There is the potential for conflicts to arise between groups with differing value systems within society. One of the types of such conflicts is the so-called “fathers and children” conflict.

Three generations actively interact in society: “children”, “fathers” and “grandfathers”. The harmony of interactions between them largely depends on how compatible their value systems are. To achieve compatibility, the values that make up the system must be consistent, but with the constant increase in the number of differences in value systems, this is almost impossible.

Differences in value systems are exacerbated by the break in the continuity of generations in the family. Values are not passed on from generation to generation, they are “depreciated”. This happens for several reasons. One of the main problems is that modern society is changing rapidly, its dynamics outstripping the process of generational succession. The number of interactions between representatives of different generations in the family is reduced, their content is changing. Representatives of the generation of “fathers” do not always strive to pass on their values to children, and the interactions of representatives of the generation of “children” with the generation of “grandfathers” are often minimized. Because of this, many values lose their original meaning or completely disappear from the value system of young people, complicating interactions with older generations to the point of misunderstanding and conflicts.

Particularly interesting is the relationship between representatives of the generation of “grandfathers” who received social experience in Soviet times and the younger generation. The difficulty lies in the fact that values are not only not passed on from the generation of “grandfathers” of young people. These two generations are poorly informed about each other's values and attitudes, which often complicates communication between them.

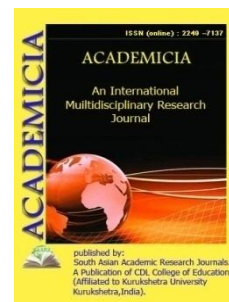
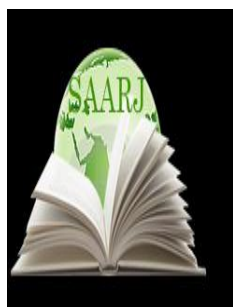
Representatives of the younger generation consider many of the values of the elders as outdated and unviable.

But it is not only the values of representatives of different generations that differ. As noted above, the value structure of Russian society is not homogeneous. Today, not only scientists, but also politicians are beginning to realize this, making certain attempts to recreate a single system of values. But to create it, you need to take into account several important features.

We can conclude that an integral system of values is only being formed in modern Russian society. Multidirectional tendencies prevail, which sometimes leads to negative results. In order to reduce the risk of conflicts due to differences in value systems, relationships in society should be regulated using basic values shared by all members of society. Targeted institutional impact is needed. Family, government, education must communicate important values together. Scattered measures do not bring tangible results.

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THE USE OF NATIONAL TRADITIONS IN THE LABOR EDUCATION OF PUPILS

Lukhmanov Dilshod Bakhtiyorovich*

*Lecturer,
Department of Education Technology,
Chirchik State Pedagogical Institute,
Tashkent Region, UZBEKISTAN

ABSTRACT

The article deals with the issues of upbringing a student, the formation of his personality, instilling in the representatives of the young generation of love for work. The techniques and methods of the main directions of the national education system, tradition are highlighted. Described are Uzbek traditions, each of which plays a great educational role.

KEYWORDS: Education, Student, Formation, Tradition, Labor, Hard Work.

INTRODUCTION

Folk traditions are a historically formed set of educational and social experience, norms of behavior, social traditions, passed down from generation to generation. Labor traditions of spiritual education accustomed children to systematic work, passing on all the skills, knowledge and skills known in the peasant world, contributed to the formation of the habit of working, hard work, reverence and respect for work, responsibility for the assigned work. Life experience is acquired throughout the history of the existence of the people, and is reflected in folk traditions. The rich arsenal of folk traditions, which was formed from the specific historical conditions of the development of the people, should be widely used. The cultural heritage of the people contains pedagogically valuable ideas and proven experience of upbringing for centuries, which, while developing, enrich the world pedagogical thought.

The role of folk traditions in the upbringing of the younger generation is great. The most significant period in the moral formation of an individual is school age. This over out is characterized by increased susceptibility to external influences, belief in the upbringing of everything that is taught, what they say, in the unconditionality and necessity of moral norms,

uncompromising in moral requirements for others, immediacy in behavior. This is the key to the learning and education of younger students.

The upbringing of schoolchildren on the traditions of folk pedagogy contributes to the recognition and strengthening of national identity, which is so important for the preservation of the identity of society, the preservation of history and determines the future of our people.

Folk pedagogy is an integral and integral part of the general spiritual culture of the people. The great Russian teacher KD Ushinsky said that "upbringing has existed in the people for as many centuries as the people themselves have existed." And it also suggests that folk pedagogy arose in ancient times, that it historically preceded scientific pedagogy and influenced its early forms. Researchers of folk pedagogy Ushinsky KD, Makarenko A.S., Sukhomlinsky V.A., have shown the mutual influence and interdependence of official and folk pedagogy that enrich and complement us.

An analysis of the sources shows that education in particular closely resonates with the ideas and thoughts expressed in the monuments of folk pedagogy: in sayings, proverbs, fairy tales, legends. Moreover, the people directly associate some legends with actions, life and activities.

Traditions (from Lat. Traditio - transmission) - elements of social or cultural heritage, passed down from generation to generation and preserved in social groups for a long time. As a tradition, certain social institutions, norms and rules of behavior, attitudes towards specific moral and ethical values, customs, rituals act.

Custom is traditionally established rules of social behavior.

Today they say that without solving the most important task of educating the younger generation on national traditions, imbued with a highly moral national ideal, there can be no full-fledged, comprehensive education. Labor education is the central problem of folk pedagogy. The development of morality and mind, physical and aesthetic improvement of the personality occurs mainly in work. The ability to work, create valuable and beautiful things with your own hands is the leading criterion for assessing a person, the basis of popular opinion about a person. Considering the traditions and customs of folk pedagogy in conjunction with modern specialized education, we would like to pay special attention to labor training in folk pedagogy and the embodiment of its ideas in the conditions of modern specialized education.

It is difficult to overestimate the importance of labor education in the general system of folk pedagogy, it really is its core. Since ancient times, the labor education of children and youth has been the most important responsibility of parents, and then of educational institutions and other public institutions.

Labor for many peoples was primarily associated with animal husbandry, gardening, silkworm breeding, and folk crafts. Everyday culture, the spiritual makeup of the people are generated by millennia of agricultural civilization. All moral canons, moral ideas, even the artistic tastes of entire eras are conditioned by the relationship of man to his mother - damp earth. The hard work of the farmer and the breeder, the attitude to bread as a sacred thing, cotton, all this brought up in children a feeling of love for work and people of labor.

The people not only glorify labor as an invaluable gift of nature to man, but to some extent idealize his inspired character: "Labor is the father of everything." The people have always made

sure that the younger generation mastered a number of professions, each becoming a "jack of all trades". All peoples have a common opinion: "Superfluous skill does not turn one's head", "Seventy crafts are not enough for a young man." History has preserved for us invaluable experience in arming the young generation with a variety of labor skills and abilities. The people clearly understood that mastering labor skills takes time and effort, since "there are things that you cannot do until you learn, but there are also things that need to be done to learn." The people make fun of the man who is looking for an easy job. The proverb says: "On a rainy day, there are many who want to water chickens." Especially negative attitude is caused by people with "white hands" who love other people's work. The people ridicule a person who does not think about the results of his work or is engaged in unreasonable, useless work.

In such cases, they say: "Having chopped down the roots of a tree with an ax, he waters the top with water." If we formulate the attitude of the people to labor education in modern terms, then we can say that they stood for universal labor education, for conscientious, systematic and reasonable socially useful labor.

Honest and conscientious work is celebrated in fairy tales; in them, with undisguised irony and sarcasm, lazy people, idlers, idlers are ridiculed. Fairy tales, as you know, idealize the strength and capabilities of heroes, but they are based on popular belief in a person, in his mind, a willingness to overcome any difficulties to achieve an intended goal, not only and somewhat for the needs of the family itself, but, above all, for work in a social collective.

Secondly, to make every effort to ensure that the child's labor is not forced, i.e. was creative, worked with interest, love, without fear of "labor sweat".

Based on the traditions of folk pedagogy, considering the family to be the cell of a new society, where the primary laying and formation of feelings, thoughts, character and consciousness of the child takes place, the teacher claims that correct upbringing cannot be presented as unworked upbringing. Explaining the meaning and significance of labor education, he advises parents to keep in mind a number of circumstances.

First, take into account that the family must prepare the child for work.

Secondly, in the process of labor, it is necessary to educate in a child certain moral qualities: love and respect for a working person, intolerance to manifestations of parasitism, laziness, attempts to evade labor.

Thirdly, labor education should become a means not only of "physical development in labor", but also of the psychological and spiritual development of a person.

Fourthly, it is necessary to take into account that work training in the family is of great importance in a person's personal life, in determining his future profession and qualifications.

An analysis of the works of the largest teachers who devoted their research to the problems of labor education shows that they undoubtedly relied on the knowledge of folk pedagogy, treated with deep understanding of folk traditions, the experience of the people in educating the young generation in the spirit of love and respect for various work activities. person.

In modern conditions, when the labor training of students is a factor in their development and at the same time meeting the needs of the national economy, special attention is paid to this important pedagogical problem.

Labor education also plays a significant role in the all-round development of the individual. For the implementation of the goals of developing labor education, its variability, electiveness, shift types of labor activity are necessary, which will allow to include in its framework the sphere of social assistance, nature protection and cultural monuments, etc. Not only teachers, but also parents should be prepared for this.

The ongoing restructuring of the content of education is aimed at creating conditions for a person to achieve a high intellectual, moral, aesthetic and physical level.

This is what can increase the intellectual potential of the state, enhance the influence of humanistic ideas and the prestige of the state, and spiritual values.

It is important to reflect the traditions and socio-cultural values of the people in the content of education. And as this, according to the concept of modernization of education for the period up to 2010, at the senior level of the general education school, specialized training is envisaged, the task is to create a “system of specialized training (profile education) in the senior grades of the general education school, focused on the individualization of education and socialization of students, in including taking into account the real needs of the labor market.

The transition to specialized training has the following main goals:

- To provide in-depth study of individual subjects of the program of complete general education;
- To create conditions for a significant differentiation of the content of education for high school students with wide and flexible possibilities for building individual educational programs by students;
- To promote the establishment of equal access to comprehensive education for different categories of students in accordance with their abilities, individual inclinations and needs;
- to expand the possibilities of socialization of students, to ensure continuity between general and vocational education, to more effectively prepare school graduates for the development of higher vocational education programs.

In these conditions, it is important to combine folk wisdom, centuries-old working traditions of the family with the achievements of modern pedagogical science. At the same time, labor education must meet at least the following pedagogical requirements: the systematic and collective nature of labor, the presence of feasible and constant labor duties for each child, taking into account the age.

At an early age, work should be combined with elements of the game, and in the senior grades, gradually move from simple forms of labor to more complex ones. It is important to teach children to perform work duties that are necessary, but no less for them, not to punish children with labor, to systematically take into account and evaluate the quality of work, to stimulate work with praise and personal example to show a conscious and disciplined attitude to work.

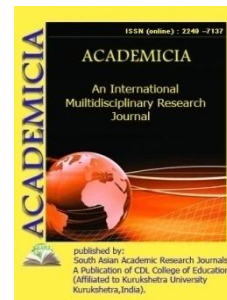
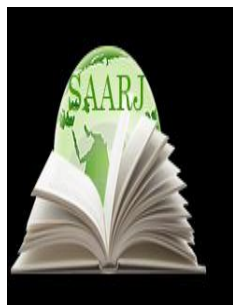
Thus, answering the above question, we cannot give a concrete answer: is it the continuation of specialized education of the traditions of folk labor education or only the embodiment of ideas in the system of the new Russian educational standard.

Time does not stand still, and the goals and objectives of education are changing taking into account the modern requirements of the state. But we must never forget about those principles,

the ideas of labor education that originated in a distant time with its popular belief in a person, in his mind, readiness to overcome any difficulties to achieve the intended goal, not only and somewhat for the needs of the family itself, but above all, for work in a social team.

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METHODS FOR IMPROVING THE SYSTEM OF ASSESSING PUPILS' KNOWLEDGE BASED ON THE QUALITOLOGICAL APPROACH

Ruzieva Zulaykho Samatovna*; **Saidova Gavkhar Ergashevna****

^{1,2}Teachers,

Department of "Methods of Primary Education",
Bukhara State University,
UZBEKISTAN

ABSTRACT

The article is devoted to the problem of qualitological education of the future teacher. It shows the special importance of this type of vocational education in the modern sociocultural situation. The structure and content of the teacher's qualitological competence are considered, a strategy for its formation in the conditions of qualitological education is proposed. The effectiveness of the implementation of the program is ensured by the use of competence-oriented technologies, such as: case technology, dialogue technologies, portfolio technology, rating technology and others.

KEYWORDS: Qualitology Of Education, Qualitological Education, Qualitological Competence

INTRODUCTION

The modern sociocultural situation has sharply set before education new tasks related to the formation of a person of a new cultural type. This is a person who understands and accepts the new values of life, independently, freely and responsibly solves various problems, has analytical, design and predictive intelligence, knows information and communication technologies, is capable of education throughout life.

The formation of a "cultured person" of the XXI century dictates the need to modernize higher professional education in the direction of improving its quality.

The main result of quality education in higher education is the training of a professionally competent specialist. A large number of factors affect the quality of education.

This is the quality of educational programs, and the level of implemented pedagogical technologies, and the quality of material and technical, regulatory, methodological, informational support of the educational process, and of course, the qualifications of teachers. Moreover, it is the teacher as the bearer of sociocultural experience that is the guarantor of quality education.

In other words, the teacher is one of the main factors influencing the quality of education. In this regard, it becomes obvious that in modern socio-cultural realities a teacher has a new function of professional activity - quality management of the educational process. That is why today there is a need for qualitological training of a teacher, which will allow him to effectively solve the issues of forming the quality of the educational process.

A modern leader and teacher needs a qualitological education, which makes it possible to develop a new paradigm of their professionalism.

The scientific content of this education is the qualitology of education (from the Latin *qualitologica* - the science of quality).

Qualitological education of a teacher involves the formation of his knowledge of the problems of theory and practice of quality management of the educational process.

It is essential to note that effective management of the quality of the educational process presupposes that the teacher has not isolated, but systemic ideas, knowledge and skills that integrally reflect the object of management, the environment of its formation and development; sociocultural, theoretical, methodological and technological foundations of the teacher's activity in the implementation of such management requirements for his professional competence. In this regard, it seems appropriate to us to introduce the didactic unit "Quality management of the educational process" into the course "Theoretical pedagogy", the development of which by students will change the value-target orientation of their future professional activities towards the formation of the quality of education, form systemic knowledge and skills in this area. The system-forming category of a teacher's qualitological education is qualitological competence.

The methodological basis for the development of the scientific content of qualitological competence is the qualitology of education, as a scientific complex, including the quality of the functioning and development of educational systems, the educational process, professional training of the teaching staff, aimed at ensuring an effective system for managing the quality of education.

The structure of education qualitology, which includes the following components: theory of quality, which studies laws, patterns, principles of formation of the quality of education; the theory of quality management, which studies the laws, principles, mechanisms, methodology of quality management in education; qualimetry, which studies laws, principles and methodology for assessing (measuring) the quality of education.

The "imposition" of the component composition of the qualitology of education on the specifics of the teacher's professional activity allows to develop the structure and content of his qualitological competence.

Qualitological competence of a teacher is an integral structure consisting of four interrelated components:

- Motivational and value;

- Cognitive; - technological;
- Professional and personal.

Let us give a meaningful description of these structural components.

The motivational-value component of the teacher's qualitological competence presupposes the presence of motivational-value orientations towards the management of the quality of education and the awareness of the fact that competence in this area is a professionally significant quality. This component manifests itself in the following aspects:

- Attitude to the quality of the educational process and its management as a professionally necessary and socially significant value;
- The desire to actively participate in mastering the theory and technology of quality management of the educational process;
- Awareness of tasks, ways, means and ways of organizing quality management of the educational process;
- focus on self-education in the use of effective tools for managing the quality of education.

The cognitive component includes a system of scientific, professionally important knowledge and ideas about the essence of the quality of the educational process and its management, which provide an opportunity for the teacher to perform these professional functions. The named component contains four types of knowledge that make up the structure of the teacher's qualitological competence:

Regulatory, philosophical and methodological, psychological, pedagogical and managerial. Regulatory knowledge includes:

- Knowledge of the foundations of the state policy of the Republic in the field of education;
- Knowledge of the state standard of general secondary education;
- Knowledge of regulatory documents that determine the requirements of the state and society to the quality of the educational process in educational institutions.

The philosophical and methodological knowledge includes:

- Knowledge and understanding of the social essence of the quality of education;
- An idea of the structure of the quality of education as a unity of the procedural and effective components;
- Knowledge of the conceptual and categorical space of the quality of education: properties, system, factors, dynamism, axiology, certainty, border, quantity, efficiency and other concepts

Psychological and pedagogical knowledge includes:

- Knowledge of the psychological characteristics of the pupils;
- Knowledge about the basic principles and laws of the organization of the educational process, focused on achieving the quality of education;

- Knowledge of the requirements for the design of the content of the educational process, ensuring the development of key competencies of schoolchildren;
- knowledge of modern educational, health-saving technologies focused on the development of independence, activity, creativity of schoolchildren; principles of their selection and use;
- Knowledge of the principles and features of designing a developing educational environment;
- Knowledge of the quality criteria of the educational process and its results;
- Knowledge of the conditions for ensuring high-quality school education: psychological, organizational and pedagogical, medical and health-improving and others;
- Knowledge of the features of the organization of productive interaction of the subjects of the educational process. Managerial knowledge involves:
- Knowledge of the essence of quality management of the educational process, its structure and content;
- An understanding of the main approaches and principles of quality management of the educational process;
- Knowledge of the functional composition of the management process: design, provision, measurement and quality assessment;
- An idea of effective design tools for the quality of the educational process;
- Knowledge of the criteria, methods and procedures for assessing the quality of the educational process.

The technological component is a set of qualitological skills that act as a specific form of the functioning of theoretical knowledge.

In the structure of the teacher's qualitological competence, the following types of skills can be distinguished:

Design and technological, organizational, communication and qualimetric.

Design and technological skills include:

- The ability to analyze the state and results of the educational process, to highlight the factors that affect them;
- the ability to set goals, select the content of the educational material and technologies adequate to it, initiating the independence and creativity of the student, activating cooperation in collective work, ensuring the student's motivation in educational activities;
- The ability to create various educational environments (information, communication, etc.), to saturate the spatial-subject components of the environment with the symbols of the academic subject;
- The ability to construct pedagogical problems of the open (choosing one of the many feasible solutions) and closed (choosing one correct solution) type.

Organizational and communication skills include:

- The ability to organize the activities of students to work with information (find information in various sources, comment on it, draw conclusions, use it to solve practical problems);
- The ability to use new information technologies to organize the independent activity of schoolchildren;
- The ability to select objects of the environment and use them to solve specific pedagogical problems;
- The ability to organize educational, creative and other types of activities, taking into account the individual characteristics of students;
- the ability to use technologies focused on a multi-level composition of students; - the ability to select and use methods aimed at developing students' reflective skills and the development of self-esteem;
- The ability to carry out reflex analysis of the lesson;
- The ability to build a communicative situation taking into account the characteristics of its subjects;
- The ability to build interaction with other subjects of the educational process;

Qualitric skills include:

- The ability to determine the goals of measuring and assessing the quality of the educational process;
- the ability to build a criterion base for measurement, determine estimated indicators, select qualimetric methods, develop a procedure for evaluating activities;
- The ability to develop test items for written assessment and computer testing of the general educational level of training of students;
- The ability to form a bank of assessment materials; - the ability to make organizational and pedagogical decisions based on the results of qualimetry.

The professionally significant qualities of a teacher's personality, which determine the success of his activities in managing the quality of the educational process, include:

- Analytical and predictive thinking;
- Innovation;
- the ability for intellectual and professional-personal reflection, allowing to comprehend their actions and decisions.

The analysis of the structure and content of the teacher's qualitological competence allows us to give its detailed definition.

The qualitological competence of a teacher is a holistic personal education, including a motivational and value attitude to managing the quality of the educational process, a system of knowledge (regulatory, philosophical and methodological, psychological, pedagogical and managerial), a set of qualitological skills (design and technological, organizational, communication and qualimetric) , professionally significant personality traits (analytical and

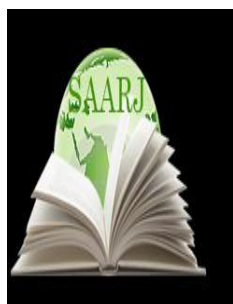
predictive thinking, innovation, personal and managerial reflection), ensuring the success of his activities in managing the quality of the educational process.

Qualitological education of a teacher is a pedagogical system that includes a set of interrelated components: target, content, organizational and communicative, evaluative and effective.

The designated structure of the content, based on the relationship of social and professional managerial and pedagogical aspects of the qualitativization of the management of the educational process of a general educational institution, contributes to the disclosure of its essence, students' awareness of its place and role in the process of innovative development of modern society, as well as their mastery of a set of qualitological knowledge and skills that provide their willingness to manage the quality of the educational process. The effectiveness of the implementation of the program is ensured by the use of competence-oriented technologies, such as: case technology, dialogue technologies, portfolio technology, rating technology and others.

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WASTE MINIMIZATION IN PAINT MANUFACTURING UNITS: ENVIRONMENTAL PROTECTION AND COST SAVING

Mostafa Khezri*; Jafar Nouri; Mahnaz Tehrani*** Leila Ramezani******

*Department of Environmental Engineering,
Graduate School of The Environment and Energy,
Science & Research Branch, IAU, Tehran, IRAN

^{2,4}Department of Environmental Management,
Graduate School of The Environment and Energy,
Science & Research Branch, IAU, Tehran, IRAN

ABSTRACT

Paint manufacturing wastes are mostly hazardous and toxic. The cost of proper treatment and safe disposal of these wastes is high. Implementing waste minimization management system reduces both waste generation and resource consumption. Furthermore it can result in environmental preservation and operational cost saving. The purpose of this study was evaluation of the effectiveness of waste minimization performance in the paint formulating industries. So we determined the amount of waste generation, raw materials usage, water and energy consumption in a paint manufacturing plant called "Rang Afarin" in Tehran, Iran. There were three major sources of waste in this factory: solid wastes, wastewater, and air pollutants. We focused on wastewater because according to our researches we found that the main waste in this plant is wastewater and we can reduce about 20% of generated wastewater at the plant. Also, results showed that by implementing waste reduction program, the amount of raw materials, energy, and water usage can reduce respectively down to 0.114%, 22%, 9.8%. The whole of these waste reduction equal to 87288\$ saving in production costs annually. Waste minimization plays key role to achievement sustainable development and economic profits in industries.

KEYWORDS: *Paint Industry; Energy And Water Consumption; Raw Materials Saving; Waste Minimization*

INTRODUCTION

Waste minimization is an aspect of pollution prevention. It includes source reduction and recycling (California department of toxic substances control, 1992). Waste prevention is a business strategy from which any company can benefit. In addition to cost savings, it can also help you improve worker safety, reduce liability, and enhance your image in the community (USEPA, 2001). In today's competitive business environment, saving energy, reducing waste and improving productivity are more than just buzz words; they are vital for a business to be successful (EPA, 2002). The major driver for waste reduction is cost (Jewell et al., 2004). If a firm wishes to minimize its total cost, it is obvious that both disposal costs and waste amounts are a good place to start cutting costs (Higgins, 1989). Waste encompasses wastage of energy or water in producing or using a product (Bishop, 2000).

The amount of wastes disposed of by paint manufacturers is high and reducing waste is a high priority for them (USEPA, 1990). Paint formulators generate a variety of hazardous wastes in their operation. Tank cleaning is the principal source of waste generation (California department of health services, 1989). The majority of conventional paints contain organic solvents. These chemicals are classified as hazardous due to toxicity, ignitability or both (WMRC reports, 1992). Waste sources of the plant are classified into three main categories: wastewater, solid waste, and air pollutants. Significant attention is given to wastewater since laboratory results indicate that wastewater contains significant quantity of solvents (Dursun, & Sengul, 2006). Waste generation reduction leads to saving in raw material, energy, and water as well as less waste disposal. This means cost saving in production process and environment protection. It is true that pollution prevention is prefer to pollution treatment.

This study examines quantitative results of waste minimization Implementation in paint formulating industries. Our selected plant for researching is located in Tehran, Iran (see Fig. 1). This plant produces 30 kton/year of products such as industrial paints, marin paints, thinner.



Fig. 1. Location of the plant

MATERIALS AND METHODS

Our research was done at some steps. First we estimated the quantity of wasted raw materials, energy waste, water waste as well as the amount of wastewater generated in the factory. Then it was determined that what percentages of all aforementioned items could be stored by implementing waste minimization management system in the plant. Finally, the sum of production cost saving was calculated through the price of purchasing raw materials and energy as well as annual production capacity of the plant.

Raw materials

We selected seven different batches in seven days randomly to estimate raw materials wasting. For each batch, the type and quantity of raw materials recorded from weighing and mixing stage to the end of production process. Paint is composed of pigment, solvent, resin and additive but the most wastage in raw materials is related to pigments and solvents. we measured total weight of used raw materials and total weight of produced paint. Differences between these two amounts indicated raw materials wasted. By the percentage of pigments and solvents in each batch the waste of pigments and solvents determined.

Energy

For measuring the quantity of energy consumption, first we listed all of the electrical equipments and facilities in the plant. At three periods of time we recorded the hours of energy consumption for all of electrical devices. According to the registered used power (total watt) on the devices by the manufacturers, the quantity of energy consumption were calculated. Compare between calculated amount and electricity bills which sent periodically by the power organization showed the waste of energy in the factory.

Water and wastewater

Total water consumption except for drinking water was supplied by a well at the plant. The volume of water which pumped daily into water reservoir was measured. Then we specified all of the water consumers in the plant. At the production area we determined the amount of water applied for cooling process equipments, washing the floor of production area. At the domestic area we estimated the volume of water used to daily shower for people who worked at production area (because of the contact with pigments and powder raw materials) and water consumption for sanitary and kitchen purposes of all domestic and industrial workers as well as water use for irrigation of plants and lawn of the plant.

Whit due attention to waste minimization approaches at water consumption segment in the plant, it was estimated that how much water could be reserved.

There were three major sources of waste in the factory: solid wastes, wastewater, and air pollutants. We focused on wastewater because according to our researches we found that the main waste in this plant was wastewater. So we examined wastewater of the plant at two portions. Cleaning solvents used for removing paint from process equipments accounted for the most volume of the hazardous waste stream. The used solvents were collected into barrels and sent for off-site management. The other waste stream we focused on was composed of paint spills mixed with solvent residue plus floor washing waters which contained low concentration of pigments.

The quantity of both waste streams were measured in our research. The amount of used solvents and wastewater could be recycled and reused were also estimated.

RESULTS

The results of measuring the quantity of raw materials usage, product produced, and raw materials waste in seven different batches in seven days have been shown at table 1.

Table 2 shows the list of electrical devices in the plant and their electric power. The estimated amount of energy consumption, the true amount of energy consumption according to electricity bills, and the quantity of energy waste are shown at table 3.

The water reservoir was pumped 50m^3 of well water in the factory every day. Daily usage of water by water consumers in the plant and reservable amount of water are given at table 4.

It was also estimated that $2.5\text{m}^3/\text{d}$ of used cleaning solvents were collected into barrels. Collected used solvent are sent to off-site recovery and then is recycled in process. The other wastewater composed of floor washing and inadvertently paint spills with cleaning solvents which generated at the production area was determined $6.5\text{m}^3/\text{d}$.

TABLE 1 THE AMOUNT OF USED RAW MATERIALS, PRODUCED PAINT, AND RAW MATERIALS WASTES

Batch No.	Used raw materials (Kg)	Pigments content (%)	Solvents content (%)	Produced paint (Kg)	Raw materials waste (Kg)	Waste pigments (Kg)	Waste solvents (Kg)
1	1064.965	28.3	23.47	1061.165	3.8	1.075	0.892
2	1069.965	28.16	20.09	1066.265	3.7	1.042	0.743
3	894.7	26.89	42.36	891.4	3.3	0.887	1.398
4	1267.6	22.92	11.44	1263.4	4.2	0.963	0.48
5	850.452	25.91	12.93	847.252	3.2	0.829	0.414
6	1214.4	21.28	12.35	1210.3	4.1	0.872	0.506
7	969.575	28.09	8.25	966.075	3.5	0.983	0.289
Average	1047.379	25.94	18.7	1043.69	3.69	0.95	0.674

TABLE 2 LIST OF ENERGY CONSUMPTION SOURCES IN THE PLANT AND THEIR POWER

Electric device	Number	Power (Kwatt)
Mixer	1	40
Mixer	6	3.5
Mixer	2	15.2
Mixer	3	6.6
Purl mill	5	30

Purl mill	4	24
Filter	3	0.37
Feeding and discharging electro pump	1	4
Feeding and discharging electro pump	1	2.5
Dissolver	4	30
Dissolver	1	11
Sand mill	4	24
Sand mill	1	30
Ventilator	20	0.8
Fluorescent lamp	25	0.06
Lift track	3	60
Laboratoar mill	3	3
Laboratoar centrifuge	1	2.5
Refrigerator	5	0.3

TABLE 3 THE ESTIMATED AMOUNT OF ENERGY USAGE, THE ELECTRICITY BILL VALUE AND THE ENERGY WASTE VALUE

Course No.	Length of time (day)	Electricity value (Kwh)	bill Estimated value (Kwh)	Energy waste (%)
1	29	24827	18620	25
2	31	30967	22451	27.5
3	41	36585	25975	29
Average		915	664	27.2

TABLE 4 DAILY WATER USAGE IN THE PLANT AND RESERVABLE AMOUNT

Consumption source	Consumption rate (m ³ /day)	Saveable amount (%)
Cooling water	32	2.5
Washing water for production area floor	6	50
Plants and lawn irrigation	1	50
Kitchen and sanitary uses	3	10
Shower	3	10

DISCUSSION AND CONCLUSION

There is average 3.69kg (0.35%) waste of raw materials in each batch during production process. One portion of these wastes is related to solvents evaporation and other portion is due to pigments waste. According to table 1, nearly 0.064% of total wasted raw materials in one batch,

results from solvents waste. Changing the technology in the plant is one way to minimize the quantity of waste (Dursun, & Sengul, 2006). Since most process equipments are open design, some of used solvents vaporize in the form of volatile organic compound (VOC). We can save approximately 50% of solvents wasting. The production capacity is 3Kton /Year and 9686.784 Kg of solvents can be stored per year which equals to 24217\$ cost saving. This goal can be achieved in this plant through designing close system for production process. This system can be performed by:

1. Putting cover over the mixing tanks and other open processing equipments.
2. Pouring small plastic balls over containers.

By the table 1, 0.091% of pigments waste in each batch. The most important reasons for pigment wastes in the plant are as follows:

1. Waste of pigments when loading in bags and unloading in mixing tanks manually.
2. Suction through ventilators in loading and unloading areas.

We can automate loading and unloading pigments by using facilities such as vacuum and hopper system and save nearly over 90% of pigments wastage. By the production capacity, 3Kton /Year, we are be able to save annually 24576.26 Kg of pigments and 61441\$ in operational costs. Improved quality control during manufacturing process with employee training can be significant factors in reducing wastes particularly the reduction of material losses through spills. Thus by performing waste minimization program in the factory 0.114% of total raw materials will stored each year which equal to 85658\$ cost saving in operational costs of the plant. It must be mentioned that there is about 50Kg leftover paint in mills in every batch. If the next batch is same colour with previous, it will be discharged as production. Otherwise, it must be cleaned and removed as waste. In this research we didn't consider this kind of raw materials wasting.

Table 3 shows that there is about 27.2% energy waste in the plant. It was found that the most share of energy consumption belongs to mills, ventilators, dissolvers, and mixers respectively. For production of one ton paint, mills work approximately 18 hours.

The main causes of this wasting can be:

1. Low efficiency of the process equipments resulting from oldness and fatigue of devices
2. Inappropriate program for maintenance and repair of electrical devices.

Process equipments in this plant have been instaled since 35 years ago. So they probably work with around 50% efficiency or less. For instance, in order to supply 30kw power, a mill with 80% efficiency consumes 37.5kw energy while a mill with 50% efficiency uses nearly 60kw energy. Differences between these two number is equal to 22.5kw (75%)energy waste. Therefor, if we replace electrical equipments at production process with newer ones, the energy consumption will approximately decrease as much as 22% . If plant works 300 days per year, then 1630\$ will nearly saved yearly. Unfortunately because of low price of energy in our country , there is no incentive to save it . In fact, regulatory approvals and really price of energy are good instruments to natural resources conservation.

With due attention to this point that 50 m^3 of water is pumped to reservoir every day, as well as by findings at table 4, it is found that there is $5 \text{ m}^3/\text{day}$ (10%) waste of water in the factory. Most of this wasting results from lack of pay attention to resource conservation and incorrect consumption pattern, because the water is free in this factory. In this research we noticed that through accomplishment of some easy option, we can save about $4.9 \text{ m}^3/\text{day}$ (9.8%).

By closing floor drains and discouraging employees from routinely (i.e. needlessly) washing down areas, some facilities have been able to achieve a large decrease in wastewater volume (USEPA, 1979). Other effective ways to reduce water use include employing volume-limiting hose nozzles, using recycled water for cleanups, and actively involved supervision (USEPA, 1990).

Moreover aforementioned options, we recommend other waste minimization options as follows:

- 1- Employee training to correct consumption and environmentally sound thought.
- 2- Control and check the leakages and defaults especially water pumping system providing cooling water.
- 3- Use of shower and valves equipped to electronic eyes.
- 4- The wastewater results from washing floors has low contamination, so by slight treatment to reduction COD, it can be reused for irrigation of the plants and lawn and floor cleanup purposes. This waste stream plus spills cleaning residue generate as much as $6.5 \text{ m}^3/\text{day}$ and we can reduce it down to $3 \text{ m}^3/\text{day}$

Spent cleaning solvent is a hazardous waste commonly generated by the paint manufacturing industry. Spent solvent should always be kept separated from other wastes, so that it can be reused. Spent cleaning solvent can often be reused as a process ingredient in batches of compatible formulation (Department of toxic substances control, 1997). Over 1/2 of the paint manufacturing hazardous waste contained solvents (USEPA, 1992). Installation of a distillation unit can provide at least 70% solvent recovery from wastewater (Dursun, & Sengul, 2006). In 1985 a survey showed that over 82% of the respondents recycled all of their solvent waste either on-site or off-site (USEPA, 1990). Waste minimization options for decreasing solvent waste are: Scheduling batch production runs from light to dark colors, use high pressure wash systems, reuse equipment cleaning wastes, clean equipment immediately, use alternative cleaning agents, use mechanical wipers on mix tanks, use countercurrent rins methods. By performing mentioned options the solvent waste generation in the plant decreased to $2 \text{ m}^3/\text{day}$ and 20% of solvent waste stream generated in the plant will reduce.

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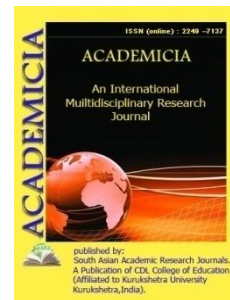
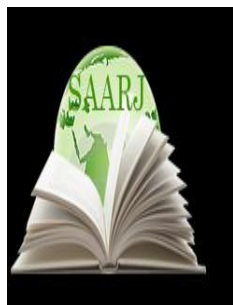
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LITERARY CONCEPTION AND AESTHETIC INTERPRETATION IN ORIENTAL EPIC FOLK TALES

Nazokat Yusufjonova Nigmadjonovna*

*Center for Spirituality and Enlightenment Under,
The Ministry of Higher and Secondary Special Education,
Tashkent, UZBEKISTAN

ABSTRACT

Studying spiritual and mental essence of ancient spiritual and cultural heritage, realizing socio-genetic factors thoroughly, feeling them in heart, its ideological and literary features, special features of its genres, historical roots and foundation of faith, poetic structure give us opportunity to create similar features of our historical heritage with world poetic understanding. Especially, researching from the point of view of Uzbek and Indian epics in archaic plot transformations of motifs in historical-genetic, historical-comparative, psychological and social methods is currently an actual problem of modern literature and folklore studies. There was researched parallels in epics in the method of plot motifs: childlessness, the birth of the main hero and challenges and protective characters, description of faith in poetic understanding, semantic chains concerning helpful spirit, individuality of symbolical or complete artistic conception and mythopoeic interpretation in this article.

KEYWORDS: *Aesthetic Interpretation, Motives Of Supernatural Birth, Motives Of Trial, Motives Of Trip, Cosmogonic Views, Epic Transformations.*

INTRODUCTION

Research has revealed that almost all genres of folklore contain protective forces. In oriental folk literature, the main character overcomes difficulties and reaches perfection with the help of such forces. Though there are certain differences on cosmogonic views of Indian and Uzbek nations, there are certain similarities as well in the perception of the universe as a triad, reached the beloved one in Heaven, attitude towards water, earth, air and fire as sacred matters, regarding just and kindness as noble features of a human being.

Similarities can also be traces in conflicts between heavenly powers and help to the main characters by protective forces in overcoming difficulties and problems. These features constitute common literary conception of oriental epic folklore and serve as continuing motives. Family and social traditions create certain motives as the result of epic transformations. Uzbek and Indian people bear share some common history and have similar traditions, which are reflected in their traditions and poetic mind. Literary traditions also allowed both nations to enrich each other.

Main part: The ancient scriptures of “Avesto” serve as a proof of the fact that our ancestors created a highly developed civilization. The underlying principle of this scripture is the battle between good and evil forces and hymn to kindness of human nature. It is interesting to note that this battle begins in Heaven, among gods and continues among nature and human beings. In the scripture, the evil force Anhra Manu (Axriman) tries to harm the good force Ahura-Mazda. The former is helped by giants in these attempts. Therefore, the supreme god of good forces, the creator of life and light Ahura Mazda and the evil force Anhra Manu, the representation of an evil mind ApaMand, the destroyer giant, the enemy of beauty and kindness Ayshma, the giants of death and fade Tuarvi and Zariklar are constantly at war with each other. Ahura-Mazda protects humankind and the whole nature as well as the riches of the underground from evil forces. In this endeavor, he is helped by such heavenly forces as Mitra, Anaxita, Sienta, Xarvalat, Amereatt and Xshatra. In “*Avesto*” it is stated Ahura Mazda has created the whole universe and sixteen countries. The purpose of creating the universe is humankind. It is stated when apocalypse comes, a person named Saoshyant appears who will save humankind from evil forces. This person will clear the Earth with “molded iron. Those who were on the side of evil forces will be put to destruction. It can be concluded that the problem of the influence of natural and heavenly forces on the fate of humankind and universe plays an important role in almost all genres of folk epic tales. In oriental folk epic tales, the main character overcomes all the difficulties and reaches perfection with the help of heavenly forces. Despite the differences, there are many similarities in the beliefs of Uzbek and Indian people. These similarities can be seen in the conflicts between heavenly forces. We assume that these similarities call for special research. Myths are results of attempting to perceive the genesis of human-nature-society-universe. People have always been incline to tie the reasons of events with external forces. Supernatural forces also allow creating this conflict between good and evil. This also increases the ideological and literary reliability of the poems and serve to create the polarity between good and evil, approving good and rejecting evil. Such humanistic pathos improves the readability and aesthetic value of the poems. For this reason, different examples of ancient epic tales like “*Gilgamish*” of Sumer, Homer’s *Iliad*” and “*Odyssey*”, “*Mahabharata*”, “*Ramayana*”, “*Pacha-tantra*” (“*Kalila and Dimna*”) of India, “*Geser*” of the peoples of Tibet and Mongolia, “*Jangar*” of the Kalmyk people, “*Edda*” of Ancient Iceland, “*Amiraniani*” of Georgia, “*Gurughli*”, “*Alpomish*”, “*Manas*”, “*Qirqqiz*” of Central Asian peoples as well as folk epic tales Gershasp, Elibek, Kayumars, Jamshid, Erxubbi, To‘maris, SHiroq, Siyovush, Rustam and others are still widely read. So, we can see that the comparative analysis of Indian and Uzbek folk literature opens new horizons for researchers. After Uzbekistan became independent, it has become possible to research ancient manuscripts that contain all the wisdom, philosophical, literary, religious, ethical and aesthetic beliefs of our ancestors.

The problem of being childless is addressed in many folk tales and epic narrations of Uzbek people through motives of the supernatural birth of the main character. V.Ya.Propp, S.Kaskabasov, B.Sarimsoqov, K.Imomov, G'.Jalolov, J.Yusupovlar and other researchers of folk literature study the genesis of tales and epic poems of nations in relation to their beliefs and traditions.⁶

They believe that the motive of being childless serves as a main element of composition of many tales. Before telling the history of the supernatural birth of the main character, narration starts with describing the state of childless parents.

The child is born after they beg to supernatural forces. In bearing the child, the spirit of ancestors or eating such things as fish or fruit presented by supernatural forces plays a certain role, which add to supernatural character of the motives of birth. For instance, in the Khorezm version of *"Olmos botir"* fairy tale, a fifty-year old woman married to a sixty-year old man unexpectedly becomes pregnant and bears a healthy, strong child.

In *"Go'ro'g'li"* epic series, the main character is born by dead mother in a grave, as his mother BibiHilol dies when his child-to-be-born reaches six months. It is interesting to note that Gurughli himself also faces the problem of being childless and adopts Avazxon from Xunxor and Hasanxon from Vayangandan.

Similar motives can be traced in *"Alpomish"*, where the sons of AlpinbiyBoyburi and Boysarini pray for a child during forty days in the mausoleum of Shohimardon. Their prayers are accepted by God and Boysari's wife bears a daughter, while Boyburi's wife bears a son.

In *"Orzigul"* epic tale, the king Qoraxon is also childless and wants to have a son. However, his wife bears a daughter.

In *"Ramayana"*, Indian epic narration, the main characters are born in supernatural ways. In particular, the descendants of Dasharatha are considered the descendants of Sun, while Sita is found in the dew. Some of the main characters suffer from being childless, and bear a child after long prayers and sufferings as a heavenly gift. For instance, the childless king of MithilaJonak wants to build a temple and starts ploughing the ground. At this point, a beautiful lady appears from under the plough and the king adopts her. She is called *"Sita"*, which means *"plough"*. The old king of KushalagDasharatha is also childless. His prayers are accepted and his wives, after eating heavenly gifts provided by the god Vishnu, bear children.

In the masterpiece of classical Uzbek literature *"Farhod and Shirin"*, an epic poem by Navoi, we can also observe such an extraordinary birth. The poem starts with the description that the powerful emperor of China suffers from being childless. His only desire is to have a son. His good deeds and charity are not in vain.

Deeds such as battle with the enemy, overcoming different disasters show that the motif of trip was applied and followed. These instances are very close to Farkhod's adventures, who is a hero of Navoi's poem. The ways of passing through the stages of perfection are reflected poetically in the book, and as Farkhod fights with a dragon, a dreadful demon Akhraman, a lion and an iron warrior – robot, he also fights with his lust, and gets rid of the feelings such as the passion for power and wealth, anger and hypocrisy. The hero learns from the great scholars such as Sukhaylo and Socrates the secrets of opening the magic of the mirror, the secrets of love and purification.

As Navoiy writes about the features of the trip, he notes that:

“A traveler can have many difficulties, but also he can achieve his aim. Though his body suffers from the difficulties of travel, his soul and spirit has a rest. and you can ask about the countries and places from the traveler.”).

It can be observed in a series of “Alpomish” and “Gurughli” poems, which reflect the high ideals of our people. For example, Khakimbek sets out to rescue his beloved. Saying goodbye to his relatives, leaving his country, travelling across ninety mountains, he reaches the country of the kalmyks ruled by Toychikhon. He fights against the enemy to fulfill Barchin’s terms.

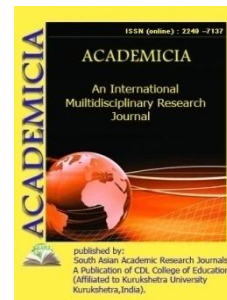
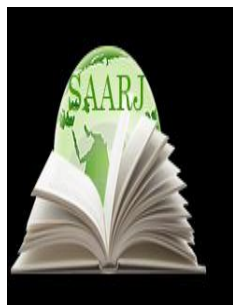
He wins all parts of the competition, including racing, pulling the arrow, hitting the coin from a thousand steps, and wrestling and shows that he is a real strongman. Despite the dodges of the Surkhail’s sons, he overcomes all difficulties. At the end of the poem, he returns his country after a seven-year captivity, and applies justice.

CONCLUSION: Such motives exist in the folklore of all oriental nations, and they have been playing an important role in forming the universal features such as good, kindness, objectivity and honesty throughout the centuries.

Furthermore, studying from each other in nations, acquiring living traditions and develop enrich both literatures and influence considerably to educate ethnic groups.

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THE CONCEPT OF "BALAGAT" AND THE "BALAGAT" OF THE SENTENCE

Bobojonov Gulom Ozodovich*

*Basic doctoral student of Tashkent State,
University of Uzbek Language and Literature,
UZBEKISTAN

Email id: anzurut@mail.ru

ABSTRACT

Although “the science of balagat” has a history of almost a thousand years, it is one of the least studied sciences. The word "maturity", which in the dictionary means "maturity", "perfection", as a science, is based on the complete delivery to the reader of all the layers of meaning intended by the author in the text. In this case, the full observance of the rules of linguistics, the delivery of the meaning and purpose of the author in full accordance with the situation of the reader (“muqtazoi hol”) and the concise expression of the conflicting interests of the two parties is important. Similarly, having the ability and skill to compose a text indicates the maturity of the author. Scholars have identified the highest and lowest levels of this subject of science and acknowledged that there are several other ranks among them. It is emphasized that every author must constantly strive to bring his work to the highest level that humanity can achieve. Systematic study of “the science of balagat” makes it easier to understand the meaning of texts that are more difficult to understand - divine books, classics and other similar texts.

KEYWORDS: “Balagat” (Maturity, Perfection), The “Balagat” Of The Sentence (Perfection Of Speech), Fasohat (Writing Without Mistakes), Mutobiq (Combination Of Contradictions), “Muqtazoi Hal” (The State Of The Listener And The Need Of The Speaker To Speak Accordingly), Mutakallim (Speaker, Author), “Muxotob” (Listener, Reader).

INTRODUCTION

The word "balagat" literally means الوصول والانتهاء "to reach" and "to finish." It expresses the quality of speech and mutakallim. In this case, the purpose of "intiho" is for the words to reach the heart of the "muxotob" (reader, listener) in the most acceptable form.

Scholars have given different definitions of "balagat" and the "balagat" of the sentence. In particular, it is necessary to "convey the great meaning in sahih (clear) and fasih (unambiguous) terms", "Let it be explained in a few words without interfering with the completion of its meaning in the heart, and do not go beyond the limits of necessity when the need arises", "the word being eloquent(fasih) and corresponding to space and time(muqtazoi hol)", "the eloquence of the eloquent word to the required situation". Some researchers have suggested that two aspects need to be considered when studying puberty. One studied the science known as éloquence in a foreign language, and the other as a skill known as rhétorique. The "balagat" we are studying is included in the first round as a skill. In our opinion, it is correct to rely on the scientific view of scientists in the form of "balagat" is a science that encompasses the rules of science, methods and factors".

The definition of balagat, which most scholars agree with and which embodies the essence of this science, is as follows: "balagat is the conformity of the eloquent (fasih) sentence to the essential." This was seen as the "the balagat of the sentence." There are three points to note here:

Fasih (writing without mistakes) sentence. "Muktazai hal" (the state of the listener and the need of the speaker to speak accordingly). Compatibility (combination of contradictions).

In order to get to know with the definition of "balagat" as a scientific term and its essence, it is necessary to be aware of the concept of " **éloquence** ". One of the three phenomena that form the basis of "balagat" is directly related to the rules of " **éloquence** " observed in words, sentence and "mutakallim".

The eloquent (fasih)sentence is composed of eloquent words. The word eloquent, on the other hand, is a word that is free from literal defects, fully complies with the rules of language in its construction and use, and can express its meaning clearly. An eloquent **speech** is one in which the words that follow are not difficult to pronounce, do not follow the rules of the language, and do not form a long chain that suffers from the combination of compounds without spiritual and verbal defects and excessive repetition. It would not be appropriate to argue about his maturity unless he is a prostitute. A sentence that contains the necessary rules of " **éloquence** " (fasih) provides the basis for "balagat". The lack of eloquence makes it impossible to find "balagat" in it. But this does not mean that every eloquent speech can be a fish.

In order for the eloquent speech to be a fish, it is also necessary to conform to it again.

At this point, it is necessary to get acquainted with the basic concepts of "balagat" with the terms "mutakallim" and "mukhotob". Although "mutakallim" means "speaker" in the dictionary, the term "balagat" is a term that encompasses all concepts such as speaker, writer, author, narrator ... and refers to "speaker". It does not matter whether the speech is oral or written. "Mukhotob" means "speech-oriented person" (people), which includes the meanings of listener, reader, reader, interlocutor. Also, "mukhotob" is not limited to the expression of a person (people). In its place, it is used in reference to "any being to which speech is directed." For example, a rock, a flower, a wind, an animal, etc. can come in the form of a "contact".

The second concept in the definition of "balagat" is the basic term and the basic concept of "muqtazoi hol". "Muktaza" is derived from the word اقتضاء, which means "demand", "necessity", "need".

"Hol" indicates status, situation, condition, etc. Researchers who have studied the situation as a whole have described it as the situation of the parties at the time of the speech. In our opinion, it is appropriate to study the "muqtazoi hol" as two phenomena.

"Mutakallim" (author) determines the need to express the purpose of the "Mukhotob" based on the situation. The basis of Mutakallim's speech is the state of "mukhatob". In this case, the level of knowledge, intelligence, awareness and perception of the "addressee", his attitude to the message is important. It is necessary to take into account space-time, situation and other conditions in the expression of the purpose, to adapt it to the mind of the addressee in conveying the idea, to point to several meanings at once, to express a single goal by pointing to several meanings. "Mutakallim" adapts the expression he wants to convey to the above cases of "mukhatob". From this point of view, the "case" is the status, and the "obligation" is the "worthy attention" from which the "mutakallim" must adapt his speech to this state.

It is the duty of the "mutakallim" to find the most necessary sentence that is "appropriate" to his situation and to convey it in an eloquent manner, while the "hal" indicates all aspects of the "mukhatob." Determining the necessity of the state of the mukhatob is at the heart of the mutakallim's speech.

The following example will help you understand these theoretical rules:

Alisher Navoi, describing the event of Miraj in the epic Hayratul Abror, writes:

“One night in the dark, the universe,

The sun hid like the eye of life”

It is known that the ascension is the ascension of our Prophet Muhammad to heaven. This historic event took place at night - in the dark. At night, the Earth or some other planet may be dark. But it is unimaginable that the whole universe - the galaxy - is dark at the same time. Astronomical and physical facts deny that there is complete darkness in the universe as long as the Sun exists. The sun definitely illuminates a part of the universe. Alisher Navoi does not deny this idea. It can be said that Mutakallim's high knowledge and poetic skill, his masterful use of the rules of "balagat" could easily bring into the mind of the "mukhatob" an event that does not fit into the human imagination, which seems to contradict the truth.

Navoi likens the Sun to the eye of life. It is well known that life means all beings. When you close your eyes, it is as if nothing has happened. And in the blink of an eye, it happens in a very short time, and sometimes it goes unnoticed. What Navoi is referring to, in our opinion, is that the Sun, which is the eye of life, closed and opened its eyes in such a short time that no one in the whole universe noticed it closed and opened. The miracle happened at a time when such a moment was less than a billionth of a minute. He is well aware that any "mukhatob" does not feel dark when he closes his eyes. Alisher Navoi skillfully used this well-known situation in the "mukhatob" to fully achieve his goal.

Based on the "mukhatob" case, the correct and error-free construction of the sentence in accordance with its case is carried out on the basis of the "meaningful" rules. One of the main sections of the "science of balagat" is the "message" in the "meaning" - "essay", "musnad" - "musnadun ilayh", "enlightenment" - "nakra", "presentation" - "tahir", "zikr" - Rules such as "hazf", "vasl" - "fasl", "iyjaz" - "itnob" - "musavat" are necessary factors for this state of "mukhatob". The main object of "meaningful knowledge" ("maoniy") is that the "mutakallim" conveys its purpose to the "mukhatob" in full compliance with the formal (formal, structural) rules of the text.

Also, the rules of the "statement" (bayon) section, such as "tashbeh", "istiora", "kinoya", "majoz" in the debate between "truth and metaphor" are aimed at serving the same purpose of "mutakallim". In a text that is fully based on the rules of "fasohat" and follows all the rules of language in the construction of words, sentences and phrases, the meaning and purpose of "mutakallim" is conveyed to the "mukhatob" through the rules of "narrative science" (bayon ilmi).

Eloquent (fasohat) speech is a means of expressing the purpose of the "mutakallim" and thus corresponds to the state of "mukhatob." The purpose of "mutakallim" and the state of "mukhatob" are two completely different phenomena that are different from each other. It is natural that the goals of the opposing parties, who want to annex, convey their purpose to the other party, and the desire to obtain the information necessary for their situation, are often different from each other. The "mukhatob" and his condition, as well as the "mutakallim" and the need arising from the "mukhatob" in the expression of the purpose, are directly proportional to each other. Consistency is the basis for creating a new phenomenon by combining the same negative and positive events into one point. In the "fish talk" (balig'gap) he creates a combination of non-interests that serve the separate independent purposes of "mutakallim" and "mukhatob". This "union of opposites" ensures that the "eloquent speech" is a complete "fish."

The absence of these "contradictions" in the speech or the fact that it does not take the form of an "alliance" (ittifoq) that serves the common good of "mutakallim" and "mukhatob", hinders "balagat". It is for this reason that scientists have said that any fish will be eloquent, but not every eloquent speech will be eloquent. "Fasohat" is a peculiar and primitive form of "balagat". The lack of "balagat" in it means that it is free from the "union of opposites" that arises between the above "mukhatob" and the "mutakallim" "muktaza" and turns non-interests into the common good.

The "union of contradictions" inherent in any creature in existence, as in all other phenomena, is the basic expression in the "science of balagat", the basic concept, the main factor that constitutes the essence of this science. Conflict and alliance serve as the driving force for the systematic evolution of things.

Scientists have identified its highest and lowest points in determining the subject of "science of balagat", The highest point ("excellent") is, according to the union of all scholars, the "status of permission." "I'joz" (إعجاز) is the root cause of the "science of balagat". Although "I'joz" is defined in the dictionary as "something beyond human power," it is in fact "something that

makes humanity incapable of creating an image like it". The science of puberty examines the extent to which a sentence is appropriate to a particular situation. At the same time, it is a characteristic of humanity to be inconsistent with the totality of all the "mukhotab". It is beyond the power of humanity to create an eloquent speech (or text) that is equally relevant to all times and all spaces and to each of the ever-changing states of all the "mukhotab" in them. With this in mind, scholars have stated that the status of "I'jaz" is not included in the subject of "science of balagat".

According to Jalaliddin Qazvini, the level of "excellent" includes "status of i'jaz" and "below it". This is the highest status that humanity is capable of. It is necessary for every "mutakallim" to strive as much as possible to bring his speech (text, work) to this status.

The lowest level of "balagat" is "adno" (or "asphal"), which is higher than the sound level of animals. If immorality is found in it (if it serves a certain purpose), then it is the subject of "balagat". But the sound of animals is not part of the "science of balagat",

The levels that make up the subject of "science of balagat" can be expressed as follows:

TABLE 1

BALAGAT	excellent	1.	Status of "i'jaz"	tanzil
		2.	The status below the "i'joz"	the creation of mankind
	the lowest	1.	higher status than animal sounds	
		2.	animal sounds	physical sounds

It is acknowledged that there are a number of other levels below the "I'jaz" and above the animal voice.

The "balagat of the mutakallim" is the ability and ability to express eloquent words in the form of "muktaza" ("fish").

From the "science of balagat", "I'jaz" is meant to be free from any flaws in the expression of the goal in eloquent words in accordance with the state of "mukhatob". In this case, the semantic-structural rules, such as the sentence structure of the "defect", the expression of the parts of speech, the location, the use of words, are in the "science of meaning" (ma'aniy ilmi); the avoidance of spiritual errors and omissions in speech and the expression of meaning in other parallel ways are studied through the rules of "narrative science" (bayon ilmi). In addition to the rules of "meaning" (ma'aniy) and "statement" (bayon), the aesthetic and emotional impact on the meaning and word - the attraction - is studied through the "science of art".

The basis for the study of "balagat" is almost all the sciences currently studied in the field of philology. However, these disciplines may not be sufficient in the study of textual maturity.

The origin and development of "science of balagat" is based primarily on the Islamic sciences, and this process continues to this day. Most of the scholars and researchers who have studied the

"science of balagat" have studied this science mainly as an Islamic science that helps to understand the meanings of the Qur'an and the hadith. Those who have studied it from the point of view of philology, on the other hand, have observed that this science is often viewed only in terms of the poetic arts. This view may cover a certain part of the sciences of '**badi**' and '**bayan**', but in this case the 'science of meaning', which is fundamental in understanding the essence of the "science of balagat", is ignored. Without the rules of "science of meaning", it will be impossible to have a complete picture of this science.

Another group of scholars who have studied this science in terms of philological sciences argue that "balagat" is largely consistent with the linguistic sciences. They try to justify this idea on the basis of the rules of "eloquence" and "science of meaning". A number of linguistic disciplines, such as phonetics-phonology, lexicology, grammar, syntax, morphology, emphasize the formation of formal-structural aspects of "balagat". There is no denying that these disciplines are included in the structure of "balagat". At the same time, it is also true that these sciences cannot study the maturity of the text on its own.

In our opinion, the complex study of the rules of "balagat" and its application to the poetic text is a phenomenon that occurs in the generalization of several disciplines. Dozens of rules and laws, which are sometimes studied in a number of disciplines, are relied upon in order to make a sentence perfect in terms of "eloquence" and to express the purpose in the most extreme way. The neglect of any of these aspects, as Mutakallim implies, is a serious obstacle to understanding the maturity of the text.

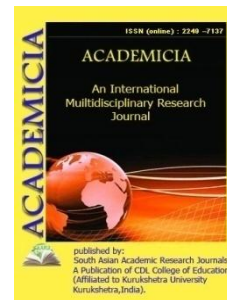
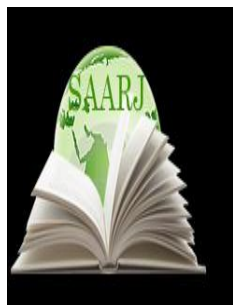
In short, "balagat" consists of a set of rules that formally and spiritually cover the text, the words, phrases and combinations in it.

In expressing its purpose, Mutakallim first of all pays attention to the full observance of the rules of language in the external structure of the text. This issue is mainly based on the rules of "eloquence". Expressing the eloquent sentence in accordance with the state of the "addressee" is the basis of the "science of balagat." This scientific approach makes it possible to cover all meanings of the text.

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IMPROVING MELIORATIVE CONDITION OF SALTED LANDS ON THE BASIS OF USING LOCAL MINERAL AGRO ORES

Ismailov Uzaqbay Embergenovich*; Ismailova Aqsingul Uzaqbaevna**

*Professor,

Nukus branch of Tashkent state Agrarian University,
Nukus, UZBEKISTAN

Email id: ismaylov-51@umail.uz;

**Assistant,

Nukus Branch of Nashkent state Agrarian University,
Nukus, UZBEKISTAN

Email id: kros0105@mail.ru;

ABSTRACT

Field experiment was carried out in order to improve salty lands of the Republic of Karakalpakstan. The aims of the experiment are improving meliorative condition of soil, increasing its productivity, defining influence of organic fertilizers and local agro ores. As a result of investigations it was obvious that when mineral fertilizers were fully used, the amount of chlorine and other salts increased, soil productivity decreased at the end of vegetation. When the amount of mineral fertilizers was shortened to 25% and additionally 10, 20 t/ha organic fertilizers and 1,5-2,0 t/ha celadon green from local agro ores were used, increasing the amount of chlorine and other salts slows down, the amount of nutritious elements in the structure of soil also balances. It was defined that for improving salty lands it is effective using N180P130K90 kg/ha mineral fertilizers, 20 t/ha organic fertilizer, 1,5-2,0 t/ha celadon green in improving soil and increasing cotton productivity.

KEYWORDS: Saltiness, Productivity, Improving, Mineral, Organic Fertilizers, Local Mineral Agro Ore, Celadon Green, Again Salty, Underground Water, Cotton, Harvest.

INTRODUCTION

The main task of agriculture is to increase agricultural production constantly, improve their quality, preservation and processing.

The intensification of agricultural production, as cotton growing, requires increasing productivity based on the effective use of mineral fertilizers. Generally known importance of mineral fertilizers in improving the condition of the soil, and in increasing its fertility and productivity of agricultural crops, is to follow to the optimal norms in applying them to the soil. In addition to the well-known nitrogen, phosphorus and potassium fertilizers, the use of trace elements containing (Fe, Cu, Mn, Mo, B, Zn, Co) fertilizers is of great importance, which enhance plant growth, increase the efficiency of enzymes that contribute to the intensity of photosynthesis, and therefore increase yield, stability of plants to drought, cold and some diseases.

In this, much attention is paid to the problem of developing and using non-traditional fertilizers obtained on the basis of local natural raw materials, which include celadon green, containing up to 15 different trace elements.

Objects and Methods of Research

The object of research is local mineral agro-ore (celadon green), organic fertilizer, the central soil-climatic zone and cotton. The soils of the experimental plot are medium loamy, the level of groundwater occurrence is 1.5-2.0 m, saline.

The following variants were studied experimentally: variant 1, normal cotton cultivation rates N250, P175, K125 kg / ha, variants 2, 3 and 4 application of celadon green with a rate of 1.0, 1.5 and 2.0 t / ha without mineral fertilizers, variants 5, 6 and 7, norms N185 P130 K90 kg / ha, celadon green 1.0, 1.5 and 2.0 t / ha and organic fertilizers 10 t / ha, variants 8, 9 and 10, norms N185 P130 K90 kg / ha, celadon green 1.0, 1.5 and 2.0 t / ha and organic fertilizer 20 t / ha.

Results of Research

For the normal growth and development of cotton, the joint application of mineral (reduced rates by 25%), organic fertilizers of 20 t / ha and celadon green at the rate of 1.5-2.0 t / ha is necessary. Cotton yield is the final result of applied agricultural technologies. If cotton is adequately provided with life factors, then indicators of growth, development and productivity will be high. The average cotton yield for 2 years was 16.5-28.5 c / ha. When using mineral fertilizers with the norm N250 P175 K125 kg / ha (option 1), the yield was 24.6 c / ha. The introduction of celadon green in its pure form without organic fertilizers is 16.35-17.5 kg / ha. This is because in the composition of celadon green there are not enough macronutrients necessary for plants, and micronutrients in sufficient quantities.

When celadon green was used without organic fertilizers with a norm of 1.0, 1.5 and 2.0 t / ha, there are not significant differences between the options. With the combined use of celadon green with mineral fertilizers, the annual NPK rate was reduced by 25% i.e. N185 P130 K90 kg / ha and in addition to them organic fertilizer. Cotton productivity in these variants (var. 5-10) was 22.4-28.1 c / ha. When applying organic fertilizers with a norm of 10 t / ha (var. 5, 6, 7), the yield was 22.4-24.7 kg / ha, and with a norm of 20 t / ha (var. 8, 9, 10) - 25, 3-28.1 c / ha, or an additional yield of 2.9-3.8 c / ha. In an average of two years, the harvest of raw cotton in var. 1, where the full norm of mineral fertilizers was applied (N250 P175 K125 kg / ha) was 24.6 c / ha,

and using only celadon green with a norm of 1.0; 1.5 and 2.0 t / ha (var. 2-4) - 16.5-17.5 kg / ha., the decrease in yield compared to option 1 was 7.1-7.8 kg / ha. With the combined use of organic, mineral fertilizers and celadon green, there is an increase in cotton productivity, i.e. on average, they amounted to 22.7-28.5 c / ha.

The content, change and accumulation of the dense residue from spring to autumn are the same as for chlorine ion.

The increase in chlorine ion and dense residue at the end of the vegetation is explained by the fact that the level of groundwater in the territory of irrigated lands is from 1.5 to 2.0 m. Groundwater is the source of salinization of the soil. Therefore, despite annual leaching, secondary salinization of the soil occurs. Due to the annual washing of saline lands, nutrients are simultaneously washed into the deeper layers of the soil.

With an increase in the rate of organic fertilizers to 20 t / ha, and the norms are the same as in variants 5, 6 and 7, the yield was 26.3-28.5 c / ha, i.e. increase in yield compared to variants 5, 6 and 7 - 3.4-3.7 kg / ha, and compared to variant 1, where the full rate of mineral fertilizers was applied (N250 P175 K125 kg / ha) - 1.7- 3.9 kg / ha.

TABLE 1 THE INFLUENCE OF THE NUTRITIONAL REGIME ON COTTON PRODUCTIVITY, C/HA

№ var.	2017	2018	Average	Variation, ±		
				From variant 1	From variants 2, 3 and 4	From variants 5, 6 and 7
1	24,1	25,2	24,6	00		
2	17,2	16,5	16,8	-7,8	00	
3	17,0	16,0	16,5	-8,1	00	
4	18,0	17,1	17,5	-7,1	00	
5	22,4	23,1	22,7	-1,9	5,9	00
6	22,9	24,2	23,5	-1,1	7,0	00
7	24,7	25,5	25,1	+0,5	7,6	00
8	25,3	27,3	26,3	1,7	9,5	3,6
9	26,7	27,7	27,2	2,6	10,7	3,7
10	28,1	28,9	28,5	3,9	11,0	3,4

In 2017. md=0,61 c / ha; p=2,26%

In 2018. md=0,57 c / ha; p=2,71%

The combined use of organic fertilizers and local agro-ore significantly improves the reclamation state, agrochemical, agrophysical properties and soil fertility, which improves the nutritional regime of the soil. In these variants, compared with variant 1, where only mineral fertilizer was introduced, the additional yield was 1.7-3.9 c / ha. This is confirmed by the fact that the combined use of mineral, organic (20 t / ha) and local mineral agro-ore is quite acceptable for additional fertilizing cotton. At the same time, organic fertilizers and celadon green have a beneficial effect to improve the reclamation state and soil fertility.

To determine the effect of the applied mineral and organic fertilizers, celadon green on the change in the salt content before the start of the experiment, at the beginning, middle, and at the end of the vegetation, chlorine and a dense residue were determined in the arable horizon.

From the data of table 2 it can be seen that prior to laying the experiment, the content of chlorine ion varied within 0.032-0.039%, this is acceptable for obtaining full-fledged seedlings of cotton. The content of chlorine ion increases by the end of the vegetation. The accumulation of chlorine ion from spring to autumn amounted to 0.005-0.019%. The greatest accumulation of chlorine ion during the growing season is observed in variants 1 and 3 (0.019-0.011). In other variants, where mineral and organic fertilizers used together with celadon green, the accumulation of chlorine ion at the end of the vegetation was less compared to variants 1 and 3, and amounted to 0.005-0.008%.

TABLE -2 CHANGE IN THE CONTENT OF WATER-SOLUBLE SALTS, % IN THE LAYER 0-30 CM

Variants	Prior to laying the experiment		At the beginning of the vegetation		In the middle of the vegetation		At the end of the vegetation		Accumulation from spring to autumn	
	Cl	Dry residue	Cl	Dry residue	Cl		Cl	Dry residue	Cl	Dry residue
1	0,036	0,640	0,039	0,700	0,046	0,730	0,058	0,760	+0,019	+0,120
2	0,038	0,640	0,040	0,700	0,40	0,720	0,046	0,740	+0,006	+0,100
3	0,038	0,660	0,039	0,680	0,040	0,710	0,050	0,740	+0,011	+0,080
4	0,039	0,640	0,040	0,660	0,042	0,690	0,046	0,720	+0,006	+0,080
5	0,036	0,630	0,039	0,640	0,042	0,680	0,046	0,690	+0,007	+0,060
6	0,037	0,680	0,040	0,700	0,043	0,720	0,045	0,720	+0,005	+0,040
7	0,036	0,690	0,040	0,720	0,043	0,740	0,046	0,740	+0,006	+0,050
8	0,036	0,660	0,039	0,680	0,042	0,700	0,046	0,710	+0,007	+0,050
9	0,038	0,680	0,039	0,700	0,040	0,720	0,046	0,710	+0,007	+0,030
10	0,037	0,660	0,038	0,700	0,040	0,710	0,046	0,720	+0,008	+0,060

With the combined use of organic, mineral fertilizers and celadon green, it improves the nutritional regime of the soil, celadon green and organic fertilizer improves water-physical and agrochemical properties, and increases soil fertility. In addition, they prevent negative influence of harmful salts on plants.

The use of celadon green together with mineral fertilizers to some extent prevents the accumulation of water-soluble salts in the soil.

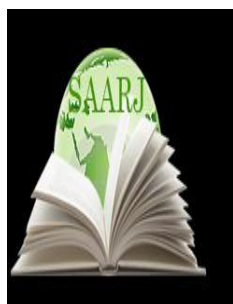
CONCLUSIONS

Due to the close occurrence of groundwater, the irrigated lands of Karakalpakstan annually undergo secondary salinization. Annual reclamation measures are required. The research results proved that with the combined use of mineral, organic fertilizers and local mineral agro-ore, it is possible to improve the reclamation state of irrigated lands, increase soil fertility and cotton productivity.

For the additional fertilizing of cotton, the combined use of mineral (N180 P130 K90 kg / ha), organic (20 / ha) fertilizers and glauconite (1.5-2.0 t / ha) is recommended.

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ACHIEVEMENTS OF UZBEKISTAN IN THE FIGHT AGAINST THE CORONAVIRUS PANDEMY, PROBLEMS AND SOLUTIONS

Sagatov Djumadulla Turabekovich*

*Independent Researcher,
Journalism and Mass Communications University,
UZBEKISTAN
Email id: dzhumadullasagatov@mail.ru,

ABSTRACT

In this article, the regulatory documents adopted by the government to prevent the spread of the Covid-19 pandemic in the Republic of Uzbekistan, the ongoing reforms are described in detail. At the same time, the practical measures taken to combat the disease during the Covid-19 pandemic in the country, the achievements, the existing problems in the field, the role of the media in overcoming them are described.

KEYWORDS: Globalization, Covid-19, Pandemic, Prevention, Anti-Crisis Fund, Sanitary-Epidemiological Service Media, Social Networks.

INTRODUCTION

In the context of globalization, the spread of Covid-19 infection, its prevention and control is considered to be one of the main challenges facing the world. The Covid-19 infection, first reported in China in December 2019, quickly spread to large areas and endangered the lives of millions of people. March 11 was declared a pandemic by the World Health Organization. Because of this pandemic, the number of people infected with the virus is growing rapidly in many countries around the world, which is a serious concern for all humankind [1]. The spread of the Covid-19 pandemic has created economic and social problems in all countries of the world, and their solution remains relevant.

Today, all countries of the world, including international and regional organizations, are taking practical measures to combat the Covid-19 pandemic in the framework of international cooperation. The spread of Covid-19 infection has not bypassed the Republic of Uzbekistan. In the prevention of Covid-19 infection, which has not yet reached the level of a pandemic, our government has raised the level of prevention, control and implementation of preventive

measures to the level of state policy. A number of regulations have been adopted to combat the pandemic. In particular, the Decree of the President of the Republic of Uzbekistan dated January 29, 2020 F-5537 "On the establishment of the Republican Special Commission to prepare a program of measures to prevent the entry and spread of a new type of coronavirus in the Republic of Uzbekistan" and Decree PF-5969 "On priority measures to mitigate the negative impact of the coronavirus pandemic and the global crisis on sectors of the economy" are signed. In addition, Medical and Sanitary-Epidemiological Service of the President of the Republic of Uzbekistan dated March 26, 2020 No. PP-4649 "On additional measures to prevent the spread of coronavirus infection in the Republic of Uzbekistan", March 26, 2020 "On additional measures to prevent the spread of coronavirus infection in the Republic of Uzbekistan" Resolution PQ-4652 "On additional measures to support employees", also Resolution of the Cabinet of Ministers of the Republic of Uzbekistan dated March 23, 2020 No 176 "On additional measures against the spread of coronavirus infection" [2] were signed. On the basis of these regulations, the prevention of economic crises in the country, state support of economically disadvantaged entities, continuous analysis and monitoring of the epidemiological situation in the country, disease prevention, diagnostics, antiviral drugs and personal protection of health facilities and the population. Effective measures for timely diagnosis and comprehensive prevention of Covid-19 disease in the country have been organized on the basis of the study of advanced foreign experience, providing the necessary amount of equipment in a timely manner.

Fighting the Crisis under the Ministry of Finance of the Republic of Uzbekistan in order to combat pandemics and other global threats in order to ensure macroeconomic stability, uninterrupted operation of industries and sectors of the economy, stimulate foreign economic activity, effective social support, prevent sharp declines in incomes fund was established. The fund will support businesses, manufacturing enterprises, banks and other entities in the country, provide medical and other institutions with the necessary drugs and medical supplies, protective equipment and test systems to combat the spread of Covid-19 infection, financial incentives for health workers involved in the fight against the spread of coronavirus infection, additional funding for the implementation of protective measures by the Republican Sanitary and Epidemiological Service, reimbursement of costs associated with quarantine of persons at risk or in contact with infected people, detection of infectious diseases. A total of 6.5 trillion soums have been allocated from the Fund for Prevention and Treatment to address the above mentioned problems caused by the pandemic. In particular, 1 trillion soums were spent on measures to combat Covid-19. These were spent directly on the care of quarantined citizens and patients treated in hospitals, as well as on the costs associated with the purchase of medical equipment. 2.5 trillion UZS spent on construction and reconstruction will help stabilize the economy by stimulating demand in the country. In addition, a total of 640 billion soums will be allocated for social protection measures were spent. These funds were used to provide financial assistance to those in need of social protection, as well as to subsidize part of the cost of planting crops on their lands, to help unemployed people earn money by involving them in temporary public works, to support low-income women. These costs will help provide financial support to the population during a pandemic. These costs will help to provide financial support to the population during a pandemic. At the same time, 2.3 trillion soums were allocated to support sectors of the economy, which were used to cover the basic salaries of employees of large industrial and service enterprises during the pandemic [3].

By the beginning of August 2020, the number of coronavirus treatment beds had increased 3.5-fold in the last 20 days to nearly 65,000. In addition, about 800 ambulances were delivered. An additional 4,000 respirators (OSVs, portable ventilators, oxygen concentrators) were delivered, bringing the total to 6,500[4].

In the context of the pandemic in our country, the government is actively pursuing an active policy to protect the health of the population and their economic and social support, the establishment of an effective system to combat the pandemic is widely covered through the media and social networks. In particular, shows, broadcasts and video materials related to pandemic control problems and their solutions are distributed by local state authorities and responsible organizations through local media and social networks. Nowadays, when we observe the activities of the media in Uzbekistan, during the pandemic period, there is a growing trend in the activities of Uzbek journalism in terms of transparency, disclosure of existing problems, their analysis and solution. A clear example of this is the words of President Sh. Mirziyoyev: "Our work to liberalize all spheres of life, to establish the principles of freedom of speech and press, openness and transparency, to establish effective public control over the activities of public authorities has become irreversible. I want to emphasize once again" [5].

In the past, one of the most "painful" problems in our society, such as corruption and the irresponsibility of officials, was rarely covered and addressed in the media. For example, at the 6th plenary session of the Senate of the OliyMajlis of the Republic of Uzbekistan in August 2020, the Chairman of the Senate T.Norbaeva reported corruption cases related to the funds allocated for the fight against coronavirus, in particular, in Andijan, Bukhara, Kashkadarya, Navoi and Namangan regions. In total, more than 1 billion 750 million soums of the fund were looted and it is necessary to pay serious attention to this issue [6].

The population is dissatisfied with the work of medical staff in the pandemic, and there are reports through foreign media and social networks. In particular, the staff of the medical institution in Termez district of Surkhandarya region said, "We, the doctors and nurses, feel sorry for ourselves!" In a video message titled, "Termez district medical institution is in a difficult situation and the hygiene products distributed to medical staff are of poor quality and insufficient. This information was discussed on Facebook by 450 citizens, who noted the urgency of the problems in the medical system and the lack of attention paid by the Ministry of Health and local authorities to the shortcomings in solving problems [7]. On August 18, 2020, a video message was posted on social media demanding the resignation of the Minister of Health, GulnoraAkbarova, a doctor who had been working as an infectious disease specialist at the Yangiyul Infectious Diseases Hospital for 33 years. According to the report, on August 19, 2020, Deputy Minister of Health UlugbekSobirov visited Yangiyul to get acquainted with the situation and said: "The hospital depicted in the video is in a really bad condition. The reason is that it was built in 1972 and has not been repaired for a long time. Because a new hospital with all conditions has been built in Yangiyul. For various reasons, doctors did not start their work at the new hospital, and patients were not relocated there. We went to the place and carried out explanatory work, re-introduced the new hospital to the chief doctor and the head of the department, showed the possibilities. It can be said that the staff of the new infectious diseases hospital, which created the necessary conditions, was pleased. The relocation process has begun. Shortcomings in the supply of medicines were also investigated and the necessary medicines were delivered, "He said in an interview with Kun.uz[8]. In the pages in social networks of

Radio “Liberty”, people has strongly criticized the irresponsibility of health care leaders. On August 30, 2020, J. Mustafiev reported to Radio “Liberty” that his father had been hospitalized with pneumonia but had been left untreated by doctors [8]. As a result of discussions on the appeal on Facebook, it was stated that there are problems in the medical system in Uzbekistan, but there are honest and effective employees in the system [10].

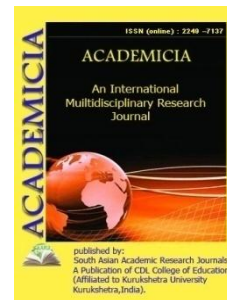
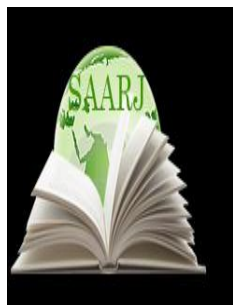
We have touched upon the events taking place in our society during the current pandemic, some of the existing problems. Such negative cases occur in almost all regions of the country. For solving the problems that face to the one of the main areas which is the healthcare system of our society, first of all, it is necessary to radically improve the material conditions of employees working in the health care system (currently being reformed by President Sh. Mirziyoyev), to increase the number of young staff and provide them with social support, to restrict the professional activities of corrupt managers and employees, and establish public control over the funds allocated to the system. It will serve to prevent the above-mentioned negative developments while ensuring accountability to public organizations through the media.

In conclusion, the problems caused by the irresponsibility of some medical leaders at a time when the media representing different interests and views in the world today are effectively working in the fight against the Covid-19 pandemic in our country, some "impartial and fair" foreign media. There are also cases of attempts by the media to disseminate messages aimed at preventing the country's ongoing reforms in the field. This could negatively affect Uzbekistan's growing positive image in the international community. Therefore, the leaders of the health care system should objectively study the problems on the ground, solve them in a timely manner, organize quality preventive measures, and the ongoing medical activities in the media, in particular, the information services of the Ministry of Health and its regional departments analyze various appeals and speeches, resolve them legally, and provide a full legal response to these appeals. Only then will citizens have confidence in the protection of their rights and freedoms by government agencies and officials. The role of the media as a mirror of society is invaluable. Because the media is an institution that reveals, analyzes, solves problems, and reflects public opinion in society.

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DEVELOPMENT OF PHYSICAL QUALITIES IN VOLLEYBALL PLAYERS ON THE BASIS OF DIFFERENTIAL METHODS

Davulov Ozodbek Qalandarovich*

*Assistants of Navoi State Mining Institute,
Navai city, UZBEKISTAN

Email id: otajonsirojov@gmail.com;

ABSTRACT

The article describes the development of physical qualities in volleyball players on the basis of differential methods, the effective use of such qualities in the training plan as speed, agility, strength, agility, flexibility. During training, athletes are required to have maximum speed, agility, alertness, quick thinking, quick understanding of the situation on the field and the ability to respond "useful" in tight conditions. The article is intended for coaches and practitioners of volleyball.

KEYWORDS: *Differential Methods, Static Exercises, Physical Qualities, Training, Physical Training, Special Training, Volleyball.*

INTRODUCTION

Modern volleyball, with its essence, content and technical-tactical combinations, which are performed at an extremely high speed, require great physical ability and functional training. Physical and functional training, in turn, are of fundamental importance for the effective formation of sports skills.

It is known that volleyball is one of the most popular sports in our country. At the same time, the problem of training competitive volleyball players in accordance with international standards in all sports schools is still a problem.

For many years, the local community has been indifferent to the issues of children's sports, including the role of volleyball, the development of talented young volleyball players, the creation of all-round conditions for them, training of coaches and training of young professionals.

1st President of the Republic of Uzbekistan I. A. Karimov's Decree of October 24, 2002 "On the Establishment of the Fund for the Development of Children's Sports in Uzbekistan" and the Government Resolution on its implementation defined the "today" and "tomorrow" prospects of this issue and laid a fundamental foundation for legal and material support.

Indeed, in recent years, the country has made great strides in the development of children's sports, the preparation of young talented sports reserves, a lot of creative work, regular sports and all the conditions for local and national competitions in accordance with official rules.

The next issue is to implement the final goals set by the requirements of this Decree and Resolution, both now and in the near future. It is known that the main strategic problem in this area is to create a scientific and methodological basis for the training of young, competitive athletes. However, this process is one of the most complex, comprehensive and multifaceted problems in terms of its organizational and technological aspects, and requires the organization of the principles of step-by-step and coherence.

Some differential physical methods, which are directly related to the formation of sports skills at the initial stage of training young volleyball players, are aimed at studying the effectiveness of non-standard game exercises in developing qualities (speed, agility, strength, agility, jumping). Of course, a lot of scientific-theoretical considerations and information on pedagogical research in this area have been published in many scientific literatures (L.V. Byleeva, I.M. Korotkov 1982; I.M. Korotkov 1971, 1979, 1991; A.I. , Lisitsina, TS Usmonkhjaev, 1989; M.N. Zhukov 2002; M.A. Kurbanova 2003 The methodology of development of physical qualities, which is the basis of sportsmanship in sports practice, including in the initial stage of training of athletes, often prefers the use of general or special exercises It is obvious that. However, forcing such exercises can lead to certain negative consequences.

Physical training is a type of training aimed at developing the body of a volleyball player, improving his physical qualities and abilities, as well as creating a solid foundation for the effective implementation of the game.

Steps of development of physical attitudes in volleyball players on the basis of differential methodologies

Modern volleyball is a type of sport that requires a great deal of strength, speed, agility, endurance and flexibility from the participants. It takes a great deal of physical strength, agility, endurance, and mental harmony for a volleyball player to perform many obstacles, kicks, and jumps, falls, runs, stops, turns, bends, and other movements at high speeds during each game.

Today's volleyball player should be 185-195 cm tall, mobile, fast, jumping, smart, intelligent, quick-thinking, sharp-witted, able to quickly understand the situation on the field and give a "useful" answer. Therefore, the content, scope and intensity of physical training varies depending on the age, training, qualifications of athletes, as well as the period and tasks of sports training.

The tasks of physical training are:

1. Health promotion.
2. Life - improving the necessary movement skills (walking, running, jumping).

3. Development of movement qualities.
4. Increase the range of movement skills and expand the scope of their implementation.
5. Formation of the functions of the organs, divisions and muscle groups of the body involved in the game.
6. Development of special qualities that ensure the effective acquisition of game skills.

Physical training is divided into two types: general and special physical training.

General physical training One of the important tasks of sports training is to ensure the full physical development and comprehensive physical training of trainees. UJT is a process aimed at improving vital motor skills and developing basic physical qualities. The goal is to create a database of NGOs, which is the basis of NGOs.

Its tasks are to develop basic physical qualities, increase the functional capacity of the body, expand the scope and performance limits of motor skills, strengthen health, increase the body's resistance to external and internal negative influences.

Common physical qualities include strength, speed, agility, endurance, and flexibility.

UJT is a specific exercise that develops physical qualities individually or together.

In the process of UJT, it is advisable to use a variety of sports equipment, simulators and natural factors.

At some stages and periods of sports training, UJT exercises and trainings differ in size, intensity, direction and structure.

Special physical training is a process aimed at developing the physical qualities that are fundamental and crucial in this sport in order to achieve high results in the chosen sport.

Functions:

- Development of special movement qualities and abilities (speed, strength, agility, special endurance, etc.) in volleyball.
- Development of skills required for mastering game techniques.
- Development of skills needed to master the tactics of the game.

At all stages and periods of MJT sports training, volume and intensity are used in a reasonable manner (L.R. Hayrapetyants, 2006).

The state educational standards for physical education for general secondary education define the requirements for the quality, education and content of the educational process: the necessary adequate level of training of students, activities in educational institutions and procedures and mechanisms for assessing the quality of physical education and training.

In the context of the Law on Education and the National Training Program, each educational institution is obliged to develop the physical capacity of students to maintain and strengthen their health, to form the basis of physical culture, and even to create conditions that guarantee it.

The course "Physical Education and Training" in general secondary education consists of:

1. Physical education classes.

2. Extracurricular forms of movement activities: pre-class gymnastics, physical minutes, dynamic pauses during extended breaks, games.

3. Extracurricular forms of physical training: sports sections, electives, sports competitions, etc.

The physical education curriculum includes sports materials (volleyball, basketball, handball and individual football).

The exercises, technical and tactical methods required to teach volleyball program materials, as well as the theoretical and practical rules of the game are included. Therefore, it is advisable to organize volleyball clubs in secondary schools.

Training of young athletes is a complex multi-stage pedagogical process that requires the organization of training on a scientific basis.

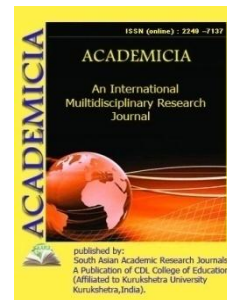
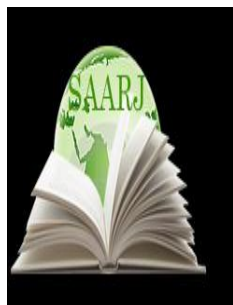
It is important that the volume and intensity of physical and technical-tactical exercises used in the lessons are planned and applied in accordance with the age, physical and functional capabilities of the children involved. The volume, intensity, return, and duration of this exercise should be based on biological laws. If the exercise load is too high for the child, such a load can have a negative effect on the child's body. Conversely, if the load is less than the capacity, the formation process will inevitably slow down.

Some coaches use special and specialized exercises in order to accelerate the development of physical qualities in a short period of time, to train more qualified athletes. In sports practice, there are cases when regular exercise, similar to each other, extinguishes the interest of a child who has just started to play sports, in which he loses his devotion to sports, and eventually he stops playing sports.

Therefore, in the training of young athletes, especially in the early stages of training, the use of movement games is very useful and important for the development of physical qualities, the formation of technical and tactical skills.

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LAND MAPPING AND ITS CHANGE DETECTION ANALYSIS IN CHITRADURGA TALUK OF KARNATAKA STATE, INDIA USING GEOSPATIAL TECHNOLOGY

Manjunatha M.C*; **Basavarajappa H.T****

*Department of Civil Engineering,
Maharaja Institute of Technology,
Thandavapura, Mysuru, INDIA
Email id: mcmanju1@gmail.com

**Department of Studies in Earth Science,
CAS in Precambrian Geology,
University of Mysore, Mysuru, INDIA
Email id: basavarajappaht@gmail.com

ABSTRACT

Land is one of the non-renewable resources and mapping of Land Use/ Land Cover (LU/LC) is essential for planning and development of land, water resources of a region with suitable technology. There is a significant change in LC/LU across the globe due to the climatic changes, rapid increase in population and over demand of the growing economic resources. The present aim is to detect the changes in LU/LC patterns and its aerial extent due to different socio-economic factors in the study area. Efforts have been made to evaluate the LU/LC patterns using SoI topomap (1:50,000) with limited field visits; geo-coded FCC of IRS-1D, PAN+LISS-III multispectral, multi-temporal satellite images. Spatial, spectral and temporal analysis type of approach has greater importance in mapping of specific LU/LC patterns and its change detection over time and coverage areas calculated using ArcGIS v10. Supervised classification using Maximum Likelihood Classifier (MLC) is applied to prepare LULC maps using NRSC guidelines (1995) through GIS software's. Different classes of vegetation activities affect the surface flow of run-off water leading to maximize infiltration. The final results highlight the capability of geospatial techniques to bring out the real changes observed in LU/LC patterns and provide meaningful information in proper planning and developmental strategies for land sustainability.

KEYWORDS: *Land Use/Land Cover; Change Detection: Chitradurga; Geospatial Technology.*

I. INTRODUCTION

LU/LC changes on the surface of the earth are generally divided into land use and land cover which are two concepts (Barnsley et al., 2001) and are often used interchangeably (Dimiyati et al., 1996). Over the last few decades various techniques of LU/LC mapping and change detection have been developed and applied all over the globe (Zhang et al., 2014). Land becoming a scarce resource due to immense agricultural and demographic pressure; but at current strategies, the natural resources can be managed and monitored for environmental changes (Pushpavathi., 2009) to initiate & increase the land productivity, restoration of soil degradation, reclamation of wastelands, increases in environmental qualities and to meet the needs of rapidly growing population of the country (Basavarajappa and Dinakar., 2005; Manjunatha et al., 2015a). In view of pressure exerted by increasing population, need for mitigating increasing demands of land resources, appropriate scientific land use planning and land management strategies could provide the alternative for sustainable development including forest cover (Sexena et al., 1993). Improper management of LU/LC may affect immensely on geo-environmental and natural ecosystems such as biodiversity, water resources and radiation budget (Yang et al., 2017). Information on change in resources, classes, area covered and patterns of land use/land cover are essential for future planning (Palaniyandi et al., 1997). The importance of investigating LULC and their impacts as a baseline requirement for food security, land sustainability, biodiversity and socio-economic vulnerability of people & ecosystems and management of natural resources (Basavarajappa et al, 2014b; Lambin et al., 2000). The potential of satellite based data as a basis for generating valuable information for LU/LC is by now widely recognized (Lambin et al., 2003; Yuan et al., 2005), although initial efforts was made since mid seventies for application of different interpretation techniques in LU/LC mapping (Anderson, 1976; Colwell, 1983). Geospatial technology and its applications provide better results on land resource management, monitoring, mapping and change detection at varying spatial ranges (Singh et al., 2010) in monitoring of ecosystems, biodiversity, water, predictive land use implementation strategies and climate change variability. In present era, satellite based Remote Sensing (RS) technology revealing its immense value in preparation of LU/LC maps through synoptic view and monitoring at regular periodic intervals of time (Kumar et al., 2004; NWDB., 1987) for proper utilization of land for agriculture, forestry, pasture, urban-industrial, environmental studies, economic production etc. This needs land use inventory surveys periodically, to make available the information on the type, spatial distribution, location, aerial extent, rate and pattern of change of each category of LU/LC patterns.

II. MATERIALS AND METHODS

i. Study Area

It lies in between 14°03'7" to 14°27'10" N latitude and 76°06'22" to 76°34'53" E longitude with an aerial extent of 1383 km² (Fig.1). Physiographically, it is a dry and thirsty land with broken hills ranges and huge undulating plains with general elevation of 732 m (Ibrahim-bathis and Ahmed, 2014). The study area experiences a hot, seasonally dry, tropical savannah climate which receives low to moderate rainfall. The quality of vegetation is poor because of poor rains. However, small grooves of the trees are to be seen in rural villages. The average annual rainfall in the district is 574 mm (1980-2010) recorded from last three decades. The average annual

rainfall is 355.6 mm (2011). The maximum temperature recorded is 37°C , while minimum is 15°C ; may falls up to 12°C during winter season (Nov-Jan). SW monsoon (June-Sep) contributes major portion of rainfall about 194.56 mm (CGWB, 2013).

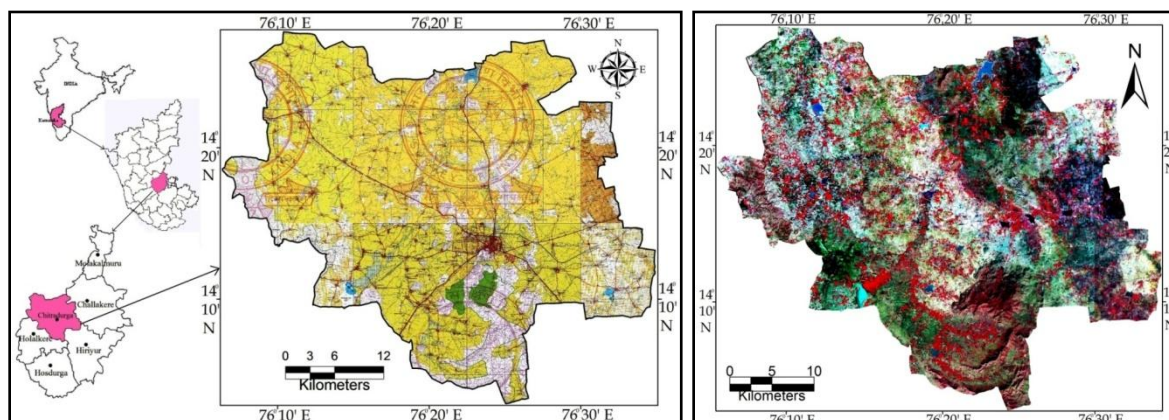


Fig.1. (a) Topomap Location and (b) LISS-III Satellite Image of Chitradurga taluk

II. METHODOLOGY

Topomap of 1:50,000 scale from Survey of India (SoI, Bengaluru) (Fig.1) have been acquired as a base map, geo-rectified and digitized each individual LU/LC themes as layers such as agricultural land, built-up land, forest cover, wastelands, water bodies, others using ArcGIS v10 software. Indian Remote Sensing (IRS)-1C/1D, PAN+LISS-III imageries of 2001 & 2005 was acquired (NRSC, Hyderabad) and Supervised Classification analyses have been carried out to extract desired meaningful information to observe recent changes occurred in the study area. Survey of India (SoI) topomaps of 1:50,000 scale are utilized for registration of satellite data, selection of Ground Control Points (GCP) and locating training sets on the satellite image. LU/LC maps are prepared using satellite image in conjunction with collateral data like SoI topomap on 1:50,000 scale by considering permanent features such as temples, major roads (NH/SH), drainages, power-lines, railways, settlements, co-ordinates, forests and village boundaries (Manjunatha et al, 2015a). A field survey was conducted for ground verification of doubtful areas with the help of GPS and local guides in different parts of remote villages and hilly terrains covering all the LULC classes. Due to mountainous topography, rough terrain and steep slopes, few areas were not accessible.

III. MATERIALS:

a. Topomaps: 57B/3, 4, 7, 8, 11, 12 of updated edition of the year 2009/10 (SoI), (Fig.1).

Source: Survey of India (SoI) of 1:50,000 scale, Bengaluru.

b. IRS Satellite Data: IRS-1D/P6, PAN+LISS-III of 5.8m Resolution (D43K03; 04; 07; 08; 11; 12) [Year of Pass: 2000-01 & 2005-06] (Fig.2).

Source: Bhuvan-portal, ISRO-NRSA, Hyderabad.

c. Software's: Erdas Imagine v2013 and Arc GIS v10.

d. GPS: Garmin eTrex-10 of 3m error handheld GPS is used to check the conditions of land use/land cover patterns during limited field survey.

v. Supervised classification

Supervised classification analyses are carried out on multispectral, multi-temporal IRS-1D, PAN+LISS-III FCC [Year of Pass: 2000-01 (Feb) & 2005-06 (Nov)] with medium scale through ArcGIS v10 (Fig.9; 10; 11). The LU/LC patterns are digitized based on the standard schemes developed by National Remote Sensing Agency (NRSA, 1995; 2007). Maximum Likelihood Classification (MLC) scheme is one of the most widely used image classification technique adopted on LISS-III images for mapping all the land use/cover classes. Before the selection of training samples, empirical analysis of satellite imagery and specific features on the toposheets are investigated carefully. For most of the classes, a minimum number of training samples were 100. Selecting training samples for water was tough because of the dense canopy of forests along with the river channel and lack of water in the river channels since the acquisition date of imagery was in mid-November and at that time most of the rivers in the mountains carry less water as compared to the monsoon season. Different LU/LC patterns are delineated based on the key elements of image characteristics like tone, texture, shape, shadow, pattern, association, background etc. Changes in land surface conditions can affect the volume, timings and quality of run-off water.

TABLE.1: DESCRIPTION OF DIFFERENT LULC CATEGORIES

Sl. No	LULC category	Classes included-general description
1.	Agricultural land	Agricultural plantations, crop lands, Vine on trellis, Palms, palmyra, conifer & bamboo plantation, Wooded/ cultivated areas, surveyed trees
2.	Built-up land	Towns, villages, buildings, huts, temples, church, Mosque, Idgah, Tomb, graves, Post-office, Power lines, metalled & unmetalled roads, bridges
3.	Forest land	Reserved & protected forest, scrub forest, deciduous forest
4.	Water bodies	Streams, canal, tidal river, swamp, springs, tanks, perennial dry
5.	Waste/ vacant lands	Barren rocky, land with/ without scrub, Mining/ industrial wastelands, Salt affected area
6.	Others	Shifting cultivation, Sand deposits

III. RESULTS AND ANALYSIS**i. Land study**

Land use is influenced by economic, cultural, political, historical and land-tenure factors at multiple scales. Land use referred to as man's activities and the various uses which are carried on Land. Land cover, on the other hand are the biophysical attributes of the land that affect how ecosystem functions (Turner et al., 1995). Land cover is referred to natural vegetation, water bodies, rock/soil, wastelands, sand/ snow cover results due to land transformation and both LU/LC are closely related & interchangeable (Manjunatha et al., 2015a). In the past few decades there is change in land use due to illegal mining activities, immense agricultural practices, encroachment of forest cover, construction of mega & mini check-dams, industrialization, urbanization, biogeophysical characteristics which need mapping to avoid deforestation and

biodiversity loss (Basavarajappa and Manjunatha., 2015). Viewing the Earth from space is now crucial to understand the influence of man's activities on his natural resources over time due to mining, industrialization and urbanization. Geospatial technique is one of the advent high-tech tools in analyzing the causes, rates, magnitude, patterns, trends in landscape changes at local scales. These inputs forms the primary basis for studies on regional climatic variations, accounting changes in deforestation/ degradation, forest encroachment, evapo-transpiration and regional ecosystem mapping and monitoring.

i.a. Agricultural land: These are primarily used as farming & production of commercial and horticultural crops. It consists of cropland, plantations, fallow land, current shifting cultivation, irrigated & un-irrigated land and plantations (Basavarajappa et al., 2014b) (Fig.4). The prevailing cropping patterns reflect physiography, climate and resources availability. Pixel reflection varies from light red to bright red and green in color. Area under this category follows regular shape with scattered to continuous pattern.

i.b. Built-up land: These are the human habitation areas developed due to non-agricultural use including buildings, major towns, villages, transportation networks, communication & recreational utilities in association with water, vegetation, open and underground mining lands (Pandian et al, 2014) (Fig.5). These can be easily identified on FCC image by its bluish to bluish green tone, definite shape, size and texture. The road network is distinguished by their characteristic linear features (Basavarajappa and Dinakar, 2005) having regular pattern and appears in cyan color.

i.c. Forest: Forest covers are (within the notified State forest boundary) the lands with tree canopy cover of more than 10 percent and area of more than 0.5 ha (FSI, 2017). It consists of evergreen/semi-evergreen, deciduous, forest plantation, scrub forests, grass/grazing land and other vegetation types capable of producing timber and other forest products (Basavarajappa and Dinakar., 2005) (Fig.6). Satellite data has become useful tool in mapping the different forest types and density classes with reliable accuracy through visual as well as digital techniques (Madhavanunni, 1992; Roy et al., 1990; Sudhakar et al., 1992). Forests exert influence on climate, water regime and provide shelter for wildlife and livestock (FAO, 1963).

i.d. Wastelands: Wastelands are the degraded land/ bare exposed land devoid of vegetation which can be brought under vegetative cover with reasonable efforts (Pandian et al, 2014) (Fig.7). Wastelands can result from inherent/imposed constraints such as by location, environment, chemical and physical properties of the soil/ financial/ management constraints and are currently not productive due to various problems such as soil erosion, salinity, water logging etc (Basavarajappa et al., 2014a). Barren rocky appears in greenish blue and brown in color with varying size and irregular to discontinuous shape.

i.e. Water bodies: The water bodies include both impounded as well as the regular flowing water, streams and tanks. It includes manmade ponds/ reservoirs/ lakes/ tanks/ canals, besides natural lakes, rivers/ streams and creeks (Pandian et al., 2014) (Fig.8). It is represented by light blue very dark blue tone depending upon the depth, volume and turbidity of the water bodies (Manjunatha and Basavarajappa., 2015b). Water bodies include those pixels reflecting dark blue to light blue and cyan color in standard FCC.

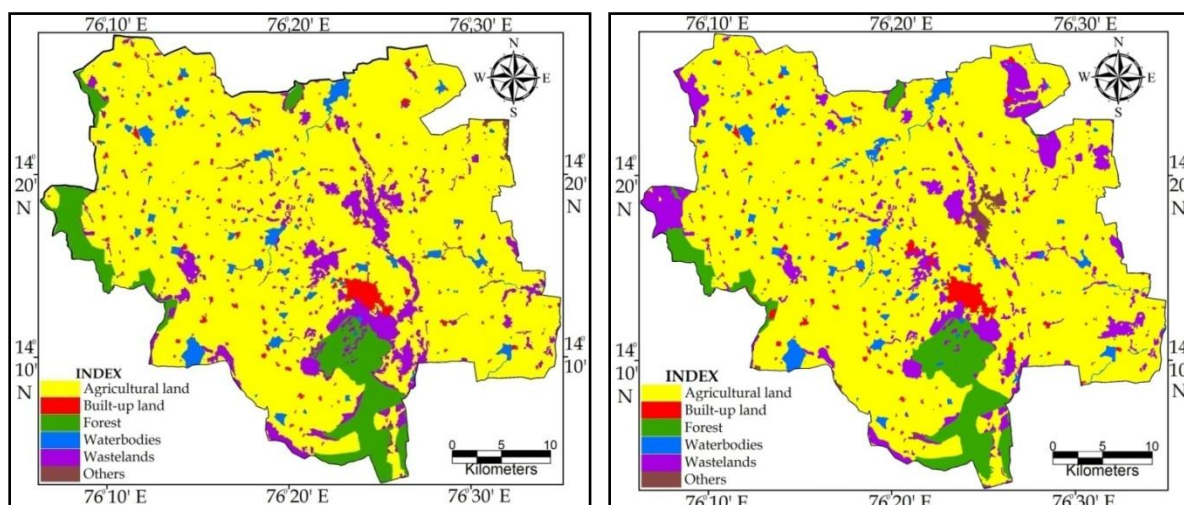


Fig.2. Land Use/Land Cover map of Chitradurga taluk in 2000-01(a) and 2005-06 (b)

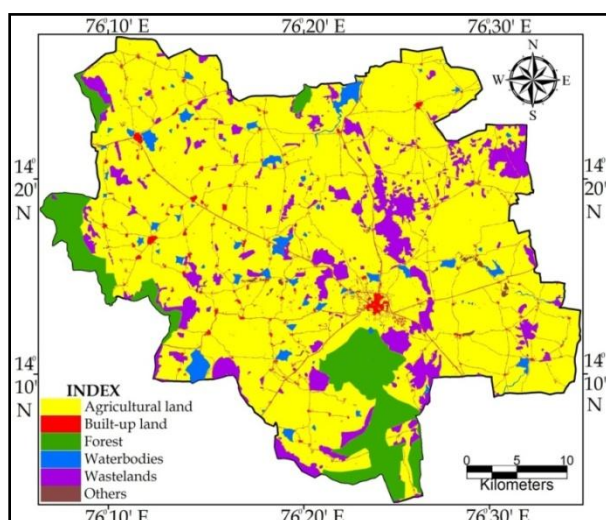


Fig.3. LU/LC map of Chitradurga taluk in 2009-10

i.f. Others: These are treated as miscellaneous due to their nature of occurrence, physical appearance and other characteristics in the integrated thematic layer such as snow/ glacier cover, sand dunes etc (Basavarajappa and Dinakar., 2005).

TABLE.2. LU/LC CATEGORIES OF CHITRADURGA TALUK FROM 2000 TO 2010

Sl No	LU/LC Categories	2000-01 (PAN + LISS-III)	2005-06 (PAN + LISS-III)	2009-2010 (SoI Toposheet)
		Area in km ²	Area in km ²	Area in km ²
1.	Agricultural land	1094.07	1090.61	1058.57
2.	Built-up land	29.66	33.11	43.84
3.	Forest cover	102.98	89.84	112.96
4.	Water bodies	38.08	38.15	33.31

5.	Waste/ vacant lands	106.67	121.90	129.40
6.	Others	4.86	8.92	3.62
	Total	1376.32	1382.53	1381.7
Total Geographic Area		1383.04	1383.04	1383.04

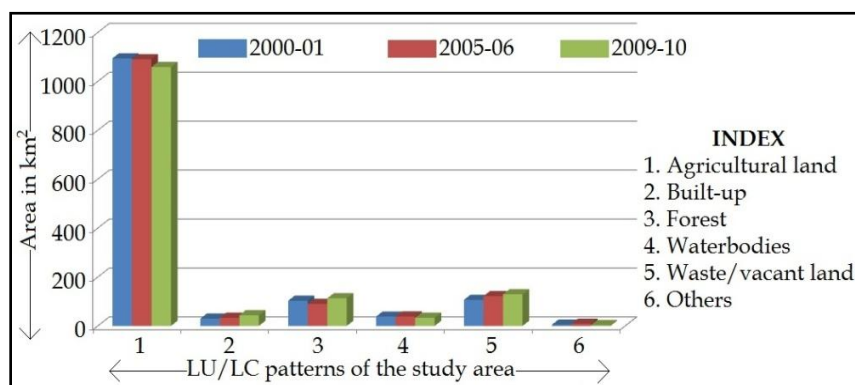


Fig.4. Column graph depicting the temporal change analysis in LU/LC patterns

TABLE.3. CHANGE DETECTION ANALYSIS (CDA) OF LU/LC IN CHITRADURGA TALUK

Sl. No	LU/LC Categories	Change Detection analysis			
		2000-01 to 2005-06		2005-06 to 2009-2010	
		Area in km ²	%	Area in km ²	%
1.	Agricultural land	-3.46	-0.25	-32.04	-2.32
2.	Built-up land	+3.45	+0.25	+10.73	+0.78
3.	Forest cover	-13.14	-0.95	+23.12	+1.67
4.	Water bodies	+0.07	0	-4.84	-0.35
5.	Wastelands	+15.23	+1.1	+7.50	+0.54
6.	Others	+4.06	+0.29	-5.3	-0.38

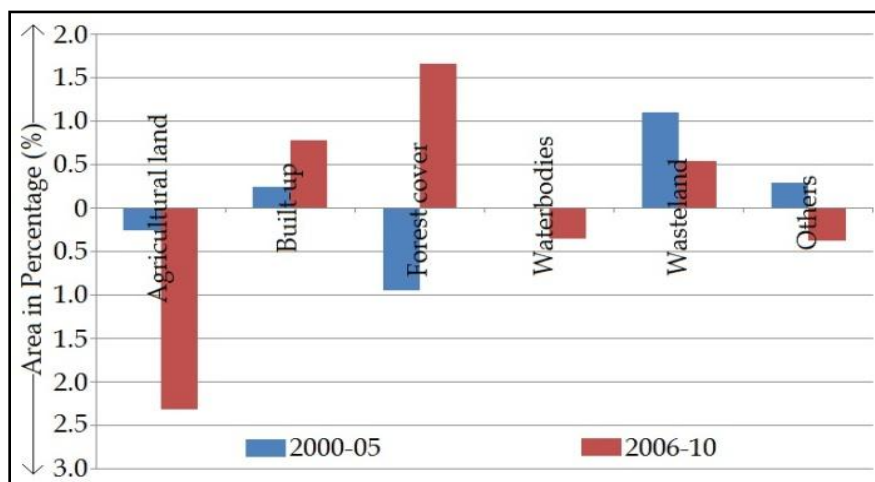


Fig.5. Column graph depicting the Percentage-wise variation in LU/LC patterns

VI. CHANGE DETECTION ANALYSIS

i. LULC patterns over the period of 2000–2005

Built up and wastelands show increasing trend during this time period in contrast to decrease rate of other land use classes. Built-up land covers an area of 29.66 km² in 2000-01; later shows increase in its area due to gradual increase in population and this also impacted on agricultural and forest encroachment. Forest covers an area of 102.98 km² in 2000-01 has been degraded to 89.84 km² (2005-06) due to human intrusions at each forest boundaries by installation of wind turbines and illegal mining activities (Fig.5 & 6). Forest degradation was also recorded by the intensity of over-grazing and other anthropogenic factors due to economic demand (Manjunatha and Basavarajappa, 2017). Illicit cutting of trees were commonly observed by the vicinity of village peoples to fulfill their needs of fuel, small timbers for huts & houses and agricultural implementations (CFD, 2012). Over-grazing was observed by the large population of cattle, goat & sheep in the forest premises which affecting the natural regeneration status causing deterioration of wild life habitat (CFD, 2012). Major proportions of iron, manganese and limestone deposits were being mined rapidly and mine waste dump were noticed (Basavarajappa and Manjunatha, 2015; NRSA, 2007). Storage of mine waste materials, sliding of the dump outside the leased area, encroachment of forest area for dumping, mining pits, trenches, routes for wind turbine installation and other activities were gradually increasing the deforestation. Approximately 12 km² of the forest cover has been degraded/ converted to wastelands during 2000 to 2005 observed through Change Detection Analysis (CDA) in western and north-western parts of the study area.

ii. LULC patterns over the period of 2005-2010

Major decrease in agricultural lands had been observed due to low rainfall intensity and global warming (?). Chitradurga taluk is highly dependent on rainfall and climatic conditions due to which the severe drought has been experienced during 2002-06 (CGWB, 2013) resulted in the failure of agriculture land. Due to the scarcity of abundant surface water, farmers have to turn groundwater resources for irrigation. Groundwater contributes to more than 70% for irrigation. Rapid loss of agricultural lands is noticed in the study area due to gradual increase in population, unplanned urbanization, industrialization, soil degradation, soil erosion, pollution, depletion of groundwater levels, and illegal mining activities for economic deposits. The aerial extent of these major changes over time has been recorded and change analysis has been shown in column graph (Table.2; Fig.13) and also percentage-wise variation is shown using column graph (Table.3; Fig.13).

Karnataka Forest Department Authority came up with many regeneration programs along with local village peoples to retain the forest resources during 2006-10 (Manjunatha and Basavarajappa, 2017). In freshly leased forest and illegal mining lands were demarcated and maintained to enlarge the forest covers in the study area. Regeneration has been assisted through artificial mode by sowing of seeds of sandal in bushes and also by areal sowing (CFD, 2012). Large areal extent of encroachments of illegal mining lands has been evicted and plantations have been raised. Rotational grazing, controlling fire hazards combined with rigid protection avoiding soil erosion and enriching moisture regime were practiced periodically by the Forest Department Authorities (CFD, 2012). More than 22 km² area of forest cover has been restored and reclaimed through periodic implementation programs by Forest Authorities (2009-10). It is

necessary to take up periodic re-surveys and demarcations in order to protect the forest ecosystems to prevent further encroachments in other similar forest land.

V. DISCUSSION

Multi-temporal mapping of LU/LC categories cover six major classes such as agricultural land, built-up land, forest cover, waste/ vacant land, water bodies and others of 2000, 2005 and 2010. The spatial distribution pattern of LU/LC obtained from supervised classification is registered in Table 3. The significant changes in the land use/land cover during the study period between the years 2000 to 2010 recorded some interesting observations. The study revealed that the major changes occurred in agricultural land, built-up land, forest cover and wastelands. The features namely agricultural land, water bodies are indicated a decreasing trend where as built-up land, forest and wastelands are indicated an increasing trend. It is suggested that the industrialization and urbanization should be restricted to wasteland or unproductive lands. Results from classified maps indicated the area coverage of each category during 2000 such as; agricultural land of 1094.07 km², built-up of 29.66 km², forest of 102.98 km², water-bodies of 38.8 km², wastelands of 106.67 km² and others cover 4.86 km² respectively.

The performance of *agriculture* by *crop* categories also clearly indicates the slowing down process of *agriculture* in India. During the decade (2000-10), the area occupied by agricultural area shows gradual decrease in cultivated land due to change in climatic conditions and various anthropogenic activities. Agricultural land covers 1094.07 km² during 2000; was gradual decreased to 1058.57 km² at the end of the decade. The built up area has increased from 29.66 km² to 43.84 km² during the decade. Forest cover shows major loss in the study area by 13 km² from 2000 to 2005; while by the efforts of Karnataka Forest Department Authority 23 km² freshly leased and illegal mining areas were demarcated and reclaimed during 2010. Mapping of water bodies was difficult in 5.8 m spatial resolution due to the shallow water and dense canopy along the rivers and tanks. Areas covered by water body decreases in 2010 due to low intensity in rainfall conditions, rise in temperature and over withdrawal of groundwater. Agricultural lands are being converted into wastelands due to soil erosion, soil degradation, and construction of highways, housing, industries, check dams & factories. Wastelands show rapid increasing in its area from 106.67 km² to 129.4 km² during the decade of 2000-10.

It is necessary to closely monitor the land use/land cover changes for maintaining a sustainable environment for a proper development. LU/LC exposes considerable influence on the various hydrological aspects such as catchment area, interception, infiltration, evaporation and surface flow which implies remarkably impact on agricultural practices (Sreenivasalu and Vijay Kumar., 2000; Kumar et al., 1999) and better understanding on the cropping pattern and spatial distribution of fallow lands, forests, wastelands and surface water bodies; which is vital for developmental planning (Philip and Gupta, 1990).

VI. CONCLUSION

The study clearly established that the satellite remote sensing coupled with GIS can be a powerful tool for mapping and evaluation of land use/land cover changes for its sustainability. A precise land use and land cover map is critically necessary for growing demands of natural resources and its utilization. LU/LC change detection analysis revealed major decrease in agricultural land; encroachment of forest land by human forces; major increase in wasteland categories and fluctuation in water bodies due to difference in seasonal variation. There is a

gradual increase in built-up land due to increase in population, mining activities and its transportation network which can negatively impacts on biodiversity & also disturbs natural land cover, increase in soil erosion into streams and lakes. Increase in wastelands shows negative impact especially on agricultural point of view. Geo-spatial application provides wide range of digital databank information in a synoptic, spatial and temporal manner for mapping & monitoring of LU/LC in most time and cost effective manner as such in the study area. This helps to record the land consumption rate and the possible changes that may occur in future, so that the planners can have a basic tool for planning. Ultimately it can contribute to the establishment of data and information products, services, models and tools for multiple users such as., scientists, resource managers and policy makers to establish an appropriate scenario in human health issues, global warming (?), ecosystem impacts and future sustainability. Land use systems need thorough systematic monitoring and management in maintaining food security, minimizing the deforestation, conservation of biological diversity and protection of natural resources.

Conflict of Interest

There is no conflict of interest between authors.

Acknowledgement:

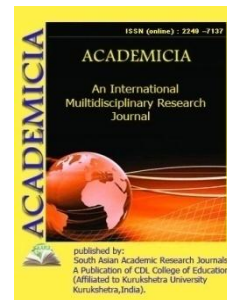
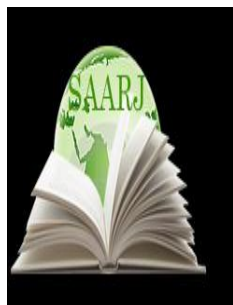
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FORMATION AND STAGES OF DEVELOPMENT OF THE ACT OR IN THE UZBEK THEATER

Akhmedova Zamfira Amirovna*

*Associate Professor,
"Musical, Dramatic Theater and Cinema",
Uzbek State Institute of Arts and Culture,
UZBEKISTAN

ABSTRACT

This article analyzes the role of acting in Uzbek theater arts. The question of creating an image was raised. This article is about the appearance and formation of the theater of one actor in Uzbekistan. The article describes the formation of theatrical art in Uzbekistan, genres and styles in traditional Uzbek theater. In addition, the article tells about Uzbek actors and actresses of the "theater of one actor" of the past and present. The article provides some recommendations for young actors involved in the creation of this genre.

KEYWORDS: Culture, Art, Theater, Performance, Actor, Director, One-Actor Theater, Stage, Genre, Stage Ethics

INTRODUCTION

Art is beauty, art is education, art is education. The actor is the educator. When we say educator, we mean an intelligent teacher, a teacher, a pedagogue, who first of all holds a pen in his hand and teaches us to read and write. If an actor is an educator, what do we need to do to be worthy of it? The acting profession requires reading a lot of books because of its closeness to literature and music. To create an image, we must read a dramatic work in order to perform a monologue and sing an aria (monologue of musical drama) from a work. The essence of the work, the consistent dynamics, the course of events, the spirit of the period are reflected in the poem. The character, the inner world, the sphere of thinking, the feeling of pain, the imaginary dreams of the heroes are revealed. One of the brightest representatives of the Uzbek national literature, the People's Writer of Uzbekistan TogayMurod, said: "I had only one goal: to read world literature until the age of thirty-five. Just read and practice the little stories so you don't get stuck. I did not build a building, I did not buy a car, I did not have a career, I did not aspire to fame. I didn't fight

the world! I just searched, I just read. ” [1] Uzbek theatrical art is directly related to the development of Uzbek literature.

About the writer Said Ahmad, the Hero of Uzbekistan Said Ahmad: "Uncle Murad was as straightforward as his works, very rude at first glance, but in fact he was a very gentle, sincere and kind person. Uncle Murad was not interested in literature, he was on fire. The people depicted in his stories are Uzbek even if you wear different national costumes. Their behavior is not the same as everyone else's! " A person should have a sense of creativity, the activities and emotions of the person who chooses the path of art will touch the heart. The Uzbek national theatrical art has developed with the work of professionals with professional skills. Theatrical repertoire is full of unique and bright performances, including the diversity of genres, the breadth of stage opportunities, acting skills, plasticity, puppetry, improvisation and other important features. "Ayajonlarim", "Andishalikelinchak", "Temirkhotin", "Chimildiq", "Arolmomo", "Birkadamyol" this list will continue. The prosperity of the industry depends on the activities of dedicated, dedicated individuals. HuseyinBoydemir, a professor at Ataturk University in Turkey, said: "The secret to being a real writer is to work, research, read and write day and night. Uncle Murad had such a principle." [2]

[illegible]

Each position of the actor is not only a lesson for today's youth, but also a guide for future generations. The role of drama in the development of acting skills in the Uzbek national theater is also important. Our national repertoire includes such national performances as "Padarkush", "The Unhappy Groom", "Doomsday Debt", "The First Day of Autumn", "One Step Road", "Dayless Nights", "Last Days", "Chimildiq", "Soul" unique performances of acting performances can be seen. Being able to apply the art of improvisation in a timely manner, sound intonations, plasticity and other elements come to life on stage. At the Uzbek National Academic Drama

Theater, the play "Chimildiq" based on the play by playwright ErkinKhushvaqtoev has a national interpretation and is imbued with folk traditions. In doing so, the actors embody a comic character, the essence of which changes throughout the plot. If the idea of the work is to understand the sanctity of the chimpanzee, to inculcate in the minds and upbringing of young people the centuries-old Uzbek values, to feel the sanctity of marriage, every actor will move towards this idea. Most importantly, the theme is fully revealed through bright performances, unique characters. A unique school of acting has been formed in the Uzbek theatrical art. The complex performances of such well-known theatrical masters as AbbosBakirov, ShukurBurhanov, OlimKhodjaev, ZikirMuhammadjanov, LutfikhanimSarimsakova, SoraEshonturaeva remained on the stage. The lively vibe of the performances shakes hearts, caters to catharsis. An important element of the art of tea is also the catharsis of the human psyche, i.e. purification. The brilliance of his acting skills, based on professional experience, seals the unforgettable work in the pages of history. The character's sorrows, joys and sorrows permeate the psyche of the actor. That's when an artistic whole is formed. The goal is to play each role from the heart. At the same time, the demands, opportunities and prospects of the director increase the longevity of the play.

Let's get acquainted with the history of the development of theater art in the republic. From time immemorial, namely from the primitive system, the land and climate of Uzbekistan were comfortable for the life of people. Ancient finds found on the territory of the republic: vessels, rock paintings, samples of dishes and utensils, stone weapons, human burials, indicate that ancient tribes lived here several hundred thousand years ago. Various ceremonies and rituals of primitive people, inherent only to them, are displayed in a kind of primitive art. In view of this, it is confidently asserted that the spectacular art of Uzbekistan has a history of several hundred thousand years. Theatrical art makes an invaluable contribution to the development of social and social life of people. It is especially worth emphasizing the contribution of the figures of this art, who convey to the people the traditions and aspirations of actors and theater. The literary scholar NM Mallaev said the following about this kind of art: "The art of the artistic word appeared much earlier, in the form of oral creativity, in addition, it was the basis for the emergence of written literature. It is passed from mouth to mouth, from generation to generation, from era to era "[2, p. 44]. Uzbek traditional theater is closely associated with such theatrical performers as the actor - comedian, clowns (maskharaboz), narrators of sacred stories, epics, puppeteer actors (qirchokboz). Such a theater existed in our area several centuries ago. This idea can be traced in many historical sources and is emphasized by art researchers in their works. In traditional theaters, mainly epics, parables, fairy tales, fables, sacred stories, adventures were performed, which were transmitted orally. In the repertoire of this theater there were many works of oral folk art, which were modified, reduced or lost in subsequent historical collisions. "Studying the history of the theater of our region, I was firmly convinced that the theater of one actor existed from the day when the folk storyteller (bakhshi), with a dombra in his hand, glorified folk heroes." A folk storyteller in a dombra in his hand performed his legends about a great people and heroes himself, and this suggests that the "theater of one actor" originates from folk storytellers [3, p. 315]. Of no less importance is the fact that the storytellers (bakhshi) performed the legends for 6-10 hours. Not to bore the viewer and singing in different voices of heroes for several hours is not an easy work of folk storytellers. One can even safely say that this is true art. Actors of traditional theater, such as rope walkers (darboz), performed their numbers both on the rope and on the stage. Clowns (maskharaboz) and comedians (kizikchi) amused the audience,

showing heroes, animals, birds. In the process of studying the history of traditional theater, we consider it reasonable that the theater of one actor was formed and existed in the origins of the birth of the national traditional theater. Studying the history of national traditions, one cannot but take into account the merits of our great ancestors, who laid the foundation for the birth of the art of the theater of one actor. They were virtuoso musicians, storytellers of folk epics, poets-improvisers, skillful orators (kissakhonlik), who performed at literary and poetry evenings dedicated to such poets as Bedil, Navoi, Fusuliy, Mashrab, which was also one of the sources of the birth of theater art. The study of the history of traditional theater, works of oral folk art began in the 20th century. In the distant past, the traditional Uzbek theater was led by experienced actors, clowns, maskharabozes, sometimes singers and musicians. Experienced actors and singers who distinguished themselves in the theater were called "korfharmon" (that is, experienced in the profession, senior, ordering). The emergence of "korfarmons" is considered an important stage in the formation of the theater of one actor. Able, gifted actors, "korfarmons", served exemplarily in several types of traditional theater. The most famous among them were Muhammadsolikh and Bidiyorshum from Kokand, ZakirEshan and his disciple Yusufzhan-kizik from the Fergana Valley, BoboerDiyorov from Bukhara. By this time, two genres dominated in the traditional theater: the first, "tankid" - criticism (a genre that touches on and depicts problems of a social and domestic nature), the second - "mukallid" - a parody. In the genre "mukallid" human vices were depicted and ridiculed, copied movements of humans, birds, animals, children were shown. The performers of this genre had their own special make-up and costume. For example, clowns and comedians dressed in peculiar bright costumes and bright make-up. They always wore a characteristic cap on their heads, by which one could recognize a cheerful maskharaboz. Heralds began spectacular performances, who with loud exclamations gathered the people to the square.

In the 21st century, a whole galaxy of actors (maskharaboz, orators, kizikchi) was formed, who had their own creative style. They were: Yusufzhon-kizikShakarzhonov, Okhunzhon-kizikKhuzurzhonov, Tesha-kizikKomilov. In the second half of the 20th century, a talented master of words, an actor-satirist who won great popular love, MukhiddinDarveshev, appeared. He skillfully performed the satirical stories of AnvarMukimov. Darveshev created the genre of "monologue", which did not exist in the theater before him. Satirical stories, such as: "The hairdresser", "Airplane", "The consequences of drunkenness" Darveshev performed vital, witty, adding to them from himself anecdotes, funny stories, he could instantly transform into a hero. The actor's speech was clear, pronouncing every word. The peculiar movement of eyes and eyebrows, hands helped to embody various forms, images, characters of people. Darveshev skillfully used plastic techniques, creating amazing "performances-stories" of the theater of one actor. In 1991, during the performances, when the scenery was changing, the theater needed readers who would entertain the audience with poems and stories. The actors MukhsinKhamidov and NabiRakhimov, who were famous and worked in the genre of artistic reading, coped with this task perfectly well. The creative tandem of two talented actors gave a powerful impetus to the formation and development of the theater of one actor. The poems of MukhsinKhamidov, who read them masterfully, were very relevant to our time, expressed the aspirations and desires of a person, the dreams of the people. The poems of ShokirSulaiman, Hamid Alimzhan, GafurGulyam were read for the most part. Among them, the patriotic poem "Sparks of Hope" was a great success. In the mid-eighties of the last century, KhazhibayTadzhibaev was very popular. He went down in the history of theater as a virtuoso comedian and professional actor.

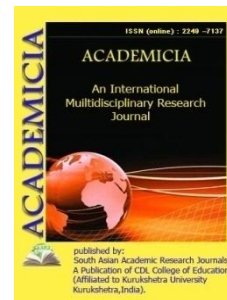
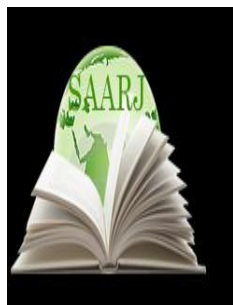
He performed in the genre of satire, humor, had his own unique style, each of his concert numbers was at the highest level of professional acting. Tadjibaev masterfully showed female and male characters. A variety of characters, sparkling humor and professionalism are characteristic features of the work of KhazhibaiTadjibayev, who during his lifetime won the stage master national love and fame. In recent years, he has been fruitfully working on the stage of the national theater. People's Artist of Uzbekistan Malika Ibragimova. For many years the actress has been working in the one-actor theater genre. Her solo performances are widely known to the viewer. Creativity Malika Ibragimova is unique and deeply individual. The heroines of Malika Ibragimova make the viewer empathize and think, her work focuses on the role of a woman in society, family, raising children and love.

In the end, I would like to emphasize that young actors should closely study and be equal to the work of actors of the past, try to find their own creative niche on the stage, creating new images.

In short, it is difficult to imagine the development of theatrical art without the formation and development of acting skills. Skill, on the other hand, is sharpened in experimental fields. The teacher-student tradition should also be established on a large scale.

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METHOD OF IDENTICAL TRANSFORMATIONS IN PROBLEM SOLVING

Saipnazarov Shaylozbek Aktamovich*; **Khodjabaeva Dilbar****;
Usarov Jurabek Abdunazirovich***

*Associate Professor,
Candidate of Pedagogical Sciences,
UZBEKISTAN
Email id: shaylozbek.s.a@gmail.com

** Senior Lecturer,
Tashkent University of Economics,
UZBEKISTAN
Email id: dxodjabaeva@gmail.com

*** Tashkent University of Economics,
UZBEKISTAN
Email id: jurabek0117@gmail.com

ABSTRACT

This article discusses the application of problem solving to the method of identical transformation. To solve problems, compose new problems. Different formulas are used, sometimes such formulas are identities. The article shows examples of how to apply identities in problem solving.

KEYWORDS: *Identity, Method, Transformation, Educational, Developing, Rationality*

INTRODUCTION

Method-a lot of ways to its use. In addition to select the method there and selection of ways to its use. In science often determines the fate study. Method is in unbreakable unity with the theory; any system objective of knowledge can become a method. Inseparable contact method and the theory of finds its expression in the methodological the role of scientific laws.

The method by itself does not completely predetermine success in the study of reality: not only a good method is important, but also the skill of its application. Each method makes it possible to

cognize only some separate aspects of the object. Hence, the need arises for the mutual complementarity of individual methods, which is also due to the fact that each method has certain limits of its cognitive capabilities.

Thus, in the theory of scientific knowledge of the method is treated as a system of successive action that lead to achieve the result of the corresponding the intended purpose. This sequence of actions can be aimed at both theoretical results and practical implementation. This means that the method acts as a method of cognition, a method of transformation.

Various formulas are used to solve problems, compose new problems. Sometimes such formulas are identities. That is, we use it with the method of identical transformations. Consider the sum

$\frac{1}{a} + \frac{1}{b} + \frac{1}{c}$, square it:

$$\left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c}\right)^2 = \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2} + \frac{2(a+b+c)}{abc}.$$

If $a+b+c=0$, then $\left(\frac{1}{a} + \frac{1}{b} + \frac{1}{c}\right)^2 = \frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2}$

or

$$\sqrt{\frac{1}{a^2} + \frac{1}{b^2} + \frac{1}{c^2}} = \left| \frac{1}{a} + \frac{1}{b} - \frac{1}{a+b} \right| \quad (1)$$

If in identity (1) a replace $\frac{1}{a}$ or a and $b - \frac{1}{a}$ and $-\frac{1}{b}$, respectively, then we arrive at two new identities:

$$\sqrt{a^2 + \frac{1}{b^2} + \frac{a^2}{(ab+1)^2}} = \left| a + \frac{1}{b} - \frac{a}{ab+1} \right| \quad (2),$$

$$\sqrt{a^2 + \frac{1}{b^2} + \frac{a^2 b^2}{(a+b)^2}} = \left| a + b - \frac{ab}{a+b} \right| \quad (3)$$

Let us apply the obtained identities to solving problems.

Task 1. Find the sum: $S = \sqrt{1 + \frac{1}{2^2} + \frac{1}{3^2}} + \sqrt{1 + \frac{1}{3^2} + \frac{1}{4^2}} + \dots + \sqrt{1 + \frac{1}{(n-1)^2} + \frac{1}{n^2}}$

Solution. Since $1 = \frac{1}{1^2}$, then using (1), we have:

$$S = \left(1 + \frac{1}{2} - \frac{1}{3}\right) + \left(1 + \frac{1}{3} - \frac{1}{4}\right) + \dots + \left(1 + \frac{1}{n-1} - \frac{1}{n}\right) = 1 + 1 + \dots + 1 + \frac{1}{2} - \frac{1}{n} = \frac{2n^2 + n - 2}{2n}$$

Task 2. Calculate: $\sqrt{1 + 2019^2 + \frac{2019^2}{2020^2}} + \frac{2019}{2020}$

Let's transform the sub radical expression:

$$\sqrt{1 + 2019^2 + \frac{2019^2}{2020^2}} = \sqrt{2019^2 + \frac{1}{1^2} + \frac{2019^2}{(2019 \cdot 1 + 1)^2}}$$

Applying identity (2), we get:

$$\sqrt{1 + 2019^2 + \frac{2019^2}{2020^2}} = \sqrt{2019^2 + \frac{1}{1^2} + \frac{2019^2}{(2019 \cdot 1 + 1)^2}} + \frac{2019}{2020} = 2019 + 1 - \frac{2019}{2020} + \frac{2019}{2020} = 2020.$$

Task 3. Solve an equation in integers $x^2 + (x-1)^2 + x^2(x-1)^2 = y^2$

Solution. Let us prove that the left-hand side of the equation is an exact square. According to identity (3), we have:

$$\begin{aligned} x^2 + (x-1)^2 + x^2(x-1)^2 &= x^2 + (1-x)^2 + x^2(1-x)^2 = x^2 + (1-x)^2 + \frac{x^2(1-x)^2}{(x + (1-x))^2} = \\ &= \left(x + 1 - x - \frac{x(1-x)}{x + 1 - x} \right)^2 = (x^2 - x + 1)^2 \end{aligned}$$

Means that $(x^2 - x + 1)^2 = y^2$, or $y = \pm(x^2 - x + 1)$

If $x = n$, then $(n; \pm(n^2 - n + 1))$, n – integer. Thus, our equation has an infinite a lot of solutions in the integers.

If n is a natural number, we note that

$$[\sqrt{n^2}] = [\sqrt{n^2 + 1}] = \dots = [\sqrt{(n+1)^2 - 1}] = n(2n+1) \quad (4)$$

We apply the obtained equality (4) in solving problems.

Task 4. Solve in prime numbers the equation $[\sqrt{1}] + [\sqrt{2}] + \dots + [\sqrt{x^2 - 1}] = y$

where $[a]$ – is the integer part of the number a .

Solution. Applying equality (4) we get:

$$\begin{aligned} [\sqrt{1}] + [\sqrt{2}] + \dots + [\sqrt{x^2 - 1}] &= ([\sqrt{1}] + [\sqrt{2}] + [\sqrt{3}]) + ([\sqrt{4}] + \dots + [\sqrt{8}]) + \dots + ([\sqrt{(x-1)^2}] + \dots + [\sqrt{x^2 - 1}]) = \\ &= \sum_{n=1}^{x-1} n(2n+1) = 2 \sum_{n=1}^{x-1} n^2 + \sum_{n=1}^{x-1} n = 2 \cdot \frac{(x-1)x(2x-1)}{6} + \frac{(x-1)x}{2} = \frac{x(4x^2 - 3x - 1)}{6} \end{aligned}$$

So, we need to solve in prime numbers the equation

$$\frac{x(4x^2 - 3x - 1)}{6} = y,$$

$$x(4x^2 - 3x - 1) = 6y$$

Location $x = 2, 3, y$. If $x = 2$, the $y = 3$.

If $x = 3$, the $y = 13$. If $x = y$, then we get equation $4x^2 - 3x - 1 = 6$, which has no prime solution. This equation has two solutions:

$$x = 2, y = 3 \text{ and } x = 3, y = 13.$$

Task 5. Knowing that

$$S = 1 + \frac{1}{2^2} + \frac{1}{3^2} + \dots + \frac{1}{n^2} = \frac{\pi^2}{6} \quad (5)$$

to calculate the integral $\int_0^1 \frac{\ln(1+x)}{x} dx$.

Solution. For any kind n are equality $\ln(1+x) = x - \frac{x^2}{2} + \frac{x^3}{3} - \dots + (-1)^{n-1} \cdot \frac{x^n}{n} + \dots$

Then

$$\begin{aligned} \int_0^1 \frac{\ln(1+x)}{x} dx &= 1 - \frac{1}{2^2} + \frac{1}{3^2} - \frac{1}{4^2} + \dots + (-1)^{n-1} \cdot \frac{1}{n^2} + \dots = \left(1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \frac{1}{5^2} + \frac{1}{6^2} + \dots \right) - \\ &- 2 \left(\frac{1}{2^2} + \frac{1}{4^2} + \frac{1}{6^2} + \dots \right) = \left(1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \frac{1}{5^2} + \frac{1}{6^2} + \dots \right) - \frac{2}{2^2} \left(1 + \frac{1}{2^2} + \frac{1}{3^2} + \frac{1}{4^2} + \frac{1}{5^2} + \frac{1}{6^2} + \dots \right) = \\ &= \frac{1}{2} \left(1 + \frac{1}{2^2} + \frac{1}{3^2} + \dots \right) = \frac{1}{2} \cdot \frac{\pi^2}{6} = \frac{\pi^2}{12} \end{aligned}$$

The goal of this method includes two groups of goals: educational, developing.

Educational goals include

- 1) assimilation of the system of mathematical knowledge, skills and abilities;
- 2) the formation of skills to carry out modeling in various mathematical situations (when solving equations, inequalities and their systems, when proving theorems);
- 3) synthesis and systematization knowledge that are associated with the data methods, the formation of the integrity of mathematical knowledge;
- 4) the formation of a scientific worldview: thanks to the method of identical transformations, on the one hand, it becomes possible to show the penetration of mathematics into other sciences, into practice; on the other hand, to form an understanding of the unity of mathematics and its methods;
- 5) education of mathematical culture, rationality of mental activity of students;

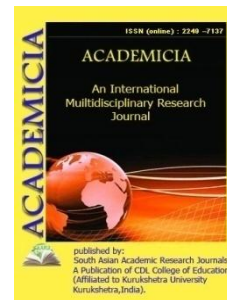
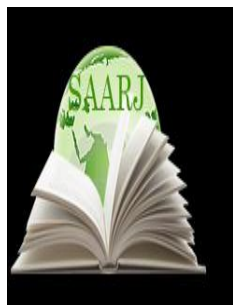
- 6) Aesthetic education of students: this method allows you to compare methods for solving the same problem, choose the most rational of them, it possible to sometimes get original, beautiful solutions to problems.

Developmental goals include:

- 1) Development of students' creative thinking, the components of which, according to psychologists, methodologists and mathematicians, are dynamism, intuition, etc.
- 2) Development of students' mathematical abilities, the structure of which is: algorithmic or computing, abilities, logical abilities.

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TECHNOLOGY FOR TEACHING SCHOOL CHILDREN TO CREATE TEXT IN RUSSIAN LESSONS IN ELEMENTARY SCHOOL

Dustova Dildora Sobirjonovna*

*Teacher,
“Preschool and primary education” Faculty,
Bukhara State University,
UZBEKISTAN

ABSTRACT

This article discusses the development of coherent Russian speech in primary school students. This type of student activity is productive if this work is based on the creation of a text approach in the lessons of the Russian language and literary reading, in which the text is considered as the highest communicative unit of speech. The creation of a text in teaching elementary school students allows in the lessons of the Russian language to purposefully practice practical actions for mastering speech as a real communication activity. To develop metasubject skills, a text-centric approach should be used in the lessons of native and foreign languages.

KEYWORDS: *Primary School; Teaching Russian; Creating Text; Communicative Competence; Development Of Coherent Speech.*

INTRODUCTION

In the context of global transformations of society, an active and creative person is becoming in demand. State educational standards of primary general education are aimed at the formation and development of communicative competencies of students on the basis of a system-activity approach. Communicative competence makes it possible for students to carry out speech activities in accordance with the goals and situations of communication within a particular field of activity by means of the studied language. The most important component of communication-oriented teaching of the Russian language in primary school is the text.

"A text is a product of speech activity, a literary work that realizes the goal" [1]. Thus, it is the main communicative unit of speech. The development of coherent speech in the lessons of the Russian language allows for purposeful systematic work on the text, therefore, the modern

method of teaching Russian speech cannot fail to take into account the fundamental provisions of the linguistics of the text.

The problem of creating texts of various styles occupies an important place in modern linguistic and methodological research. Analysis of the linguistic, psycholinguistic and methodological literature showed that the research problem is devoted to the scientific works of such scientists as L.S. Vygotsky, N.I. Zhinkin, A.A. Leontiev, V.V. Vinogradov, V.G. Gak, I.R. Halperin, N.D. Zarubina, I.A. Zimnyaya, N.A. Ippolitova, N.S. Valgina, L.M. Loseva, E.P. Nikiforova, E.I. Passov, E.A. Referovskaya, E.A. Bystrova, M.T. Baranov, M.R. Lvov, T.A. Ladyzhenskaya, Ramzaeva T.G. and etc.

According to authoritative researchers, "The theoretical substantiation of the textocentric principle is the following: the use of language is, first of all, in the creation of texts to speak or write in a given language; the study of texts as ready-made, established speech works can be considered as the study of language in action: from this point of view, the text appears as a result of the use of the language system and its basic elements, and when we perceive this text, we observe how the language functioned and how it was used by those who created this text "[2]. The main goal of the textocentric principle of teaching the Russian language is the development of cognitive, intellectual skills and abilities, the formation of the personal qualities of students. The main means of organizing the educational process in the Russian language at school are scientific, artistic, journalistic, official-business texts, each of which has its own structure, lexical, morphological, syntactic, stylistic features and other typological characteristics.

The text-centered approach in teaching the Russian language is the methodological basis of the educational process, in which the text becomes an emotionally influencing object of study, aimed at organizing students' activities, contributing to the achievement of personal, meta-subject and subject results. The text is a means of cognizing language as a multifunctional phenomenon; it is the most important means of familiarizing with Russian culture; on its basis, cognition of grammatical categories, linguistic phenomena is carried out, a system of linguistic concepts is formed; the text acts as a speech work; the result of using the language system and the main means of mastering the oral and written forms of Russian speech; it is a means of creating situations in which real communication takes place.

Work on the text, in addition to enriching the vocabulary, stimulates the speech activity of students and is the basis for creating your own texts. The text centric approach to teaching the Russian language ensures the integrity of the process of forming the linguistic, linguistic and communicative competence of students.

As practice shows, primary school students do not have enough ability to analyze and produce texts. This is primarily due to the fact that in the lessons of the Russian language insufficient attention is paid to working with the text, and the language is studied as a system of lexical and grammatical forms. Usually in primary grades, teachers are limited to such forms of writing as dictation, presentation and composition. Systematic text work usually begins in middle and high school. In our opinion, work on the text should be started from the first grade, following the didactic principle from simple to complex. The main task of communicative training is that students must be able to correlate the goal of the activity with speech expression.

Working on the text in the Russian language lessons has a great educational potential for the formation of a comprehensively developed personality. For the formation of speech skills,

primary school age is extremely important, since it is during this period that students develop basic communicative competencies. A feature of children in modern society is that they perceive information mainly visually, as they masterfully use electronic means. It is very important for a teacher to rely on such a quality of primary school students as curiosity.

Speech, being a complex psycho physiological process, accompanies a person throughout his life, but the main foundation is laid at a young age. The desire and desire to express your feelings and thoughts is the main condition for the generation of speech in oral or written form. The motive generates an intention, a path that allows you to achieve communicative goals. The choice of strategies depends on the specific speech situation. Having chosen the path, the speaker realizes his intentions in certain speech utterances, thus, solving specific life tasks.

In the lessons of the Russian language in primary grades, the teacher should pay attention to how to make students feel the need to express their thoughts and teach how to plan speech to solve the assigned tasks. In order to formulate their thoughts, students must master all types of speech activity. At primary school age, in contrast to preschool age, children begin to realize causal relationships, to correlate words, phrases and sentences with lexical and grammatical categories. At this age, visual-figurative memory is developed. They better and faster memorize and retain in their memory events, persons, objects, facts than definitions, descriptions and explanations. During this period, it is important, based on the life experience of students, on their interests and needs, to teach how to correctly and accurately use words, build sentences, retell and express their thoughts. This gives the teacher the opportunity to rely on such thought categories as abstraction and generalization. In this period of study, the most effective forms of work are group activities. This form of work allows students to defend their opinions, listen carefully to each other, discuss and present the work of the group. Students are more motivated to learn and self-esteem, as well as responsibility for the results of their common work. In primary school, attention should be paid to the technology of level differentiation, the creation of comfortable conditions for students with different abilities and interests. It is necessary to create a favorable speech environment, practice listening to literary texts performed by speakers, masters of verbal art, it is necessary to organize such conditions so that children have a desire to express their thoughts. As a result of listening to Russian literary speech, students develop a sense of language. Unfortunately, in the Russian language lessons, teachers cannot always rely on the linguistic intuition of bilingual children, since the speech environment does not allow this.

Teaching the Russian language at school should be aimed at developing the ability of students to solve certain problems by language means in different areas and situations of learning. In this regard, the development of speech occurs in the process of working with the text. Through it, students are introduced to Russian literature. The reliance on the text in the study of grammatical material creates conditions for the spiritual and moral education of schoolchildren and the development of their creative abilities.

In our opinion, journalistic texts from children's magazines and newspapers should also be used as didactic material, gradually introducing students to writing their own notes, small reports from the scene and chronicles.

From primary school, students learn to correctly formulate and form thoughts. The emerging speech gradually becomes coherent, allowing the presentation of complex semantic concepts. The gradual enrichment of the vocabulary of students with terminology allows them to express

thoughts accurately and concisely. At this stage, the use of reproductive methods plays an important role. Developed coherent speech of primary school students allows them to successfully master other school subjects.

Work on the development of coherent speech allows you to gradually use the learned words and their combinations in sentences, complex syntactic wholes, independently design simple texts, determine the topic of the statement, formulate the main idea, draw up a plan. To develop the skills of producing texts, a specially developed methodological system is needed, which includes materials that have enormous didactic capabilities. Educational texts are aimed at enriching the feelings of students, to form a certain attitude towards the surrounding reality. In Russian language lessons, work with the text should be carried out in an integrated manner.

We also believe that when developing and improving the skills and abilities of constructing texts, it is necessary to follow the following stages of work: 1) analysis of the sample text; 2) compilation of a text based on language materials; 3) construction of texts; 4) improving the written.

At the same time, it is necessary to comply with the didactic requirements for the gradual and consistent assimilation of language material. The analysis of the studied text begins with the completion of tasks related to the speech development of schoolchildren. This is an expressive reading of the text, the definition of a topic, main idea, type, style, genre; drawing up a simple or complex plan or algorithm of action. The analytical activity of students is aimed at the formation and development of the ability to understand the content of the text, to comprehend speech units. Various types of analysis are used: communicative, compositional, speech, linguistic and stylistic. These types of work make it possible for schoolchildren to realize the dependence of the content and its speech design on the communicative attitudes of the author, which the speech situation dictates to him. At the second stage, students collectively select words, phrases, speech constructions to compose their own text, discuss and analyze them.

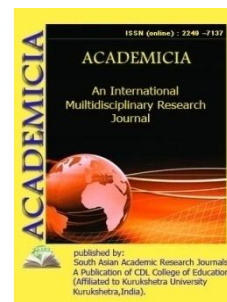
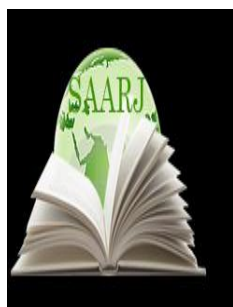
As practice shows, the most effective when working with texts of various styles, types and genres in elementary school are the following types of work: defining the topic and microthemes; dividing text into paragraphs; formulation of the main idea of the text; finding keywords and thoughts in the text; determining the meaning of words by context and the ability to work with dictionary entries; formulation of questions on the content of the text; adding new ideas to the text; transformation of texts; the ability to work with deformed texts; composing a text at a given beginning; the ability to write a text-reasoning according to the scheme: thesis, proof, conclusion, etc.

Working on the text in Russian lessons in primary school should also take into account the fact that its nature has changed, the modern text has become non-verbal, more often found in the form of pictures, diagrams, tables and diagrams. The main distinguishing feature of the new texts is their laconicism. Schoolchildren are increasingly hearing texts from electronic sources. Texts should be carefully selected as didactic material. They should correspond to the age characteristics of the student's perception, the reading and life interests of the student, in order to turn learning into an exciting process. You should teach how to work with texts from narration, then move on to texts such as descriptions and reasoning. In the elementary grades, as didactic material, one should turn to such genres as a fairy tale, riddles, counting rhymes, fables and shape-shifters, short essays in the form of movie scripts, congratulatory letters, announcements,

an information note in a newspaper, a report from the scene, annotation and others. Work on texts of various types, styles and genres should be based on the idea of semantic reading, which involves working at the meta-subject level. If at the initial stage of training the main goal is to teach how to read, then in basic school reading becomes a means for teaching, understanding the content of other more complex subject areas. The systematic work on the text proposed in the article is the basis for the production of their own texts by younger students.

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METHODOLOGY TO ORGANIZE INDEPENDENT WORK OF STUDENTS IN MATHEMATICS LESSONS IN PRIMARY SCHOOL

Ochilova Laylo Temirovna*; Rajabova Lobar Chorievna**

*Teachers,
“Preschool and Primary Education” Faculty,
Bukhara State University,
UZBEKISTAN

ABSTRACT

It is independent work that is the most important condition for self-regulation of the personality, its creative capabilities. But why are there so many people who are dependent, unable to make the necessary decisions in time, without looking back at others? This question comes up again and again in society, the long-standing dispute between teachers from different countries does not cease. The student's independent work is the main way of fostering independence. The school's many years of experience is the best proof of this. The article discusses the correctness of the organization of independent work, since I believe that independent work serves as an effective means of forming a personality, encourages mental independence in children.

KEYWORDS: Formation, Skills, Problem Solving, Independence, Mathematics Lesson, Primary School.

INTRODUCTION

Today, a student is defined not just as a subject of the educational process, he is recognized as a subject of social interaction, in the process of which there is a mutual development and personal development of all participants in the interaction.

The initial link of education is one of the sensitive school periods for the formation of such personality traits as independence, which is actively developing at this age in educational activity. Independent educational work is usually understood as any active activity of students organized by the teacher in a specially allotted time for this. As a didactic phenomenon, independent work is, on the one hand, an educational task, i.e. what the student must accomplish, the object of his activity, on the other hand, the form of manifestation of the corresponding activity: memory, thinking, creative imagination when the student performs an educational task,

which ultimately leads the student either to obtaining a completely new knowledge unknown in advance, or to deepening and expanding the scope of already acquired knowledge.

Independent work includes two stages: preparatory and executive. At the first stage, students get acquainted with the task, comprehend it, highlight what needs to be done, what tasks and actions will be required for this, and draw up a plan for completing the task. The second stage is that the students, having understood the task and drawing up a plan of action, carry out and check it.

In a modern lesson, the independent activity of students must necessarily be accompanied by evaluative (or rather, self-evaluative) activities (self-test by a key or standard, fixing and identifying the causes of errors and difficulties, adjusting the training route, etc.)

The following types of independent work can be distinguished, taking into account the level of activity of the thinking of children, to show the possibilities of their use at various stages of teaching mathematics.

1. Independent work with the aim of updating the knowledge of students.

The teacher must update the basic knowledge and skills before introducing new material and before consolidating it. This work can be reproductive and reconstructive – variative in nature.

Reproductive works (or patterns) in the mathematics course are numerous typical examples and problems with fully specified conditions. In the course of performing these works, students formulate the conditions of the problems, determine the conditions of the problems, determine the data and the desired, and then reproduce the corresponding knowledge, find a way to solve. Students perform work of this type with detailed instructions.

For example, in order to prepare for the study of a computational technique of the form $30 - 6$, it is advisable to propose the following system of tasks:

1). Replace the number with the sum of the sample:

$$50 = 40 + 10 \quad 70 = +$$

$$90 = 80 + 10 \quad 20 = +$$

2). Fill in the "windows"

$$60 + = 65 \quad 72 + 6 = + 8 = 78$$

3). Solutions in a convenient way:

$$(50 + 10) - 6 \quad (30 + 10) - 4$$

This work should be carried out in order to determine the level of preparedness of students for the perception of new material. The types of verification can be different: frontal, selective, using feedback, etc.

Works of a reconstructive - variable nature require from students various transformations, generalizations, relying on previously acquired knowledge and skills. Here, students must not only reproduce individual functional characteristics of knowledge, but also the structure of this knowledge as a whole. Thus, they deepen, their application expands, they become more perfect, and the thinking of students reaches the level of productive activity.

Let's imagine a system of preparatory assignments using the example of the same topic $30 - 6$

1. Distribute independently the examples in two columns according to some criterion, justify your answer:

$$40-8 \quad 34 + 5 \quad 44 + 3 \quad 80-9 \quad 56 + 20$$

$$70-8 \quad 90-6 \quad 45 + 50 \quad 30-6 \quad 72 + 10$$

2. Among these examples, find those that will help solve examples of one of the columns recorded in the assignment.

$$(20 + 10) - 6 \quad (70 + 10) - 9$$

$$(30 + 10) - 8 \quad (60 + 10) - 8$$

$$(50 + 10) - 1 \quad (80 + 10) - 3$$

$$(40 + 10) - 2 \quad (80 + 10) - 6$$

3. The composition of what numbers do you need to know to solve these examples? Write them down yourself.

2. Independent work with the aim of learning new knowledge

The introduction of new material can be carried out at different levels of students' cognitive activity. It depends on the complexity of the material and the level of preparation of the class.

Works of a reproductive nature (or according to a model) are performed by students entirely on the basis of a model or detailed instructions, due to which the level of cognitive activity and independence does not go beyond the framework of reproductive activity.

For example, the chalkboard contains examples: $48-3$; $48-30$

The teacher announces the topic and makes a detailed record of the example solution:

$$48-30 = (40 + 8) - 30 = (40-30) + 8 = 10 + 8 = 18$$

- Look, the chalkboard contains an example solution with an explanation and a memo with reference words that will help you explain the solution.

- Guys, independently figure out the solution to this example. It is advisable to start the survey at will and with weak students. At the end, the teacher summarizes the students' answers.

Works of a reconstructive - variable character.

Here, students must see and apply basic knowledge and skills. And this requires a system of preparatory knowledge. Only a system of appropriately selected preparatory questions and tasks will allow organizing independent work of this type.

For example, you need to enter a computational device of the form $30-6$. We will proceed from the preparation that we presented in paragraph 1. Then the questions and tasks at the study stage will be as follows:

Take a close look at the examples we just solved. Are there any among them that will help solve this?

Children are given time to think. After the discussion, they are invited to independently write down an example with a detailed explanation, using the key words of the memo, and orally speak

the algorithm. At the end of such work, the teacher should give a sample reasoning for solving this example using the same key words.

Works of a partial search nature differ from the previous ones in a greater degree of students' independence. With this type of work, it is advisable to offer the student some kind of auxiliary material.

For example, consider familiarity with computational example $47 + 5$

Guys, now you will learn to solve examples of the form $47 + 5$. You have bunches of sticks of different colors on your tables (two sticks of a different color) How is it convenient to calculate how many sticks there are in total? Children are given time to think. After the discussion, the teacher makes a generalization and invites the students to write down the solution themselves. What follows is a test and a sample algorithm for solving the example.

In the work of a research nature, students themselves solve the problem, draw up solution algorithms, and make generalizations. This type of work can only be organized in a strong classroom, where students have formed the skills necessary for research. The system of preparatory exercises also plays an important role here.

For example, it is necessary to acquaint students with a new computational technique of the form 42-5. We will proceed from the fact that we proposed the preparatory work that I spoke about in paragraph 1. Then, at the study stage, we can offer the following system of questions and tasks.

Guys, you need to solve example 42-5. Think about how you can calculate. There are sticks of the same color on the tables, but no practical help is offered to children. Our goal was to introduce material at a higher abstract level. Only those children who have not coped with the task, it is advisable to offer help - counting sticks.

After discussing the search for a solution, which should start with weak students and if desired, the teacher may offer to write down the solution with a full explanation and tell the algorithm using the cheat sheet.

We have considered 4 types of independent work that can be carried out in order to study new knowledge. These works can be carried out only in the indicated sequence, since the content is gradually increasing in difficulty, which entails an increase in activity in the thinking of students. The highest level of cognitive activity is manifested in research works.

3. Work with the aim of consolidating and repeating the knowledge and skills of students

The purpose of consolidation is memorization, systematization, generalization and practical application of knowledge and skills. Most often, in practice, we observe the repeated execution of similar tasks. This, of course, is not enough. Consolidation is a lengthy process and tasks should be offered in a certain sequence: solving similar tasks; performing tasks where knowledge is transferred to new conditions; further - the inclusion of new knowledge in the old system; the latter can offer tasks of a creative nature. For independent execution, you can offer tasks of any kind. When consolidated, independent work can be reproductive and reconstructive-variative in nature.

For example, for work of a reproductive nature, you can offer tasks:

1. Solve examples based on the pattern.

2. Solve the problem similar to the one that was analyzed orally.

3. Draw the same line, etc.

For works of a constructive-variative nature, it is advisable to offer such tasks where it is necessary to transfer knowledge to new conditions, having seen intra-subject connections, and tasks of a creative nature.

For instance:

1. Using the first example, compose the second for calculations: $(20 + 10) - 6$ $(40 + 10) - 7$

2. Think of a problem that would be solved like this: $30 * 6$.

4. Independent work in order to test the knowledge and skills of students

The purpose of the test is to determine the level of assimilation of knowledge and skills of the student. The result of the check is the assessment. Work at this stage, as well as at consolidating knowledge, can be of a reproducing and reconstructive-variative nature, tasks are offered similar.

I have named the main types of independent work used in elementary school, which can increase the activity of students at various stages of the lesson, and further contribute to the independent mastery of new knowledge.

Independent work as a teaching method can be included in almost all teaching methods, applied at different stages of the learning process. In most cases, at the stage of comprehending the material being studied, independent work in mathematics lessons takes about 5-6 minutes, at the stage of developing skills in applying the studied material up to 10-15 minutes, and at the stage of developing skills - up to 30 minutes.

1. Working with the textbook:

- reading text;
- Reading to yourself;
- Reproduction of the read;
- Discussion of what has been read;
- Breakdown of the read into semantic parts;
- drawing up a plan of the reading;
- work with a table of contents, with a suggested index;
- work on the concept, term.

2. Implementation of written independent work in the lesson:

- performing exercises, tasks to consolidate the topic;
- drawing up tasks, equations, exercises, diagrams, tables;
- Work on errors;
- Work according to a drawing, graphic, table, diagram;
- laboratory and practical work;

- test tasks.

3. Types of practical work

Mathematical dictation.

Proceed from the tasks of the studied item:

- include tasks for repetition, poorly mastered material;
- all tasks should be as close to the studied material as possible;
- mastering the technique of self-control.

Lessons - reports:

- homework is given ahead for two weeks on a card.

Practical work to consolidate knowledge, skills and abilities at the final stage.

Drawing up schemes. Tables.

Tests.

Requirements:

- certainty;
- simplicity;
- unambiguity;
- equal difficulty.

The modern educational process cannot be imagined without a test control system. The use of tests allows you to save time, check a wide range of students' knowledge of the subject, the level of formation of certain skills and abilities.

Laboratory work

- construction of graphs and their application;
- use of models, drawing tools;
- data processing according to the formula and average results;
- the use of tables, reference books;
- connection with other disciplines.

Creative "Special Assignments"

Naturally, at different stages of learning, independent work is used to achieve various goals: at the stage of comprehending the educational material, independent work is aimed at understanding the meaning of the studied concepts and rules; at the stage of skills formation, independent work is primarily aimed at working out the correctness of the actions performed, and at the stage of skills formation, they are aimed at practicing the speed of the actions performed. Naturally, the formation of students' skills for independent study of mathematics at each of these stages has its own specifics.

Let's consider in more detail.

At the stage of acquaintance with the content of the studied material, independent work with the text of the textbook is fruitful. Generally speaking, the text of the textbook intended to be read after the teacher's explanation and the text that is designed for students to read independently should be different.

It should be remembered that independent reading of a mathematical text is a very difficult task due to the fact that this text is usually full of information, the references cited in it may slip out of sight of students, and some remarks may seem superfluous. Therefore, when choosing material for independent work with a textbook, the teacher has to take into account the level of accessibility of the text of the textbook. A combination of different methods is of great help. For example, the teacher explains part of the new material himself, while the other part from the textbook suggests studying on his own.

For the purposeful formation of this skill, some teachers use the following algorithm.

- 1) Read an example of solving a problem in the book and draw up a general plan for solving such problems.
- 2) Check if it can be used to solve another problem of this type.
- 3) Solve a number of tasks of a new type, using your plan and adjusting it if necessary.

The problem of enhancing the independent learning activity of students is closely related to the problem of developing their mathematical culture, with the problem of formulating a system of various educational and cognitive tasks in the process of teaching mathematics.

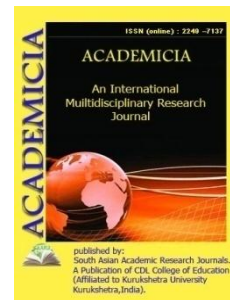
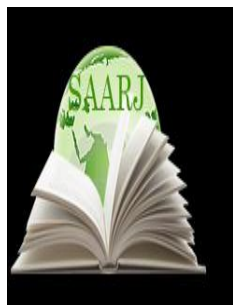
The ability to solve problems, the skill in solving them is, perhaps, the most important thing in teaching mathematics.

To develop skills in solving problems, of course, students will need to solve many and the most diverse problems; but they should be solved not mechanically, not indiscriminately, but consciously and deliberately, relying on indisputable logic.

Note that thinking through tasks on your own is the best way to get into the essence and spirit of tasks. Thinking over tasks can occur according to a given formula, rule or topic.

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PROBLEMS OF TEACHING MATHEMATICS IN PRIMARY GRADES AND SOME WAYS TO SOLVE THEM

Sayfullaeva Nozima Bahodirovna*; Sharipova Ikbol Fayzullaevna**

*Teachers,
“Preschool and Primary Education” Faculty,
Bukhara State University,
UZBEKISTAN

ABSTRACT

The article is devoted to a retrospective analysis of the formation and development of methods of teaching mathematics at school. In the direction of the development of methodology and methodological training, there can be the integration of subject methodologies, as a dialogue of methods on the functional-target, organizational-activity and content aspects.

KEYWORDS: *Primary Classes, Mathematics, Teacher, Students, Method, Method, Psychology, Tasks, Education.*

INTRODUCTION

The modernization of the professional training of a modern primary school teacher, one of the key dominants of which is the methodological and mathematical component, provides for the study and use of the historical experience of the formation and development of the system of teaching mathematics in schools of the republic. This allows, on the one hand, to reveal the peculiarities of the domestic system of training primary school teachers, and on the other hand, it is the key to the creative use of the methodological heritage in the context of modern changes in school and teacher education.

Among school subjects, mathematics has appeared as long as the school system itself. In different historical periods, the attitude to the subject was ambiguous, but at all times school mathematics belonged to the compulsory general education subjects. Therefore, when determining the goals, content and tasks of the methodological and mathematical training of future primary school teachers, it is advisable to track their modern design for those reform processes in primary education that influenced the professional training of primary school

teachers. The foregoing requires a periodization of the process of formation and development of the methodology of teaching mathematics to younger students as a separate science.

Ya.A. Komensky (1592-1670) Illuminating the general didactic rules, he paid much attention to the study of arithmetic. For the first time in the history of didactics, he characterized visualization as the "golden rule of education", substantiated the principle of conformity of upbringing (the need to take into account the nature of the child), gave a theoretical justification for the classroom teaching system, he was familiar with the experience of fraternal schools in Ukraine. Ya.A. Comenius created the first illustrated textbook for young students "The World of Sensual Things in Pictures" (1768 published in Russian).

I.G. Pestalozzi (1746-1827) In his works "Lingard and Gertrude", "Small works", developed a methodology for teaching children arithmetic. He put forward the idea of developing education, formulated didactic principles of consistency and gradualness in learning, defended the principle of systematicity. I. Pestalozzi - the founder of the method of primary teaching of the native language, arithmetic, elementary geometry, geography, gymnastics. He tried to simplify the methodology of primary teaching of the native language, counting and measurements so that it could be successfully used not only by primary school teachers, but also by any peasant mother during classes with her child. Defining the main approaches to the methods of teaching arithmetic, I. Pestalozzi replaced rote memorization with free reasoning, the automatism of written calculations according to the rules - with oral exercises over the numbers of the first hundred. He initiated the concentric placement of arithmetic material, separating a hundred into a separate concentrate. However, work on this concentrate by I. Pestalozzi had no connection with the arithmetic theory. I. Pestalozzi considered the unit to be a simpler element of the number. By successively adding and subtracting units, he strove to create in the child's mind the correct concept of number, considering it as the ratio of the set and the unit. For teaching arithmetic in elementary school, I. Pestalozzi created a special didactic material - tables, where whole numbers were depicted using strokes. On this ground, the method of the German methodologist A. Grube grew up, which is called the method of numbers or monographic.

A.V. Disterweg (1790-1866 rr.) In his "Guide to the education of German teachers" (in 1829) posted arithmetic material on concentrates. Developing the positive that was contained in the system of I. Pestalozzi, A. Disterweg established the following stages in the study of integers: the first ten, the second ten, the first hundred, significant numbers. Within each of these concentrates A. Disterweg recommended to study not the composition of numbers, but actions (one after another). Thus, the foundations of the method were laid, which was later called the method of action or computational.

Mathematics is one of the most important disciplines that can be very necessary in the life of every person. It is impossible to do without mathematics in principle, given the time in which we all live.

Mathematics as an academic subject contains the necessary prerequisites for the development of students' cognitive abilities, it forms and corrects such forms of thinking as synthesis, comparison, analysis develops the ability to generalize to concretization, creates conditions for the correction of memory, attention and other mental functions.

In this process, the development of children's speech is observed, it is enriched with special mathematical terms and expressions. When explaining the solution to a particular problem, the

student acquires the skills of rational explanation of his actions, to do it accurately and concisely, without adding unnecessary words or expressions.

Math lessons in primary school are strikingly different from those in older grades. A mathematics teacher in primary grades should, like other teachers at this stage, have the skills of a psychologist and educator, in addition to their main responsibilities. Because training during this period implies not only the presentation of knowledge in various academic disciplines, but also its upbringing in the psychological and personal terms.

Like other subjects, mathematics presupposes the mastery of the following knowledge and skills: a) gives the concept of natural number, zero, natural number of numbers, their properties, the concept of ordinary decimal fractions; b) forms in the minds of students clear ideas about the basic quantities (length of a segment, cost, mass of objects, area of various geometric shapes, capacity and volume of bodies, time), units of measurement, various quantities and their ratios; c) gives the concept of the metric system of measures, measures of time; d) the ability to carry out four basic arithmetic operations (addition, subtraction, multiplication and division) with multi-digit numbers and fractions; e) develops in students the ability to solve simple and complex problems.

To achieve the above goals in mathematics lessons, various methods are used that are aimed at the most complete transfer of educational material to students.

Teaching methodology is a means of joint activities of a teacher and students, with the help of which the teacher transfers knowledge and skills to the student. These methods come in many varieties. The teacher chooses which of them will be appropriate to apply at this particular stage of training. Some of them are creative, others are called traditional. If new teaching methods have not yet been mastered by many teachers, traditional methods have long been used in the classroom and have managed to show their effectiveness. More often in other elementary grades, when explaining materials on various academic disciplines, including mathematics, the story method is used; when applied to mathematics, it is called the method of presenting knowledge. Along with it, they use the method of conversation. In the course of the conversation, the teacher sets tasks for the students, in the solution of which the latter will have to use the already existing knowledge.

The methodology of teaching mathematics is closely related to other sciences, primarily with pedagogy, developmental psychology, ethics, native language and literature. Recently, the use of modeling methods has been increasingly noticed. Teaching mathematics in secondary general education schools, including in primary grades, contributes to the formation of such personality traits as accuracy, punctuality, perseverance and strong will.

Also, mathematics can help educational purposes. This subject teaches students to think about rationality. If the lessons of the native language and literature help to reveal the child's creative abilities, gives him a field for improvisation, mathematics teaches us to firmly assess a particular situation, draw the right conclusions and make the most correct, acceptable decision in a given situation.

Mathematics forms in students such forms of thinking as comparison, analysis, and the ability to generalize conclusions. Also, solving a mathematical problem, the student gets the opportunity to improve the correction of memory, sharpen the skills of concentration, develop observation. In

the elementary grades of secondary school, children very often perceive mathematics as a boring and monotonous subject, perceiving classes in this discipline as the most monotonous passing.

The guilty in this state of affairs can be called the teachers themselves, who for the most part do not seek to bring something new to the lesson process, they are not interested in how interesting their teaching abilities are to the students.

It is important to remember that a teacher whose teaching methods are considered to be interesting for students to perceive wins among them. Indisputable authority and as a result, in the lessons of such a teacher, they are engaged in more diligent efforts to get his praise. It is easier for such a teacher to convey to the students the educational material provided for this particular lesson.

Why do some teachers manage to gain confidence in children, while others, with all his undoubted pedagogical knowledge, do not succeed? Because, as noted above, they must first of all be psychologists, which implies the ability to find an approach to each child. It is very easy to work with children who have the ability for mathematics - they grasp the teacher's explanation on the fly, easily perform mathematical actions and solve problems of different levels of complexity. But, as a rule, there are few such children in the primary grades. In the course of research, it was found that a child who experienced difficulties with addition and subtraction in preschool age also has them in primary grades, which undoubtedly prevents him from assimilating mathematical material.

As the math problems get more difficult over time, the problems of these children get worse. It is all the more important that the teacher can find out the number of such children in a given class and build a lesson plan taking into account this detail.

Primary school teachers deal with this problem in different ways. Some practice dividing children into groups depending on their level of knowledge and ability in mathematics. In such cases, stronger or slightly weaker groups are formed. The teacher gives these groups tasks based on their abilities - the strong group solves more difficult problems, the weak ones are not so difficult.

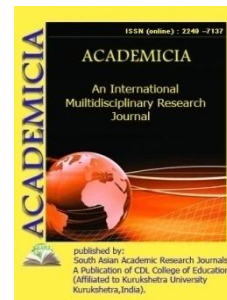
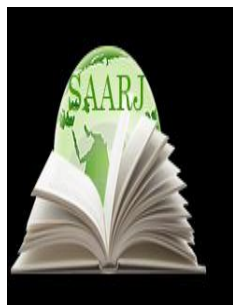
The teacher gradually complicates the tasks of the lagging group, step by step bringing such students closer to the level of children from the strong group. It should be noted that this method has a number of its advantages, but it is also not without its disadvantages. Its advantage can be considered the fact that children in lagging groups have the opportunity to catch up with their classmates from a strong group, to strengthen their problem-solving skills to eliminate their shortcomings. But it must be taken into account that this method can lead to stratification of students, dividing them into leaders and outsiders. Since children in primary grades are not yet very confident in themselves and in their abilities, such a division can hurt his pride, and especially impressionable children, even traumatize the psyche. Therefore, the teacher who decides to use this method should be as attentive as possible to the psychological climate of the class, not to allow the arrogant attitude of students from a strong group in relation to children from a weaker group.

Another method of teaching mathematics is also known - the teacher transplants a strong student in mathematics to a weak student during the lesson, giving them one task for two. In such cases, small teams are created from the students, which for two carry out a common task. This way of

learning to teach children to work in a team, a lagging child, who is often timid in relations with a teacher, feels more relaxed next to a peer and, using a live example, to see how problems are solved, a classmate can reveal the essence of the problem of a given problem in a language that is understandable for him. and explain how to solve it. But this method gives a result only when friendly relations are established between two such students. Otherwise, such work can turn into torture for both sides and can cause nothing but mutual irritation. And this again means that the teacher must be a subtle psychologist and expert on children's characters. Because in such teams there is always a leader and a follower. If the leading student learns well the follower can improve his problem solving skills he will actually learn to solve arithmetic examples. But if the leader in terms of character is stronger, but learns worse, this method will not give anything good, since he will dominate in the pair and a student who is strong in his studies but weak in character will do all the work for him. In such cases, the lagging student will not learn anything, all his activities in the team will only lead to cheating the problems solved by the other student. As you can see, teaching mathematics can be carried out using various methods and methods in order to use the time allotted for the lesson in the most rational way, in terms of conveying educational material to the consciousness of students. Although mathematics is an exact science, nevertheless, teachers can experiment, apply, various aids, music, movement, everything that can show children all the beauty and power, as well as the importance of this discipline in everyday life.

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A STUDY OF MEASURING CUMULATIVE ADAPTIVE CAPACITY FOR CLIMATE CHANGE IN SRI LANKA

U.S. Thathsarani*; L. H. P. Gunarathne**

*Lecturer (Probationary),
Department of Economics and Statistics,
Sabaragamuwa University of Sri Lanka,
Belihuloya, SRI LANKA
Email id: Thathsarani0@gmail.com,

** Professor,
Department of Agricultural Economics and Business Management,
Faculty of Agriculture, University of Peradeniya, SRI LANKA
Email id: lhpguna@pdn.ac.lk,

ABSTRACT

Climate change is considered as the major threat to the human beings in the future. Vulnerability to the climate change refers to the potential of a system to be harmed by an external threat and it is a function of exposure, sensitivity to impacts and the ability or lack of ability to cope or adapt. Adaptive capacity represents the ability of a region or community to cope and thrive in the face of change. In this context, an attempt has made to construct an index to measure the adaptive capacity using five assets as economic, social human, physical and natural. The data set obtained from Sri Lanka Household and Expenditure Survey covering 25000 households. The algorithm used to construct index of adaptive capacity in this paper follows as Weighted Principal Component (WPC). Positive relationship between adaptive capacity and social assets is clear followed by economic assets and physical assets, but human assets have been attributed a negative association. Batticaloa, Jaffna, Ampara, Moneragala, Trincomalee, Vavuniya and Puttlam districts had lower adaptive capacity, alone with Colombo and Gampaha had a higher level of adaptive capacity.

KEYWORDS: *Adaptive Capacity, Cumulative, Weighted Principal Component, Climate Change*

INTRODUCTION

Disaster affecting human beings are the result of complex interaction between human and natural system. Due to this interaction most of the activities are totally based on environment activities even simply breathing. It will have multi directional effect on humanity in terms of several socio-economic factors like agriculture, health (disease prevalence), sea level rise, scarcity of labour etc. Several damages will be taken place unless proper adaptation strategies are implemented in proper time.

Natural climate variability has always been a challenge to human livelihoods. Human-induced climate change has lent a complex new dimension to this challenge. Evidences show that the natural climatic variability, compounded with climate change will adversely affect millions of livelihoods around the world (IPCC, 2007). The rural communities in the developing countries are expected to be affected more due to their extensive dependence on climate sensitive livelihood options, and limited adaptive capacity to adapt to the changes.

Adaptive capacity is defined as the capacity of an economic, social, environmental or other system to cope with or recover from a potentially damaging external influence. These external influences can be identifying as natural or manmade. When considering about the climate change concept, adaptive capacity is generally describes the ability of the system to cope with the impact of climatic changes. Meantime adaptive capacity can be defined as the capacity of a system to adapt if the environment where the system exists is changing. It applied to ecological systems and human social system

According to the ADB report in 2009 showed that as one of the most vulnerable regions in the world, Southeast Asia is likely to suffer more from climate change than the global average due to its long coastlines, high concentration of population, economic activity in coastal areas and heavy reliance on agriculture, natural resources and forestry. So considering about Sri Lanka is also heavily sensitive natural resource based activities and agricultural activities for uplift their livelihood as a main source.

LITERATURE REVIEW

Concept of adaptive capacity comes most of the time assistance with vulnerability assessment. Adaptive capacity is broadly defined as the ability of a system (region and community) to cope and thrive in the face of change. According to the definition of Intergovernmental Panel on Climate Change's (IPCC), it denotes 'the ability of a system to adjust to climate change (including climate variability and extremes) to moderate potential damages, to take advantage of opportunities or to cope with consequences'.

Interactional theory posits that a geographically bound local society and locality-oriented collective action are the foundations of community (Wilkinson, 1991). From this perspective, social interaction over time is the structure of community and occurs primarily through different loosely bound, constantly evolving and interacting fields. Communities vary in their physical exposure to threats, and it is widely recognized that adaptation is place, culture, and issue specific. This means that strategies to facilitate and enhance adaptive capacity also must attend to context (Armitage and Plummer 2010:291) and recognize that capacities do not exist or are not developed uniformly across all communities (Adger et al. 2007). For example, Smit and Pilifosova (2001:19) observe that "what may work in one place or with one socioeconomic group

may not work or may not be feasible elsewhere.” While all communities have some degree of adaptive capacity, some analysts have observed that it is generally not developed specifically to respond to environmental change (Handmer 2003) and might actually be hazard specific (Brooks 2003). Finally, temporal scale is often overlooked but important to consider. For example, adaptation (e.g., installation of air conditioners) at one time can “impose externalities” at others (Adger et al. 2005:80) and the temporal characteristics of disturbance events vary (e.g., in Florida hurricanes occur in a predictable season whereas wildfires can occur throughout the year), affecting potentially different timing of adaption for different disturbances.

New studies present that adaptive capacity is influenced not only by economic development and technology, but also by social factors such as human capital and governance structures (Klein and Smith, 2003; Brooks and Adger 2005; Næss et al., 2005; Tompkins, 2005; Berkhout et al., 2006; Eriksen and Kelly, 2007).

PROBLEM OF THE STUDY

Capability assessment has now been accepted as a requirement for the effective development. There are various rational for investigating the significance of adaptive capacity of climate change. Many of the analytical frameworks for assessing adaptive capacity based on large scale such as national level, and less attention was given to represent capacity at local and community levels. In this research mainly will focus on to address this three questions as who are the less adaptive capacity district in the country?, what socioeconomic factors influence the adaptive capacity of the different district level deviations? and what is the extent and nature of their adaptive capacity in relation to climate extremes?

RESEARCH OBJECTIVES

The primary aim of this research is to construct an index of adaptive capacity to climate change for district level aggregation. In the context of the global warming problem, assessing adaptive capacity is an important component of any attempt to define the magnitude of the threat.

A secondary aim of this article is to clarify the links between conceptualized adaptive capacity index and the fitted adaptive capacity index and to identify the deviation of those two situations. Adaptation is a topic of considerable policy relevance and concern but, to date has not been effectively assessed, to address the relationship between the indicators and theoretical models of adaptation relevant for incorporation into global integrated assessment

METHODOLOGY

Study area

To discuss the adaptive capacity, Household and expenditure survey 2009/2010 was used. Population frame for the HIES Survey 2009/2010 was the housing units in all census blocks. However, only 22 districts out of 25 were completely enumerated in this census of the remaining three districts in the Northern Mannar, Kilinochchi and Mullaithivu were not enumerated.

Sampling method

Stratified sampling: - when the population is heterogeneous or of different segments or strata with respect to the variable or characteristic under study, then it is stratified. First the population divided into a number of sub- groups or strata. Each stratum is homogeneous and random. In the

collection of data in HIES 2009/2010 is also follow stratified random sampling. A two- stage stratified sampling procedure was used as the sample design. The population frame was first stratified into three sectors (rural, urban and estate) and later districts in the nine provinces.

Statistical tool

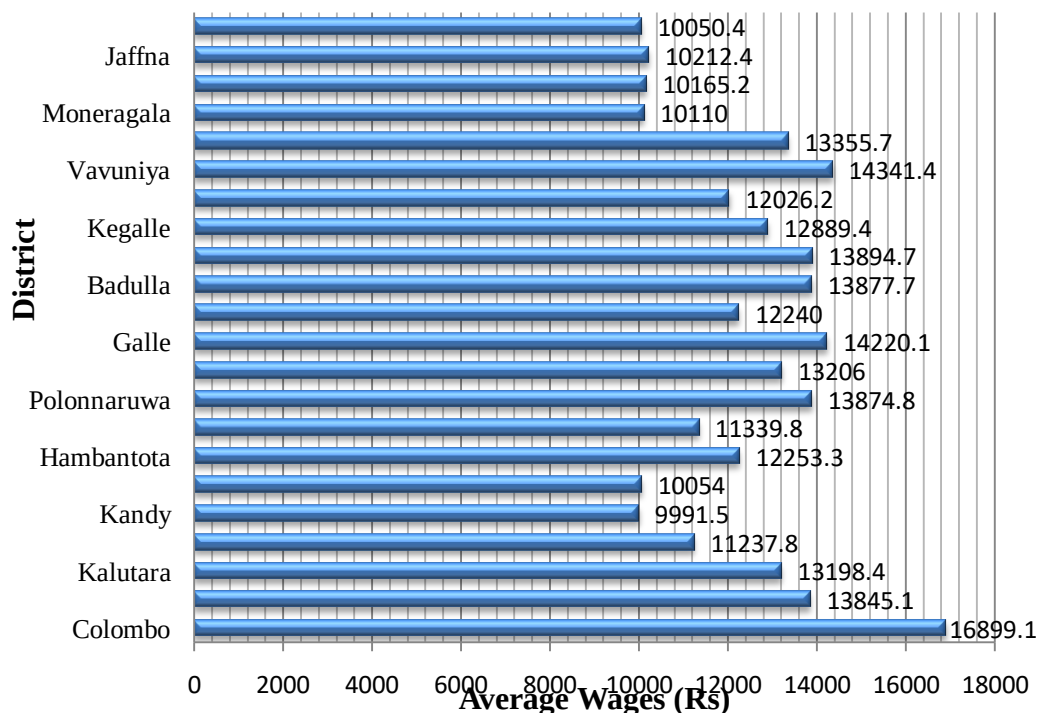
The algorithm used to construct indices of adaptive capacity in this paper follows, with the inclusion of data standardization for the input variables and the final index scores. The computations are carried out using the following steps:

Having choosing the suitable variables, standardize all input variables by subtracting the mean and dividing by the standard deviation. As a next step weights should be assigned to these indicators an appropriate means of creating sub-indices need to be chosen. The application of weighting in this paper assigned as weight by Principal Component Analysis (Nelson et al., 2010b; Gbetibouo & Ringler, 2009; Cutter, Boruff, & Shirley, 2003).

Loadings from the first component of PCA are used as the weights for the variables and the weighted value for each variable varies between -1 and +1. The sign (+ or -) of the variables denoting the direction of relationship with other variables used to construct the respective index. The magnitude of the weights describes the contribution of each indicator to the value of the index. Stepwise PCA was run with the standardized input variables for the selected dimensions under each sub-index and statistical software (SPSS16) used to assign the weights. Select the number of components to be further used based on the un-rotated solution. If desired, rotate the initial solution which is presented as much as easy to interpret. For this case Varimax Rotation are applied: this rotation tends to load each variable highly on just one component. This often leads to easier component interpretation. Then the weights obtained from first-step PCA either in un-rotated or rotated solution, individual variables and their magnitude is explained separately against for the CACI.

RESULTS AND DISCUSSION**FIGURE 01**

Distribution of average wages of the head of the family according to District



Source: (Household Income and Expenditure Survey 2009/2010)

For the calculation of average wages, first consider only wages of the head of the family. As a next step, divide the total wages by total number of households in a domain or in an area. Out of 19958 household data, higher average wages of the head of the family are reported in Colombo (Rs 16899) and lowest in Kandy (Rs 9991.5). Considering about North and West East provinces, average wages are comparatively low due to agricultural works, but in higher in West and Southern provinces

TABLE 1 PERCENTAGE DISTRIBUTION OF MAIN OCCUPATION FROM THE EMPLOYED HEAD OF THE FAMILY

District	Government	Semi-government	Private sector	Employer	Own account
Colombo	10.2	3.9	60.4	2.9	22.6
Gampaha	9.5	3.4	57.7	2.2	27.1
Kalutara	10.9	3.0	58.6	1.5	26.1
Kandy	13.3	6.1	51.1	2.6	26.9
Matale	13.7	7.6	35.4	1.8	41.5
Nuwara Eliya	8.2	31.6	34.0	1.5	24.8
Galle	12.6	3.4	54.8	2.8	26.3
Matara	11.7	3.2	51.6	2.5	31.0
Hambantota	13.8	3.4	37.6	1.2	44.0

Vavuniya	13.3	3.0	46.9	5.4	31.4
Jaffna	23.4	2.3	37.7	2.3	34.3
Batticaloa	15.1	1.4	50.0	0.6	32.9
Ampara	13.3	4.2	53.7	2.7	26.2
Trincomalee	21.2	2.8	45.3	1.3	29.4
Kurunegala	13.0	2.7	40.6	1.4	42.3
Puttlam	8.4	3.0	53.1	1.6	33.8
Anuradhapura	16.5	2.8	22.0	1.0	57.7
Polonnaruwa	18.2	3.5	23.2	0.9	54.2
Badulla	12.3	3.1	42.2	0.7	41.7
Moneragala	10.8	2.6	23.6	0.7	62.3
Ratnapura	10.4	1.7	49.2	2.2	36.5
Kegalle	13.6	1.8	60.4	1.2	23.0
Total	12.3	4.3	48.5	2.0	32.9

Source: (Household Income and Expenditure Survey 2009/2010)

Occupation is the one of key factor that determine the way of earning to the family. Since most of the families are totally depend on their occupation. With aim of evacuation these thing employed heads are considered and their age should be greater than ten. The survey has also found that among the total household employed heads in Sri Lanka, 48.5% are from private sector as listed in table 1 and it is around three time higher when comparing with both government employees and semi government employees. Second place is holding by both own account worker and unpaid family worker (32.9%).

Considering about the employed heads in Colombo(60.4%), Gampaha (57.7%), Kalutara(58.6%), Kandy(51.1%), Nuwara Eliya(60.4%),Galle(54.8%), Matara(51.6%), Vavuniya(46.9%), Jaffna(37.7%), Batticaloa(50%), Ampara(53.7%), Trincomalee(45.3%), Puttlam(53.1), Badulla(42.2%), Ratnapura(49.2%) and Kegalle(60.4%) are recorded in private sector is the highest employment status which is presented the same result in Sri lanka. while for the remaining districts are holding own account worker and unpaid family worker together as their main occupation (Matale-41.5%, Hambantota-44%, Kurunegala-42.3%, Anuradhapura-57.7%, Polonnaruwa-54.2% and Monaragala-62.3%).

RESULTS OF WEIGHTED PRINCIPAL COMPONENT ANALYSIS

Sub-indexes

From the weights obtained from first-step PCA, individual theme of sub- index values for in each asset types were calculate using aggregation method. Indicator's scores in first step were taken as input of second step. After determining theme of sub index then as a second step performed PCA to obtain weight on each sub index using aggregated theme as an indicators. Results of sub index are presented in bellow.

Economic asset: First principal component of the economic asset for three response variables are the linear compound

$$Economic = 0.585 \text{ Income} + 0.714 \text{ Employment} + 0.798 \text{ Expenditure}$$

and results from the first principal component for economic asset is recorded as their associated Eigen value is 1.489, accounting for 50 %, of the variation in the original data. All three variables are weighted as positively on economic indicator. Greater economic resources increase adaptive capacity. Lack of financial resources limits adaptation options. The poorest regions face higher risk levels. Level of adaptive capacity is highly dependent upon the economic status of community and nations. Lack of wealth is directly that makes a community vulnerable. The ability to absorb losses and enhances resilience to hazard in facts. Wealth enables communities to absorb and recover from losses more quickly due to insurance, social safety nets, and entitlement programs. Higher the economic status could be seen as higher the adaptive capacity.

Social asset: Relative to social assets below is the general form for the formula to compute scores on the first component extracted (created) in a principal component analysis with explaining 61.8% from the total variation $Social = 0.645 Education + 0.778 Leadership + 0.913 Culture$

Skilled and trained personnel reduce adaptive capacity and measure it with the assistance of education which is recorded as direct relation with adaptive capacity. The greater the connectivity of the population to any association, then it is easier to promote disaster preparedness and early warnings that could substantially reduce vulnerability in the face of a hazard and increase the adaptive capacity.

Human asset: Using PCA for the human asset with two variables only the first component could be created with 83.49% from the total variation and calculated scores are with the following equation

$$Human = -0.914 Demography + 0.914 Dependence$$

In addition to economic and social status being important in the adaptive capacity to environmental shocks, the structure and health of the population may also play a key role in determining standard. Age is an important consideration as the elderly and young tend to be inherently more susceptible to environmental risk and hazard exposure (O'Brien and Militia, 1992). In general terms, populations with a low dependency ratio (high proportion of working age adults) and in good health are likely to have the higher adaptive capacity but generally in Sri Lankan context most are assumed to be having an excellent job after their pension. As well as in classifying younger dependent, do in fact contribute to household livelihoods and GDP (through the informal economy) in most of the areas.

Physical asset: PCA generated for the results of aggregated dimension under first step, two components with Eigen values greater than 1.0. These two components accounted for 87.48% of the variance in the defined five variables. First principal component of the economic asset for five response variables are the linear compound;

$$Physical = -0.609 House - 0.743 Land + 0.612 Communication + 0.935 Energy + 0.885 Transport$$

Better access and information enables a household planning proactive adaptation measuring against climate risk, greater access to information increases likelihood of timely and appropriate adaptation and greater variety of infrastructure can enhance adaptive capacity, since it provides more options, characteristics and location of infrastructure also affect adaptive capacity. Access to information and communications infrastructure is arguably important in influencing

vulnerability (Blaikie et al, 1994). Since loading on communication, energy and transport and access are recorded as positive weights against adaptive capacity

Final index

PCA generated two components with eigen values greater than 1.0. These two components accounted for 82% of the variance in the dataset.

TABLE 2 PCA ON SUB-INDEX

	Component	
	1	2
Economic assets	0.827	-.674
Social assets	0.916	-.287
Human assets	-0.468	-.093
Physical assets	0.565	.832
Natural harm	-0.743	.714
Eigen values	2.366	1.747
% of total variance	47.32	34.95
Cumulative % of variance	47.32	82.27

Source: (Household Income and Expenditure Survey 2009/2010)

A data-driven aggregate index of adaptive capacity was formed through the weighted average of five composite sub-indices: economic well-being, social asset, demographic structure, physical asset and natural harm. Generally, as discussed early a sub-index with a positive score is associated with higher adaptive capacity, and conversely a sub-index with a negative factor score is associated with lower adaptive capacity. Social assets are the most important determinant of overall adaptive capacity followed by economic and physical.

The relationship between economic assets and adaptive capacity to climate change disaster is clear that the higher the level of economic assets available to a household in a particular district, the higher the level of their adaptive capacity, since they would likely be unable to afford changes to their livelihoods in case of hazard exposure. Ideally a quantitative analysis of the monthly household budget (income and outgoings), employment status could be used. Simply strong economy acted as a safety net in the case of environmental risk and hazard exposure.

Social capital inevitably plays key role in determining adaptive capacity in this case. Theoretically, the greater the number of these, the higher an adaptive capacity since, this indicator reflects adaptive capacity in two ways; one was education and other with leadership.

Physical capital is another type where showing a direct association with adaptive capacity. Typically physical capital can refer to the number of assets owned by a household, such as type of house, number of bed rooms, cultivated land and associated equipment, ownership of durable goods, things which are used for communication (radio, TV, phone) purpose and transport (car/van), access to facilities. Higher the ownership of these items, higher the adaptive capacity against climate risk.

It is useful to note that in this study, human assets have been attributed a negative weight from PCA. This implies, all things being used to determine adaptive capacity are family status and dependence. These proxies inevitably cooperate with negative lording on the PCA as concerned in totally.

Furthermore, final result of natural proxy on adaptive capacity is recorded as opposite relation compare with other sub index under adaptive capacity. When constructing natural sub index concerned due natural harm. Thus the above result is shown, indicating higher the harm from natural disaster lower the adaptive capacity in general.

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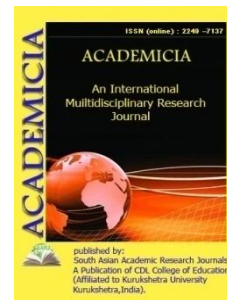
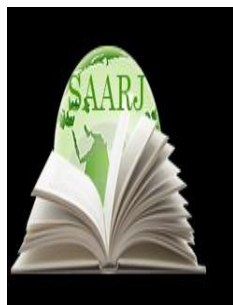
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INFLUENCE OF TECHNOGENIC IMPACT ON CHANGES IN ENGINEERING-GEOLOGICAL AND HYDROGEOLOGICAL CONDITIONS OF THE KASHKADARYA DEPRESS AND ITS ASSESSMENT

Yuldash Irgashevich Irgashev*; **Yusuf Pulatovich Isomatov****;
Mukhammadzhakhongir Kidirbaevich Akhmedov***

*Professor,
Institute of Geology and Exploration of Oil and Gaz Fields,
Tashkent, UZBEKISTAN

**Senior Lecturer,
Almalyk branch of Tashkent State Technical University,
UZBEKISTAN

***Senior Teacher,
Almalyk branch of Tashkent State Technical University,
UZBEKISTAN

ABSTRACT

The article deals with the main problems of changes in the hydrogeological and engineering-geological conditions of irrigated areas during reclamation development. On the irrigated lands of the region, two main engineering and geological regions are distinguished. The first area - proluvial middle-, upper-quaternary and alluvial modern terraces. The terraces of this area are formed from the surface by loess-like loams and sandy loams (3-5 m to 20-35 m thick), the second area from the surface by loams and sandy loams (3-5 m thick), underlying gravel-pebble deposits with a thickness of 20-30 m and more. Engineering-geological assessment of the territory of irrigation and drainage construction is given on the basis of hydrogeological conditions transformed during irrigation. The issues of soil moistening, flooding of territories during irrigation, changes in the composition and properties of soils, subsidence of loess soils, etc. are considered. The assessment of the reliability of forecasts and recommendations for their implementation is given.

KEYWORDS: *Depressions, Loess Rocks, Irrigated Lands, Groundwater Levels, Drainage, Canal, Subsidence, Water Distribution Devices, Engineering And Geological Conditions, Subsidence Of Soils, Filtration Properties Of Soils*

INTRODUCTION

The natural conditions of the Kashkadarya depression are very diverse in engineering-geological and hydrogeological terms, and in general, complex. The piedmont weakly and strongly dissected plains are composed of a thick stratum of subsidence varieties of loess rocks. They are densely cut by a gully-block network. The foothill part of the depression belongs to a highly drained and very highly drained zone. Low relief elements form the alluvial and alluvial-proluvial terraces of the river, and the peripheral parts are occupied by proluvial deposits of the third and fourth terraces.

Main part

Irrigated lands within the Kashkadarya depression are located mainly in two engineering-geological regions - on alluvial, alluvial-proluvial terraces. The terraces of the Kashkadaryarivers and its tributaries are characterized by the presence of middle and Upper Quaternary proluvial, as well as modern alluvial deposits. Alluvial deposits are represented by gray sands, and the upper one with a total thickness of 3-5 to 20-35 m consists of three layers: loam and sandy loam with a thickness of 3-5 m lie on top, below - gray sands 5-10 m thick, which are underlain by red-brown clays thickness from 3-5 to 7-10 m. Middle and Upper Quaternary sediments are represented by loess rocks with a thickness of 10 to 40 m, the maximum is traced on the right bank of the Kashkadarya, where it reaches 50-70 m. They are represented by typical loess and loess-like loams and sandy loams of pale yellow, yellow-brown color [1].

Irrigation, as a complex of reclamation measures, including the construction of an irrigation-collector network and reservoirs, vertical and horizontal drainage, canals and water distribution devices, pumping stations, planning, etc., dramatically changes the natural engineering-geological and hydrogeological conditions and landscape appearance of the territory. The assessment of regional changes in engineering-geological conditions under the influence of irrigation using the example of the Karshi steppe was carried out by the methods of comparison and analysis of hydrogeological and engineering-geological maps compiled for various periods, materials for interpreting aerospace images, stationary study of engineering-geological processes and other works. Based on the use of this approach, the following regional patterns of changes in those components of engineering-geological conditions, for which forecasts of their changes in connection with the forthcoming irrigation were made, were identified [2].

The development of irrigation of the territory of the Kashkadarya depression caused sharp changes in the rise of the groundwater level and the dynamics of the areas of their spatial distribution. According to the map of depths, the occurrence of groundwater compiled by E.V. Mavlyanov, K.P. Pulatov, I.U. Usmanov, Y. Irgashev, Y. P. Isomatov and others (1963, 1966, 1969) at the beginning of irrigation (1956), when the irrigated area reached 210 thousand hectares, groundwater in most of the Karshi steppe lay at a depth of 10 -20 m and more, areas with a depth of groundwater up to 3.0 m were only 98 thousand hectares and were noted within the deltaic parts of the Kashkadarya River, in endless depressions (Charagil, Shorsai, Tudakulshor, etc.).

In 1986-1992, when the irrigated area of the Karshi steppe reached 350,164 thousand hectares, respectively (the zone of old and new irrigation), in the distribution of groundwater depths compared to 1963, there were large changes: areas with shallow groundwater depths increased sharply by reducing areas with great depths. The area of sites with a groundwater depth of 2.5-5.0 m as of 1982 increased almost 4 times, 1992 - 8 times, 2010 - 12 times. At the same time, the area (almost 6 times) of areas with a groundwater depth of 5-10, 10-20 and more than 20 m has sharply decreased [3].

The rates of rise of the groundwater level were different depending on the initial depth of occurrence, the dynamics of the areas of spatial distribution, the intensity of groundwater flow, the amount of water supplied for irrigation, the regime and technique of water supply and the rate of irrigation and ranged from several centimeters to several meters per year. According to the materials of long-term regime observations by the Kashkadarya regional department "Kommunrenage", the average value of the average annual rise in the level of groundwater in 2015 on the left bank of the Kashkadarya River in the zone of new irrigation varies from 0.98 to 1.2 m / year, averaging 1.0 m / year ...

A significant part of the irrigated and promising for irrigation territory of the Karshi steppe is composed of loess rocks with subsidence properties. Moistening of loess soils with irrigation water from above, a rise in the level of groundwater from below can cause their subsidence.

Subsidence properties of proluvial loess of siltlike rocks are characterized by unevenness and high values of the coefficients of relative subsidence at natural pressure (from 0.01 to 0.134 MPa). The main reasons for the high subsidence are a large value of natural pressure and a large thickness of subsidence strata (more than 20-30 m), high porosity (on average 48.9%), an unequal rate of irrigation, as well as the presence of virgin lands with undeveloped subsidence within the irrigated lands. deep bedding of the groundwater level [4].

Results and Discussions

The assessment of the manifestation of subsidence of loess rocks was carried out on the basis of the analysis of materials from the stationary study of the dynamics of subsidence deformations in field conditions along canals, irrigated fields, at test sites located in different parts of the described region (Table 1).

TABLE 1 RESULTS OF INSTRUMENTAL MEASUREMENTS OF DEFORMATION OF LOESS SOILS AT TEST SITES

№	Characteristics of the site and the thickness of the subsiding strata on the day of the first measurement, m	date measuring	Number of sequential blocks	Capture area by subsidence phenomena, m ²	Subsidence crack width, mm	The total amount of surface sinking, mm	Drawdown value in m for the period of measurements
1.	The upper part of the Djalavashsayhollov (Kashkadarya	11.06.1986	3	8,6	4	32	0,086
		22.06.1987	3	12,0	6	48	
		04.07.1988	3	13,6	8	53	
		15.06.1989	3	14,4	10	69	

	hollow, 14.0	19.09.1990	3	16,9	13	75	
		12.08.1991	4	20,2	16	86	
2.	The left side of the Bozbichkenskaya hollow (Kashkadarya depression), 22.0	15.09.1981	3	14,0	8	61	0,192
		24.08.1983	3	13,6	11	84	
		13.08.1984	3	16,0	11	96	
		25.09.1986	3	17,5	12	122	
		18.06.1987	4	28,4	18	135	
		24.08.1992	5	44,0	20	156	
		14.07.2000	5	44,0	22	163	
		23.07.2005	5	44,0	28	192	
		11.05.1984	2	32,0	12	134	
3.	Along the Eski- Ankhor canal (Kashkadarya depression), 14.5	18.07.1985	4	186,0	36	485	0,640
		24.08.1986	6	248,0	44	620	
		26.07.1990	6	262,0	46	636	
		17.08.1995	6	263,0	46	638	
		28.07.1999	6	264,0	48	639	
		23.07.2005	6	284,0	49	640	

As a result of stationary studies, it was found that the subsidence of loess soils within the test ranges occurred relatively unevenly, and its magnitude varied from 0.086 to 0.640 m. The mode of subsidence deformations of soils is mainly associated with the propagation of the moistening contour from above due to irrigation water and water saturation from below when the groundwater level rises. The level of groundwater, occurring within some test sites before irrigation at a depth of 14-20 m, due to irrigation, rose to a depth of 2.5-4.0 m from the earth's surface. The degree of groundwater mineralization varied from 10.0-15.0 g / l to 3.0-10.5 g / l. The largest subsidence of loess soils occurred in the zone of influence of the canal, its value is 0.640 m. In the area of sections 1 and 2, where the territory is not irrigated, subsidence is very weak. In general, for the study area within the irrigated area (site 4) and the influence zone of the Eski-Ankhor canal (site 3), the value of subsidence of loess rocks can be taken on the basis of averaging observation results over two characteristic sites equal to 0.487 m [4].

Assessment of the reliability of forecasts and recommendations for their implementation. The reliability of forecasts is characterized by the absolute and relative magnitude of their probable error in assessing changes in engineering-geological and hydrogeological parameters; lead time - the duration of the period from the moment of transmission of the forecast to the interested organization to the moment for which the forecasts are calculated. The assessment of the accuracy of the previously compiled engineering-geological forecasts was carried out by comparing the forecast estimates with the actual (field) changes in individual components of engineering-geological conditions under the influence of long-term irrigation. At the same time, to obtain a quantitative assessment, E. V. Mavlyanov [2] proposed to use the expression

$$K = \frac{A_{\phi}}{A_n}$$

where K is the criterion of convergence;

Af - values of actual (full-scale) changes in the components of geotechnical conditions;

Ap - predicted values of changes in the components of engineering and geological conditions.

Using the value "K" as an evaluation characteristic of the comparison, it is possible to assess the degree of reliability of the previously compiled forecasts of changes in engineering and geological conditions in connection with the irrigation of the Karshi steppe [1]. For this, taking into account the experience of engineering-geological and hydrogeological substantiation of projects for irrigation of large areas of South-West Uzbekistan, it is tentatively proposed to distinguish three categories of reliability of regional forecasts, depending on the value of "K" (Table 2).

TABLE 2

Credibility categories	Assessment of forecast accuracy	The value of convergence criteria
I	The forecast is good (reliable)	$0,8 \leq K \leq 1,2$
II	The forecast is sat is factory	$0,5 \leq K < 0,8$ $1,2 < K \leq 1,5$
III	The forecast is unsat is factory	$0,5 > K > 1,5$

Presenting the values of forecasts and actual estimates of changes in individual components of engineering-geological conditions under the influence of irrigation into the formula, the convergence criterion was calculated to determine the category of reliability of engineering-geological forecasts compiled by various authors to justify irrigation projects for the Kashkadarya depression.

The results of calculating the convergence criteria are shown in Table 3, from which it can be seen that for all the considered components of the engineering-geological conditions there are certain coincidences and differences of the forecast estimates with the actual changes depending on the methodology adopted by the authors of the forecast development. Calculations for assessing the accuracy of forecasts of the rise in the level of groundwater, compiled by Khodzhibaev N.N., Alimov M.S., Neiman B.Ya., Samoilenko V.G., Mavlyanov E.V., Aripov K.I. and others, show a fairly close convergence of the predicted values with the actual values [5].

According to the proposed categories of forecast reliability, the forecasts of groundwater level rise, compiled by these authors, are good (reliable) and satisfactory. The forecast of the groundwater regime, compiled by V.G. Gafurov, is assessed as unsatisfactory. The actual values of the rise in the level of groundwater exceed the forecast by more than 1.5 times [2].

The assessment of the accuracy of regional forecasts of subsidence of loess soils, compiled by G.A. Mavlyanov, Kh.A. Askarov, E.V. Mavlyanov, K.P. Pulatov, Yu.Irgashev, and others, gave quite good results. As can be seen from Table 3, the value of the criterion of convergence of the predicted and actual values of subsidence of loess soils varies from 0.409 to 1.184, which indicates the proximity of the predicted data with their actual implementation. The above results allow the forecasts of subsidence, compiled by G.A. Mavlyanov, Kh.A. Askarov, G.L. Urmanova, P.M. Karpov, E.V. Mavlyanov, K.P. Pulatov, Yu.Irgashev, can also be estimated as satisfactory. Estimates of the accuracy of forecasting the subsidence of loess soils, compiled by Kh.A. Askarov, G.L. Urmanova, using the laboratory method under natural load, showed

unsatisfactory results. The actual values of soil subsidence exceed the predicted values by more than 3 times. Also, the forecast of soil subsidence, compiled by VG Gafurov, turned out to be unsatisfactory, the predicted value exceeds the actual value by more than 2 times [2].

TABLE 3 RESULTS OF ASSESSING THE RELIABILITY OF FORECASTS OF CHANGES IN ENGINEERING-GEOLOGICAL AND HYDROGEOLOGICAL CONDITIONS IN SOME REGIONS OF UZBEKISTAN IN CONNECTION WITH IRRIGATION

№	Forecast author	Predicted components	Forecast values	The actual meaning	Prediction convergence criterion	Estimating the convergence of forecasts (after E.V. Mavlyanov)
1	2	3	4	5	6	7
1.	Khodzhibaev N.N., Alimov M.S.	groundwater level	$\frac{2,8 - 3,0}{2,9}$	$\frac{1,8 - 2,0}{1,9}$	0,655	Satisfactory
2.	Neiman B. Ya.	groundwater level	$\frac{1,7 - 2,6}{2,3}$	$\frac{1,8 - 2,0}{1,9}$	0,826	good (reliable)
3.	Khodzhibaev N.N., Aripov K.M.	groundwater level	$\frac{0,9 - 1,1}{1,0}$	$\frac{0,8 - 1,0}{0,9}$	0,900	good (reliable)
4.	Gafurov V.G.	groundwater level	$\frac{1,0 - 1,5}{1,25}$	$\frac{1,8 - 2,0}{1,9}$	1,52	unsatisfactory
		subsidence of soils at natural pressure	0,95-1,05	0,392-0,426	0,409	unsatisfactory
5.	Mavlyanov E.V.	groundwater level	$\frac{2,0 - 2,5}{2,25}$	$\frac{1,8 - 2,0}{1,9}$	0,844	good (reliable)
		subsidence of soils at natural pressure	$\frac{0,16 - 0,50}{0,33}$	$\frac{0,392 - 0,425}{0,409}$	1,26	Satisfactory
		Shore processing	$\frac{45 - 75}{60}$	$\frac{51 - 72}{61,5}$	1,02	good (reliable)
6.	Askarov Kh. A., Urmanova G.L.	subsidence of soils:				
		a) at natural pressure	$\frac{0,07 - 0,14}{0,105}$	$\frac{0,392 - 0,426}{0,409}$	3,900	unsatisfactory
		b) underload 0.3 MPa	$\frac{0,28 - 0,43}{0,355}$	$\frac{0,392 - 0,426}{0,409}$	1,352	Satisfactory
7.	Mavlyanov G.A.	subsidence of soils	$\frac{0,5 - 1,0}{0,75}$	$\frac{0,387 - 0,632}{0,547}$	0,73	Satisfactory

8.	Mavlyanov G.A., Pulatov K.P.	subsidence of soils	$\frac{0,59 - 0,73}{66,5}$	$\frac{0,64 - 0,92}{0,780}$	1,02	good (reliable)
9.	Pulatov K.P. Irgashev Yu. Isomatov Yu.	subsidence of soils	$\frac{0,42 - 0,66}{0,54}$	$\frac{0,57 - 0,71}{0,640}$	1,184	good (reliable)
10.	Karpov P.M.	subsidence of soils:				
		a) at natural pressure	$\frac{0,650 - 0,760}{0,650}$	$\frac{0,382 - 0,626}{0,549}$	0,84	good (reliable)
		b) under load 0.3 MPa	$\frac{0,15 - 0,50}{0,325}$	$\frac{0,382 - 0,626}{0,549}$	1,66	unsatisfactory
11.	Irgashev Yu.	Filtration properties of soils	$\frac{0,10 - 0,50}{0,32}$	$\frac{0,08 - 0,62}{0,36}$	1,12	good (reliable)

Note: The numerator contains the minimum and maximum values, the denominator is the mean.

CONCLUSIONS

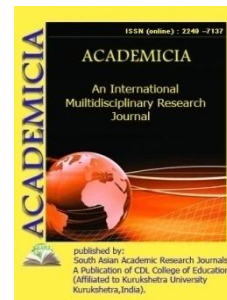
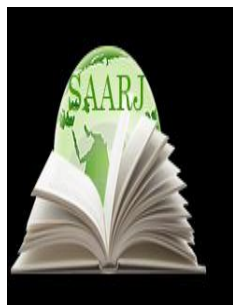
1. The study shows that the consistent implementation of projects for irrigation and economic development of the territories of the Kashkadarya depression causes profound changes in engineering and geological conditions not only within the irrigated area, but also in the whole region. At the same time, there is no sufficient amount of materials presented on the study of regional changes in many of the most important components of engineering and geological conditions under the influence of prolonged irrigation.
2. Based on the results of assessing the reliability of the forecasts, it can be noted that the regional forecast of the rise in the level of groundwater, the forecast of subsidence of soils and changes in the filtration properties of soils in the aeration zone, were compiled for some areas of the Kashkadarya depression in accordance with the categories of reliability we proposed are satisfactory and good.
3. The methods of the previously developed regional engineering-geological forecasts, which received good and satisfactory assessments, can be recommended for practical use when conducting regional engineering-geological studies and surveys related to the justification of irrigation and reclamation of large territories of Uzbekistan at the early stages of design.
4. Special attention should be paid to the development of integrated regional studies in the irrigated regions of Uzbekistan for the purpose of studying the changes in all the main components of the hydrogeological and engineering-geological conditions of large territories under the influence of irrigation. These studies will serve as the basis for the development and improvement of the scientific and methodological basis for integrated engineering and geological forecasting of changes in the geological environment in connection with irrigation

and reclamation development and related other types of construction of civil, industrial and other structures covering large areas of the arid zone.

5. The proposed comprehensive approach to assessing the reliability of regional engineering and geological forecasts, which makes it possible to present it in quantitative form, can be applied in other irrigated regions of Uzbekistan.

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OUR MEDIEVAL ORAL AND WRITTEN LITERARY HERITAGE - AS NATIONAL AND UNIVERSAL VALUES

Kenesbay Allambergenov*

*Professor,
Doctor of Philological Sciences,
Nukus State Pedagogical Institute,
UZBEKISTAN
Email id: awada@mail.ru

ABSTRACT

This article discusses the importance of teaching the peoples of the Turkic world a common cultural heritage in patriotic education. It is known that Karakalpakstan is a country where great culture flourishes. Our great ancestors Beruni, Khorezmi, Zamakhshari, Rabguzi were born here. The homeland of the Karakalpaks is vast, and once they lived on the banks of the Syrdarya. Turkestan was the homeland of the Karakalpaks. Ahmed Yassavi and Ahmed Yugnaki, who were born in Turkestan, are also representatives of Karakalpak literature. Deep teaching young people the life and work of such great scholars serves to enhance their sense of patriotism.

KEYWORDS: *Turkic World, Cultural Heritage, Turkic Peoples, Patriotism, Youth, Oguznama, Korkytata Book.*

INTRODUCTION

The cultural heritage of the ancient Turkic peoples plays a special role in educating the youth in the spirit of patriotism and thus realizing that the peoples of this country are brothers, friends and relatives. Such heritage includes Orkhon-Yenisei written memoirs of the X-XIV centuries, Oguznama, Korkytata book and others. It is difficult to say that I did not fully understand the history of the emergence and formation of national literature without studying this heritage, from the Turkic-speaking peoples of Central Asia, Kazakhstan, the Caucasus and the Altai Mountains to the Ottoman Turks. This is because these heritages arose as the common ancestral property of all the peoples or tribes of the same Turkic-speaking peoples in the periods created by them in the same ethnic groups, in the same political circles, and in the same state structures.

Main part

From the Turkic-speaking peoples of Central Asia, Kazakhstan, the Caucasus, and the Altai Mountains to the Ottoman Turks, it is difficult to fully comprehend the history of the emergence and formation of national literature without studying this heritage. This is because these heritages arose as the common ancestral property of all the peoples or tribes of the same Turkic-speaking peoples in the periods created by them in the same ethnic groups, in the same political circles, and in the same state structures.

But this is only the theoretical side of the issue. The practical and methodological side of the problem is even more important. Because this cultural heritage is not only one of the obstacles to the emergence and formation of any national literature belonging to the Turkic-speaking peoples, but also the younger generation of those Turkic-speaking peoples, especially those seeking their own national neutrality. Loyal love is one of the most important and inseparable means of protecting its impartiality and thus educating and strengthening these peoples in the spirit of friendship and brotherhood.

In educating the youth in the spirit of respect and love for such sacred values as the heritage of these ancestors, first of all, the qualities of this cultural heritage, which are characteristic of all Turkic-speaking peoples, have a great educational value. When a teacher teaches these heritages to young people, he must take into account the principles of common heritage, the right of inheritance equal to the heritage of ancestors, as the guiding principle of his method of teaching his heritage. Only then will he be able to fully achieve his successful, noble goal of educating the youth to the above-mentioned sacred feelings through this cultural heritage. To do this, it is not enough for the teacher to explain to the students the ideological and artistic differences of these common cultural heritages. These cultural heritages must be interpreted in close connection with the history of the people, nation, state and homeland that created that spiritual artistic world. In such a situation, this common heritage itself helps the teacher to prove his point.

In these legacies, including the Karakalpak heroic epics, which are an integral part of these legacies, the concept of homeland is given as follows:

Arjaǵı – Túrktan, berjaǵı – Qoqan, Háziretimnińmákanbasqanjayları.	The other side is Turkestan, the other side is Kokand, The places where my Lord lived.

or:

Jaylawım - Úrgenish, arqası – teńiz (Ájiniyaz)	Pasture is Urgench, and north is Sea (Azhiniyaz)

or:

Xorezm, Túrktan – máskanıń meniń, Bes qala, teńizdiń átirapı – elim (Berdax)	Khorezm, Turkestan is my homeland, Five cities, around the Sea are my country (Berdakh)

These writings and epic works show us that the boundaries of the sacred feeling that we are the homeland of the Turkic peoples are wider.

According to cultural heritage and history, the concept of homeland for the first time for the Turkic peoples is in the foothills of the Altai and Ural Mountains, in the deserts of Mongolia, on the slopes of the Balkans, Aral and Issyk-Kul, beyond the Ceyhun-Sayhun River. . Also recently, the Baburids in India, the Safavids in Iran, Turkestan and the Golden Horde were ruled by various Turkic states and khanates. The Turkic peoples formed the Seljuk and Ottoman Turkic empires in the Middle East, Anatolia and Rome. The homeland of the Turkic peoples is also understood as a vast area stretching from the Altai Mountains to the Atlas Mountains, from the Viana Gates to the latitudes of the Ganj, and from the Volga to the Sahara Desert [1, pp. 24-30].

The cultural, lyrical and epic heritage confirms not only that these regions were the homeland of the Turks, but also that the Huns, Oguz-Kipchaks, Pechenegs and their descendants, the Khagans and Khans, were active in building this homeland. For example, the blue Turks in the Orkhon inscriptions were the descendants of the Huns who were the first to establish world domination and statehood. In 545, when the Chinese ambassador came to Tuman (Bumin), the first blue Turkish kagan, all the Turks congratulated each other on the arrival of the ambassador - a sign of the maturity of the Turkish state [2, pp. 227-228].

These facts in Orkhon inscriptions tell young people that the historical roots of patriotism are very ancient. Because, like Istemikagan and Bilge kagan, their ancestors were involved in statehood and homeland building.

For example, in the inscription "Tonikok" Tonikok says that, "Kapagankagan ascended the throne at the age of 27, did not sit during the day and did not sleep at night. I was in his service, sweating my red blood and shedding my black skin like water. The Turkish nation has won because we are united"[3, pp. 290-291].

The story "Oguznama" is about Oguzkhan, the king of the Hun-Turks in the late third century BC [4, pp. 3-4]. Oguz Kagan founded the first Hun-Turkish state of Oguz state. This epic mythical state is historically similar to the state of the Huns and Turks, founded by a great historical figure - Tan Yusuf Mete. Mete (Mode - AK) is the Oguz khan in Turkish folk epics, and Alp Er Tunga in Turkish written sources is the great Turanian king Afrosiab in Ferdousi's Shakhnama [5, pp. 3-5].

Oguz - Alp Er Tunga - Afrosiab committed many heroic actions on the way to the formation of the Great Turanian state and died bravely.

There are talked about him in such ritual songs:

Alp Er Tońǵa óldi me? Yalganshı dúnya qaldı ma? Zamana óshin aldı ma? Endi júrek jarılar.	Is Alp Er Tunga dead? Is it a false world? Has time taken its toll? Now the heart breaks.

These lines in the poem teach students the need for heroism for the sake of security and unity of the Motherland, the Turkic world.

The book "Korkyt Ata" is one of the legends proclaiming that the Turkic peoples are a brotherly people.

The history of the Pechenegs, which dominates the ethnogenesis of the Karakalpaks, is connected with the history of the Oguz-Kipchuk people, who published the book "Korkyt Ata" [6, pp. 8-11].

It is a mistake to say that the songs "Korkyt Ata" belong only to the Bayandur (Seljuk-Azerbaijani), Kazan-Salor (Seyilkhan-Turkmen) tribes.

This poem was first written orally by the Syr(Turkestan) tribes in the 9th century, and was written in the 15th century in the Bayandurkhan palace in the Caucasus. It is dominated by the genealogy and history of the Oguz-Kipchak-Pecheneg (Karakalpak – A.K.) ulus, which existed along the Syr Darya in the 9th-10th centuries. Therefore, he is at the forefront of the epic of all Turkic tribes [7, p. 183]. This is clearly seen in the storyline between the poem "KorkytAta" and the Karakalpak heroic epics and the typological similarity of heroic motives [8, pp. 39-48].

Such a common heritage can be found in the written and cultural literature of our ancestors Beruni, Ahmed Yassavi, Ahmed Yugnaki, Suleiman Bakyrangani, Rabguzi, Al Kerderi and others who were engaged in creative activities in the Karakalpak lands or in areas where certain groups of Karakalpaks lived in the X-XV centuries [9, pp. 3-4].

These scientists cannot be identified as representatives of literature, culture and science of this or that nation. These scientists and creators became bright stars of all Turkic peoples in their epochs as representatives of one nation.

Many scientists were born in Karakalpakstan.

Abu Raikhan Al Beruni, the great encyclopedist of the 10th century, was born in 973 in the Kiyat (now Beruni). Abulkasim Mahmud al-Zamakhshari, who was called "God's neighbor" in the Turkic and Arab-Islamic world in the 11th-12th centuries, was born in 1075 in a village between Gone Urgench and Takiyatas.

Suleiman Bakirgani, one of the leading figures of Sufism in the 12th century, was buried in the cemetery in the village of Bakirgan near Kungrad. Rabguzi, also known as the with his book "Contribution of the Prophets", was born in the 1920s in the town of Rabotoguz (now Tok-Kala) in the village of Akmangit. If we turn to the history of culture of the 14th century, then the famous historian, jurist and philosopher of that period Mahmud bin Ali Sheikh Al Kerderi was born in Kerder, which is considered the ancient state of the Karakalpaks. The author of the famous epic "Muhabbatnama" Khorezmi was born in Kat (Beruni). All these are our great compatriots.

Such ideas can be said about one of the poets of the Turkic world of the XII century Khoja Ahmed Yassawi, Ahmed Yugnakiy. One of the great representatives of Sufism, the poet Khoja Ahmed Yassawi, was born in the 11th century in Sayram, one of the ancient cities of the SyrdaryaKarakalpaks. He died in 1166 in Turkestan. Turkestan was the homeland of the Karakalpaks. Ahmed Yugnaki, the author of HibbatulHaqoyiq, one of the oldest philosophical and didactic epics in the Turkic world, was born in the Karakalpak village of Yugnak in Turkestan. Most importantly, there is no doubt that Suleiman Baqirgani, Rabguzi, Yassau, Yugnaki, Khorezmians were famous masters of artistic expression in the Turkic world. Beruni, Zamakhshari, and Kerderi, who were great encyclopedic scholars, were also great representatives of the world of literary expression. For example, Beruni was the author of a collection of selected poems "Mukhtar-ul-ashar", as well as a prose work in Turkish literature entitled "Memories of

the ancestors of the past." Zamakhshari also wrote many artistic and philosophical treatises, songs, and epics. His works "Fundamentals of Words" and "Introduction to Literary Studies" prove that he was the first literary theorist in the Turkic Islamic world. Kerderi's book, Naqsh-al-Faradis (The Open Path of Paradise), written in 1357, is not only a scholarly work, but also a written literary work of the period. This book also contains a number of fairy tales, legends and myths that are close to the spirituality of the Karakalpak people.

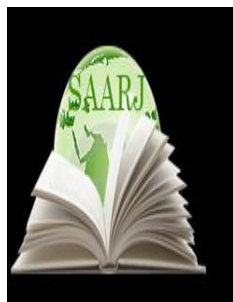
These sources show, firstly, that the Karakalpak region is an integral part of the ancient great Turkic world, including the hearth of Khorezmian civilization, and secondly, it shows that our ancestors also made a great contribution to the development of Turkic culture.

CONCLUSION

In general, the study of these cultural heritage, common to all Turkic-speaking peoples, first of all calls on the Turkic-speaking peoples to love the Turkic world, the Turkic homeland, its independence, their ancestors, kinship. Second, they awaken a sense of national pride. The reason is that these common heritages form the basis of national and universal values.

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TYPOLGY OF CONSONANT SYSTEMS OF RUSSIAN AND UZBEK LANGUAGES (TO THE PROBLEM OF POSSIBLE INTERFERENCE OF THE NATIVE LANGUAGE)

Normakhmat Panjievich Panjiev*

*Associate Professor,
Candidate of Philology,
Head of the Department of Russian Linguistics,
Termez State University, Termez, UZBEKISTAN

ABSTRACT

The article provides a comparative typological study of the phonological systems of the Russian and Uzbek languages. Such a study made it possible to reveal not only the similarities and differences, but also the phonological specifics of each of the compared languages to determine the alleged interference of the native language in the Russian speech of Uzbeks. Using the comparative typological method and methods of internal interpretation and oppositions, positional methods, significant differences in the phonemes of the Russian and Uzbek languages were revealed in acoustical and articulatory features, the specificity of the system of consonant phonemes of the Russian language was determined, which generates interference in the Russian speech of Uzbeks (substitution, under-differentiation, semi-differentiation, over-differentiation, reinterpretation) on the paradigmatic axis, taking into account the differential features of phonemes. The interference of the native language is shown, associated with the existing discrepancies in the positions and the implementation of the phonemes of the Russian and Uzbek languages.

KEYWORDS: *Typology; Comparative Typological; Phoneme; Consonantism; System; Substitution; Under-Differentiation; Semi-Differentiation; Re-Differentiation; Reinterpretation; Neutralization; Opposition.*

INTRODUCTION

In modern conditions, typological study of languages is one of the most important tasks of modern linguistics. It is directly related to the theory of linguistic contacts in general and to the problem of bilingualism, in particular, it is relevant for understanding the interference in language and speech. Typological research of languages will help to reveal not only their common features, differences, but also reveal most fully the individual characteristics, the specifics of the compared languages. But such research is also important in practical terms. Its study is a necessary condition for the successful organization of teaching the Russian language: long-term observation of the Russian speech of Uzbek students has shown the great practical importance of this problem. The theoretical and practical aspects of this problem are inextricably linked, since life itself brings to the fore the problem of mastering the Russian language perfectly as the language of international communication.

The purpose of this article is a comparative typological study of the phonological systems of the Russian and Uzbek languages. Such a study made it possible to reveal not only the similarities and differences, but also the phonological specifics of each of the compared languages to determine the alleged interference of the native language in the Russian speech of Uzbeks.

The main method was comparative typological. In the work, as necessary, the techniques of internal interpretation and oppositions, positional techniques are used.

Let's consider the consonants of the Russian and Uzbek languages in order to identify possible interference in the Russian speech of the Uzbeks. The sound aspect of a language in this sense can be described in two directions: acoustic-articulatory and phonological, in which phonemes act as units that differentiate linguistic meanings, i.e. functional. It seems to us that taking into account both the acoustic-articulatory and functional aspects is mandatory in terms of comparison in order to predict the interfering influence of the native language. After all, it is well known that for the sound system of the Russian language, it is not the presence of voicedness or softness of consonants per se (these signs, as acoustic-articulatory, are characteristic of consonants in the Uzbek language as well), but the opposition of signs. This means that in the process of learning the Russian language, one should study consonants not in isolation, but in opposition like /з- ц/, /з'-ц'/, /б-п/, /б'-п'/ (Reformed, 1961, No. 4, p. 23).

THE MAIN FINDINGS AND RESULTS

In this case, it is usually believed that the ideal would be the simultaneous assimilation not of individual pairs, but of the entire system of consonant correlation, since under these conditions the student would perceive the consonants of the Russian language not as a set of sounds with certain characteristics, but as a system built according to special rules ... But a speaker of another language is not able to convey the entire range of opposition in terms of hardness - softness, deafness - voicedness, etc. pairs of consonants of the Russian language, if he has not previously mastered their articulation. Therefore, only taking into account the combination of acoustic-articulatory and functional sides of sounds when subordinating the first to the second can give significant results.

In the practice of teaching Russian to non-Russians, the effectiveness of the comparative method raises no doubts. Therefore, many courses of practical phonetics are written on the basis of comparing the sound structure of the native language and the target language, since "... the path

that can to some extent guarantee students from the dangers of mixed bilingualism is the path of conscious repulsion from the native language". (Shcherba, 1947, p. 57; Reformed, 1961., No. 4, p. 27). The purpose of this article is a comparative typological study of the phonological systems of the Russian and Uzbek languages. Such a study made it possible to reveal not only the similarities and differences, but also the phonological specifics of each of the compared languages to determine the alleged interference of the native language in the Russian speech of Uzbeks.

The main method was comparative typological. In the work, as necessary, the techniques of internal interpretation and oppositions, positional techniques are used.

This approach is determined not only by methodological requirements, but also by the theoretical position on the importance of comparative - comparative learning of languages.

Any - phonetic - comparative research cannot do without comparing the phonemic composition of languages. By phonemes, we mean: "... the sound units that are used to distinguish between words and word forms are called phonemes ... Each phoneme is a set of essential features that distinguish it from other phonemes." (Barannikova, 1973, p. 81).

So for the phonemes /д/, the essential features are hardness, voicedness, consistency, (дентальность) -denticity/ detail. These features constitute a single, phonological content of a phoneme, inextricably linked with its relationship to other phonemes. N.S. Trubetskoy wrote on this occasion: "The definition of the content of a phoneme depends on what place this or that phoneme occupies in a given system of phonemes, that is, ultimately on what other phonemes are opposed to it" (Trubetskoy, 1960, p. 74).

A phoneme in a speech stream can be realized only in the form of one of its variants. Among them, it is important to highlight: a) the main variants are those phonetic variants in which the implementation of the phoneme is less dependent on the environment. The most independent is the pronunciation of phonemes in an isolated position, where the influence of only the subsequent sound is possible; b) phonetic variants caused by the conditions for the realization of the phoneme, i.e. her position, environment, influence of previous and subsequent sounds (Barannikova, 1973: 83).

I must say that the main options are of decisive importance for comparison, but it is necessary to take into account the secondary ones associated with the influence of ambient sounds.

As you know, the process of setting the sounds of a foreign language begins with mastering the sound types of a given language in their basic version, i.e. with the implementation of the corresponding phonemes in a less dependent position. Only after this is the consideration of their phonetic, combinatorial variants. For example, when studying Russian consonants, you must pronounce them in a strong position, and only then - at the end of the word, before the consonants. Consequently, the basis for setting the pronunciation of the main variant of Russian consonants in Uzbeks should be their comparison with the corresponding sound types of the Uzbek language, also taken in the main variant. The fact that the characteristic of the main variant of the phoneme most closely corresponds to a single phoneme is the basis for comparing the consonant system of phonemes of the Russian and Uzbek languages outside the flow of speech.

The consonant system of Russian phonemes is formed by /б/, /б' /, /п /, / п' /, /в /, /в' /, /ф /, /ф' /, /г /, /г' /, /к /, / к' /, /д /, / д' /, /т /, /т' /, /з /, /з' /, /с /, / с' /, /ж /, / ж' /, /ш /, / ш' /, /л /, / л' /, /м /, /м' /, /н /, /н' /, /п /, /п' /, /х /, /х' /, /ц /, /ч' /, /й / (see: Musatov 2006, p. 173; Modern Russian language, 2002, p. 64), and the Uzbek language - /б /, / в /, /г /, /д /, / j /, /ж /, /з /, /к /, /л /, /м /, /н /, /п /, /п /, /с /, / т /, /ф /, /х /, / ч /, / ш /, / к /, / ғ /, / ڭ / (see: Abdurasulov, 2006, p. 30-31; Abdurakhmonov , 1995, pp. 17-24).

Comparison of consonant phonemes of Russian and Uzbek languages shows significant differences in acoustical-articulatory features.

1. In quantitative terms, the Russian language is characterized by the presence of a relatively large number of consonant phonemes, primarily due to the soft consonants that do not correspond in the Uzbek language; in addition, the phonemes ц, ф are absent in the primordial Uzbek words.

2. Only a few phonemes of the Russian and Uzbek languages have a great acoustic-articulatory similarity. These are phonemes: /б/, /п/, /м/, /с/, /з/, /д/, /т/, /н/, /п/, /ч/. The Russian consonant phonemes /в/, /л/, /ж/, /ш/, /к/, /г/, /х/ are very different from the corresponding consonants of the Uzbek language.

3. Specific consonants of the Uzbek language that have no correspondence in Russian are: /к/, / ғ /, / ڭ /.

In general, the differences in the articulatory bases of the Russian and Uzbek languages are quite significant. The Uzbek articulation base, in contrast to the Russian, is characterized by less active work of the speech organs in the anterior-middle position and more active work in the posterior-middle, posterior and deep-posterior positions. The work of the lips when pronouncing Russian consonants are more active and energetic than when pronouncing Uzbek consonants. (Abdusamatova, 1971, p. 32.).

The softness of a consonant in the Uzbek language is a phenomenon of a combinatorial order, due to the quality of the neighboring vowel: with the vowels /е/, /и/ some consonants are somewhat softened. The non-combinatorial softness and hardness of consonants in the Uzbek language can be said only in relation to consonants /к/ - /к/, /г/ - /ғ/ (Kononov, 1960, p. 38).

The specificity of the system of consonant phonemes of the Russian language generates in the Russian speech of the Uzbeks on the paradigmatic axis the following relations, taking into account differential features: 1) substitution, 2) underdifferentiation, 3) semi-differentiation, 4) overdifferentiation, 5) reinterpretation (see: Rabinovich, 1970.)

Consider them in sequence below:

1) Substitution, i.e. substitution occurs when there is a one-to-one relationship in the systems of the languages being compared. So, in the consonant systems of the Russian and Uzbek languages, the following relations are observed (The number 1 under the phoneme denotes the belonging of this phoneme to the phonological system of the Russian language, the number 2 - to the system of the Uzbek language. The sign = means: the phoneme of the Russian language can be equal when implementing the phoneme of the Uzbek language.)

$$/ч_1/ = /ч_2/, /j_1/ = /j_2/, /u_1/ = /u_2/$$

The Russian phoneme /ч/ is realized as the sound /ч'/ which the speakers of the Uzbek language can easily reproduce, because Uzbek /ч/ coincides with Russian. When the Russian phoneme /j/ is played, insignificant phonetic interference can be observed, because the Uzbek phoneme /j/ is pronounced much more intensely than the Russian one. When reproducing the phoneme /w/ of the Russian language, Uzbeks replace it with their own phoneme /ш/, which is pronounced with palatalization.

2. Under-differentiation, i.e. facts of confusion, non-discrimination of phonemes. They appear when two or more phonemes of the Russian language are perceived as one phoneme. Thus, paired lip-lip phonemes of the Russian language can be perceived as one; /б₁/ - /б'₁/ = /б₂/; /п₁/ - /п'₁/ = /п/; /м₁/ - /м'₁/ = /м₂/, so that the six labial-labial phonemes of the Russian language correspond to three labial-labial phonemes of the Uzbek language. For Uzbeks, soft consonants are especially difficult, but when pronouncing hard consonants, deviations can be expected, since "when pronouncing the Uzbek consonants /б/, /п/, /м/ the preliminary mouth solution is somewhat wider than when pronouncing the corresponding sounds of the Russian language" (Reshetov, 1959: 214).

The four labiodental phonemes of the Russian language correspond to two phonemes of the Uzbek language: /ф₁/ - /ф'₁/ = /ф₂/; /б₁/ - /б'₁/ = /б₂/ . In the pronunciation of labiodental phonemes in the Russian speech of Uzbeks, one can expect interference by changing the location of the gap, and for soft ones also by palatal articulation.

The ten front-lingual consonants of the Russian language correspond to the five consonant phonemes of the Uzbek language: /с₁/ - /с'₁/ = /с₂/; /з₁/ - /з'₁/ = /з₂/; /т₁/ - /т'₁/ = /т₂/; /д₁/ - /д'₁/ = /д₂/; /н₁/ - /н'₁/ = /н₂/ . Phonemes /с/, /з/, /т/, /д/, /н/ of the Russian language are equal to the corresponding phonemes of the Uzbek language. When playing soft phonemes of the Russian language: /с'/, /з'/, /т'/, /д'/, /н'/ in the Russian speech of the Uzbeks, their softness is not differentiated.

Under-differentiation is also observed in the pronunciation of posterior linguals: /х₁/ - /х'/ = /х₂/ . In addition, when reproducing the hard phoneme /х/ of the Russian language, a peculiar pronunciation is expected in the Russian speech of Uzbeks, because in the Uzbek language /х/ is pronounced when the back of the tongue wall approaches the back of the soft palate and with more vigorous articulation than Russian /х/ (Kissen, 1952, p. 119).

3. Semi-differentiation is manifested when two phonemes of the Russian language correspond to one in the Uzbek language, which differs from both hard and soft consonants. Semi-differentiation is established between the following phonemes of the compared languages /л₁/ - /л'₁/ = /л₂/; /п₁/ - /п'₁/ = /п₂/; /к₁/ - /к'₁/ = /к₂/; /г₁/ - /г'₁/ = /г₂/ . The phonemes /к/ /и/ /г/ in the Uzbek language, like и /п/, /л/, are semi-soft sounds (Reshetov, 1959 p. 220).

But in the Russian speech of Uzbeks /п/, /к/, /г/ are not softened before the back vowels (including before their advanced variants, i.e. before /а/, /у/, /о/) , and before the front vowels /е/, /и/ are almost completely pronounced as soft, i.e. here the principle of combinatorial softness, characteristic of the Uzbek language, is manifested. The phonemes /л/, /л'/ of the Russian language in the Russian speech of the Uzbeks are pronounced as /л'/, see: /лу/на' /л'у/бит = /л'у/на, /л'у/ in both cases, pronounce a semi-soft sound /л'/.

4. Redifferentiation is manifested when more than one phoneme of the Uzbek language corresponds to one phoneme of the Russian language. This relationship is formed between the following phonemes of the compared systems: /ж₁/ = /ж₂'/, /дж₂'/; /г₁/, /г₁'/ = /г₂/, /г₂'/; /х₁/, /х₁'/ = /х₂/, /х₂'/; /к₁/, /к₁'/ = /к₂/, /к₂'/. In a systematic comparison, these relations stand out, but this phenomenon is not observed in the oral Russian speech of Uzbeks, which is associated with a significant difference in the Uzbek language phonemes /к/ and /к'/, /х/ and /х'/, /г/ and /г'/ and the rare use of the phoneme /ж'/, which occurs in only a few words.

5. Reinterpretation, or re-decomposition, stands on the verge of paradigmatics and syntagmatics. Reinterpretation-based interference can occur when the phoneme of a secondary language is reproduced by a combination of two sounds. This phenomenon can be attributed to the relationship between /с/ system of the Russian and Uzbek languages, i.e. ц₁ = с₂.

Based on our observation, /ц/ can be turned on

a) In under differentiation: /ц₁/ = /с₂/ (see: court, here, the circus is pronounced by Uzbeks /с/уд, /с/уда, /с/ирк);

b) In reinterpretation: /ц₁/ = /т₂ + с₂/. For example: pronounce бор/тс/о instead of бор/ц/о.

It should be noted that the long soft sounds /ж'/ and /ш'/ of the Russian language are especially difficult for the Uzbeks. Uzbeks, even very fluent in Russian, replace long sounds /ж'/и/ш'/ with short /ж'/ and /ш'/ or /ш' ч'/.

The phoneme /нг/ of the consonant system of the Uzbek language has no correspondences in the consonant system of the Russian language.

The originality of the articulatory base of the Uzbek language is reflected in the ratio of the system of phonemes of the Russian and Uzbek languages. The most important difference is the absence of hardness-softness opposition, which is one of the specific features of Russian consonantism, in the consonant system of the Uzbek language. Hence, a number of characteristic features in the pronunciation of consonants of the Russian language in different positions.

At the absolute end of a word, before consonants and non-front vowels, i.e. vowels /а/, /о/, /у/ consonants of the Russian language, differing in hardness-softness, coincide in the Russian speech of Uzbeks, compare: бра/т/ instead of бра/т/ and бра/т'/, /глу/п/ instead of /глу/п/ and /глу/п'/; го/рк/ а instead of го/рк/а and го/р'к/а, га/лк/ а instead of га/лк/а and га/л'к/а; тры/б/а instead of тры/б/а and тры/б'/я; /ох/ instead of /вол/ and /вол'/; /мал/ instead of /мал/ and /м'ал/. The opposition /л-л'/ is neutralized in the Russian speech of the Uzbeks, since pronounced as semi-soft /л`/: /мол`/, /мил`/, /пыл`/ instead of /мол/, /мил/, /пыл/.

The consonants of the Russian language in position before the vowels /и/, /е/ in the Russian speech of the Uzbeks remain soft. The exception is always the hard pronunciation of soft consonants т'/, /д'/, /н'/ of the Russian language in the Russian speech of Uzbeks before /и/, /е/ - this is due to the fact that in the Uzbek language /т/, /д/, /н/ before и/, /е/ do not acquire positional softening. As for the soft pronunciation of consonants of the Russian language before /ы/, this is explained, in our opinion, by the fact that Uzbeks associate /ы/ и /и/ in the positions of consonant + ы and consonant + и with Uzbek /и/ in the position of consonant + /и/. Unpaired soft consonants /ч/, /ж/ in the Russian speech of Uzbeks retain their softness. A solid /ш/ is

replaced by /ш'/ Uzbek. Hard /ц/, /ж/ undergo various changes of another plan /см.выше/, not related to the opposition in hardness-softness.

In other respects, the differences in the phoneme system are less significant. Thus, the sign of deafness-voicedness is phonologically significant for the system of phonemes of both Russian and Uzbek languages. And in that, and in the other language there are consonants that are unpaired in voicelessness. In Russian, these are sonorics, affricate, voiceless /х, х'/; in the Uzbek language - voiced sonorous /ж/, /м/, /н/, /л/, /р/ and voiceless - /ш/, /ф/.

The facts of the preservation and neutralization of the opposition in terms of deafness-voicedness to a large extent coincide. Thus, the position in front of vowels, sonorous and /в/ and /ж/ is strong for consonants in both Russian and Uzbek languages. Hence the consistent preservation of this opposition in the Russian speech of the Uzbeks: был-пыл = /б/ыл - /п/ыл; дам - там = /д/ам - /т/ам; одних - отних = /о/д/них - /о/т/них, etc.

In the Uzbek language, voiced at the end of a word are deafened (The consonants б, д are deafened to a large extent; consonants з, г, ж/джь are deafened somewhat weaker (see: Kissen, 1952, p. 44), therefore, as in Russian, the opposition is deafness-voiced hence, in the Russian speech of Uzbeks: луг - лук = лу/к/; газ - газ = га/с/; пруд - прут = пры/т/, etc. The same neutralization is observed in the position in front of voiceless consonants: обходить - о/пх/одить, разведка - разве/тк/а. But the neutralization of consonants by voicelessness in the position before voiced consonants is not the same: in the Uzbek language, as a result of progressive assimilation, the subsequent voiced is neutralized (аппир - ка/пк/ир»; асбоб - а/сп/об, ниҳоятда - ниҳоя/тт/а, and in Russian, with regressive assimilation, the previous sound is neutralized /сбить - /зб/ить, отдать - о/дд/ать/. Therefore, it is no coincidence that the pronunciation of Uzbek words such as request, unpleasant, asbestos etc. like про/сп/а, не/ст/обровать, а/сп/ ест0

The correlative opposition /ж-ш/ of the Russian language in the Russian speech of the Uzbeks is replaced by the opposition /дж'-ч/ characteristic of the Uzbek language at the end of a word and before voiceless consonants. For example: ло/ч/, но/ч/, но/ч/ка instead of лош/, /нош/, /но/шка.

Opposition /в-ф/ in the Russian speech of Uzbeks is realized as /в-п/. Since the final phoneme 17 of the Uzbek language is not stunned, pronunciation is possible: кро/в/ or кро/п/ instead of кро/ф' (Azizov, 1965: 15).

With regard to oppositions by the method and place of formation, the differences are less.

For the Uzbeks, the opposition /т - ц/, /с - ц/ presents a particular difficulty, which leads to the replacement of /ц/ through /с/ or /тс/: улисъ/ or /ул'ит-са_/ instead of /ул'ицъ/; /л'иса/ instead of / /л'ица./, /л'ица/.

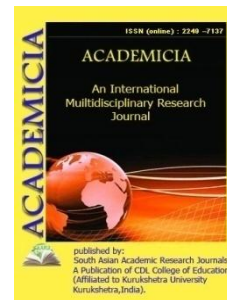
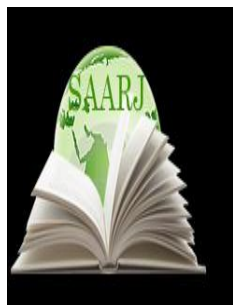
In contrast to the place of education in the Russian speech of Uzbeks, it turns out to be difficult to maintain the opposition: /ф-с/, /ф-х/, /ф-ш/. There are such oppositions in the system of the Uzbek language, but in them /ф/ is realized as /п/. It is appropriate to recall the words of A.V. Mirtov, who, revealing the reason for the wrong pronunciation of the sound f, he wrote: "... the Uzbeks have a tendency (the influence of their language) to pronounce this sound by bringing both lips together, and not the lower lip and teeth, as we pronounce. Hence, their ph is a sound close to n, and in some dialects and completely replaceable 14 "(Mirtov, 1940: 229). Cf. pronunciation: сей/п/, /п/акт, /п/ерма, за/пт/ра instead of сей/ф/, /ф/акт, /ф/ерма, за/ф/тра.

Oppositions 11, 12 are realized in the Russian speech of the Uzbeks as 13. They pronounce 14 instead of 15.

Thus, the existing discrepancies in the phonetic systems of the Russian and Uzbek languages lead to the fact that 1) in the Russian speech of the Uzbeks, oppositions are violated in terms of softness-hardness in all positions (the exception is part of the consonants before and, e), and in terms of voicelessness-voiced in position after voiceless consonants; 2) a number of phonemic oppositions acquire a different realization: /a/ at the end of a word, the phonemes /ж-ш/ and /в-ф/ of the Russian language are pronounced by Uzbeks as /ж/ - /ч/, /в/ - /п/; /б/ opposites /т - п/, /с - п/ are realized as /т/-/тс/ or /с/, /с/-/тс/ or /с/; /б/ opposites /ф - с/, /ф - х/, /ф - ш/ are represented as /п/ - /с/, /п/ - /х/, /п/ - /ш/; 3) there is a distortion of the quality of individual consonants of the Russian language, included in certain oppositions, a loss of softness, changes in the methods of education, etc. These are the most typical cases of interference at the phoneme level.

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RELIGIOUS TOLERANCE IN EARLY MEDIEVAL SUGH D SOCIAL LIFE

Eldor Bobirogli Sattorov*

*PhD Student,
Samarkand State University,
UZBEKISTAN

ABSTRACT

In this study, the issue of religious relations, which is one of the most important processes in social life, is revealed through the existing religions in Sughd. The study also provides facts on the spread of Christianity, Monism, and Zoroastrianism throughout the Sughd region. The role of the above-mentioned religions in ensuring religious tolerance throughout the mythology has been explored.

KEYWORDS: *Sughd, Religious Tolerance, Christianity, Monism, Zoroastrianism, Panjikent Posters.*

INTRODUCTION

At all times, religious relations have been a topical issue. This factor also applies to the early medieval Central Asian region. We all know that Nestorianism played an important role in the penetration of Christianity into Central Asia in the early Middle Ages, a process that played an important role in shaping the interethnic relations of Sughd and Khanate through spiritual and cultural synthesis.

The Nestorians were followers of Patriarch Nestorian of Constantinople. Although the Nestorian doctrine believed in the divine question of Jesus Christ, they had a different opinion on the question of his birth. For this reason, Nestorianism was declared heresy at the Christian cathedral in Ephesus, Byzantium, in 431. As a result, Nestorian Christians left the Roman Empire and called themselves the "Church of the East," to the east of Iran, Central Asia, and other countries carried out propaganda work. Because of the simplicity of their beliefs, the influence of Nestorianism grew very rapidly. As a result, a Zoroastrian priest sat to the right of the Iranian king, and a Christian monk to the other. This situation, of course, provoked the displeasure of the ruling circles, the Zoroastrian priests. As a result of the opposition's ability to convince the king

that Christians are trying to destroy Iran's traditional culture, Christians have left Iranian territory.

However, since the Nestorians could not return to Byzantium, the only available route for them was to the east.

THE MAIN FINDINGS AND RESULTS

On Christianity in Central Asia, V.V. Barthold: "... there is nothing new about the spread of Christianity in Trans-Saxony during the Sassanid period, which may be the basis of historical research, but based on the fact that Christians already existed in Sughd in the sixth century, they have a bishopric in Samarkand" [4.272].

The emergence of Christian societies and metropolises in Samarkand in the 5th century confirms Barthold's opinion.

In 420 there was a metropolis in Merv. Yazdigard III, a pine ruler killed by the Arabs near Merv, is buried in a metropolitan courtyard, indicating his sphere of influence. Based on this information, we can conclude that Christianity probably came to Sughd from Merv in the V-VIII centuries.

In the VI century in Samarkand there was a department of bishops, and in the VIII century the metropolis was established.

In the centuries of Arab writers of the VIII-IX centuries there are reports of Christians living in the cities of Bukhara, Samarkand and **Zhetysu**. The existence of Christian communities is also confirmed by archeological finds - Christian inscriptions in Turkey, Sughd and Syria.

The sources found justified that Christianity was primarily embraced by urban merchants, aristocrats involved in international trade, and local governors.

Christians were greeted with hospitality in Sughd, where they commemorated the apostle Thomas and his disciples, who passed from Sughd to India. There are also sources that as a result of the development of Christianity in Samarkand in 412-470, Christians in Sughd, Bukhara and Chach established religious organizations such as bishops and metropolitans [5.12.].

The Sogdian ethno-cultural society has enabled people to realize their full potential. In Urgut, for example, there was once a Christian monastery, a Zoroastrian temple, and the Jartepa Buddhist temple. Based on the above historical fact, no one interfered with the activities of the religions operating in Sughd, which in turn portrayed the early medieval Sughd as a center of religious tolerance and tolerance.

The results of our analysis have shown that in Central Asia, religious harmony and tolerance, the synthesis of cultures, have created favorable conditions for the promotion of Christianity.

At the same time, monotheism occupies a special place on the page of interethnic relations in the history of Central Asia. The founder of Monism was Moni ibn Fatak, whose teachings consisted mainly of Christian-Gnostic ideas based on a clear understanding of the Bible. As Zoroastrianism and Buddhism became widespread in the countries, monasticism led to the assimilation of many aspects of these religions. Moreover, its passage through hidden and revealing stages has enabled the creation of new religious doctrines in the most diverse cultural contexts as a result of efforts

on the concept of the common feature of true religion. Nevertheless, Monism has not become a world religion.

During Moni's lifetime, his missionaries entered Central Asia. By the end of the third century AD, Monic communities began to emerge in Egypt, while in the 1970s; Rome became acquainted with the teachings of Monism. Moni, emphasizing that his faith knows no bounds, said: "My faith will be spread in every country and in every language to open and distant lands" [10.74].

Although Sughd followed traditional (Zoroastrian) beliefs at this time, an analysis of Panjikent murals shows that the religious art of India and Bactria reflected the influence of their iconography of repentance on Sughd. This serves to reveal the cultural ties in interethnic relations.

Among the Sogdians there were communities of monasticism. By the fourth century, monastic communities existed almost exclusively in the Roman and Sassanid empires and in neighboring countries. The Roman government fought against monism: In particular, Diocletian first issued an anti-monastic decree in 297, and later decrees of this content were issued by the Christian emperors in 326, 372, and 381-383. As a result of the work mentioned above, by the sixth century, monasticism in the West had disintegrated.

At the same time, the struggle with all non-Zoroastrian religious organizations began in the Sasanian state, which is why most of the Monks were forced to come to Central Asia. A center for the propagation of monasticism was established in Samarkand, and the center had excellent links and connections with the West and the East. Naturally, in order to continue the spread of monasticism to the east, it was considered very important that the monastic religion had a base in Samarkand and Tashkent, the main cities of Sughd. According to many Arab sources, the Mani was found in Samarkand. The translation of religious literature into the Sogdian language was considered expedient in the widespread propagation of the Monism religion. For this reason, the large number of texts and fragments of the existing monastic teachings in the Sogdian language today indicates that the Sogdian language is widely used in Monism.

The first monastic monastery appeared in Sughd in the IV century. Kang Juan-Chan Min (Eternal Shadow) from Samarkand had a special role in propagating this doctrine among the Turks of the Khanate [8.184].

Under the influence of Sughd, Monism spread to China, and in 584 the first monasteries were built in East China. In the VII century. The official language of Eastern Monism is Sughd, which is why all the works of Monism have been translated into Sughd. Moni's teaching focuses on the visual arts. The first books with a religious content were described by Moni [10.75].

The influence of this was reflected in the miniatures of Afrasyob, Varakhsha, Penjikent, and the early Middle Ages of Central Asia.

The Sogdians traded with China. Even in the early Middle Ages, the Great Silk Road from China to western countries was very popular, Sogdian merchants dominated along the International Transit Road, and built trade colonies along the way. As an example, we can mention the colony south of Lubnor. The Sogdian inscription was found even in the upper reaches of the Orkhon River in the remote Karabalgazun. These data highlight the importance of Sughd in interethnic relations and religious tolerance.

The importance of Zoroastrianism in the life of the Turks in Sughd is reflected in the documents of the Mug archives. 3 –“Sughd marriage certificate” and Nov. 4 – “Duties of the groom to the bride”. These documents record the marriage of a Sogdian girl - Dugduncha (nickname Chata) - daughter of Vius and a Turkish Ottakin (nickname Nidon). The document was drawn up in the House of Law in the presence of several witnesses in the presence of the son of its chief, VakhgukanVarkhuman (*wywyk'n ZKn bym'n BRY*).

The fact that the documents did not specify the religion or nationality of the boy and girl was also a sign of tolerance in Sughd. The Dugduncha in the document was from the Sogdians, and Ottakin was from the Turkic takin (*tkyn*) of Sughd. The son of the head of the House of Law (*βwntyn'k 's'ny*) Vakhg'ukanVarkhuman (*wywyk'n ZKn bym'n BRY*) and witnesses of the marriage agreement (*Skatch Shishchor Gigchogli - sk'tc ZK šy-šc /yy-yc BRY*, ChakhrinRamchogli - *cyr'yn ZK r'mc BRY*, ShavMahakogli - *š'w ZK m'γ'kk BRY* and secretary RamtishAgushfarnogli - *r'mtyš ZKn 'γwšprn BRY*) were all representatives of the Zoroastrian religion. The logical continuation of Nov.3. In 4, Ottakin confirmed his obligations to the bride with an oath before Mitra-mydr, one of the main deities of Zoroastrianism: "In the testimony of Mitra, I undertake the following - *rtβy ZKn βyy ZY ZKn mydr' nβ'nty* " [6.166].

The Sogdians believed in the god Nana, who was revered not only in Bactria but also in Parthia. This shows that the Sogdians believed not only in foreign religions, but also in anti-Zoroastrian religions [1.252-254]. According to Hen, the negative attitude of the Zoroastrians towards the giants in the dictionary of the Sogdian language, especially in Ustrushan, the word "giant" means "god". However, as a result of archeological research, the gods believed by the Sogdians living in Ustrushona, Ettisuv and Otrar were identified in the same form as the gods believed by the people living there. In our opinion, the reason for this was not in local differences, but in the fact that the Zoroastrian doctrine was propagated without coercion by a strong state apparatus.

Panjakent's sixth-century terracotta sculptures depict a woman wearing a crown. If we classify the position in the statues, they have images of wild animals with their hands tied to their chests (a sign of obedience) and at the bottom [13.129]. We can see that the images quoted are similar to the demonic form and ancient sirens in Babylon [11.119]. Also on the walls of Assyria there is an image in this form with only the wings painted [7.149]. Our terracotta is wingless, unlike the analogues cited. The head of the demons adorned the ossuary with underwater ornaments in the sky (the scene of the soul coming to heaven) and the Erkurgan furnace [12.65-69].

We can see almost everywhere the idea that the depiction of demons served as a tumor against evil forces. For example, in the seals of the Sassanids, too, images of evil hated by Zoroastrians are described as helping to offset its harm [2.35].

However, Panjakent terracotta is not entirely suited to such ideas. They are joined by a belt wrapped in images of pantheon gods depicting the submissive pose of the beast. The above condition indicates the existence of such a deity [3.42].

In pictures depicting epics in Panjikent, demons are often likened to gods. For example, the image of a three-headed demon with a three-horned spear is very similar to Veshparka. Only in one of the episodes does his death at the hands of the protagonist show that he is not a god. Because the evil god Wayne did not suffer such a death.

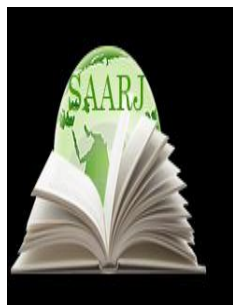
In addition, the iconography of the pantheon gods depicts the spirit of the harvest sitting on the background of a grain of grain in the ethnography of the Tajik people. The above composition is part of the celebration of the new harvest. The images in the Sogdian icons demonstrated simple forms of worship of ancient farming factors. In the image, the spirit of fertility is seated on a throne, and the royal pine gardens are adorned with the image of a burning fire on his shoulders.

CONCLUSION

To conclude, in the early Middle Ages, Sughd was characterized by its own tolerance and religious tolerance. Its inhabitants not only believed in Zoroastrianism, Buddhism, Christianity, Monism, and the Qom-Shaman religions, but were not an obstacle to the development of these religions. In addition, the religious ceremonies and customs of some regions are closely intertwined and have played an important role in the spiritual life of the society, religious tolerance and interethnic relations. In the early Middle Ages, the interaction of existing religions in Sughd had a major impact on the development of material and spiritual culture.

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FEATURE OF THE USE OF TEMPERAMENTS IN THE SOCIO-POLITICAL TEXTS OF THE MODERN CHINESE

Zebo Fazliddinova Shamsiddinova*

*Chinese Language Teacher,
Department of Eastern Languages,
University of World Economy and Diplomacy,
UZBEKISTAN

ABSTRACT

In modern Chinese, unlike other languages, the expression of time is expressed in auxiliary words, fixed constructions, and word groups. There is a slight difference in the use of temperaments between Chinese oral and written style, and this article discusses the features and peculiarities of the use of temperaments in socio-political texts. It should be noted that most Chinese temperaments are word-specific and need to be analyzed in different contexts. In addition, in socio-political texts, fixed constructions are widely used to represent time.

KEYWORDS: *Temperaments, Time Category, Time Factor, Auxiliary Words, Auxiliary, Connecting, Temporal, Fixed Constructions, Language Tools, Grammatical Category.*

INTRODUCTION

The category of time plays an important role in any language and traditionally represents the relation of action to time when speech is spoken. The expression of the category of time is common to all languages, and different languages have different views on the category of time.

However, when we study the concept of "time" as a direct linguistic term, we get a definition of this grammatical category from a linguistic dictionary. "The category of time is the grammatical category of the verb, which is a specific linguistic expression of objective time. It serves as a temporal localization of the event or situation in question. Localization by time category can combine lexical and syntactic devices (tenses, conjunctions, etc.) to describe time in more detail" [1, p. 89].

Temporality is reflected in "a person's perception and understanding of the timing of situations and their elements related to the spoken word or other point of reference" [2, p. 264].

THE MAIN FINDINGS AND RESULTS

The main characteristics of temporality are the present, the past and the future. The main content of the present tense refers to the time that coincides with the time of the speaker's speech, the time before the speaker's speech in the past tense, and the time after the speaker's speech in the future tense.

According to the great Chinese linguist Wang Li, in general, people look at the relationship between fact and time as follows. First, attention is paid to the time of the event, not the proximity or length of time it took place. Second, special attention is paid to the duration of the event and the beginning or end of the event. Maybe it doesn't matter much at what time it happened. The first case belongs to the Romance language family (French, Italian, Spanish, etc.), the second to Chinese [3, p. 151].

In Chinese, temporal attitudes are expressed through the use of language tools that represent the time factor. This is done by using auxiliary words in the sentence that represent time [4, p. 304]. Auxiliary words denoting time 着 *zhe* (meaning that an action is in progress); 了 *le* (indicates that the action was completed in the recent past); 过 *guo* (reflecting that the action took place in the distant past). These auxiliary words are often used in conjunction with verbs.

In addition to auxiliary words, temporal forms, conjunctions, auxiliaries, fixed constructions, nouns, and rhyming phrases also play an important role in expressing temporal meaning. The following tenses serve to express temporal relations in Chinese: 曾 *céng*, 曾经 *céngjīng*, 已 *yǐ*, 已经 *yǐjīng*, 都 *dōu*, 正在 *zhèngzài*, 在 *zài*, 将 *jiāng*, 即 *jí*, 马上 *mǎshàng*, 立刻 *lìkè*, 立即 *lìjí*, 一下子 *yīxiàzi*, 迄今 *qìjīn*; conjunctions: 则 *zé*; auxiliaries: 自 *zì*, 从 *cóng*, 于 *yú*; fixed structures: 当... (时候) *dāng...shíhòu* can be cited as an example.

In this article, we will analyze some forms of time, the use of auxiliary, connecting and time-stable constructions in socio-political texts, their features and differences in the expression of temperaments in written speech and putunhua.

According to A.Khojiev's dictionary of linguistic terms, a form is a set of words that signify an action according to its place, time, cause, and so on [5, p. 71].

时间副词 *shíjiān fùcí* - according to the works of Chinese linguists such as Zhu Chingming, Wang Li, Liu Yuehua, we can cite the following:

Actions 曾 *céng*, 曾经 *céngjīng*, 已 *yǐ*, 已经 *yǐjīng*, 都 *dōu* are used to indicate whether a situation has occurred. These group forms represent the past tense, or the past, or the action completed in the past tense. “曾 *céng*/曾经 *céngjīng*...过 *guò*...”, “已 *yǐ*, 已经 *yǐjīng*...了 *le*” is a fixed construction, and sometimes it is possible to use 已经 *yǐjīng* auxiliary words after 过 *guò*. But at the same time, using 了 *le* auxiliary words at the end of a sentence is more grammatical.

农业在国民经济中已无足轻重

Nóngyè zài guó mín jīng jì zhōng yǐ wú zú qīng zhòng

Agriculture is no longer important in the national economy [6, p. 22].

This “已经” *yǐjīng* – is an older form of the word "already" “已” *yǐ*. Forms 已 *yǐ* and 已经 *yǐjīng* the same function and can be used interchangeably. 已 *yǐ* refers mainly to written speech, while 已经 *yǐjīng* refers to an action or situation that occurs before speaking in Putonghua or at a specific time. As long as it is spoken or for a certain period of time, the result will remain the same. The form 已经 *yǐjīng* can be followed by the negative, which can also be used to describe the future.

1936 年后，柬埔寨曾被法国，日本占领

1936 niánhòu, jiǎnpǔzhàicéngbèifàguó, rìběnzhànlǐng

After 1936, Cambodia was occupied by France and Japan [7, p. 23].

曾 *céng* - the phrase "once upon a time" is used only in written speech. This form indicates the lexical meaning of the 过 *guò* suffixes in oral speech, indicating that an action has taken place in the past.

Form 将 *jiāng* is used in the following senses:

- 1) Used in the function to describe an upcoming event;
- 2) Represents the approach of any time;
- 3) Represents an event that occurs at a specified time;
- 4) Used as a sign of the future tense;
- 5) Inverted complement inversion as an auxiliary, i.e. it can take precedence over the verb. For example, 将 *jiāng* + noun + verb = "to do something in the future".

我方将于近期内函告我方的决定

Wǒfāngjiāngyújìnqínèihángàowǒfāng de juédìng

We will inform you about our decision soon [8, p.105].

This style is often used in written speech.

巴西今年将进口 1500000 袋咖啡

Bāxījīnniánjiāngjìnkǒu 1500000 dàikāfēi

This year, Brazil will import 1.5 million cans of coffee [9, p. 230].

即 *jí* - the form "now, immediately" is the same as the function and meaning of the literary language in the sentence 即 *jí*. For example:

两国就建立外交关系，派驻外交代表等问题达成协议，并互派外交代表后，外交关系即正式建立

Liǎngguójiùjiànliwàijiāoguānxì,

pàizhùwàijiāodàibiǎoděngwèntídáchéngxiéyì,

bìngghùpàiwàijiāodàibiǎohòu, wàijiāoguānxìjìzhèngshìjiànli.

Diplomatic relations between the two countries will be officially established after the appointment of diplomatic representatives and agreement on other issues, as well as the exchange of diplomatic representatives.

The morpheme 即 *jí* is part of a two-syllable 立即 *lìjǐ* word meaning "now, immediately." In oral speech, meanings 立刻 *lìkè* and 马上 *mǎshàng* are the same.

The forms belonging to group 马上 *mǎshàng*, 立刻 *lìkè*, 立即 *lìjǐ*, 一下子 *yīxià* represent an action that can be performed very quickly. In most cases, it is possible to use 就 *jiù* steps to emphasize the speed of movement to the next level. There are a number of other words of this type in Chinese: 顿时 *dùnshí*, 霎时 *shàshí*, 立时 *lìshí* and so on. The use of 一下子 *yīxià* is usually used only to describe the action that took place. In special cases, it can represent future actions in a language environment.

老师说了声“开始”，大家立刻就做了起来

Lǎoshīshuō le shēng “kāishǐ”, dàjiālìkèjiùzuò le qǐlái

The teacher says, "Get started!" When he said that, they all did it immediately.

我真恨不得一下子就找到他

Wǎzhēnhènbúdéyīxiàjiùzhǎo dāo tā

I really want to find it right away [10, p. 26].

正在 *zhèngzài*- represents the process of action. It is more widely used in oral speech than in written speech:

北京天桥民俗园正在筹建中

Běijīngtiānqiáomínsúyuánzhèngzàichóujiànzhōng

The "Tianqiao" folk park is under construction in Beijing [11].

Figure 在 *zài* can also be used in conjunction with the particle 呢 *ne*, which represents the process of action, as well as 着 *zhe*, which indicates the duration of the action, indicating the process of action, such as 正在 *zhèngzài*. In the written style, the form 在 *zài* comes in the form of 在...中, 在...过程中 constructions and expresses meanings such as "in the process, at the moment, in...". For example:

在活动中青年们进行了非常精彩的表演，并及朗诵了纳瓦伊的精美作品

Zàihuódòngzhōngqīngniánmenjìnxínglěifēichángjīngcǎi de biǎoyǎn, bìngjǐlǎngsòngnàwǎyī de jīngměizuòpǐn

During the event, young people made wonderful speeches and recited the elegant works of Navoi [12, p. 54].

在进行斗争过程中...*Zàijìnxíngdòuzhēngguòchéngzhōng... - during the battle ...;*

在进行合作的过程中... *Zàijìnxínghézuò de guòchéngzhōng*... –in the process of cooperation ...

在会议中共同发表公报... *Zàihuìyìzhōnggòngtóngfābiǎogōngbào*... - publishing a joint communiqué during the meeting ...

迄今 *qìjīn*, still, still ”is a phrase used in written speech, the meaning of which is expressed in the compound 到今天为止 *dào jīntiānwéizhǐ* putunhua. For example:

迄今科索沃局势依然紧张，民族仇视不减，冲突不断

Qìjīnkēsūwòjúshìyīránjǐnzhāng, mínzúchóushìbùjiǎn, chōngtúnbùduàn

The situation in Kosovo remains tense, with national tensions and conflicts continuing [13, p. 418].

则 *zé*- when the conjunction is used in a sentence, it translates as "when..., if..., only when...". This conjunction is specific to the written style and represents the temporal-conditional relationship in complex conjunctions. For example:

缔约各方彼此同意废约时，国际条约则停止生效

Dìyuēgèfāngbǐcítóngyìfèiyuēshí, guójìtiáoyuēzétíngzhǐshēngxià

An international agreement becomes invalid only if the parties to the agreement agree to terminate it [14, p. 717].

It is clear from the above sentence that the 则 *zé* conjunctions are used in the second part of a complex compound sentence, before the verb, i.e., to express the conditionality of time.

The 自 *zì* auxiliaries are more commonly used in literary language and have the same meaning as the 由 *yóu* auxiliaries. Putunhua is similar with 从 *cóng* assistants.

Auxiliary 自 *zì* is part of the constructions representing time, such as 自...起 *zì ... qǐ* (since then), 自...后 *zì ... hòu* (since then, after this time), 自...以来 *zì ... yǐlái* (since then, since then).

双方决定自 1992 年 8 月 24 日起相互承认并建立大使级外交关系

Shuāngfāngjuédingzì 1992 nián 8 yuè 24 rìqǐxiānghùchéngrènbìngjiànli dàshǐjī wàijiāoguānxi

The parties recognized each other on August 24, 1992 and decided to establish diplomatic relations at the ambassadorial level [15, p. 230].

In Putunhua, constructions such as 从...起 *cóng... qǐ*, 从...以来 *cóng... yǐlái*, 从...以后 *cóng... yǐhòu*, 由...至 *yóu... zhì* are used. But they can also be found in socio-political texts:

从 70 年代开始，由于外国干涉，柬埔寨经历了长期的战乱

Cóng 70 niándàikāishǐ, yóuyúwàiguógānshè, jiǎnpǔzhàijīnglìchángqí de zhànluàn

Since the 1970s, Cambodia has experienced many years of war due to foreign intervention.

从 今 以 后 我 们 应 该 加 强 关 系
Cóngjīnyǐhòuwǒmenyīnggāijiāqiángguānxì

From today, we need to strengthen our relationship [16, p. 85].

The auxiliary 于 *yú* is used in literary language, and in modern language only in written speech, and is close to the meaning of the auxiliary 在 *zài* in putunhua. The words it combines can create both a state of place and a state of time. A sentence can sometimes be placed before verbs and sometimes after verbs. For example:

柬埔寨是历史悠久的文明古国，于公元 1 世纪建国

Jiǎnpǔzhàishìlìshǐyǒujiǔ de wénmínggǔguó, yú gōngyuán 1 shìjìjiànguó

Cambodia is a country with an ancient history of civilization, founded in the 1st century AD.

当...（时候）*dāng...shíhòu-...* during that time...; ... The time-constant construction is characterized by special lexical elements of type 时候 *shíhou* with or without auxiliaries, indicating that the two actions occur in part at the same time. The cut in the follow-up sentence of this type of sentence signifies an incomplete action. The cut in the preposition means the completed action.

➤ 当大脑皮层的机能产生障碍的时候，管理血管的神经中枢便失去控制。

Dāng dànnǎo pí céng de jīnéng chǎnshēng zhàng'ài de shíhou, guǎnlǐ xuégǔǎn de shénjīng zhōng shū biàn shīqù kòngzhì.

When the cerebral cortex is impaired, the nerve center that leads to the blood vessels loses control.

In the process of analyzing temperaments in modern Chinese socio-political texts, we can draw the following conclusions:

1) The use of the category of time in Chinese is unique in that it is reflected in speech through various linguistic means, such as auxiliary words, tense forms, auxiliaries, conjunctions, and fixed conjunctions. finds;

2) The use of the category of time in literary language and written style, especially in socio-political texts, is different from putunhua. While some words are used primarily in written speech, we see that some are used only in oral speech; Alternatively, temperatures in putunhua can take a concise form in written speech: 曾经 *céngjīng* putunhua, 曾 *céng* in written speech;

We have witnessed its application in 已经 *yǐjīng* putunhu, 已 *yǐ* in written speech;

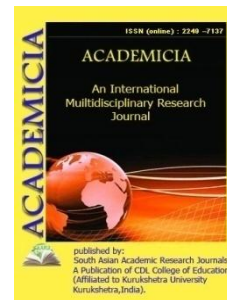
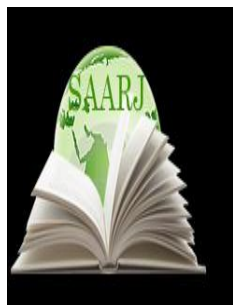
3) In Chinese, temporal relations play an important role. Because forms are always connected with verbs. A verb, on the other hand, expresses an action, and a sentence cannot exist without a verb.

4) Unlike some languages, the Chinese language system does not have a term related to temporal relations and its specific classification. 时间副词 *shíjiān* - except for the tense form, because in addition to tense forms, the expression of time in Chinese contains a number of auxiliary words,

auxiliaries, fixed constructions, temperaments belonging to the noun and rhyme groups, for which a single term not available.

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IMPROVEMENT OF TECHNICAL AND TACTICAL SKILLS ON THE BASIS OF SPEED AND STRENGTH TRAINING OF ATHLETES IN THE UZBEK NATIONAL WRESTLING

Abdikholiq Nurullaev Qakhkhorovich*

*Candidate of Pedagogical Sciences,
Navoi State Pedagogical Institute,
Navaicity, UZBEKISTAN
Email id: otajonsirojov@gmail.com;

ABSTRACT

This article addresses the issues of improving the technical and tactical skills of Uzbek wrestlers on the basis of speed and strength training. The participants were offered various techniques for improving their technical-tactical, agility and movement skills, which are used in wrestling. The article is intended for wrestlers and coaches of Uzbek wrestling and other types of wrestling. National wrestling is not only a national sport, but also a competition of Uzbeks, which is very close to the world standards, and is one of the main tools of our Republic in the world. However, the skill of the athlete is refined in various competitions, wrestling, and discovers new content. On September 6, 1998, the International Wrestling Association was established in Tashkent with the participation of 28 countries. It was attended by delegates from Latin America, Europe and Asia. Its congress approved the international rules of wrestling under the name "Uzbek Kurashi".

KEYWORDS: *Agility And Strength In Uzbek Wrestling, Technical And Tactical Physical Abilities, Skills, Scientific Knowledge.*

INTRODUCTION

It has long been known that sport is a guarantee of health. Exercising the body through various physical exercises and strengthening human health is mentioned in the medical books of Abu Ali Ibn Sina. Our great-grandfather recommended various exercises for the development of different parts of the body. Probably, this is the reason for the diversity and variety of sports. For thousands of years, national sports have been developing and improving in Central Asia. This

type of wrestling is similar to the wrestling of the peoples of Europe, America and Africa in terms of its technical performance and the rule of law.

If we look at the physical exercises and sports that were included in the curricula of the former Soviet Union, then there is no place for national sports. After gaining independence, the country promotes and supports the development of national sports of the peoples of the republic, including national wrestling, the development of legal rules of Uzbek wrestling, its scientific study, stylistic improvement. This sport, in particular, Uzbek wrestling, is included in the curriculum. For the first time in our country, the Law "On Physical Culture and Sports of the Republic of Uzbekistan" was approved. This was the legal guarantee of the national wrestling.

The decision of the delegation of the Ministry of Public Education of the Republic of Uzbekistan dated February 11, 1994 2/2 developed measures for the introduction of national sports in the curriculum.

Approval of the National Program "Soglomavloduchun" in the Republic of Uzbekistan, the establishment of various levels of the National Government Awards "Soglomavloduchun", the steady strengthening of the material base of physical culture and sports in our country are the result of the care of the Government of the Republic, its President for the development of national sports.

Uzbek wrestling is developing as an important educational part of the sport, and its material technology is constantly improving. Various conditions and conveniences are created for athletes. This is the main source of the fact that the wrestlers of our Republic, in response to this care and opportunity, have achieved high results in wrestling at the Asian and World Championships and adequately defended the sports honor of our independent Republic.

Steps to improve technical and tactical skills on the basis of speed and strength training

Another reason why Uzbek wrestlers are the strongest in the world is that the sport has been popularized and the training of substitutes is well organized.

It is a well-known fact that this sport, like any other, does not require proof from an early age. Because agility, strength, which bring success to the athlete, in difficult situations to find the most optimal solution in a matter of seconds, such as courage, physical qualities are formed from an early age.

In order to attract teenagers to the sport of wrestling, it is important to develop national wrestling techniques that are close to international rules in terms of technique.

World-renowned wrestlers are emerging in Uzbekistan, Kazakhstan, Tajikistan, Georgia, Armenia and other countries due to the high level of popularity of the sport of wrestling. If we look at the celebrations, folk festivals and other ceremonial gatherings held in these countries, the national wrestling is central event in them. Further development of sports that people love and respect has great prospects.

National wrestling is not only a national sport, but also a competition of Uzbeks, which is very close to the world standards, and is one of the main tools of our Republic in the world. However, the skill of the athlete is refined in various competitions, wrestling, and discovers new content. Due to this, the competitions for the prize of the President, At-Termizi, Bahauddin Naqshbandi,

Amir Temur, which are held at various stages to celebrate the pure spirit of the people, have become a traditional sport for young people.

Today, the internationally recognized positive results in this sport are based on the use of technical means of training athletes in this field, the use of advanced foreign wrestling technologies and methods, the preparation of athletes for competitions in a scientifically sound manner. From a methodological point of view, the training systems can be divided into 6 main interrelated factors.

1. Predicting the results of sports competitions;
2. Modeling the activities of athletes;
3. Accurate assessment of the movement and mental state of athletes at different stages, determining their physical fitness and skills based on the results of competitions;
4. Establish a system of preparation of athletes for competitions depending on their age and sports skills, rehabilitation of athletes and improvement of sports activities;
5. Availability of modern sports equipment and facilities that can improve the recovery of strength and skills after training and competitions;
6. The special knowledge, pedagogical skills and ability of coaches to work independently, to help the athlete to work independently to the extent that meets international standards;

At the same time, modern techniques of wrestling, a certain order of the style that supports the movement to win over the opponent, novelty and leading role in the offensive movement, the rapid development of physical abilities of athletes, the development of technical skills and modern techniques pay special attention and have three types of speed strength: absolute blasting; speed and power; differs in strength endurance.

The technical movements learned by the wrestlers have been shown to help them to think in new ways, to adapt and strengthen conditional habitual connections with training, and to form the basis of movement. Authors A.A. Novikov, G.S. Tumanyan, Y.V. Verkhoshansky, A.M. Astakhanov, V.M. Dyachkov play a leading role in the offensive movement, the development of physical abilities and modern technical skills of athletes. It is emphasized that in improving their skills, special attention is paid to the use of speed and strength. The authors believe that the efficiency and tactical skills of athletes in the performance of technical and tactical movements are determined by the accuracy and timeliness of their performance.

Athletes' abilities and skills are beyond their control. Therefore, the relationship between movement skills and physical qualities is inextricably linked.

The main problem for the coach is the choice of individual exercises to adapt to the development of the physical abilities, capabilities and technical movements of wrestlers to a certain extent, adapting them to the abilities of athletes.

Wrestling is characterized by a complex combination of movements, and the intensities accumulated in the wrestler at each minute of the fights can be achieved in different directions: speed, strength, endurance, by finding the right solution in a matter of seconds.

The development of physical abilities can be achieved mainly through the development of agility and strength of athletes, improving their technical and tactical training. Determining these on a scientific basis is one of the most important issues in the development of the national struggle.

The degree of connection between speed and strength training and technical and tactical training determines the effective means of training the athlete.

The effective use of physical education in the implementation of this work, the development of technical training of athletes through the correct choice of methods of their implementation.

In the style of Uzbek wrestling, the development of technical training on the basis of rapid-strength training and the interdependence of these two processes were identified. There is a correlation between the strength and technical and tactical training of wrestlers.

Effective means of improving the technical and tactical skills of wrestlers have been identified. Depending on the technique of performing speed and strength exercises, this method is aimed at perfecting the technique by selecting developmental, auxiliary and stimulating exercises.

At the same time, along with the general set of physical qualities, the speed and strength training of wrestlers helps to develop other qualities.

It is known that 68 hours of lessons were allocated for teaching this course in accordance with the standard curriculum approved by the order of the Ministry of Higher and Secondary Special Education of the Republic of Uzbekistan dated August 23, 2008 No. 263. It consists of lectures, seminars, laboratories, practical classes.

During the years of independence, attention to the Uzbek wrestling has increased. On February 22, 1992, in Tashkent, the normative documents of the National Wrestling Federation of Uzbekistan were approved. On September 6, 1998, the International Wrestling Association was established in Tashkent with the participation of 28 countries. It was attended by delegates from Latin America, Europe and Asia. Its congress approved the international rules of wrestling under the name "Uzbek Kurashi". Islam Karimov, the first President of the International Wrestling Association, and Komil Yuupov were elected the permanent honorary presidents of the International Wrestling Association.

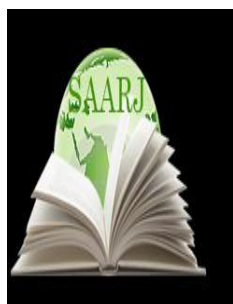
In recent years, the term "technical and tactical skills" has been widely used in wrestling operations. Wrestling techniques are the most sensible ways for a wrestler to perform winning movements.

Competitions between wrestlers between the ages of 7 and 70, the traditional educational weddings and celebrations of our people, based on the rules of the law "Uzbek Kurashi", are an important educational part of the sport - speed and strength.

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THE EFFECT OF REPEATED CROPS AND ORGANO-MINERAL COMPOSTS ON AGOPHYSICAL AND AGROCHEMICAL PROPERTIES OF THE SOIL UNDER THE TYPICAL GRAY SOIL CONDITIONS AFFECTED BY IRRIGATION EROSION

Nurmatov Sheramat Nurmatovich*; Rakhimov Avazbek Kholmamatovich**

*Professor,
Doctor of Agricultural Sciences,
UZBEKISTAN

**Candidate of Agricultural Sciences,
UZBEKISTAN

ABSTRACT

This article provides information about the effect of repeated crops and organo-mineral composts on the agophysical and agrochemical properties of the soil in the lower part where the soil is moderately washed (accumulated) particles from the slopes after winter wheat in the conditions of typical gray soils affected by irrigation erosion.

KEYWORDS: *Irrigation erosion, typical gray soils, soil washed, soil particles washed away, organo-mineral compost, secondary crops, soybeans, potatoes, agophysical, agrochemical, mineral fertilizers.*

INTRODUCTION

Extensive work is carried out in the country to expand the area of secondary crops after winter wheat, to increase the share of crops obtained through the rational use of each hectare. In this regard, the Resolution of the President of the Republic of Uzbekistan dated June 1, 2017 No PP-3027 "On measures for the planting of secondary crops in the areas vacated by cereals in 2017, the timely supply of material and technical resources required"

In recent years, increasing soil fertility and crop yields based on resource and resource-saving technologies, the use of cheap and local raw materials has become a pressing issue.

In this regard, in order to study their impact on productivity and soil fertility, field experiments were conducted in 2017-2019 in time and space (every year in a new field). This experiment

held by Application of mineral and organo-mineral composts in different amounts to replanted crops planted on land vacated by winter wheat in the conditions of typical gray soils affected by irrigation erosion of the white-pumpkin research station of Research Institute of Cotton selections and Seed Production and Cultivation Agro technologies. The experiment consisted of 24 variants, of which variants 1–12 were placed in 3 replicates in the lower parts where the soil was washed moderately (field slope is 2 degrees), and options 13–24 were washed from the slope. The control of options 1-4 and 13-16, respectively, in the lower parts of the soil moderately washed and washed away soil particles, organo-mineral composts were not used for repeated crop shade in options 5 and 17. Under summer drive in repeated crop shade in options 6-8 and 18-20 -mine composts were applied to 10, 15 and 20 t / ha, in 9-21 options organic-mineral compost was not applied to replanted potatoes, in 10-12 and 22-24 replanted potatoes to summer crops under organic drive 10, 15 and 20 t / ha. Field experiments were carried out in the methods described in the sources "Methods of field experiments with cotton" [1], "Methods of agrochemical, agrophysical and microbiological research in the whole region" [2] "Methods of agrochemical analysis of soil and plants [3].

In typical gray soils, the increase or decrease in volume weight depends primarily on crop rotation. Crop rotation is a crop that improves the physical and agrochemical properties of the soil among all crops. In the year of uncultivated plowing, the volume mass of the soil is less than in the old plowed lands [4]. Studies have been conducted on the degree of soil erosion exposure and concluded that the volume weight increases as a result of soil washing [6].

It should be noted that the secondary crops are ore and not only grows well under the influence of composts, but also affects the change of water-physical and agrochemical properties of the soil. On the change of nitrates in crop rotation systems, Romanov Kh.S., Mirzajanov K.M., Tolibulin R.T. [7], Mahsudov S.S [5]. scientific work has been done by many scientists.

When applying mineral fertilizers N-60, P-90, K-60 kg / ha to the shade planted as a repeat crop after winter wheat in 2017 conditions, the volume weight in 0-30 and 30-50 cm layers (option 5) of the average washed part of the soil and porosity at the beginning of the season. It was 1.314-1.422 g / cm³ and 51.3-47.3%, respectively, the amounts of nitrate nitrogen, mobile phosphorus, and exchangeable potassium were 18.8 and 10.0 mg / kg, 25.1 and 10.9 mg / kg, 200 and 170 mg / kg, respectively, 1,380-1,454 g / cm. At the end of the season, depending on the soil layers; 48.9–46.1%, 19.1 and 10.1 mg / kg, 25.4 and 11.1 mg / kg, 202 and 170 mg / kg, or the volume weight of the soil relative to the beginning of the season was 0 , 07 -0.03 g / cm³ increased. The porosity decreased by 2.4-1.2%, nitrate nitrogen content was 0.3, 0.1 mg / kg, mobile phosphorus content was 0.3, and 0.2 mg / kg, the amount of exchangeable potassium was found to be higher between 2 and 0 mg / kg.

By the end of the season, compost was applied at a rate of 15 t / ha against the background of relatively high rates of mineral fertilizers (option 7). The volume weight and porosity were 1,348-1,442 g / cm³ and 50.1-46.6%, nitrate nitrogen content was 20.5 and 10.5 mg / kg, the amount of mobile phosphorus was 27.1. And 11.5 mg / kg, and the amount of exchangeable potassium was 225 and 180 mg / kg, or 0.03-0.01 g / cm³, respectively, in exchange for the used organo-mineral compost less than 1.2-0.5% more, 1.4-0.4; 1.7-0.4 and 23-10 mg / kg were found to be high.

The above figures are slightly higher when the compost norms are applied to 20 tons per hectare against the background of mineral fertilizers in the shade of repeated crops higher values were obtained.

Relatively high rates in the lower part of the washed particles were obtained by applying 10 tons of organo-mineral compost per hectare on the background of mineral fertilizers in the shade of repeated crops. By the end of the season the volume weight and porosity in soil layers 0-30 and 30-50 cm was 1.317-1.418 g / cm³ and 51.2–47.5%, nitrate nitrogen content of 31.0 and 16.4 mg / kg, mobile phosphorus content of 43.6 and 24.4 mg / kg, and exchangeable potassium content of 271 and 210 mg / kg. It was equal to or less than 0.02–0.01 g / cm³, 0.8–0.3% more than the control option, and the nitrate nitrogen content was 1.8–0.2; 1.3-0.6 and 23.0-5.0 mg / kg were higher.

Mineral fertilizers N-180, P-150, K-60 kg / ha and 15 tons of organo-mineral composts per hectare were applied to potatoes as an average washed repeat crop at the end of the season. 1,354-1,430 g / cm³ and 49.9-47.0%, nitrate nitrogen 19.6 and 10.5 mg / kg, mobile phosphorus 26.5 and 10.9 mg / kg, exchangeable potassium 215 and 176 mg / kg equal or 0.04-0.01 g / cm³ less, 1.6-0.4% more than 2.3-0.7, respectively, the control option 1.6-0.5 and 24-12 mg / kg were higher.

Control of the washed-out part of the soil Particle the data obtained in option 21 are compared with option 9 of the average washed-out part of the soil. In the 0-30 cm layer of soil at the end of the season the volume weight of the soil is less than 0.03 g / cm³, 1.2% higher, 10.5 mobile phosphorus was found to be 16.8 mg, and exchangeable potassium 44.0 mg / kg. This situation has a positive effect on the agrophysical and agrochemical performance of the soil due to the passage of washed soil particles from the slope to the lower part of the field can be explained by the fact.

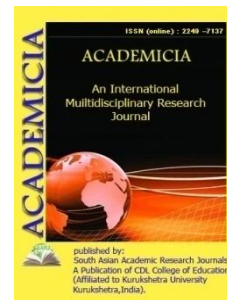
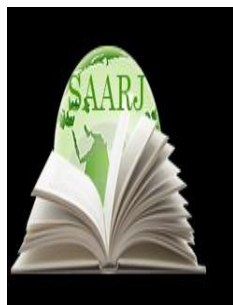
In this section, relatively high rates were obtained for the application of organo-mineral composts of 15 tons per hectare on the background of mineral fertilizers. Similar data were obtained in the following year of the study.

Thus, the application of organo-mineral composts to soybean and potato crops replanted after winter wheat improves the agrophysical and agrochemical properties of typical gray soils subject to irrigation erosion and creates optimal conditions for crop growth and development.

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LEXICAL MEANING RELATIONSHIPS OF WORDS IN GERMAN AND UZBEK LANGUAGES

Shohsanam Kodirova*

*Master's degree from Uzbekistan,
State World Languages University in Tashkent,
UZBEKISTAN

Email id: shohsanam.kodirova25@gmail.com

ABSTRACT

This article discusses the lexical semantic relationships of lexemes and demonstrates their similarities and differences in different languages using the method of comparison. This situation is compared by comparing the lexical meanings of the word "water" in German and Uzbek, and the cases of disproportion between them are explained with the help of examples. This analysis explains the reasons for the differences in the meanings of words in languages. List the factors that affect the perception of the word.

KEYWORDS: Word, Meaning, Content, Water, Difference, Similarity, Lexical Unit, Dictionary.

INTRODUCTION

Speech is made up of words, phrases, and sentences that are connected by content. Words and phrases have one or more meanings in the speech process and perform morphological and syntactic functions. The word and the meaning of the word are important factors. Only a person who understands the meaning and content of the word correctly can use the words correctly in speech and express his thoughts clearly. To do this, you need to master the language.

Today, the study of the relationship between the meaning and content of the word is becoming more widespread, and it is covered in many works. Because every aspect of the phenomenon of meaning, which is extremely complex, deserves special attention. The study of one aspect taken separately requires the analysis of another. From time immemorial, we have been accustomed not only to proving the relationship between lexical units and their meanings, but also to noting them. For example, we note that the third planet in the solar system is called the earth and sometimes the globe, the world, the universe, and we are not so interested in the relationship

between the expressed and the expressive. In fact, the relationship is very complicated. It is a well-known fact that a particular part of reality is not perceived uniformly by people and does not have a linguistic form. This is especially true when comparing words in different languages. Proof of this can be seen in the analysis of the word water (das Wasser) in German and Uzbek:

Das Wasser 1. a) aus einer Wasserstoff- Sauerstoff-Verbindung bestehende, durchsichtige, weitgehend farb-, geruch-und geschmacklose Flüssigkeit, die bei 0°C gefriert und bei 100°C siedet. - <i>Wenn es heiß ist, trinke ich gern Wasser;</i> b) Wasser eines Gewässers - <i>das Wasser ist sehr tief;</i> 2. Gewässer: - <i>ein tiefes, fließendes Wasser;</i> 3. Alkoholische wässrige Flüssigkeit: - <i>kölnisches Wasser;</i> 4. a) wässrige Flüssigkeit, die sich im Körper bildet: - <i>Wasser (eine krankhafte Ansammlung von Gewebsflüssigkeit) haben;</i> b) (ugs.) Schweiß: - <i>das Wasser lief ihm von der Stirn;</i> c) Urin: - <i>das Wasser nicht halten können;</i> d) Tränenflüssigkeit.¹	water 1. A salt-free clear liquid consisting of a chemical combination of hydrogen and oxygen: - Water is not only the blood and soul of the earth, but also a source of electricity; 2. Aquifers of rivers, lakes, rivers, etc: - the other side of the water. 3. Juices, juices, liquids in fruits, vegetables, etc. - Apple juice is very sweet; 4. Portable: no mattress, juice or jam (about fruit or food): "It's not soup, it's water." 5. Floral element in the form of a straight or wavy line in embroidery: - The water is white, the flowers are different; 6. Esk. A unit of land equal to ten tanobs "Every ten acres of land was water, and a man was sent to clear the canal at the expense of this area." 7. Various compound and compound terms include: - water eagle, water snake, water lily

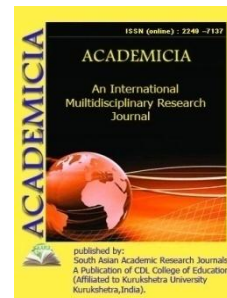
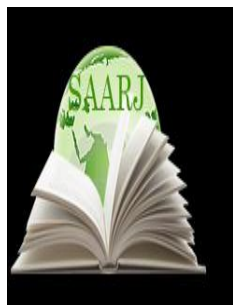
When we compare the meanings of the word das Wasser (water) in German and Uzbek, we can see similarities in the meanings of the words, as well as different aspects. The word das Wasser (water) has four meanings in German and seven in Uzbek. If we pay attention to the first meaning of this word, it is said in German that it is a colorless, odorless and tasteless liquid consisting of oxygen and hydrogen, and in Uzbek it is a salt without a chemical combination of hydrogen and oxygen. clear liquid; described as a substance found in nature in the form of water and ice, which is an integral part of all living organisms. This meaning of the word is one thing, although it is described differently. If we look at the next meaning of this lexeme, we can see

another similarity. That is, the word *das Wasser* (water) is the part of the earth covered with water, the meaning of naturally collected water is close to and similar to the Uzbek word for water surface of streams, lakes, rivers, etc. . But the difference is that in German, this meaning of the word has a poetic, artistic color. Let's look at the third meaning of the word. Here we can see the differences in the lexical meanings of the languages. The word *alcohol* in German does not mean alcohol in Uzbek. In contrast, in Uzbek, the word "water" can be used as a generic name for juices, juices, liquids in fruits, vegetables, etc. (pomegranate juice). In addition, the fluid secreted by living organisms, syrup (did not feel the continuous flow of water from the nose behind the flu); the word *water* is also used to refer to the liquid (bread that has run out of water) in various things. In the course of the analysis, in contrast to the Uzbek language, we did not observe the use of the German word *das Wasser* (water) in relation to liquids in various objects. All the paragraphs of the word in the fourth sense given in the German dictionary clearly show the disproportion between the two languages: in German, the word as a medical term also means the accumulation of damaged body fluids in tissues. In Uzbek it occurs in the form of fluid accumulation. The Uzbek lexeme cannot express the meanings of sweat, urine and tears in the following verses. Some of the meanings of this word in Uzbek are not found in German: the expression of taste in relation to fruit or food (it is not soup, but water). The word is used in embroidery as the name of a flower element in the form of a straight or wavy line (the water is white, the flower is a different curve). The reason why the word does not have this meaning in the German dictionary is that it is associated with Uzbek national handicrafts. In the history of Uzbekistan, the unit of land equal to ten tanobs was called *water* (Every ten tanobs of land was one water, and a man was sent to clear a ditch at the expense of this area). For this reason, this meaning of the word does not exist in German. In addition, the word "water" is used in the Uzbek language in various compound and compound terms. We can see this in the following examples: *water eagle*, *water snake*, *water flower*. Although this feature of the word is not included in the German dictionary, we find it in the form of a compound word in different contexts: *Wasserball*, *Wasserbau*, *Wasserbedarf*.

The analysis shows that in German and Uzbek there are some differences and similarities between the meaning and content of words. It would be a mistake to assume that words have similar meanings. But we don't think it's right to take certain differences for granted. There are a number of reasons for the differences. In the course of the analysis, we saw that factors such as the living environment of peoples, their worldview and life skills, emotional experiences, religious and national affiliation, achievements in science have an impact on the underlying image. All this proves once again that meaning is the fruit of intellect, of human cognitive activity. A person who understands the meaning acquires intelligence, uses the wealth of the nation with understanding - the language, preserves it and respects it.

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USING MOVEMENT GAMES IN TEACHING ENGLISH IN PRESCHOOLS

Mirkasimova Zilola Alisherovna*

*English Teacher of the organization,
of preschool education №516 in Tashkent,
UZBEKISTAN

Email id: zilolaxakimova0083@gmail.com

ABSTRACT

In this article you can find information about the structure of preschool education in the country, their decision-making, as well as recommendations on the correct and reasonable organization of lessons in preschool education, meaningful spending of children's time, what interactive methods to teach them languages and the importance of physical activity. In particular, the level of effectiveness of foreign language teaching depends on how the educator organizes the lesson, how to attract the attention of young playful children, how to teach new words for 20 minutes without tiring children.

KEYWORDS: *Preschool, Young Children, Sample Program, Variable Work Program, Movement Games, Physical Activity, Account Of Mastered Words.*

INTRODUCTION

Currently, a great deal of attention is paid to the use of interactive methods in all types of education. Interactive methods consist of innovative methods aimed at increasing the effectiveness of education. "Innovation" is derived from Latin and means renewal, change, innovation. In preschools, innovations mainly consist of technology integration within a play-based learning environment. Play is the main activity of preschool children and at the same time is an important tool for their physical and mental development. In the process of play, the child begins to form as a subject of personal activity. In fact, a child cannot be left in one place for a long time, he always strives to be on the move.

20 minutes are allocated for classes with young children in preschool institutions. The age characteristics of the children do not allow them to spend more time in the classroom. Even

during this time period, children will need to be involved in physical activity for several times. Therefore, the educator is required to compile each lesson minute by minute.

The state curriculum "Ilk qadam" ("First Step") developed for preschool educational institutions in the country has been adopted as a mandatory basic document of the variable curriculum, all preschool educational institutions develop their own working programs on the basis of this program in teaching children foreign languages. Nowadays, along with state-owned preschools in the country, private preschools have the right to develop their own working curriculum on the basis of the state curriculum.

It should be noted that the working curriculum is developed by teachers of the institution with the involvement of parents and approved in accordance with applicable law. In the varied curricula developed by preschool educational institutions, the content of lessons is enriched on the basis of teachers' experience, knowledge, new methods. The structure of the working program with a creative approach to the model program will further increase the effectiveness of young children's learning.

In the preschool education system, classes also start on September 2 and last till May 31. A summer recovery period will be held from June 1 to August 31. The following is the approximate number of classes for second language specialists during the week, month and academic year under the state program "First Step".

Analytical view of the school year in the preschool education system (in the example of a foreign language)	Held during the academic year the approximate number of sessions		
	per week	per month	during the academic year
	1	4	36

In the framework of the standard basic program "First Step" in teaching foreign languages to young children to learn an average of 4 new words in 1 lesson per week, as a result, the child learns an average of 16 new words per month, in 36 lessons during the school year on average 144 has been shown to master new words. This is definitely a high figure for children aged 6-7, and achieving it will depend on the level of effectiveness of the exercises.

In preschool education today, based on the needs of parents, additional classes in foreign languages (such as Russian, English, Arabic), mental arithmetic are organized. In particular, the level of effectiveness of foreign language teaching depends on how the educator organizes the lesson, how to attract the attention of young playful children, how to teach new words for 20 minutes without tiring children. In this case, the use of interactive methods aimed at ensuring the physical activity of children is extremely important.

Below we present a calendar and descriptive development of 1 lesson, which provides ways to achieve effectiveness through the involvement of children in physical activity in the organization and conduct of English lessons for children aged 6-7 years.

№	Type of training	Descriptive development of the lesson	Time allotted for training
1.	Saying hello and singing the appropriate song together	Teacher: Good Morning. Kids: Good Morning Teacher: How are you? Kids: I'm OK. Teacher: Are you ready for the lesson? Kids: Yes!!! Each session begins with the simple sentences above. Although the former may seem a bit difficult, but from the third lesson onwards, children will be able to use these sentences in full, without any difficulty. A good morning song is sung together: Good morning, good morning, good morning to you Good morning, good morning, I'm glad to see you The songs may change in the sequence of lessons. 	2 minutes
2.	Physical activity exercises	At the end of the song, the children are involved in light exercise by the educator. These exercises help the child focus on the lesson. It is also easier to memorize action names by doing exercises. The exercise is performed in English. Stand up Clap, clap (twice) Arms up Clap, clap (twice) Step, step Arms down Clap, clap (twice) Sit down	1 minute
3.	Repetition of the previous topic: "Numbers"	At the end of the exercise, the educator asks the children the question: How many fingers do we have? The children answer 10. Thus begins the counting of the fingers in English. If it is counted first as a chorus, then the sequence method is used. That is, children have to say the next number, not the number the teacher says: 1 – 2 – 3 – 4 – 5 – 6 – 7 – 8 – 9 – 10 The memorized poem on the previous topic is repeated:  1, 2, 3 - let me see I like coffee, I like tea I Like radio and TV Children memorize the poem by performing hand gestures that match the meaning of the poem.	3 minutes

4.	New topic: "Family fingers" of	In tune with Finger Counting, a new topic, Finger Family, begins. Now the names of family members are memorized with the help of fingers. Headline: Daddy Index finger: Mummy Middle finger: Brother Ring finger: Sister Little finger: Baby Each finger name is repeated several times in English. The educator uses play methods to reinforce children's skills in new words. Now it's your finger shows them one by one, without naming them. The children have to find the names of the fingers shown. For example, if the teacher shows the thumb, the children answer "daddy". This way the participants find the name of all the fingers. Then this situation is done in reverse. That is, the educator says the name of the finger in English, but does not indicate which finger it is, the children who hear the word "Daddy" point their thumbs. Thus 5 new words are easily mastered by children through play.	4 minutes
5.	Song: "Family of fingers"	"The finger family" Daddy finger, mummy finger, brother finger, sister finger, baby finger where are you? Here I am, here I am, how do you do?  The song is first repeated 2 times with the teacher in the form of a poem. It is then sung together as a chorus via multimedia. Singing the song in groups also gives the children fun. In this case, children are divided into 2 groups, ie boys and girls. The lines of the song about the father and brother fingers are sung by a group of boys, the words of the mother and sister fingers are sung by a group of girls, and the part of the song that belongs to the baby finger is sung together.	5 minutes
6.	Movement exercises	At the end of the lesson, children stand up and perform interesting movement exercises with the teacher:  Run jump swim dance stop sit down  These exercises are performed by the children together with	2 minutes

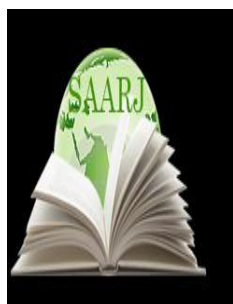
		the teacher in a good mood, not while running around the group, but in a good mood, and the lesson ends in the same good mood.		
7.	Conclusion	New words: 5 pieces (family members' names) Theme song: “The fingers family”		17 minutes
		Average score of new words learned during the week	The average count of new words mastered during the month	Average score of new words during the academic year
		4	16	144

As you can see, each type of work performed in the session is described minute by minute. All types of games and activities are designed to be performed as a team, with 20 minutes of physical activity, singing and poetry for children. The lesson on “Family” is based on the plan to teach 5 English words - Daddy, Mummy, Brother, Sister, Baby. By involving children in physical activity games during the lesson, the children will be able to learn 13 more action names as a result of repeating the teacher's instructions together.

Involving children in physical activity in language teaching in preschools makes them both physically and mentally healthy. Moving games help to keep children from becoming mentally exhausted, develop memorization and recall skills, and further enhance their interest in language.

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PEDAGOGICAL ASPECTS OF PREPARING ADOLESCENTS FOR INDEPENDENT LIVING

Nagmetova Nursulu Muratbaevna*

*Doctor of Philosophy in Pedagogical Sciences (PhD),
Nukus State Pedagogical Institute,
The Republic of UZBEKISTAN

ABSTRACT

The article covers various conceptual approaches to the formation of ideas for preparing adolescents for independent living, approaches to preparing adolescents for independent living, solving various social problems in adolescents through seminars, developing skills to behave in difficult life situations, as well as homework with students. practical skills in working with materials and technical means. A template has been created to prepare teenagers for independent living. This model summarizes the views on the pedagogical conditions, factors, specific features and opportunities of the pedagogical process, the gradual implementation of pedagogical technologies in the preparation of adolescents for independent life.

KEYWORDS: *Adolescent, Independent Living, Educational Process, Social Life, Conceptual Approach And Pattern.*

INTRODUCTION

Since the emergence of humanity, the continuity of the nation, its power and the role of youth, especially adolescents, in its development has played an important socio-political role, and each state saw its great future in developing the physical, mental and intellectual potential of youth.

In this regard, the Prime Minister of Singapore Lee Kuan Yew said that any nation or country sees its future in the image of the rising generation and prepares them for independent family life is important not only in personal life, family relations but also in public administration. a new generation is being formed that is interconnected, has strong knowledge, and is psychologically and emotionally ready for the rapid challenges of the new era. They are different people: independent, self-confident, demanding to study, ready for any work. They do not expect blessings from anyone. Among them, there will be strong leaders who will take the flag from our hands and lead it to the future of the nation "[1; 259-260-p.].

Main part

In the past and in modern education, there have been various conceptual approaches to the formation of ideas for preparing adolescents for independent living, which we have tried to analyze and summarize in the table:

Approaches and their representatives	The content and essence of the approach
Western philosophical approach	It is scientifically interpreted in the directions of masculism and feminism in Western philosophy. While masculineism exhibits masculine traits such as willpower, perseverance, a desire to show strength, risk-taking, and toughness, feminism generalizes the traits of submissiveness, obedience, sensitivity, empathy, and grief that are characteristic of women.
Historical approach	Courage was the highest quality valued by the ancient Massagets, Persians, and Sak tribes. Boys from the age of five to twenty were taught three things - horseback riding, archery, and accuracy.
Religious approach (Zoroastrianism)	Based on the idea of preparing children for independent life, the Avesto instills in the hearts of children the virtues of goodness and virtue from an early age, strengthens faith, cultivates a sense of hatred of evil and wickedness, and teaches the mind to fight evil. From an early age, children were taught to plant trees, make household utensils, cultivate the land, and raise livestock. After all, living by one's own labor ensures the well-being of life.
Oriental philosophical approach (views of Eastern thinkers)	In the East, the upbringing of a harmoniously developed generation, morality and preparation of young people for life is a priority. Adolescents are taught to be mentally, aesthetically and physically nurtured, to be hardworking and professional, and to provide for the family through independent labor. It is said that health, well-being, abundance of food, a loyal friend and rest are the guarantee of a good life.
Views of Uzbek enlighteners	In their opinion, it is important to give a child a multi-component upbringing, consisting of physical, mental and spiritual upbringing, in order for him to reach full maturity. In order to bring up children to be self-confident, strong, resourceful, agile and intelligent, it is important to bring them up in the spirit of respect for their dignity and honor, to teach them to respect those around them.
Reproductive approach	In preparing the adolescent for independent living on the basis of a healthy lifestyle, the development of a culture of healthy living, strengthening the will, active movement,

	including physical activity and sports, adherence to the requirements of personal and general hygiene; ecology and health; protection from accidents and injuries, avoidance of harmful habits; to form a conscious attitude towards proper sexual upbringing and leaving a healthy offspring in the future.
An active approach	It is imbued with the ability to live a prosperous, independent life through continuous study, self-exploration, active work, meaningful recreation, and the achievement of productive results.

Fig 1. Approaches to preparing adolescents for independent living.

Given the importance of forming a sense of self-respect in a child at this age, the teacher should look for ways to raise his or her prestige in front of the school community. To do this, the teacher informs the public about the child's achievements in this or that area, does not immediately reveal some of his mistakes and shortcomings to the public, talks to the teenager and shows in practice that he believes in his strengths, knowledge and abilities. A teenager who feels good about such support is involuntarily exposed to the teacher, as the teacher now becomes the person needed to build the relationship with the teenager.

As a result of experimental work, we were able to develop a theory of raising the level of personal behavior in the preparation of adolescents for independent living and to shape the attitude of adolescents to independent living. The basic principles of this theory are: persuasion of theories of independent living; the predominance of conscious activity; behavior control and planning; feeling independent life; overcoming fear; behavior change; caution.

Based on this theory, the experience of a school practitioner psychologist should be widely used in preparing adolescents for independent living. It is advisable for practicing psychologists to conduct individual work with adolescents and conduct various sociological surveys. In order to adapt adolescents to social life, it is necessary to organize seminars and trainings on such topics as "School of Independent Life", "I-in the future", "We are ourselves".

Through the training seminars, adolescents developed the skills to solve various social problems, to behave properly in difficult life situations, as well as practical skills in working with household appliances and technical devices. It would be expedient to hold practical trainings on such topics as "Our rights and duties", "Clothing", "Purchasing", "Means of communication", "Household chores and savings".

Susan Merrill also acknowledges the need to prepare adolescents for independent living, noting that they need to have the following skills:

- ability to cook;
- know how to manage the household budget;
- care for health;
- communicative skills, ie the ability to communicate and behave;
- know and understand how to work with cars;

- have basic household skills;
- be able to understand what people are like;
- sense of responsibility;
- be able to separate true love from temporary passions;
- recognition of failures and striving for further progress [2].

The formation of these skills in adolescents is important in foreign countries, including Eastern countries. It is necessary to cultivate national identity in adolescents, especially in food, in the management of the economy, in the interaction with people, based on our national mentality.

The Republican Diagnostic Center has been closely assisting educational institutions and parents in preparing children for independent life by directing them to a profession based on their interests at school age.

The pedagogical conditions for the preparation of adolescents for independent living were analyzed from a scientific point of view, and a model for improving the pedagogical mechanisms for preparing adolescents for independent living in general secondary schools was created and put into practice.

This model summarizes the views on the pedagogical conditions, factors, specific features and opportunities of the pedagogical process, the gradual implementation of pedagogical technologies in the preparation of adolescents for independent life.

The template consists of two blocks: a target and a meaningful block. legal, social, economic, psychological, pedagogical, patriotic, spiritual and moral factors play an important role in preparing adolescents for independent living. It is worth noting that the adolescence is well aware of their rights, the level of legal literacy encourages him to carry out all his actions on a legal basis throughout his independent life. Knowing in advance the legal consequences of each action will help you not to go astray. It also does not allow his rights to be violated by others.

Adolescents enter independent life on the basis of social relations. Therefore, he must have an understanding and perception of the society that surrounds him, learn to behave in a micro, meso, mego environment, to interact with others. Only then will he be able to freely express his thoughts and achieve his goals throughout his independent life. The economic factor plays an important role in living an independent and prosperous life. The formation of basic economic knowledge in adolescents, teaching them to save, helps to form the knowledge and skills to organize their family budget, plan it properly, distribute income correctly and ensure the economic stability of the family during independent life.

Psychological preparation of the adolescent for independent living is one of the main tasks of parents and secondary schools. Practitioner psychologists working in general secondary schools work with class teachers, science teachers and parents to prepare adolescents for independent living. Stepping into the independent life observed in adolescents, the feeling of fear of their obligations is overcome through various psychological trainings, interviews, tests. Only when a teenager is mentally ready for an independent life can he overcome any problems and obstacles without difficulty. In this process, the cooperation of parents with the school practitioner psychologist allows to achieve effective results.

In Uzbek and Karakalpak families, the role of teachings and precepts, legends and stories, legends, ie folk pedagogy, is important in preparing a child for independent life. In the upbringing of adolescents, special attention is paid to the Karakalpak national traditions and customs, national values, and the task is to preserve and enrich their continuity. Therefore, in the families of Karakalpaks, the advice of ancestors is widely used in preparing adolescents for independent life, educating them in the spirit of respect for their native land, the formation of a sense of patriotism. The above-mentioned factors are the essence of the spiritual and educational work with adolescents. In general secondary schools, in-class and out-of-school activities, the main goal is to prepare the teenager for independent living.

Proper organization of the pedagogical process in the preparation of adolescents for independent living is desirable. Therefore, the idea of preparing adolescents for independent living is included in the content of subjects taught in general secondary schools. Pre-design of the goals and objectives of the subject is achieved through teaching through pedagogical and information technologies, as well as innovative management of the pedagogical process.

In this process, the motivation to prepare adolescents for independent life, the unity of goals, interests, needs, desires and aspirations for the acquisition of scientific and theoretical knowledge, the study and teaching of the laws of life are important. It provides creative cooperation between the subjects of the educational process, unanimous decision-making, free thinking, creating a spiritually friendly environment in the community, communicative cooperation aimed at a common goal.

In the pedagogical process, the preparation of adolescents for independent living can be organized on the basis of the following chain: Teacher-student; student-teacher; teacher-class team; class team-teacher; student-team of the educational institution; student-to-student; student, teacher, class community civil society institutions; student, teacher - parents; the school community is the general public.

The expediency of this template; humanism; community and community education; to treat the person with respect; relying on positive personality traits; to know the essence of the concept of independent life in adolescents, its gradual application to the educational process on the basis of the principles of membership, interaction in educational activities; the ability to control one's own behavior; to understand that service to the motherland and society is of the highest value; ensures that he is able to set a goal and be consciously ready to achieve it. As a result, knowledge, skills and abilities about independent living in adolescents are brought up in accordance with the age.

The use of effective forms and methods of educational work is important in preparing adolescents for independent living. In order to effectively organize this process, teachers, parents, students and adolescents in the community need to know the state of preparation for independent life, to determine their knowledge, imagination and skills, to know the level of respect for friends, teachers, especially parents, their place in the family. It is important to determine the behavior in the neighborhood, their physiological-hygienic and pedagogical-psychological aspects.

In particular, the interests, inner needs of adolescents, the separation of educational aspects, the organization of the educational process on the basis of special standards, the preparation, retraining and professional development of teachers in this process, the joint conduct of the

educational process, effective forms, methods and tools of education have the skills and abilities to use it, to manage it innovatively, to identify the criteria of education to be inculcated in the minds of adolescents by introducing advanced, acceptable aspects of pedagogical technology into the content of educational work, to monitor their results, to implement the acquired spiritual and moral qualities is a guarantee that they will grow up to be active citizens.

Thus, in preparing adolescents for independent living:

- adherence to psychological and pedagogical principles, conditions, factors, laws;
- Organization of psychological, physical and medical preparation of adolescents for independent living;
- Relying on advanced experience, theoretical ideas promoted in world science;
- It is important to prepare and publish popular science literature on the preparation of adolescents for independent living, to ensure their access to every family, to organize special sections in the media.

In short, the pedagogical views of Eastern thinkers, the content of legal and regulatory documents on the education of young people, scientific and theoretical ideas in the field of pedagogy, psychology serve as a methodological basis for the preparation of adolescents for independent life. The preparation of adolescents for independent life on the basis of spiritual and moral, social, economic innovations, life experiences in society plays an important role in the formation of a strong life position of young people.

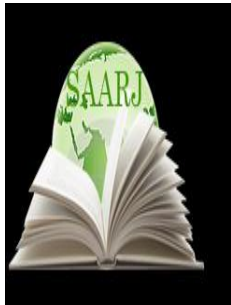
CONCLUSION

Effective use of modern pedagogical technologies, interactive methods and information and communication technologies, taking into account the geographical and demographic conditions on the basis of the pedagogical model of preparing adolescents for independent life has a positive effect.

In determining the effectiveness of the preparation of adolescents for independent living, it is necessary to use clear indicators within the topic, relying on a clear methodology. In the preparation of adolescents for independent life, along with secondary schools, pedagogical cooperation of social institutions, the use of modern forms of organization of educational work, social projects give good results.

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EQUALLY BENEFICIAL ECONOMIC COOPERATION BETWEEN THE UNITED STATES OF AMERICA AND UZBEKISTAN

Rahmatov Ilgor Erkinovich*

*Researcher,
UZBEKISTAN

Email id: longway06@mail.ru

ABSTRACT

This article provides a historical overview of the economic relations established between the Republic of Uzbekistan and the United States during the years of independence. The main focus of the article is on major projects implemented with the participation of the two countries, and their significance.

KEYWORDS: *Economic Ties, Cooperation, Joint Venture, Large-Scale Projects, Implementation, Cooperation Agreement, "Diversified" Economy, Technical Resources, Investment Climate.*

INTRODUCTION

In the first years of Uzbekistan's independence the country's economic situation was very difficult, mainly cotton-growing industries are partially developed and most of the products needed for the daily needs of the population are imported from other parts of the former Soviet Union. Urgent economic measures were needed to rectify the situation. The need to establish economic ties with foreign countries as soon as possible was necessitated by the existing conditions. Our country's first economic ties with the United States were also related to food security. The first American-Uzbek joint venture, Uzbek chicken, was founded on September 15, 1991, and this joint venture was co-founded by America the New York-based firm Agritech International. The company was established to produce turkey and other poultry products[2]. Later, cooperation in this area did not develop, and the main reason for this was the low purchasing power of the population and the high cost of the planned projects.

The economic relations between the two countries do not have a clear advantage in any area, that is, large-scale projects have been implemented in many areas within the framework of economic relations. Economic relations between Uzbekistan and the United States can be divided into two

periods, and the chronological boundaries of these periods cover the period from 1992 to 2004 and from 2006 to the present.

Within the framework of economic relations between Uzbekistan and the United States in 1992-2004, a number of large-scale projects were implemented and manufacturing enterprises were established. In particular, on January 15, 1992, the first President of Uzbekistan Islam Karimov met representatives of the Newmont Mining Corporation of the United States, headed by Gordon Parker, President of the Newmont Mining Corporation. During the meeting, the sides discussed issues of cooperation in the mining industry, in particular in gold mining. The positive results of these meetings led to the signing of a document on the establishment of the Uzbek-American joint venture "Zarafshan-Newmont" on 20 February this year in Tashkent. The Zarafshan-Newmont joint venture, with a charter capital of \$ 85 million, had an equal share of the two countries, with 50% owned by the State Committee for Geology and Mineral Resources and the Navoi Mining and Metallurgical Combine, and the remaining 50% by Newmont. The main activity of the company was to extract gold by processing waste from the Muruntau deposit in Central Kyzylkum. The enterprise was launched in 1995 at a cost of \$ 225 million. In the first phase of its operation, it was able to extract 12 tons of pure gold in exchange for processing 13.8 million tons of ore per year[1].

While Uzbekistan has been cooperating with the United States in the economic sphere, there have also been opportunities for cooperation in the provision of mobile services. Because in the first half of the 1990s, the United States became the world's leading provider of mobile services. In Uzbekistan, this service has emerged as a completely new field. The presentation of the Uzbek-American mobile communication company Uzdunrobtaon August 20, 1992 was a big practical step in this direction. The significance of this presentation is that the service provided by the joint venture "Uzdunrobta" was one of the leaders not only in our country, but also in the CIS.

When thinking about the development of economic relations between Uzbekistan and the United States, it is necessary to pay special attention to the projects implemented with major US financial institutions, the relationship with them. On September 28, 1993, the first President of Uzbekistan Islam Karimov, who was on an official visit to the United States, visited the head office of JP Morgan Bank, one of the world's largest banks, and held talks with the bank's managers. As a result of these negotiations, a cooperation agreement was signed with the National Bank for Foreign Economic Affairs of Uzbekistan and J.P. Morgan Bank. On the same day, the President of Uzbekistan signed a cooperation agreement between the National Bank and Chemical Bank, which visited the head office of another major bank Chemical Bank. These meetings and the agreements reached were a positive development for the banking and financial system, which is still in its infancy in our country. Because the banks of our country, which have low credit ratings and financial strength in international markets, have benefited in every way from cooperating with well-known banks. In particular, the participation of our banks in the implementation of major projects has increased, and their ability to lend and receive has improved and their ratings have improved.

In the early years of independence, the United States had a common program of economic cooperation with Central Asian countries, which included large-scale conferences, meetings and

seminars for the countries of the region. One such international conference was held on May 5, 1994 in Washington, DC, with the participation of the Uzbek delegation. More than 300 American companies participated in the US-Central Asia: Partnership for Development international conference organized by the US Department of Commerce. Within the framework of the conference, the Uzbek delegation also held a number of important meetings, in particular, the meeting with the US Secretary of Commerce D. Brown. During the meeting, Mr. Brown noted that the US economic relations with Uzbekistan are developing rapidly in the Central Asian republics [3].

The participation of the Uzbek delegation in the international conference "US-Central Asian Republics: Partnership for Development" has become of great practical importance. After the conference, delegations of several American companies visited our country. In particular, on September 10, 1994, a delegation of the insurance company led by the Chairman of the Board of Directors of the American company AIG Maurice Greenberg paid an official visit to Tashkent. The delegation was received by President of the Republic of Uzbekistan Islam Karimov. On the same day, Deputy Prime Minister of Uzbekistan B. Hamidov and Maurice Greenberg signed an agreement on cooperation between the Government of Uzbekistan and AIG and the opening of an official representative office of the company in Tashkent. In addition, on November 1, 1994, a delegation led by the Chairman of the Board of Donavan Enterprise V.B. Donovan visited our country. The American delegation expressed interest in the processing of Uzbek cotton. During the visit, Donavan Enterprise presented its technologies for processing Uzbek cotton from its many years of experience [5. 99].

Initiatives to develop economic relations and trade between Uzbekistan and the United States have been strongly supported by officials of both countries. In particular, the US Department of Commerce has repeatedly organized official delegations to Uzbekistan, which included directors and chairmen of large firms and companies. At the same time, the initiatives of US Senator S. Brownback and Adviser to the Ministry of Commerce Jan Kolinski in developing economic relations with Uzbekistan should be noted. In the first decade of our independence, economic relations between the United States and Uzbekistan developed rapidly, but the implementation of major projects took some time. When we analyze the economic relations between the two countries, we can see that U.S. companies do not pay special attention to any area. That is, they have expressed a desire to cooperate with our country in any field, and this is a positive thing. This, in the language of economists, creates a "diversified" economy.

When studying the economic relations between the United States and Uzbekistan, we can see that mutually beneficial projects have been implemented in the field of agriculture. Major practical work in this area began on June 10, 1998 with the visit of Uzbek farmers to the United States. On the same day, the famous American company KELI Glottal INC, together with the Polytechnic University of California, the Republican Business Incubator and the State Property Committee of the Republic of Uzbekistan, developed a program for young Uzbek farmers to study in the United States. Under this program, 14 young Uzbek farmers have been trained in the United States for 11 months on modern farms in Indiana, Wisconsin, Massachusetts, Maine and Connecticut. During the course, young Uzbek farmers learned how to organize and apply the

latest technologies in agricultural production. The Young Farmers Rapid Training Program planned to send more than 100 Uzbek farmers to the United States each year.

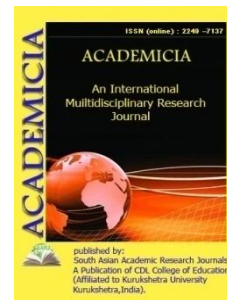
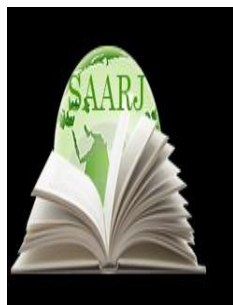
Mutually beneficial economic relations between the two countries have been developing rapidly in the field of agriculture. One of the most important agreements reached in this regard was the US-Uzbek Joint Venture Support Program of December 3, 1998, according to the decision of the Cabinet of Ministers of the Republic of Uzbekistan, equipment, material and technical resources, components provided by the American corporation "Keys" as a contribution to the statutory fund of the joint ventures "UzCasemash", "UzCasetractor", "UzCaseservice" and "UzCaseagroleasing" are exempt from all taxes for five years was made. It should be noted that the Uzbek-American joint venture UzCasemash was established on February 11, 1997 [4].

Cooperation between the Government of Uzbekistan and the American company Case New Holland has played an important role in strengthening the technical base of agriculture in our country. In particular, by the end of 2004, the number of Cases in the fleet of agricultural machinery exceeded 5,000. At the same time, 22 new machines were exported. The localization of the components of these machines was 35%. In 2012, as a result of cooperation between UzCasemash, UzCasetractor and other companies, the production of New Holland TL 100, NS135, Case IH 1200 agricultural machinery for farmers was launched in our country [5.127].

Mutually beneficial cooperation between our country and the United States has been developing rapidly in recent years. The policy of openness pursued by President Mirziyoyev is of great interest to American entrepreneurs and representatives of big business. In particular, Boeing, Cargile, Caterpillar, Kellogg and Neosho Ivey, IBM, Keys, Enron, Cummins, GM, Apple, Chevron, Exxon Mobil, General Electric, Honeywell UOP, Firms and companies such as United Investment Healthcare Group LLC, General Electric Gas Power Services, Silverleaf Capital are interested in investing directly in various sectors of the Uzbek economy and industry. In same time, our government has done a number of things to improve the investment climate in our country, which will serve to further develop existing economic ties with the United States.

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DIACHRONY OF TERM FORMATION OF GERUNDIAL STRUCTURE IN ENGLISH

Saidova Aziza Davlatovna*

*Researcher,

Teacher of Samarkand State University of English Department,
UZBEKISTAN

ABSTRACT

The term formation with the –ing form in aspects of dictionary codification (lexical-semantic variance, nesting, interrelation of general and terminological vocabulary, monosemantic-polysemantic, derivation) are considered.

KEYWORDS: *Variance, Nesting, Term-Formation, Derivation, Terminotypology, Gerundial Substantives.*

INTRODUCTION

It is known that terms are words of a special function. They are distinguished by specialized meaning, semantic precision and intellectual certainty [Bushuy, 9]. In the terminotypology of the English language, gerundial marked formations are distinguished [i.e (ing) forms].

The formation of terms is one of the most striking processes in the development of the semantic structure of gerundial substantives in modern English. They are closely intertwined with the specialization of action and objectification of action, which may have terminological meanings [Alekseenko,166].

In addition to the synchronous analysis of the tendency of gerundial substantives towards terminology, the diachronic approach is very indicative

[Caso,101].

When analyzing the semantic structure of gerundial substantives in the diachronic plan for the data of dictionaries that cover a period of 80 years from 1933 to 2013:

OED 1933; OED - 1999; OED - 2010; Supplement to Oxford - 2012; 2013; and etc.

Consider the gerundial substance boxing as a terminological sample.

The following lexical-semantic variants of boxing were registered in OED - 1933:

1. The putting into, or providing with, a box.

Law The lodgment of pleadings and other documents in court

2. The applying of “boxes” or cupping-glasses in surgical treatment; cupping.

3. Naut. Box-hauling.

4. A structure or work of boxes.

5. Ship-building. A square piece of dry hard wood used in connecting the frame timbers of a ship; also a scarf joint.

6. The two cases, one on earth side of a window, into which shutters are folded.

In the dictionary WIND – 1959 the semantic structure boxing is given as follows:

Boxing – n. –

1. Act of enclosing something in a box.

2. A box-like enclosure or recess.

3. Material used in making boxes, casings.

4. Arch. The external case of the material used to bring any material to a required form.

5. Civ.Eng. A mold for concrete.

6. pl. Milling Course flower separated in bolting.

7. Naut. The scarf joint uniting stem and peel.

8. Shoemaking. A leather or canvas stiffening used in shoes to give permanent shape.

As can be seen from the comparison of the semantic structure Boxing in OED – 1933 and in WIND – 1959, in the latter five lexical-semantic variants are registered [3,4,5,6,8], which is not registered in OED – 1933. Four of them are terminological [4,5,6,8].

Supplement to OED - 2012 fixes the following additional lexical-semantic variants of boxing -

1. Various technical senses.

Mech. the fitting of a shoulder of a tenon in the surface of the timber, which is mortised for the reception of the tenon.

2. Coal and Metal Mining. A method of securing shafts solely by slabs and wooden pegs.

3. Shoemaking. A term used to designate the stiffening material placed in the toe of a shoe to support it and retain the shape; such as leather and composition of leather and paper, wire net etc.

4. A wooden casing, conduit, etc. constructed after the manner of a box; the lining of a well.

5. Austr and N.Z. boxing - when your sheep go and join another mob feeding close by, and you can't tell one from another except by the brand of the ear-mark.

All new lexical-semantic variants registered in Supplement to OED - 2012 have a certain terminological orientation.

It is advisable to bring information from specialized terminological dictionaries to the above data.

Thus, ARCJ - 1992, registers boxings [case of double lexicalization as an agricultural term]: boxings - coarse seeding (after sifting out the bran from flour).

In AMC - 1992 the following lexical and semantic variants of boxing are registered:

Boxing –

1. box, container, casing; 2. village Connection in an oblique lock (for example, a stem with a keel); timber; connecting the branches of the frame.

So, it can be seen that the filiations of meanings in boxing is due to the development of terminological lexical-semantic variants. A similar phenomenon is found in the substances winding, setting, reading, rating, landing, holding, heading, finding, dressing, drawing, bearing.

This variation due to the terminological lexical-semantic variants in the gerundial type of substantives is very intensive. Supplement to OED - 2012/2013 confirms this.

It is interesting to cite data from earlier editions of this dictionary, where a number of lexical and semantic variants of gerundial substantives are of a terminological nature.

So, in 1947. breeding has a registered lexical-semantic terminological variant that belongs to the field of nuclear physics:

Breeding - 1. Nuclear Engin. The production of fissile material. 1947.

In 1957. the indexing substantive had a terminological lexical-semantic variant that belongs to the computational domain: indexing - computers. The automatic increasing or decreasing of the address portion, following each execution by means of an index register so that a succession of operands is operated on.

The monosemantic term haloing belongs to the field of printing, which originated from the verb halo in 1967:

Haloing – Paper / Ink Terms for Letterpress Printing, the appearance of vehicle from the ink round half- tone dots or characters.

From the above, the following generalizations can be made.

1. Gerundial substantives function as

a) monosemantic terms:

arcing - email arc discharge, overlapping;

b) polysemantic terms:

blanking - 1.el. locking (cathode ray tube);

2. physical - extinguishing;

3. those. - stamping (or cutting) from a sheet;

c) terminological lexical and semantic variants of the common word:

loosening –

1. weakening;

2. loosening (soil);

3. relaxation.

2. Gerundial substantives are relatively rare in monosemantic and polysemantic functions. More often they are used as terminological lexical and semantic variants. Along with absolute terms, these terminological options are implemented on the basis of a common feature - belonging to the terms of this particular science.

Terminological lexical and semantic variants of the same substantive can

a) belong to one field of science or technology and

b) cover a variety of areas of science, technology, production and culture.

3. In modern English, the enrichment of the semantic structure of substantives is largely due to the development of terminological lexico-semantic variants.

4. The productivity of the process of terminology of substantives is explained by the fact that they most clearly express the concept. Hence the particular predisposition to function as a term.

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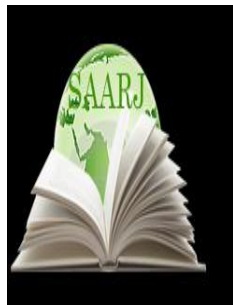
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PICTURE LETTER FROM USMAN MUSHAFI AND ITS FEATURES

Hasanxon Yahyo Abdulmajid*

*Researcher,
Faculty of Islamic Studies,
International Islamic Academy of UZBEKISTAN

ABSTRACT

The official letter of 'Uthman refers to the spelling style of the Mushafs copied under the leadership of Caliph' Uthman ibn Affan. The significance of the official letter is that from ancient times, all Muslim scholars have stressed the need to write the Qur'an only in this spelling. However, scholars have differed on whether this spelling was recorded by revelation or based on the knowledge of the Companions. Many claim that the spelling of the Qur'an was based on the knowledge and experience of the Companions, while at the same time under the control of revelation. This idea has a scientific basis. There are different aspects of the official letter from the current spelling, and researchers have interpreted this difference differently: 1. Some scholars, including many orientalists, have claimed that the features in the official letter arose because the Companions did not know the letter well. This idea has no scientific value. 2. A group of scholars have linked the features of the official letter to divine mysteries, tried to interpret them inwardly, and have gone deep into the matter. This idea also has no scientific basis and does not conform to the rule. 3. The features observed in the official letter were a requirement of the spelling rules and skills of the time. Ancient scholars and modern researchers have supported this view. Scientific research also proves this.

KEYWORDS: Holy Quran, Uthman Mushafs, Official Letter, Official Letter Features, Revelation, Hazf, Ziyoda, Badal, Hamza, Fasl And Wasl.

INTRODUCTION

Osman's mushafs are written in a form devoid of action and points. A group of scholars argue that the picture of the Companions was made so that it corresponded to the recitation of the letter. However, it is known from the history of Arabic writing that we have studied above that at that time the use of points and gestures in Arabic writing itself was not in circulation. However,

this does not deny that the Mushaf script was written in accordance with the recitations. In other words, the two conditions are combined - that the official letter conforms to the spelling rules of the time, and that it follows the discrepancies in the recitations.

Today, whether it is handwritten mushafs or printed ones, the picture in Osman mushaf is published according to the letter. Only when placing characters is the work done according to a certain reading. For example, in most of the mushafs in us, as well as in the world, dots, movements, and other signs are written according to Hafs' narration from Asim. It is possible to find the mushafs of other recitations as well.

It is known that the Qur'an was revealed in plain Arabic. There are a number of verses about this, enough mental evidence. However, since there have been different dialects in Arabic since ancient times, the question naturally arises as to which dialect of the Arabic language the Qur'an was revealed in. Some scholars say that the Qur'an was revealed only in the dialect of Quraysh, because the Messenger of Allaah (peace and blessings of Allaah be upon him) was from this tribe, while others say that the Qur'aan includes other dialects.

In the words of a number of great Companions, it is clearly stated that the Qur'an was revealed in the dialect of Quraysh. But it is also true that other dialects are reflected in the Qur'an. For example, in the Quraysh dialect, there is no hamza in the middle of a word, but there is a hamza in the recitation. Therefore, the scholars say that the words of the Companions, "The Qur'an was revealed in the dialect of the Quraysh," should be understood in the sense of "most of it, most of it," or "the beginning." However, this does not deny that the Mushaf was written in accordance with the Quraysh dictionary.

Abu 'Amr al-Dani said, "However, most of the official letter is written in the tawfiq (ie without the hamza). This is because the people who were responsible for moving the Mushafs during the time of 'Uthman were Quraysh. That is why many hamzas are written in the form of tashil - hamza with a vowel. It was in their natural skills, in their language. "

In conclusion, the Qur'an was revealed in the Quraysh dialect, and accordingly, the picture was written in a letter and recited in other Arabic dialects with the permission of the seven letters. It was definitely within the framework of those seven letters that were taught, not everyone read on their own based on their dialect.

It is not said that the Qur'an was written in seven letters in the time of the Prophet (peace and blessings of Allaah be upon him). However, a group of Salafi scholars have stated that seven letters are taken into account in the pages of Abu Bakr. Abu Amr Dani stated this openly in Muqni, and Imam Shatibi, who composed this work, also supported this idea.³ However, in the commentary of that verse of Jabari al-Shatibi, he said: "But in the words of Abu Bakr and Zayd, this meaning is not clearly stated, but it is understood from the flow of their words."

As for the fact that the 'Uthman Mushafs contain seven letters, a group of scholars say that these Mushafs are written in only one letter, and the remaining six letters are invalid, while most scholars say that they contain all seven letters or a picture. Researchers support the latter view. The official letter here refers to the Mushaf inscription, the foundations of which were laid in the presence of the Messenger of Allaah (peace and blessings of Allaah be upon him).

From the time of the Companions to the present day, the scholars of the Republic have agreed that it is obligatory to write the Qur'an in accordance with the letter of the Mushafi Ottoman script.

As a result, a group of ecclesiastical scholars have argued that the letter is false. The first scholar to speak openly on this subject was Abdulaziz Dabbagh, who narrated it in his book *Al-Ibriz*, which he wrote to summarize what he had heard from his disciple Ahmad ibn Mubarak.⁵ Dr. Ayman Rushdie Suwayd, one of the most prominent scholars of modern times in the field of recitation, and an academic teacher of Qur'anic sciences, also says that the official letter is *taqwa*.⁶ However, this is a controversial issue, and most experts support the idea that the official letter is *ijtihad*, not *taqwa*. They provide a number of arguments for this statement. In particular, the differences in the personal mushafs of some of the Companions, in particular, the differences between the imam mushafs, are said to be evidence that the official letter was written on the basis of *ijtihad*. The other side responds to this evidence by saying that those contradictions were also narrated from the Messenger of Allaah (peace and blessings of Allaah be upon him). However, a person who has studied the history of mushaf katobati will not find any clear evidence from previous sources to indicate that the official letter is *taqwa*, which none of the ancient scholars have said.

In our opinion, these two ideas can be combined to the following point: Although the letter of the Mushaf is not *taqwa*, that is, the Prophet (peace and blessings of Allaah be upon him) did not teach how to write the words literally as he taught the pronunciation, it is important that they were written in the presence of the revelation reaches.

Reports that the Messenger of Allaah (peace and blessings of Allaah be upon him) re-read and corrected the verses to the scribe confirm our words. In other words, it can be said that the paper letter was supported by a circumcision. That is why the Companions copied the Mushaf from the writings written in the presence of the Prophet (pbuh) and tried not to change this letter as much as possible. However, they may have worked with *ijtihad* in problematic places when necessary.

The scholars have studied it very carefully and thoroughly, as it is considered that the secretary of the mushaf must follow it, whether it is *taqwa* or *ijtihad*. In the Mushaf picture letter, some words were written in a peculiar way, which differed from the usual spelling. In particular, as linguists corrected and improved spelling, the difference between mushaf writing and consumer spelling increased. In order to preserve the words of the Mushaf, the scholars copied them to the Mushafs in the form of an official letter, studied and narrated these differences with great precision, and began to create works on the subject. Hamza ibn Habib Zayat's statement, "I was afraid that I would lose my eyesight if I looked at the Mushaf too much," is an example of how much research scholars have done in this regard. As a result of research on this topic, a new science has emerged in the field of Islamic sciences, which has its own sources and scientific works - the science of Mushaf painting.

One can get an idea of how the science of formal correspondence was formed and developed by studying the history of its sources.

Since a letter is a written expression of speech, it must be consistent with oral speech. Although the Mushaf official letter is also based on this law, some words are written contrary to the rule of comparison. This, of course, had its own basis and goals. Therefore, the scholars not only studied the Mushaf picture letter, but also tried to explain its features. Early authors limited themselves

to conveying a picture letter. Perhaps this is because they know the reasons why some of the words in the mushaf are written in a specific way. Or they may have advanced the idea that "there is no need to open this subject, the mushaf picture is not comparative, it is to be followed, copied as much as possible, and to spend on other necessary sciences without spending time explaining it." However, by the fifth or sixth century AH, scholars began to focus on interpreting the characteristics of the mushaf painting. After the Middle Ages, some authors focused more on this topic and engaged in lengthy debates. In general, views on this issue can be divided into three groups:

1. The Mushaf secretaries mistyped some words because they did not know the rules of writing well, because in their time there were few literate people, and the spelling rules were not yet well formed. That is why a word is written in two different places.

According to those who hold this view, the Companions made spelling mistakes in copying the Qur'an because they did not know the letter well. The contradictory expressions in the writing of some words in the Mushaf are the result of this situation. However, since the narration of the Qur'an was mainly based on oral instruction, it was read correctly based on the teacher's teaching, even if there was an error in the writing.

Among the linguists, Yahya ibn Ziyad Farro (d. 207 AH), later Ibn Qutayba (d. 276 AH), Ibn Khaldun (d. 808 AH) and others put forward this idea. However, scholars argue that this view is unfounded and one-sided without a thorough study of the subject. Ghanim Qadduri concludes about this as follows:

"In short, this view of the official letter image stems from a lack of understanding of the history of Arabic writing, the nature of the letter, and its fundamentals. As the researcher examines the Mushaf picture letter, this should be far from a sectarian view. This is because the views of this sect prevent the correct understanding of the image of the letter and lead to the accusation that the Companions made a mistake when they wrote the Qur'an in the presence of the Prophet (peace and blessings of Allaah be upon him), compiled it into pages and copied the mushafs. However, they acted with great precision in their writings, and in their oral speech they complied with the requirements of *vasl* and *waqf* without allowing any excesses or shortcomings. "

Ghanim Qadrudi substantiates this statement in the following pages of the book with very strong documents, material evidence. Those who wish can refer to that source.

In fact, the Companions first wrote the Qur'an in its entirety in the presence of the Messenger of Allaah (peace and blessings of Allaah be upon him), reviewed it, and revised it from time to time. In the time of Abu Bakr, he also made great scientific efforts to compile the Qur'an into compiled pages. In writing the Mushafs of 'Uthman, however, each word was copied with special attention and advice, and the Mushafs were repeatedly examined and compared. Under such a scientific approach, errors cannot be avoided, as Ibn Qutaybah said. Their opinions do not only correspond to the features of the letter, but also to the messages about the process of writing the mushafs.

2. There are hidden secrets in writings that do not seem to correspond to the speech in the official letter, and the mind is incapable of fully understanding them. However, only those who are open-hearted and those whom Allah has revealed can know the inner meanings of the letter as a precious power, or only through divine discovery.

The emergence of this sect may have been due to the fact that the people of the previous sect blamed the Companions for error and illiteracy, thus casting a shadow over the belief in the protection of the Qur'an.

After all, the representatives of this sect tried to present a number of arguments in support of their views, writing separate works on the subject. The greatest leader of this sect is Ibn Banno of Morocco (d. 721 h). Badriddin Zarkashi (d. 794 AH) narrated the spiritual interpretation of some words in Burhan and Jalaliddin Suyuti (d. 923 AH) in Itqōn.

Ibn Banno Morocco tried to provide certain rules for the spiritual interpretation of the official letter in his book *Unvōnud-dalīl fī mars ma'lummi hottit-tanzīl*. However, most of them did not rely on clear evidence. Sometimes the story went too deep and too far from the goal. But the belief that the features of the official letter were not in vain, and that the scientific efforts to study them were based on certain principles, led to new research, encouraging scholars to interpret the official letter from a linguistic point of view.

3. The Mushafi Sharif was written on the basis of the spelling rules of that period, and the Companions made the most of the existing rules in writing the Mushaf. The fact that some words in the Mushaf are written in a specific way, with the exception of the general rule, is based on ignorance, negligence, or simply not clear goals. Consequently, the view that the Companions made a mistake in writing the Mushaf is nothing but ignorance. It is clear that a person who has studied the features of the picture in depth will come to this conclusion.

To understand the features of the official letter, it is necessary to study the spelling of that period. Indeed, the scribes of the Qur'an wrote it according to the spelling rules of their time. The spelling rules known to many were formed in the second and third centuries AH.

The Companions mobilized all their knowledge and writing skills to express the Qur'an in the Mushaf as they received it from the Messenger of Allaah (peace and blessings of Allaah be upon him). They sometimes went beyond the usual spelling rules to express more clearly in certain words based on their tastes, their understanding. At the same time, they significantly reformed and developed the letter. These words are not just opinions, but conclusions that have a spelling basis.

The owners of this sect interpret the features of the official letter from a linguistic point of view, using spelling rules. In fact, this view is the oldest, earliest idea about the characteristics of a picture letter, and has been put forward by many experts in the field. However, in the Middle Ages, the idea of the previous two sects became more widespread. Modern research, on the other hand, supports the idea of this third sect and further clarifies the issue with unprecedented scientific advances made in recent years.

In conclusion, the following can be said:

1. Neither in antiquity nor in the present did writing fully express speech. That is, both in ancient letters and in modern alphabets, writing and speaking do not completely coincide. Some letters are written but not read, and in some places one letter is written and the other speech sound is pronounced. This condition is present in the spelling of all languages. Numerous examples of this can be seen, especially in English and Russian. But no one calls it a mistake or a fault, but the possibility of writing itself is taken for granted.

There is also this phenomenon in the Mushaf spelling, although the writing possibilities of that period were highly developed. But reading skills and education have filled this gap. Indeed, the Qur'an was first taught and studied on the basis of oral narration.

2. Variation in spelling some words is not considered an error. In the Mushaf, sometimes words of the same type are written differently in one place and differently in another, which, as noted above, has been considered by some scholars to be a mistake.

In fact, it is not a mistake to write a word or a letter in two or three different ways, but it is a common situation in all spellings. There is a similar rule in modern writings today. For example, the word "faith" is now written in the works both with y and without the letter y in the form of "faith." A similar situation existed in the spelling written by the Companions. However, the Companions were also very careful in choosing one of the two different looks at such a time. For example, they wrote some words according to the wasl, some according to the waqf, and mainly tried to preserve the image in the presence of the Prophet (peace and blessings of Allaah be upon him).

3. If we study the process of writing the Mushafs, it becomes clear that the Companions of the Qur'an used all the possibilities of the Arabic script of that time in expressing the Qur'an and its recitations in writing. Imam Dani says in this regard: "The Salaf, may Allah be pleased with them, relied on a correct basis in every form of mushaf, at every point, and used language and analogy. Indeed, their knowledge, their status in eloquence, require it. He who knows knows, he who does not know does not know. Fazl is in the hands of Allah, He gives it to whomever He wills. God is of bounty.

Letters represent speech sounds, speech sounds mean words. Consequently, in fact, the number of speech sounds with letters must be common. However, just as the ancient Arabs tried to keep the sentence short on the subject of eloquence in speech, they also tried to keep the writing as concise as possible in spelling. Therefore, they did not express short vowels, or even dots, in the text. In some places, the long flourishes were dropped. At the same time, they tried to fully express the oral speech in writing according to their own feelings and tastes.

Osman Mushafi's picture is called "terminological picture letter" and most of the comparative picture corresponds to the spelling of the letter. Only in some places do they have their own peculiarities, which are explained by the scholars of official correspondence in their works.

The Companions wrote the Qur'an in the script they used. In addition to the Qur'an, they wrote agreements, letters, and some hadiths in the same letter. In those letters, as in the Mushaf, there were cases of omitting or adding certain letters. After the Companions, the followers and their successors also used this style of writing in all their dealings. By the second century AH, when the linguists of Basra and Kufa had perfected spelling according to the rules of language, the science of modern literature emerged and called it the science of comparative writing.

As the works on the comparative letter were being completed, books on the Mushaf letter began to be written alongside it. This was intended to keep the Mushaf picture letter in its original condition.

Ibn Duruswayh (d. 346 AH) said: We have found that the letters of the Book of Allaah are incomparable and do not contradict them. They will be accepted as long as they are placed in the mushaf.

The scribes insisted on keeping the Mushaf letter unchanged, even if the spelling changed. Imam Malik asked, "Is it permissible to write the Mushaf in a new spelling?" when asked, the man replied, "No, it must be written in the first letter."

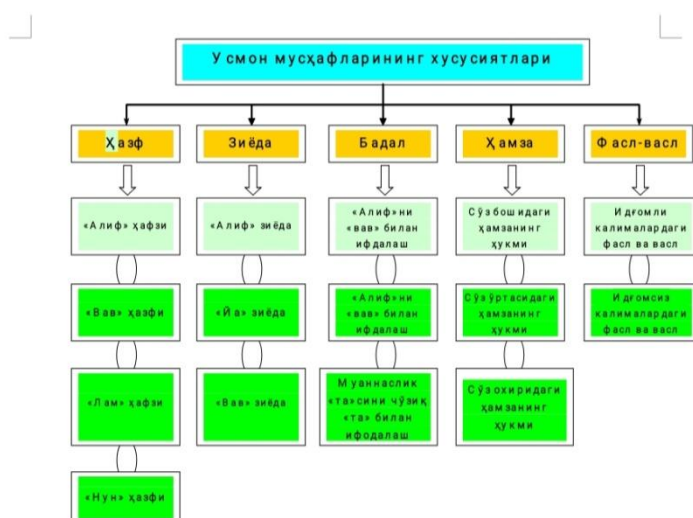
Abu Hayan said, "There are three types of the term Kitab: the term Aruz, the term Mushaf, and the terms used by the scribes in letters other than these two. That is why they said, "The two writings are not comparable - the Mushaf and the Aruz."

The characteristics of the Ottoman Mushafs are divided into five groups:

1. Hazf is to drop a letter.
2. More - letter addition.
3. Badal is the exchange of one letter for another.
4. Rulings on Hamza.
5. Section and vasl - to separate or write words.

Mutaakhir scholars also add a sixth group, which are words written in one of two different readings. However, this group of words is very rare and is studied separately from these groups because they do not have a specific rule and are not considered spelling.

Each of these five groups is divided into several networks. They can be seen in the table below.

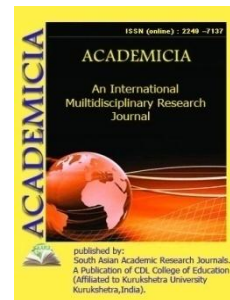
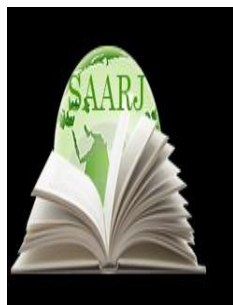


In the works devoted to the Mushaf picture letter, the differences are explained verbatim, indicating which word is written in which Mushaf. Since our goal is to compare the mushafs, we think that the above information is sufficient to understand the topic.

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ICHTHYOLOGICAL STUDIES OF FISHERY RESERVOIRS IN THE LOWER REACHES OF THE AMUDARYA

Atanazarov K.M*; Sultanov B.A**

*Nukus branch of the Samarkand Institute of Veterinary Medicine,
UZBEKISTAN

**Nukus State Pedagogical Institute named after Ajiniyaz,
UZBEKISTAN

ABSTRACT

In the past, Karakalpakstan was considered a "Lake district" and historically represented unique habitats for many species of flora and fauna. In the 30s of the last century, there were more than 140 large lakes in the Amu Darya Delta with a total area of about 600 km². With the reduction of the Amu Darya river runoff and the inflow of water into the lower reaches, the studies were continued in terms of identifying changes in the hydro regime of the Aral and the river, changes in their ichthyofauna, distribution, biology and migrations of fish in the sea and coastal zone.

KEYWORDS: *Ecosystem, Karakalpakstan, Ichthyofauna, Red Book, Hydro-Construction, Amu Darya.*

1. INTRODUCTION

The scale of changes in the ecosystem of the region due to the desertification of the Southern Aral Sea region is enormous; they have changed the ecological conditions of the habitat of animals, including ichthyofauna. In the lakes of Karakalpakstan, pelicans, swans, herons, wild gray geese, various species of ducks nested, a number of which are listed in the Red Book. Catching fish in lakes, hunting ducks, wild boars and other species of wild animals in tugai forests, cultivating skins and making various goods from them were the traditional craft of the local population.

Intensive hydro-construction, intra-annual redistribution of river runoff, limitation of spring-summer water flows, intake of large amounts of fresh water for irrigation and other economic needs, as well as pollution with pesticides coming from agricultural land, have led to a serious

deterioration in the conditions for the reproduction of valuable fish species in the main fishing water bodies. the lower reaches of the Amu Darya, a reduction in their stocks and catches.

The aim of this work is to analyze the literature data on ichthyological studies of streams and reservoirs in the lower reaches of the Amu Darya under conditions of river runoff transformation.

2. MATERIAL AND RESEARCH METHODS

Water bodies of the Republic of Karakalpakstan, the Aral Sea, the Amu Darya and their ichthyofauna and fish resources have historically been constant objects of attention and research.

We analyzed the scientific literature of the results of scientific research carried out by scientists on ichthyological studies, in particular, the fish population of the lower reaches of the Amu Darya River under conditions of a change in the hydro regime. With the reduction of the Amu Darya river runoff and the inflow of water into the lower reaches, the studies were continued in terms of identifying changes in the hydro regime of the Aral and the river, changes in their ichthyofauna, distribution, biology and migrations of fish in the sea and coastal zone.

According to the literature data, the first scientific studies on the ichthyofauna of the lower reaches of the Amu Darya River were carried out at the end of the 19th century by M.N. Bogdanov (1873, 1882); N.A. Severtsov (1874), A.M. Nikolsky (1886, 1900), A.N. Borodin (1904). Then the fish of the Amu Darya River were described by L.S. Berg in the monograph "Fresh water fish of the fish of the USSR and adjacent countries", published in four editions (1916, 1923, 1932, 1948).

According to G.Kh. Shaposhnikova (1950), the ichthyofauna of the Amu Darya river delta is represented by 29 species, the most typical are limnophils inhabiting lakes and represented mainly by reed forms of the Aral fish species.

From 1950 to 1965, a lot of work was done on fish resources: the state of stocks, reproduction, acclimatization of fish and their food supply (Volodkin, 1950, 1954-1956, 1958-1960, 1963, 1964; Bezdenzhnykh, 1953; Geller, Sorokin, 1953; Gosteeva, 1953, 1954, 1956, 1957, 1959; Dengina, 1954, 1956, 1957; Berdichevsky, 1957, 1964; Burevich and Solovyova 1957).

Studies of the ichthyofauna of the lower reaches of the Amu Darya River and the Aral Sea were launched with the organization in 1957 as part of the Karakalpak Integrated Research Institute of the fisheries sector. Subsequently, the Karakalpak branch of the Academy of Sciences of Uzbekistan was created, within the scientific divisions of which a laboratory of ichthyology and hydrobiology was opened, later renamed the laboratory of fish ecology.

Numerous ichthyological studies were carried out already in the 1970s in connection with the growing negative consequences of changes in the Amu Darya hydro regime and the degradation of the Aral Sea. The reasons for the restructuring of the ichthyofauna of the region were convincingly shown, the effect of blocking the Amu Darya channel by hydraulic structures and embankments in the lower reaches on the populations of anadromous and semi-anadromous fish, violation of breeding conditions, reduction of fish resources and the composition of catches (Tleuov 1966, 1981; Adenbaev, Tleuov 1970, 1972; Tleuov, Sagitov 1973; Tleuov, Tleubergenov 1974; Pavlovskaya, 1976, 1982, 1990; Barkhanskova, 1979; Sagitov, 1983; Zholdasova, 1977, 1987; Pavlovskaya, Yusupov, 1972; and others).

Many of the studied aboriginal cyprinids have now become rare and endangered. Sagitov N.I. (1983) conducted research 1970-1979. in the middle and lower reaches of the Amu Darya river. He studied the ichthyofauna and food base of this area. He noted the influence of the Takhiatash dam and the Tuyamuyun reservoir on the ichthyofauna and on their food base. In his work, he gave the ecological and morphological characteristics of certain fish species. He notes that 51 species of fish from 11 families lived in the Amu Darya River, and the largest number of species - 38 in the lower reaches of the river. Numerous in the number of species of the family Cyprinidae - 28 species, Cobitidae - 8, Acipenseridae - 4, Percidae - 3, Salmonidae - 2 species, other families - Esocidae, Siluridae, Sisoridae, Gasterosteidae, Poecilidae, Opiocephalidae are found in one species.

Pavlovskaya L.P. Zholdasova I.M. (1991) investigated the formation of fish populations during regulation of runoff in the lower reaches of the Amu Darya River. The study of the composition of the ichthyofauna was carried out based on the materials of the downstream migration of fish eggs and larvae. They noted the dominance of acclimatizers and further regression of the aboriginal complex.

According to R.O. Temirbekov. (2019) currently 51 fish species from 11 families live in the Amu Darya basin. Of these, in the lower reaches of the Amu Darya there are 37 fish species belonging to 13 families. As before, the richest family of cyprinids is 23 species, the rest of the families are represented by 1-2 species. He notes that favorable conditions for spawning and the formation of commercial populations in the water bodies of the lower reaches of the Amu Darya have developed for the rheophilic pelagophilic cyprinids of introduced species.

The change in the Amu Darya regime led to the loss of unique ecosystems and many species of animals and plants in the river delta zone. Most of the lakes and wetlands have dried up in the coastal area. The consequence was a great loss of biological resources and a violation of their reproduction. Fish resources were particularly affected. Of the aboriginal fish living in the flat part of the Amu Darya, almost all endemics of the Aral basin are in a depressed state. The sturgeon fishes have disappeared: relict endemics of the Amu Darya - large and small Amu Darya shovelnose and thorns - are on the verge of extinction. Like all sturgeon fish of the world fauna, these three species are protected on a global scale. They are included in the Red Lists of the International Union for Conservation of Nature and in the lists of the Red Book of Uzbekistan. In total, 15 species and subspecies of fish of the Amu Darya basin are included in the lists of the Red Book of Uzbekistan.

In the last decade, a set of works and activities has been carried out and local reservoirs have been created in the place of former (dried up) lakes. Examples of this are water bodies - lake systems: "Zhytyrbas", "Sudochie", "Domalak", "Mesopotamia", Muynak and Sarbass bays, Karadzhar lake system. In turn, all this gradually leads to the restoration of the microclimate around the lakes, conditions are created for the restoration of biodiversity.

But the water level in the lakes is still unstable. These dynamic processes in vast wetlands have a serious impact on the redistribution of biodiversity components throughout the Aral Sea region.

On average, since 2000, here it has amounted to a little more than 6 cubic km / year, while the previous average annual flow was 39.6 cubic km / year. The flow regime of the Amu Darya and the living conditions of fish were also affected by its regulation by the Tuyamuyun hydroelectric complex and the Takhiatash dam. In general, this level of transformation of the Amu Darya

hydrological regime in the lower reaches was the main reason for the change in the composition and structure of the fish population, its depressed state and a critical reduction in the number of endemics in the Amu Darya basin and most commercial species, and the loss of many aborigines from the fishing industry. Moreover, the quite successfully acclimatized cyprinids create quite productive commercial populations and have great prospects.

3. CONCLUSION

Thus, in order to increase the fish productivity of reservoirs in the lower reaches of the Amu Darya, it is necessary to continue research on the development of methods and technological solutions for the selective catch of fish, on the management of the development of a natural food base in water bodies of various types, fish diseases and the ecological safety of water bodies.

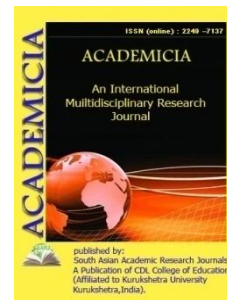
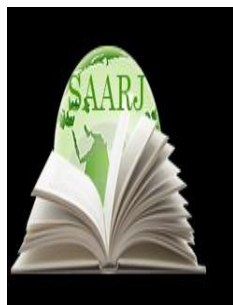
The fishing industry is an integral part of the agro-industrial complex of the republic and affects economic, social, administrative, political, legal and legislative issues. In this regard, the prospects for the development of the industry in a market economy largely depend on the agri-food policy of the state.

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EFFECTS OF ALBIT STIMULATOR ON COTTON GROWING

Karimov Sharofiddin Abdukarimovich*; Abdualimov Shukhrat Khamidullaevich**

*Ph.D. in Agricultural Sciences,
Research Institute of Cotton Selection,
Seed Production and Cultivation Agrotechnology,
UZBEKISTAN

**Professor,
Doctor in Agricultural Sciences,
Research Institute of Cotton Selection,
Seed Production and Cultivation Agrotechnology,
UZBEKISTAN

ABSTRACT

The article provides information on the use of Albit stimulator before sowing and during mowing, as well as its effect on seed germination and cotton yield. When seeds and cotton are treated with albite stimulator during flowering and flowering periods, even in adverse weather conditions, seed germination rate is 10-20%, healthy and uniform seedlings are obtained, which has a positive effect on cotton growth and development. 3.6-10.0 sm, the number of cocoons increased by 1.0-3.1, and the opening of cocoons accelerated by 1.4-16.6%.

KEYWORDS: Cotton, Seeds, Stimulants, Growth, Development, Cotton Yield.

INTRODUCTION

In cotton, seeds are treated with fungicides before planting for many years, but in recent years, methods of processing seeds with stimulants to increase seed germination and health, increase disease resistance, accelerate growth and development, increase productivity are also being developed and introduced. The natural climatic conditions of the country are unfavorable for cotton growing, spring rains and low temperatures or hot summers, droughts, water shortages, difficult germination in spring, reduced field germination, increased root rot and gonorrhea, thinning seedlings and weak growth. develops and yields less, resulting in a 15-20% decrease in cotton yield.

Relevance of the problem

Sh.Abdualimov, K.A.Davronov (2007) found that the use of Vitavaks 200 FF and Unum stimulants before sowing in Fergana region can accelerate seedling germination, coordinate growth and development, increase cotton yield and reduce seed consumption by up to 25%.

According to G.Kholov (2000), in the conditions of dark gray soils of Tajikistan, before sowing when the seeds are treated with bronotak 7 kg / t, humus 4, 8, 12 kg / t and punnen 200-400 ml / t, germination of seeds are accelerated by 0.5-7.8%. In particular, when humus was used at a dose of 12 kg / t, root rot was reduced by 6.2%, gommos by 2.4% during the 2-4 chin leaf period, and by 1.8% during the budding period. In addition, the number of pods in the cotton stalks increased by 2.6-2.6%, with an increase of 3.6-5.6% and an increase in yield by 3.3-4.8 centner per hectare.

Condition and Methods of the research

The research studied the biological effectiveness of the albite stimulator Andijan-37 cotton variety in the conditions of typical gray soils of Tashkent region in 2015-2017. In the experiment, the plant was treated with stimulants before sowing and during the growing season of cotton, and Dalbron fungicide and Uzgumi stimulator were tested as a general and control standard. Each variant in the experiment consisted of 4 rows, the width between the rows of cotton was 60 sm, the length of the variants was 25 m, the width was 2.4 m, the area of the experimental variant was 60 m², the variants were arranged in 3 rows, 3 tiers (Table 1).

While the albite stimulator was applied at 50, 75, and 100 ml / t doses before sowing the seeds, 40 ml / ha were treated during the weeding period. However, the variant used in combination with Albit insecticides (entolucho) was also studied.

1-TABLE EXPERIMENTAL SYSTEM

	Experiment options	The norm of seed processing, l / t	The norm of cultivation during the growing season of cotton	
			honing	During flowering
	Control	Not processed		
	Dalbron	6,5 kg/t		
	Uzgumi	0,8 l/t	0,3 l/ha	0,4 l/ha
	Albit	50 ml/t	40 ml/t	
	Albit	75 ml/t	40 ml/t	
	Albit	100 ml/t	40 ml/t	
	Albit + insecticide	-	40 ml/t+insect	

Results of the research

The soil of the experimental field is typical gray, the groundwater level is 18-20 meters deep. Albite stimulator is a brown liquid, has a weak odor of conifers, has stimulant, fungicidal and

antidote properties. The active substance is poly-alfalfa hydroxy acid -6.2 g / kg, magnesium sulfate-29.8 g / kg, potassium phosphorite -91.1 g / kg, potassium nitric acid -91.2 g / kg, urea-181.5 g / kg. Albite is used as an antidote to accelerate the growth of crops, protect against disease and stress, protect the soil and the environment, reduce the adverse effects of toxic pesticides on plants. Albite can be used in combination with pesticides and agrochemicals, toxicity class IV, less harmful, produced by the Russian company Albit Antidot.

The content of humus in the driving layer of the experimental field soil 0-30 cm is 0.552-0.551%, total form nitrogen 0.047-0.054%, phosphorus 0.055-0.118%, mobile form NO_3 -2.6-3.3, P_2O_5 -9.7-29, In the presence of 0 and K_2O -292 mg / kg, the amount of humus in the subsoil of 30-50 cm of soil is 0.396-0.449%, total nitrogen 0.031-0.042, phosphorus 0.037-0.120%, mobile form NO_3 -2.1-2.9, P_2O_5 77.5-23.2 and K_2O -276 mg / kg, indicating that the soil of the experimental field was low in humus, general and mobile form of nitrogen and phosphorus with very low, moderate and low supply of potassium.

In the experimental field, the annual norm of mineral fertilizers for feeding cotton was set at N-200, P-140, K-100 kg / ha and was applied stratified according to the level of nutrient supply.

In 2015, the seeds were treated with Albit stimulator in the sowing laurel and prepared for sowing at different rates. However, after heavy rains, seeds were planted in a field with high humidity. Initially, no significant differences between the experimental options were observed, and closely related data were obtained, with significantly higher results than controls in the Albit stimulator in the May 15 follow-up. For example, in the control variant, the germination rate was 61.4%, in Dalbron 57.3%, in Uzgumi 68.2%, Albit 50.7 / ml 68.7, Albit 75 ml / t 72.7 and Albit 100 ml / t 75 was found to be 3%. When seeds were treated with albite, germination was 7.3-13.9% faster than control.

In 2016, the seed germination rate was 76.0% in control, 78.7% in Dalbron, 86.2% in Uzgumi, and 86.8-88.0% in Albit 50-100 ml / t. At the same time, seed germination increased by 10.8-12.0% under the influence of Albit.

It is known that it is important to determine the effect of new physiologically active substances on the growth and development of cotton ontogeny. Therefore, when its effect on the growth and development of cotton was determined, it was found that Albit had an active effect from the earliest developmental stages. The height of the cotton, the number of true leaves, the number of fruiting horns, combs, flowers and buds are optimal. In particular, on June 2, 2015, the height of cotton was 13.1-15.1 sm, the leaves were 3.4-3.7sm, while the seeds were treated with Albit, the height was 0.5-1.2 sm, the leaves were chin. the number was more than 0.1-0.2.

In the experiment, on July 2, the height of the cotton was 36.8-44.4 sm, on July 30 - 75.1-84.8 sm, the number of branches was 5.6-6.5 and 12.4-13.3, respectively, the stems were 6.4-7.6 and 5.9-6.5, the flowers and buds were 3.0-3.3, and the stalks were 6.7-7.4 in a single stalk.

During the ripening period of cotton (29.08.2015) the height was 80.3 sm under control, 12.5 pieces of crop branches, 8.0 pieces of pods, of which 2.7 pieces (33.8%) were opened, 50-100 ml of seeds with Albit / t and at the rate of 40 ml / ha in the period of mowing, the height is 86.7-90.2 sm, the yield is 13.3-13.5, the buds are 9.1-9.5, and the opening is 3.2-3.7 pieces (35.2-38.9%), in the variants used Albit, the height of the cotton is 6.4-9.9 sm, the yield branches are 0.8-1.0 pieces, the stalks are 1.1-1.5 more, their opening rate was 1.4-5.1% higher. Positive

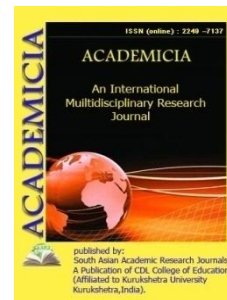
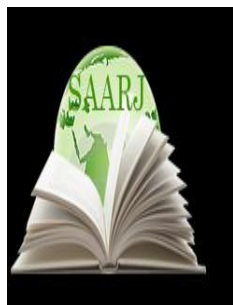
results were also obtained when the albite stimulator was mixed with entolicho and entomite pesticides and treated with cotton, which led to the conclusion that the albite stimulant could be used in combination with pesticides.

CONCLUSION

Thus, in typical gray soils of Tashkent region and in natural climates, when seeds and cotton are treated with Albite stimulator during flowering and flowering periods, even in adverse weather conditions, seed germination rate is 10-20% higher and healthy and even seedlings can be obtained. A positive effect on the growth and development of cotton, height 3.6-10.0 sm, the number of cocoons increased by 1.0-3.1, and the opening of cocoons accelerated by 1.4-16.6%.

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THEORETICAL BASIS OF STEEL SATURATION WITH CARBON AND NITROGEN AND THEIR FOLLOWING THERMAL TREATMENT

B. K. Tilabov*; **U. E. Normurodov****

*Professor,
Doctor of Technical Sciences,
Department of Materials Science,
Faculty of Mechanics,
Tashkent State Technical University named after Islam Karimov,
UZBEKISTAN

**Assistant,
Scientific researcher for the Department of Materials Science,
Faculty of Mechanics,
Tashkent State Technical University named after Islam Karimov,
UZBEKISTAN

ABSTRACT

The article investigates the theoretical foundations of steel saturation with carbon and nitrogen. The chemical composition, properties, microstructure, hardness, microhardness and depth of the surface coating of nitrocarburized steel samples and parts have been studied. The surface layers of cast parts of tillage machines with a coverage depth from 1.5 to 2.0 mm are analyzed. The results of abrasive wear of surface-coated cast specimens before and after heat treatment of quenching with subsequent tempering are presented. It has been proven that optimal heat treatment of parts increases the abrasive wear resistance and durability by 2-3 times.

KEYWORDS: Carbon Steel, Bases, Saturation Of Surface Layers Of Steel With Carbon And Nitrogen, Thickness Of Surface Coating, Optimal Heat Treatment - Hardening Followed By Tempering, Microstructure, Hardness And Microhardness, Abrasive Wear Resistance And Durability Of Parts.

INTRODUCTION

Until now, a lot of hardening methods are known, but among these methods of thermal hardening of machine parts, one of the leading places in the industry belongs to chemical-thermal hardening by saturating the steel surface with carbon or simultaneously carbon and nitrogen. In this case, you can apply carburizing or nitro carburizing. When carburizing in a solid carburizing agent, it is impossible to ensure constant contact of the active cementing component - carbon monoxide with the steel surface and control the steel saturation. The process of carburizing itself in a solid carburizer is very laborious, time-consuming (the process is very long) and therefore is everywhere replaced by more rational processes - gas carburizing or nitro carburizing. Than carburizing, nitro carburizing is not labor-consuming, short-lived, very reliable and more economical process [1]. Successive saturation of steel with carbon and nitrogen is called joint saturation of steel samples and parts.

It is known that many parts wear out due to abrasive and abrasive-corrosion wear [2,3]. At this time, recommendations on the choice of materials for the manufacture of machine parts subjected to abrasive or abrasive-corrosive wear, as a rule, do not take into account the effect of general corrosion processes, the contribution of which to the overall wear of machine parts and equipment with a relatively low level of external micro wear [4] is very significant. Therefore, the study of the regularities of abrasive and abrasive-corrosive wear in corrosive environments is of great scientific and practical importance.

Most parts of machinery and equipment operate under conditions of abrasive-corrosive wear, when the material of the part is required to simultaneously abrasive wear resistance and corrosion resistance. The service life of these parts is limited due to the simultaneous abrasive and corrosive effects of the environment [4,5]. All this requires a constant renewal of the technological equipment and spare parts park.

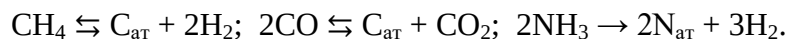
The purpose of this work is to develop technological methods for saturating the steel surface with carbon and nitrogen. Obtaining cast parts of land-working machines with a surface coating by the method of chemical-thermal treatment - nitrocarburizing, followed by quenching and tempering. The goal was also to establish the possibility of efficient surface hardening and increase the wear resistance of steel by treating its working surface with an effective and reliable nitrocarburizing layer (quenching and tempering).

RESEARCH METHODOLOGY

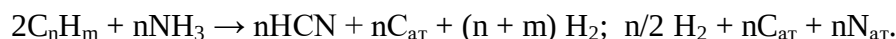
The nitro carburizing process consists in heating parts in a gaseous medium consisting of nitrogen and carbon-containing gases to a temperature of 820-860 ° C, holding for the time necessary to obtain a diffusion layer of a given depth and cooling at a rate that provides the necessary properties of the surface layer and steel core. The saturation of the surface layers of steel with carbon and nitrogen during chemical thermal treatment (CTT) depends on a complex of complex processes occurring at the interface "gas medium - surface of the part", as well as in the surface layers of the metal [6].

The main solubility of molecular nitrogen in iron is insignificant and is only 0.026-0.028% at 900 ° C, and the dissociation energy of nitrogen is the highest among diatomic molecular gases (225.1 kcal / mol).

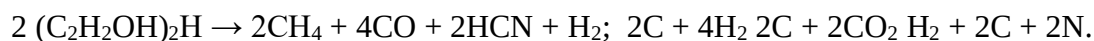
In this regard, the saturation of steel with nitrogen is possible only under the condition that reactive atomic nitrogen is supplied to the metal surface, which is released during the decomposition of relatively easily dissociating ammonia molecules. Similarly, to saturate steel with carbon, it is necessary to supply active carbon atoms to the steel surface. Active carbon and nitrogen atoms are formed when the dissociation reactions of methane, carbon monoxide and ammonia occur in a gas environment:



With the interaction of hydrocarbons and ammonia, the formation of a very active gaseous hydrocyanic acid is possible:



When triethanolamine is used for nitrocarburizing, carbon and nitrogen are formed during the following reactions:



In practice, atomic nitrogen and carbon are involved in the reactions of interaction with the metal, which are released at its very surface in a very thin layer of the gaseous medium with a thickness of about 2-3 Å. The atoms formed in the rest of the working space of the furnace are bound into inert molecules and do not participate in saturation processes. At the gas-metal interface, under the conditions of the catalytic action of the metal surface, complex physicochemical so-called sorption processes (adsorption and absorption) take place. If the sorption processes proceed at a sufficiently high rate, then on the metal surface and in the surface layers there appears a significant difference in the concentrations of these atoms and an intense diffusion saturation of the surface layers of the metal with carbon and nitrogen occurs.

The main relationship between the rates of reactions in the gas phase, sorption processes on the surface of steel and the rate of introduction of atoms through diffusion into the surface zone of steel in real processes of nitrocarburizing is such that a certain equilibrium is established between the composition of the gas atmosphere and the content of carbon and nitrogen in the surface layers of the steel being treated.

If the reaction rates in the gas phase are insufficient to saturate the boundary gas layer and do not provide the maximum diffusion rate of atoms into the surface zone, as a result of which the saturation process slows down and the concentration of carbon and nitrogen on the surface decreases, then methods of special preparation of the gas mixture are used before it is introduced into the working space of the furnace (in endothermic or exothermic generators) or actively dissociating additives are introduced directly into the furnace. If the rates of dissociation of molecules in the gas phase and absorption are higher than the rate of diffusion into the outer zone of steel, then the equilibrium conditions are violated and a phase of free head appears.

Influence of nitrogen and carbon. Nitrogen, diffusing into steel together with carbon, has a significant effect on the saturation kinetics. Previous studies have shown that nitrogen significantly lowers the temperature of the onset of saturation in comparison with the cementation process from 750 °C to 400-450 °C as a result of a decrease in the temperature range of γ -iron existence. Simultaneously with the release of active carbon and nitrogen atoms, significant amounts of hydrogen (as a result of the dissociation of methane and ammonia) and

carbon dioxide (as a result of the dissociation of carbon monoxide) are released in the reaction zone. Therefore, the initial high concentrations of methane and carbon monoxide in the reaction zone at the surface of the parts decrease and approach the values corresponding to equilibrium states. As a result, a difference in the concentrations and partial pressures of the active components of the mixture is created over the thickness of the reaction zone of the gas phase. This concentration difference causes diffusion processes leading to a decrease in the concentration gradient. Moreover, hydrogen and carbon dioxide diffuse into the depth of the gas mixture from the surface, and methane, carbon monoxide and ammonia - to the surface of the part from the depth of the gas mixture.

Carbon and nitrogen, diffusing into austenite or ferrite, form an interstitial solid solution, since the actual radius of the carbon atom (0.77 Å) and nitrogen (0.71 Å) is less than 0.59 of the actual atomic radius of iron (1.28 Å). Interstitial solid solutions are characterized by the predominant diffusion of only one component (with a smaller atomic radius), whose atoms are incorporated into the interatomic interstices of the matrix. With this nature of diffusion, the mathematical description of the process is simplified. The mathematical expression of the processes of atomic diffusion has no complete form. Fick's equations are used to determine the diffusion rate.

Diffusion is caused by a gradient of the chemical potential, which is proportional in the case of carburizing and nitrocarburizing to the concentration gradient of the diffusing substance. The concentration gradient is large at a small thickness of the diffusion zone and sharply decreases with its increase, which leads to a decrease in the diffusion rate. A decrease in the diffusion rate can also be caused by a decrease in ΔC due to either an increase in the concentration of a diffusible substance in the core (for example, when various steels are saturated with carbon), or a decrease in the concentration of a diffusible substance on the surface (for example, during decarburization of steel subjected to carburization and nitrocarburizing). In this direction, Russian scientists have made a great contribution to the study of the mechanisms and kinetics of diffusion processes. They found that diffusion is determined not by the concentration gradient, as was commonly believed, but by the gradient of the chemical potential (the gradient of partial free energy).

The main direction and intensity of diffusion depend on the thermodynamic activity of a substance in a solid solution, associated with its chemical potential. A chemical element that lowers the thermodynamic activity of a substance dissolved in the matrix, accelerates its diffusion into the matrix. In real processes of saturation of the steel surface with carbon and nitrogen, the initial and boundary conditions that predetermine the legitimacy of the use of mathematical dependencies (for example, the constancy of the concentration of a diffusing substance on the surface) are rarely observed. Therefore, the nature of the structure and properties of nitrocarburized layers is most justified to describe depending on the technological parameters, i.e. process temperature, gas composition, holding time and cooling rate.

Cast steel samples were made of steel 35, 40 so that a 0.7-1.0 mm layer of coating was on the working surface of the part. Nitrocarburizing was carried out at a heating temperature of 820-8600C, steel has a relatively high wear resistance and impact strength. The low quenching temperatures of the poured metal contributes to complete penetration and good contact with the base metal. The choice of such metals as an object of research is due to the need to study the

effect of additions of alloying elements in the structure and on the abrasive wear resistance of steel castings of parts on the coatings.

Macro- and micro-studies were studied with optical metallographic microscopes МБС-1, МБС-9, ММ-8М and Neofot-21. Samples for testing were 12x12, 15x15, 15x20, 20x20, 22x22 mm in size.

The microstructures and microhardness of surface coatings change significantly after optimal heat treatment. If quenching is performed from a heating temperature of 840-860 °C [7], then the pearlite component of the structure undergoes a martensitic transformation. The location of the carbide component does not change. The total depth of the coating, including both the surface layer and the high-carbon sublayer, does not change either. So, for example, after quenching with a heating temperature (t) of 840-860 °C of special samples obtained by casting with a thickness of 0.6-1.0 mm, the structure of the eutectic component and the location of secondary carbides did not change. Only, instead of the pearlite component, fine-needle martensite is observed [8].

When heated for quenching to a temperature of 860 °C, all secondary carbides dissolve in austenite, only primary carbides remain in the eutectic. Specimens whose surface coatings were obtained by casting into earthen molds with a thickness of up to 1.0 mm, on the surface is formed a structure consisting of eutectic carbides and martensite. The microstructure clearly shows martensite needles, retained austenite, primary carbides, and a sublayer of high-carbon martensite (Fig. 1a, b, c). A similar picture is observed when considering the microstructures of coatings for specimens with a thickness of 0.7 and 1.0 mm. In these cases, primary carbides and martensite are observed on the surface itself [8].

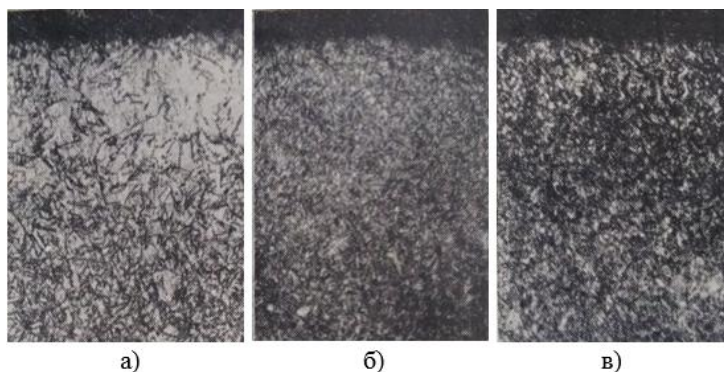


Fig.1. Microstructure of nitrocarburized surface layer of steel.

RESEARCH RESULTS AND DISCUSSION

Scientific research was carried out on special samples and parts made of this steel, subjected to chemical-thermal hardening - nitrocarburizing according to various options. The microstructure of the nitrocarburized layer of the part made of the selected steel consisted of acicular martensite (see Figure 1) and residual austenite less than 20-25%. the structure of the core is of troostite-martensite. The hardness at the top of the surface of this part is HRC58-63, and the hardness of the core is HRC38-45. The hardness of the samples was determined on Brinell TB5-4 and Rockwell TK-2 devices, and the microhardness was measured on a IIMT-3 device at a load of 0.5 N. The microhardness within the thickness of the hard-alloy coating varies within wide limits. The highest microhardness is for specimens with a layer thickness of 1.0 mm [9]. At the very surface, a hypereutectic structure is formed

with a large amount of primary chromium carbides with a hardness of $HV100 = 15300$ MPa. At the same time, the microhardness of the pearlite component of the eutectic is 7300 MPa. At a depth of 0.6-0.9 mm from the surface, depending on the thickness, the structure of the base metal with a hardness of 2600 MPa is already observed. A tetrahedral diamond pyramid (with an apex angle of 136°) is pressed into the test material under a very light load of $0.05 \div 5N$ ($5 \div 500$ g). For loading, special weights in the form of washers with a cutout weighing 5,10,20,50,100,200 and 500 g are used. Application of the microhardness measurement method allows one to determine the hardness of a thin sheet and foil material, thin surface layers of metal coatings and individual structural components of materials. Also, the microhardness method can be used to find the hardness of individual grains or even very thin surface layers, thin protective coatings and small parts.

The obtained quenched specimens with a coating for tests of X-ray structural analysis had dimensions of 20x20 and 22x22 mm. The phase composition of the coating was determined by X-ray diffraction analysis (DRON-2.0), and the results of the phase X-ray diffraction analysis give a more complete picture of the composition of the obtained coatings. The width of the X-ray lines was determined at half-height of the maximum as an arithmetic mean value from four to five diffractograms or distribution curves of the intensity of X-ray radiation. Calculations of measurement errors showed that they are in the range of 5-10%, depending on the object of research. According to the research results, it was revealed that special carbides of the type $Me_{23}C_6$, Me_7C_3 and others are formed on the surface of samples with coatings [10].

CONCLUSION

Thus, it can be concluded that an effective way to increase the abrasive wear resistance is the chemical-heat treatment of steel and the production of a surface coating on the working surfaces of the part by the nitrocarburizing method. It can be seen from the above data that nitrocarburizing, optimal hardening followed by tempering increases the abrasive wear resistance of finished needle sprockets of parts by two and three times [11, 12]. This new innovative technology has been introduced into the production of "Aggregate Plant" JSC with the best economic effect.

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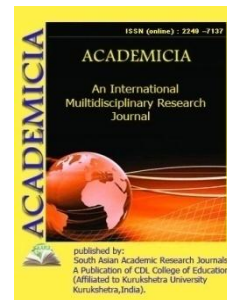
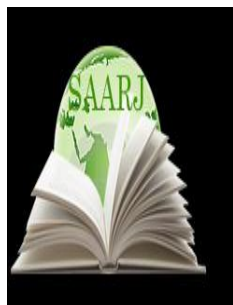
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WORD BORROWING AND ASSIMILATION IN THE UZBEK LANGUAGE

Kosimova Mukammal Umaralievna*

The Teacher of the chair,
Uzbek language and Literature of Fergana branch of TUIT,
UZBEKISTAN

Email id: mukammalkosimova11@gmail.com

ABSTRACT

This article looks into the Uzbek language system and analyses loaned words from other languages. The theories are provided with current examples of loaned words and explanations of their meaning. Moreover, the thesis compares the usage of loaned words in the English and Uzbek languages.

KEYWORDS: Word Formation, Lexeme, Lexicon, Explanatory Dictionary, Thematic Group, Loan Words, Borrowed Words, Assimilation,

INTRODUCTION

It has long been known that 3 components play an important role in the formation of the Uzbek lexicon. These are: 1. All words derived from the oldest Turkic language and play an important role in the development of Uzbek lexicon, in addition, everyday words and phrases are reflected in the above elements.

2. Borrowed (assimilated) words. Such words come from other languages, such as: Arabic, Persian-Tajik, Russian, German, French, Spanish, English and others. The interesting thing about this word is that they are mainly formed from a combination of classical languages (Arabic, Turkish, Persian-Tajik).

3. Assimilated neologisms, words of this type are formed by adding suffixes, prefixes and suffixes to words that exist in the language.

In addition to the three components mentioned above, secondary elements also contribute to the development of vocabulary. These are: Onomatopoeia, the formation of one word from one word to another. The introduction of foreign words into our language and their use leads to the

emergence of certain new words in our language, and this group of words is called assimilated words. At the heart of assimilated words are words, whose formation did not change in their form and meaning, when entered to our language. For example bar, film, leader.

Main part

Bilingualism have existed among Uzbek people for a long time. The population of Movorounnahr could speak in the Uzbek and Tajik languages in 6th century. Even now, in most parts of Uzbekistan people speak the two languages. In the period of Arab caliphate the Arab language became an academic language. Next period is the bilingualism of Uzbek-Russian languages. In the Uzbek language, there are considerable amount of borrowings from 20 languages which have had a significant impact on Uzbek vocabulary. We can find borrowed words from the languages which are inactive in forming Uzbek vocabulary as well. Because of the relationships of different languages : 1) New words are accepted; 2) some prefixes are assimilated; 3) identical sounds may appear in the language; 4) identical syntactic structures may appear; 5) hybrid calques are shaped; 6) the meaning of the words may change .

Some of the lexemes that were loaned during the pre-independence period are Russian and adapted to our language with Russian language features. For example, chempionat (championship), trenirovka (training). The elements such as –at, -ka are not characteristic for English words. Also, it is noticeable that «x» is replaced by a phoneme «h» in lexemes such as xaker (hacker), xuligan (hooligan) and xoll (hall).

Though most of the Uzbek lexicon consists of its native lexemes, Persian, Arabic and Russian borrowed lexemes are larger in size than other languages. Besides, currently we may found more English words that are already in common in everyday use.

Old version of «Eplanatory dictionary the Uzbek language» included almost about 80 English borrowed words, but in its new edition, more than 500 English words have been explained. Moreover, «The Explanatory dictionary of the English borrowings in the Uzbek language» and «English-Uzbek dictionary of IT and internet terminology» gives the definitions of about 1000 English words in Uzbek.

While the English borrowings are in synonymic, antonymic, and lexical-semantic relationships, they are grouped into thematic groups with members of a particular paradigm. Such thematic groups take their place in the language based on hierarchical relationships.

As vocabulary content evolves according to changes in society, borrowed words play a primary role in vocabulary enrichment. Immediately after independence, assimilation of loaning words, precisely, English words into our language increased. Many borrowings, especially those used in information technology, do not have the recommended Uzbek versions in Uzbek-English dictionaries. I suppose that if necessary, it is essential to translate them into our language according to the nature of the language.

Many of these words are now used in modern oral and written communication as modern-day words. English borrowings can be classified into the following thematic groups:

1. Lexicon on socio-political sphere;
2. Lexicon on economic sphere;

3. Lexicon on cultural and educational sphere;

4. Lexicon in the field of sports.

Below we categorize the words of a thematic group on socio-political, economic, cultural, educational and sports spheres by internal divisions.

Name of the food: steyk (steaks), gamburger (hamburgers), yogurt, keks (cake), ketchup, jem (jam).

Drink names: kokteyl (cocktail), koka-kola (coke), viski (whiskey).

Clothes names: jemper (jumper), jinsi (jeans), kavboyka (cowboy), pijama (pajamas), sviter (sweater), trusi (trousers), reglan.

Household goods name: mikser (mixer), pleyer (player).

Cosmetics and household items: sheyping (shaping), shampun (shampoo), servis (service).

Place names: skver (square), kemping (camping), klub (club), kollej (college), kotej (cottage), matel (motel), bar (small restaurant, bar), tunel (tunnel), zopark (zoo), supermarket.

Name of vehicles: trolleybus, express, tramvay (tram), pikap (pickup), layner (liner), tanker, etc.

The English vocabulary lexemes have a special place in science and scientific terms. In particular, units of pedagogy, psychology, ethnography, physics, journalism, history, literature, music, linguistics, biology, botany, physiology, dietology, geography, chemistry, zoology, and drawing are also of scientific importance.

Generally, borrowings we have in our lexicon are the names of food, drink names, clothing names, household items, names of organizations, fabric names, vehicles, drugs. Names, names of fuel products, and technical names also fill the vacancies of some thematic groups in the Uzbek language.

In English, there are many common lexemes with -tion affixes. Such kind of words were borrowed into our language assimilating to the nature of the Russian language. For example, vulkanizatsiya-vulcanization, innovatsiya-innovation, press-konferensiya- press conference, registratsiya-registration.

Based on the process of mass computerization, a number of words have been mastered by experts and then among computer users: computer, file, printer, scanner, laptop, browser, site, and more.

As the borrowed words are mostly neologisms, they are often misspelt. Even «The explanatory dictionary of the Uzbek language» includes two written forms of these words: noutbuk/notbuk-laptop, yogurt/yo'g'urt-yoghourt.

CONCLUSION

Though the Uzbek language is rich in Arabian and Persian words, today English and other languages' influence is bigger on our lexicon. Most of the words recently assimilated to our language are taken from the English language or taken through it. Like other borrowed words, these words face different phonetic, morphological and semantic changes while they are

assimilated. They have synonymous and antonymous relationships with Uzbek native words as well.

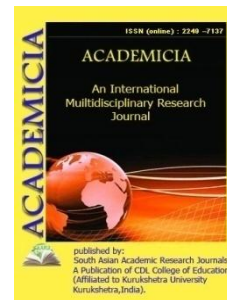
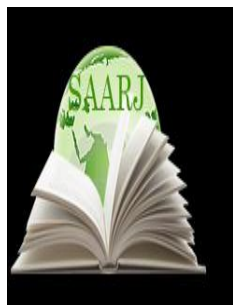
The vocabulary bank of the language shows changes in the language more widely than other aspects. Nowadays borrowing is continuing with technological advances.

CONCLUSION

The real consideration is that there is not any language without new words or terms in the world. Because in the far development of history different countries, nations made interrelations causing new phrases and expressions appearing in the language.

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LEADING FAMILIES AND MAIN FORMATIONS OF KATTAKUM MASSIVE'S FLORA

Begmatov Abdusamat Mamatqulovich*

*Associate Professor,
Candidate Of Biological Sciences,
Mamedova Visola Najmiddinovna,
Master Of Termiz State University,
Termiz State University, UZBEKISTAN

ABSTRACT

In The kattakum massif, located on the territory of the Termez district of Surkhandarya region, scientific research is being conducted to study the species composition and life forms of common plants. Information about the leading families and categories of plants distributed on the territory is presented.

KEYWORDS: *Family, Species, Category, Flora, Endemic, Anthropogenic, Formation.*

INTRODUCTION

Today, the problem of biodiversity conservation in our country and in the world is becoming more acute. This is due to anthropogenic¹ impacts and natural disasters, which lead to significant environmental losses. This is primarily due to changes in the species composition of plants, the disappearance of rare plants.

Main part: The Kattakum massif (Kattakum desert) is located in the Termez district of the Surkhandarya region, bordered on the north by the Karakir ridge on the southeast of Khovdog. The total area of the Kattakum Desert was 250 km² in 1971 (according to Uzdavyerloyiha), 175 km² in the 2000s, and only 147 km² today. The saddest thing is the deterioration of its flora.

As a result of neglect in the Kattakum massif, plants such as saxaul (Haloxylon), cherkes (Salsola richteri karel), and kandym (Calligonum), which serve to reduce the environmental damage of fly sands, are being eradicated. Villages, roads, irrigated lands, and irrigation networks are left in the sand the upshot of the movement of sand dunes due to the wind, leaving the area without bushes and trees. If the situation keeps going in this way, the sands and the

psammophilic ²plants and creatures that live there may not be visible. In this regard, the Cabinet of Ministers on June 11, 2019 approved the Strategy for Biodiversity Conservation in the Republic of Uzbekistan for 2019-2028.

To date, little has been done to study the vegetation of the Kattakum massif, but for some reason it has not been completed. One of the main reasons for choosing this topic is to study the life forms, medicinal properties, importance in the national economy, species listed in the “Red Book” (Qizil kitob) and protected species in the Kattakum massif.

The relevance of this topic is that the data collected through its study and the future results obtained can be used to study the flora³ of a particular region of the country or the whole of Uzbekistan, as well as to protect endangered populations⁴ can be used to develop targeted measures. In addition, no specific studies have been conducted on endemic ⁵and rare species in the Kattakum massif. However, this study is important in terms of maintaining environmental sustainability.

As a result of preliminary research in the Kattakum massif, we observed that the area consists of 316 species belonging to 42 families and 101 genera. *Chenopodiaceae*, *Asteraceae*, *Poaceae*, *Fabaceae*, *Brassicaceae*, *Polygonaceae*, *Boraginaceae*, *Caryophyllaceae*, *Laminaceae*, *Apiaceae* families play a leading role in the flora of the higher plants of the region. The leading categories include: *Haloxylon*, *Astragalus*, *Calligonum*, *Salsola*, *Artemisia*, *Cousinia*, *Climocoptera*, *Suaeda*, *Polygonum*, *Atriplex*, *Allium*, *Ferula*, *Halimocnemis*, *Convolvulus*.

There are natural plant communities in small areas around the settlements.

Leading families of the flora of the Kattakum massif

TABLE 1

No	Families	Categories	Types
1.	<i>Chenopodiaceae</i>	8	28
2.	<i>Asteraceae</i>	5	24
3.	<i>Poaceae</i>	4	17
4.	<i>Fabaceae</i>	3	13
5.	<i>Brassicaceae</i>	3	13
6.	<i>Polygonaceae</i>	2	10
7.	<i>Boraginaceae</i>	2	8
8.	<i>Caryophyllaceae</i>	3	7
9.	<i>Laminaceae</i>	2	6
10.	<i>Apiaceae</i>	2	5

Classification of vegetation cover of Kattakum massif

(According to P.Q. Zokirov, 1989)

Table 2

Types	Little type	Senotype	Formation	Association
Desert Plants - Eremiphyton (Eremion, Deserta)	Halophilous plants -Halophyta	Soup halophilous grass -Halopoia	Mixed salt Salsoleta scleranthae, Girgensohnia	1. Weeds - ephemeral-mixed saline 2. effervescent-mixed-saline 3. poa bulbasa

			oppositiflora	-soup-mixed soup 4. Mixed-grass-worm-mixed saline
	Argylophile (ephemeral plants) -Argillophyta	Ephemeral grasses (Ephemeropoia)	Poeta bulbosae - Poeta bulbosae	5. large grass-colored- Poeta bulbosae 6. Mixed grass-ephemeral- Poeta bulbosae 7. Howling Pixel - Poeta bulbosae 8. Shorali-ephemeral-cousina - Poeta bulbosae
	Psammofil– Psammophuta		Mixed juzg'un– Mixto- Calligoneta:	9. Singren mixed - one annual saline-ephemeroid-dwarf
			Selinzor – Aristideta pennatae:	10. In some places there is a sparse mixed olabutali-saline-selinzor

Thus, one of the most important factors in the development of animal husbandry in the Kattakum massif today is to increase in the productivity of desert plants and the planting of some nutritious plants. Early advances have been made in this area. For example, in the deserts of Turkmenistan and Uzbekistan, Howling Pixel, *Kochia prostrata*, *Saxaul*, *Astragalus villosissimus*, *Calligonum*, *Ephedra*, *Cousinia*, and *Keyreuk* (*Salsola rigiga*) are successfully grown. Attention is being paid to improve the condition of naturally growing plants such as sagebrush, sagebrush, sagebrush, carnation, selenium, teresken, wormwood, beetroot, sugarcane, izen, and in the end, systematic grazing is being established. [1]

Desert plants are important not only as fodder for livestock, but also for other sectors of the economy. They are used in food and spices, as dyes, essential oils, and for other purposes. Sand carrots (*Sehumannia karelinii*) and kovrak (*Ferula dshaudshamyr*) are the roots and seeds of sandalwood (*Sorisprum Ithmahnianum*, *C.apterum*), arnebia (*Arnebia orintalis*) and nomneya (*Nonnea picta*). possible. *Rheum turkestanicum* is derived from sugarcane, *Tamarix ramossisima*, and *Limonium* Mill. [2]

CONCLUSION: In short, every plant in nature is of special importance to the biosphere, and at the same time reflects biodiversity. Throughout human development, plants have been divided into medicinal, ornamental, and a number of other groups, and have been used as needed. Due to the increase in such needs and climate change in nature, some plants are in danger of extinction. Improving the condition of the desert in all respects and paying special attention to its use in various sectors of the economy is important in maintaining the natural balance. The use of nature depends on the ecological balance of any area, and in this process, of course, it is necessary to take its fragility into account and focus on the factors that ensure sustainability.

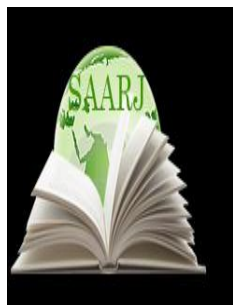
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RAISING THE ATTITUDE OF PRIMARY SCHOOL STUDENTS TO EDUCATION AS A VALUE

Turdieva Nigora Saidovna*

*Lecturer of the Department "Theory of Primary Education",
Bukhara State University Bukharacity,
UZBEKISTAN

ABSTRACT

The article is devoted to one of the complex problems of modern education, especially primary education - the problem of upbringing the value attitude of primary schoolchildren to knowledge, educational and creative activity. The article contains a description of the diagnostic complex for studying the value attitude towards learning in accordance with its three-component structure, a description of the qualitative characteristics of various levels of formation of the value attitude towards learning in primary school children.

KEYWORDS: *Experience, Value Attitude, Readiness For Self-Education, Attitude Towards Learning, Junior School child*

INTRODUCTION

The changes taking place in the modern world: their speed, innovativeness and sometimes unpredictability are perceived as the need to form a readiness for self-education and self-development among the younger generation. It is shown in the standard that the development of cognitive interests, value attitudes towards education, experience of educational and cognitive and positive creative activity are important components of the implementation of the education standard. This view is consistent with theoretical ideas about the structure of the content of education based on a culturological approach (V.V. Kraevsky, I. Ya. Lerner, M.N. Skatkin).

The presence of the category of experience in the content of education emphasizes the importance of the child's own activity in mastering knowledge about the world, which defines education as the property of the child's personality and a condition for the transition to independent education in the future.

Learning activity is an activity for self-change (D. B. Elkonin). The inclusion of a child in educational activities presupposes not only an orientation towards developing the skills to carry

out the processes of cognition and learning, which can be considered in retrospect, but also as the acquisition of the ability to cognize, to learn here and now, to be ready in the process of cognition and learning to acquire new competencies. This requires teachers to create conditions for the simultaneous orientation of the child to the past, present and future when organizing the educational and cognitive activity of a younger student. The solution to such a complex problem is possible provided that the child has a positive value attitude towards learning.

The modern educational standard is based on an axiological approach, which dictates the value base of the content of education.

Purposeful work of the teacher to educate the value attitude of younger students to learning is possible on the basis of determining the characteristics and level of their development. Saturation, and, consequently, the study of value relationships is possible in the trinity of components that make up them: cognitive, realizing information-fixing and generalizing functions, emotional-evaluative - emotionally imperative, and motivational-behavioral - performing motivational-behavioral and prognostic functions.

There are several types of students' attitude to education (value, positive, indifferent, negative), but it is the value attitude, when the process of cognition itself is interesting and there is a need for it, that the most important role in the process of holistic education of the individual belongs.

The value attitude towards education is at the same time: 1) the basis of an active, conscious attitude towards education; 2) a qualitative indicator of the effectiveness of the entire educational process; 3) the most important element in the formation of personality. The more active a student is in his contacts with the educational process, the more productive the process of developing value relationships.

Signsoftheformationofstudents' valueattitudestowardseducationare:

- awareness by schoolchildren of the importance of education for personal growth (the ability of a student to explain what the value of education is for him personally) and for the public good (students' judgments about the importance of education);
- creative, conscious-activity attitude to cognitive activity, when the need for cognition becomes an integral part of students' consciousness (asks questions on the merits, performs tasks creatively and enthusiastically, makes meaningful comments or additions, performs tasks not provided for in the program);
- emotional response to the educational process (various emotional states - joy, irritation, indifference; unconscious movements - gestures, posture, glance, mimic activity; predominance of positive emotions over negative);
- manifestation of strong-willed qualities (always strives to bring the work begun to the end, to get to the essence of the issue; knows how to defend his position).

The mechanism of developing a value attitude towards education must be carried out in the process of personality-oriented education, which contains the possibilities for the effective formation of this attitude.

The need-motivational sphere of the student is the basis of the process of instilling a value attitude towards education among primary school students.

A negative attitude towards the teaching of a number of younger students is due to the lack of its significance for the child himself. The value-based attitude to education arises as a result of students' search for such meaning.

Effective upbringing of the value attitude of students to education is possible if the following conditions are met:

- Equal representation in the content of primary education of all its components;
- active development of values by students through a creative approach, independence, amateur performance, etc .;
- inclusion in the content of education of the student's personal experience as its specific component;
- involvement of primary school students in the process of joint goal-setting with the teacher;
- predominance in the teaching process of figurative forms over logical ones;
- correlation of students' value ideas with their immediate social environment;

Speaking about the values of education, it is necessary to consider its value for the individual and for society.

The value of education for society reflects the collective, group significance of this cultural phenomenon, and in the Soviet period of national education it was this value that came to the fore in many pedagogical concepts. Recently, priority has been given to the personal value of education, an individually motivated, biased attitude of a person to the level and quality of his education.

The personal value of education can be considered on the example of “culture of usefulness” and “culture of dignity,” concepts introduced by the famous psychologist A.G. Asmolov. A culture of utility or a culture focused on utility as the basic value of society has “the only goal ... is to reproduce itself without any changes ... education is assigned the role of a social orphan, who is tolerated insofar as one has to spend time on training, training person to perform useful official functions. ” In his opinion, the opposition to such a culture, to such a structure of society is a new type of culture focused on dignity. “In such a culture, the leading value is the value of a person’s personality, regardless of whether it is possible to get something from this person to perform a particular business or not” [1].

It is obvious that the culture of dignity requires a new foundation of education - education focused on fostering human dignity, a sense of freedom, professional and general educational (general cultural) competence. This requires a radical change in the content and organizational forms of the entire educational system, a change in the values of education as a social and cultural phenomenon.

Education (in addition to its own educational goals) performs the most important social functions in the modern information society (continuous education of the subject in the field of telecommunication technologies, communication between subjects and social institutions, technological development of the information society, etc.) and in this sense acts as a functional mechanism, which makes possible the further development of the information society. At the

same time, the goal of education is the development of a person who meets the requirements of the society in which he lives, which is reflected in the connection between education and culture.

A modern person should not only have a certain amount of knowledge, but also be able to learn: to seek and find the necessary information to solve certain problems, to use various sources of information to solve these problems, to constantly acquire additional knowledge.

Modern society needs people who know how to learn and independently work with information - only they can count on success in the information society. However, society needs young people and their cultural values, and the institution of adults must attract them with its attitudes and know its interests and goals. Basically, higher education among young people is associated with a high-paying job in the future. This point of view is understandable, since modern culture is based on entrepreneurship, business, and efficiency. Money and material well-being come to the fore. But do not forget about the spiritual aspect of this issue. After all, education should develop not only the mind, but also the culture of a person, since the learning process takes place at the stage of personality formation.

In modern conditions, education must meet the requirements that are imposed on it by society. Education acts as a socially adaptive mechanism capable of responding to social transformations, and in this sense it is necessary to develop a model of education in this way so that it (education) functions as a dynamic and flexible system capable of responding to social changes. As the experience of many countries shows, only the advanced development of the education sector forms the country's investment attractiveness and ensures a technological breakthrough.

The value potential of the category "education" is contained in its content. The value attitudes and orientations that are formed in the process of educational activity largely depend on its filling with the emotional-value component. In everyday practice, those means of pedagogical influence that are associated with the very content of education are still insufficiently used.

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