

Impact Factor:

ISRA (India) = 4.971
ISI (Dubai, UAE) = 0.829
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHHI (Russia) = 0.126
ESJI (KZ) = 8.716
SJIF (Morocco) = 5.667

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

SOI: [1.1/TAS](#) DOI: [10.15863/TAS](#)

International Scientific Journal Theoretical & Applied Science

p-ISSN: 2308-4944 (print) e-ISSN: 2409-0085 (online)

Year: 2020 Issue: 05 Volume: 85

Published: 28.05.2020 <http://T-Science.org>

QR – Issue



QR – Article



Feruz Fayzullayevich Kasimov

Bukhara State University

A teacher of Information Technology department

+998905122332

fern1986@gmail.com

METHODOLOGY OF TEACHING PROGRAMMING TECHNOLOGY

Abstract: The purpose of the teaching of "Fundamentals of Informatics and Computer Engineering" in general secondary education is to teach students information processing technologies and from providing them with a thorough knowledge of the processes of their use computers wisely in learning and post-work activities from imparting skills and competencies to new information based on them about the contribution of technology to the development of our country is to create imagination.

Key words: Computer Engineering, technologies, processes, new information, computer technology, Computer science, Pascal programming language.

Language: English

Citation: Kasimov, F. F. (2020). Methodology of teaching programming technology. *ISJ Theoretical & Applied Science*, 05 (85), 346-350.

Soi: <http://s-o-i.org/1.1/TAS-05-85-67> **Doi:**  <https://dx.doi.org/10.15863/TAS>

Scopus ASCC: 3304.

Introduction

One of the main tasks of education is to teach students to solve problems on the computer technology and its main stages. That's it 9th grade in general secondary education "Computer science and computer engineering Basics programming language was used in the course "Fundamentals". Until today that the developed programming languages are widespread and widely used Pascal programming language has been included in the textbook since the 2006 academic year. Although the Pascal programming language was developed to teach programming, common among highly qualified programmers.

Pascal programming language is the second in the 9th grade of secondary schools taught in the chapter. It consists of a total of 38 lessons. The question is general education How effective is it to teach students in school? I have it first we teach lessons from modern educational technologies as well as multimedia lessons are more efficient when organized using.

II.Literature review

From multimedia technologies in teaching programming languages use

Many authors are strategic to use new ones in teaching computer science emphasize the importance of problems of computerization of education special conferences are being organized. Multimedia in education, the most important thing is to use the tools.

Multimedia is a multimedia information technology tool (MIT) one of the various channels of information exchange between the computer and the user allows you to use it on time. Because multimedia is in the process of learning activates all data channels, all types of memory uses to the maximum extent.

Number of articles on computer education topics is growing in publishing, scientific communities in information technology and educations are considering the interaction of the process.

Use the computer as a learning tool or interactive expert dedicated bans are in place. Many schools have multimedia education using the latest generation of computers equipped with tools in fact, despite the cost of using computers in education the quality of data transmission, its updates and additions cheap to use a computer as a library, audio-video, no doubt covers ten times the initial cost.

Enthusiasm is the use of multimedia by teachers in computer science they develop lessons

Impact Factor:

| | | | | | |
|------------------|---------|----------------|---------|--------------|---------|
| ISRA (India) | = 4.971 | SIS (USA) | = 0.912 | ICV (Poland) | = 6.630 |
| ISI (Dubai, UAE) | = 0.829 | PIHHI (Russia) | = 0.126 | PIF (India) | = 1.940 |
| GIF (Australia) | = 0.564 | ESJI (KZ) | = 8.716 | IBI (India) | = 4.260 |
| JIF | = 1.500 | SJIF (Morocco) | = 5.667 | OAJI (USA) | = 0.350 |

independently but teach computer science at school because teaching requires a multimedia-based, effective methodology it is necessary to solve the problem of knowledge in the field of modern informatics. Basics of programming are common in their practice principles of demonstration and delivery of lessons in teaching programming languages implementation problems. The cause of these problems is visual the ineffectiveness of traditional means of exhibition is their low dynamics is observed, which makes the material better by the students interferes with assimilation.

Humanization of education for the development of educational institutions and differentiation properties. Multimedia learning process leading to increased individualization of teaching will come.

On the other hand, along with the continuous development of the science of the basics of programming the scientific principle requires that the content of programming education be constantly analyzed does. Electronic data to solve this problem quickly and easily carriers and the use of modern telecommunications suitable.

Principles of multimedia teaching are often programmed teaching theory, so the problem is broader let's see The idea of programmed learning originated in the United States in the 1950s Its author is Professor B.F. Skinner (Department of Psychology) specialist) to teach the effectiveness of the management of the educational process by viewing the proposal in full accordance with the scientific data on the process entered. The first programmed training in our country scientific works are known by A.A. Abdukadirov, N.I. Taylakov, K.T. Olimov made.

III. Analysis

Ideas for programmed learning for former union educators and scholars attracted. In these ideas, they are relevant to the Union School saw potential opportunities to solve problems. In the spring of 1962 American version of the teaching ideas programmed at the UNESCO conference the former, dominated by the ideas, views, and experiences of psychologists and educators new pedagogical ideas of programmed teaching in the union country coincided with the beginning of the development of Soviet cybernetics and it included the ideas and methods of cybernetics, logic, statistics in pedagogy due to the arrival of they can control the whole pedagogical process opened the way to look at it from a system perspective, and at the same time most of it helped to identify the subtleties. Teaching optimization problem research is a clear statistical method of analyzing the learning process led to its widespread use in pedagogy. These methods are teacher and student objective in relation to the extent to which the goal is achieved allowed views.

There are a number of achievements in programmed learning: individualization and differentiation learning. The scientific organization of

process management and, consequently, its increase efficiency. Multimedia education has led to similar success allows us to predict. The essence of programmed learning review and improve the content and structure of the study material There are a number of questions that need to be considered. These questions are part of the learning process to optimize, to program to manage it, to study it and helps to optimize learning methods. In programmed learning, all elements of the learning process are scientific requires validity. Because teaching is about the student and the teacher the process of interrelated activities, to determine the direct connection in it possible. Direct contact during the learning process and in the education of students will be installed. Feedback is the quality, depth, helps to obtain information about the strength of Basics of learning programming languages from multimedia technologies It is advisable to use Ashampoo Snap and AutoPlay Media Studio suitable.

Ashampoo Snap is a comprehensive audio-visual application files: demonstrations, presentations, audio-visual, the guide is used to create lesson slides. Basic Functions:

- Record audio and audio-visual guide files from the screen;
- Editing, project creation;
- Write to disk;
- Use AVI, FLV, PPT file formats.

Ashampoo Snap software moves on the computer screen, from the microphone record audio and audio-visual guide files that computers can understand format. One of these tools is Ashampoo Snap interface, many formats, a variety of audio-visual guide files marking and commenting, as well as creating audio files using the program possible. Highlight the desired area of the screen while writing a lesson possibility is also available. These are just some of the goal setting shareware that you can use Ashampoo Snap software was chosen as the authoring program.

Ashampoo Snap Software Classification. Ashampoo Snap is on display used to maintain processes. The program consists of four auxiliary parts consists of:

- Menu Maker;
- Player;
- Theater;
- Recorder.

The main part of the program is undoubtedly Ashampoo Snap Recorder. All lessons were created using this very program. Ashampoo Snap software at the bottom of the window is a desktop called a timeline Perform various operations on audio and audio-visual guide files possible. These include linking files together and cutting out unnecessary parts throwing etc. In the center of the main window, the program could run. There is a "Clip Bin" section that lists the files. These files can be viewed in the audio-

Impact Factor:

| | | | | | |
|-------------------------|----------------|-----------------------|----------------|---------------------|----------------|
| ISRA (India) | = 4.971 | SIS (USA) | = 0.912 | ICV (Poland) | = 6.630 |
| ISI (Dubai, UAE) | = 0.829 | PIHHI (Russia) | = 0.126 | PIF (India) | = 1.940 |
| GIF (Australia) | = 0.564 | ESJI (KZ) | = 8.716 | IBI (India) | = 4.260 |
| JIF | = 1.500 | SJIF (Morocco) | = 5.667 | OAJI (USA) | = 0.350 |

visual guide player on the right. This tiny Ashampoo Snap Player only performs one function — AVI displays files. Finding the right one among the various subjects in the education system can cause difficulty for the user to navigate. You will need to create a menu. Such a navigation interface is AutoPlay Media Can be created using Studio software. Visual using this program perfect navigation using objects. In the interface each page that is created looks like a web page, you can set different actions on the objects on the pages.

Autoplay Media Studio - Bring any file or set of files to a single environment merge, as well as create an Autorun menu for CDs or DVDs Autoplay Media audio is the most powerful visual package. Multimedia Autoplay Media to create applications based on technology studio software is very easy and convenient for users to use provides an interface.

IV. Discussion

Working with Autoplay Media Studio requires almost no programming. The user is just one to choose a different design software environment can use project templates in multiple ready-made forms. In this Autoplay software to make the application environment rich in design tool contains ready-made objects, including the command button, amplifier, which allows you to print files from a printer a tool that opens and accesses Web sites you can enter a number of functional objects. Graph for applications Autoplay Media Studio for creating shells and launching it automatically creates all the necessary files. And the users are just tough the task of forming ready-made projects for writing discs and compact discs remains. On March 12, 2008, Indigo Rose Corporation launched Autoplay Media Studio has released version 7.1.

Autoplay Media Studio software environment Visual Basic, Visual C ++, Java, Documents created on a number of systems, such as Macromedia Flash, can also be easily reproduced can work. Software animated menus, directories tree, database, and the like you can not only create but also manage them. Auto start windows are optional using the "masks" in its library can be created in the form (form). Such as "mask" .jpg, .bmp and .png You can also use files in formats such as Also, the data is on a CD be able to burn it to a CD or DVD without having to program it See how wide the capabilities of Autoplay Media Studio are shows. The finished project opens automatically as a file with an .exe extension, the archive can be created in view or in a separate folder on the hard disk. The program also includes the ability to spell check text. This feature of the program is its objects such as Label, Paragraph and Button works together. If the program is installed on the computer with the full version is too large in his library to spell check the text dictionaries. Thus, AutoPlay Media

Studio 7.0 The new version of has been released with the following features:

1. Automatic start menu, interactive presentations, multi-media applications, create software in minutes;
2. Various photography, music, video, animation, text and the ability to attach others;
3. Advanced tools for creating web applications;
4. Ability to work with XML, SQL and encryption mechanisms;
5. Ability to work with RTF-format documents;
6. Ability to work with slide-show;
7. Available RadioButton to change the color of the text;
8. Extended printing function;
9. Ability to format objects;
10. Availability of search engine using keywords;
11. Ability to burn to CDs, DVDs, etc.

Writing scripts in AutoPlay. If in the workspace (more on the page) using the properties panel to perform a function that an object must perform, If we want to define, then only one function is attached to one object, just but in real conditions, a single object must perform more than one function may be born. Properties to get out of a situation in such conditions cancel the selected function from the panel and separately for each function, It would be useful to write scripts. For example, one put audio music on one page and turn off music when you go to another page the script for his own Show event can be written as follows:

```
AudioLoad (0, "AutoPlay // Audio // 01.ogg", true, false);
```

In this case: true - if the page opens, the audio will play, and false this audio will not continue when you move to another page or indicates that it will not be repeated.

The page may also contain a Tree object. It is case to run its networks when using this Tree object the following scenario can be written:

```
If Tree.GetNode("Tree1", "1.1").Selected then  
Page.Jump("PgWebMavzu1");  
elseif Tree.GetNode("Tree1", "1.2").Selected  
then  
Page.Jump("PgWebTest");  
End
```

In this scenario, line 1 of the Tree object is in the 1st level grid If the DoubleClick mouse event is used, then "PgWeb- Theme1 "page appears.

If the Tree object is in the 1st level grid, the 2nd line is marked and two when the left mouse button is pressed (i.e. the DoubleClick event of the mouse)), then a page called PgWebTest will appear. You can also create an .exe file by pressing a command button If you need to run, then the script is written as follows:

```
Shell.Execute("AutoPlay\\Docs\\MyProg.exe",  
"", "", SW_NORMAL, true);
```

Sometimes it's about creating different dialogs in

Impact Factor:

ISRA (India) = 4.971
ISI (Dubai, UAE) = 0.829
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHIQ (Russia) = 0.126
ESJI (KZ) = 8.716
SJIF (Morocco) = 5.667

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

different options have to write a branching algorithm. For example, home launch that the InputBox will be displayed first, as requested for a password before the download If you want, then the following script for the "Preload" item of the homepage enough to write:

```
1. name = "";  
2. while (name ~= "CANCEL") and (name == "" ) do  
3.name=Dialog.Input("Attention", "Enter your name:");  
4. if name == "" then  
5. result=Dialog.Message("Error!", "You did not enter information!",MB_OK,MB_ICONEXCLAMATION,MB_DEFBUTTON1);  
6. elseif name == "CANCEL" then  
7.name=Dialog.Input("PersonalInformation", "Here's the author's name sheriff is entered: ");  
8. end  
9. Paragraph.SetText("Paragraph5", name);  
10. end
```

When writing a script, the focus is on the object focused on the event.

Writing a script in AutoPlay Media Studio 7.0 is a bit more complicated, but in any repetitive situation to minimize the content of the script or can provide the ability to write global scripts for simplification. This means that the script is in the field of work, or in other words, in the project a global scenario that is valid for all relevant pages may be, or limited to, valid for only one page could be a scenario. Limited scenarios are another part of the project loses its validity when you go to the page.

V. Conclusion

At present, the educational process in Uzbekistan is in line with international requirements intelligent, able to think independently, intellectual

special attention is paid to the education of talented young people. It's yours in turn, the need to pay more attention to the educational process, the educational process Improving efficiency leads to a deeper understanding of the mysteries of science and technology. Today, the teaching of "programming languages" in educational institutions is the most popular is one of the current problems. This research to solve it developed a methodology for teaching programming languages. Including the following work done:

- The basic form and content of teaching Pascal programming language are shown;
- The basic form and content of teaching Delphi programming language are shown;
- The basic form and content of teaching C ++ programming language are shown;
- Develop recommendations based on Pascal, Delphi, C ++ programming languages came out;
- One e-textbook for teaching Pascal, Delphi, C ++ programming languages was created. Teaching programming technologies and their importance in the dissertation. We have provided information and recommendations on To explore the topic we have divided the dissertation into three chapters. The first chapter is about programming tools modern technologies, history of programming languages, solutions to problems and algorithmic language elements, algorithm concepts, and object-oriented algorithms. The second chapter is Pascal, Delphi, C ++ We've covered the capabilities of programming languages. In the third chapter Recommendations for teaching Pascal, Delphi, C ++ programming languages. In short, the programming mentioned in the dissertation programming languages using technology teaching recommendations would help teach.

References:

1. Akhmedova, M. B. (2020). Typological Aspects of Adequate Translation Methods of "Spirituality" Nominative Units into English. *Psychosocial Rehabilitation journal*, Volume 24, Issue 3, UK, pp. 386-393.
2. Alimova, N. (2020). The role and importance of individual education in the system of organization. *Theoretical and Applied Science* 84 (4), 401-404.
3. Akhmedova, M. B. (2015). *Effectiveness of teaching vocabulary through short stories*. In International Scientific and Practical Conference World science (Vol. 1, No. 1, pp. 55-57).
4. Safarova, Kh.S., Karimova, Sh.K., & Nazarova, G.H. (2020). Main Characteristic Features of Oscar Wilde and OmonMukhtor's Literary-Aesthetic Works. *International Journal of Psychosocial Rehabilitation*, Volume 27, January. ISSN: 1475-7192, pp.397-403.
5. Khodjaeva, D. I. (2020). Lexicographic analysis of linguistic terms (on the basis of materials of explanatory dictionaries of the english, russian and uzbek languages). *International Journal of Psychosocial Rehabilitation*, Vol. 24, Issue 06, ISSN: 1475-7192, pp. 603-612.
6. Khodjayeva, D. I., & Khusenova, M. U. (2020). Lexicographiz analysis of pure phonetic terms in

Impact Factor:

ISRA (India) = 4.971
ISI (Dubai, UAE) = 0.829
GIF (Australia) = 0.564
JIF = 1.500

SIS (USA) = 0.912
PIHHI (Russia) = 0.126
ESJI (KZ) = 8.716
SJIF (Morocco) = 5.667

ICV (Poland) = 6.630
PIF (India) = 1.940
IBI (India) = 4.260
OAJI (USA) = 0.350

- the uzbek and english languages. *ISJ Theoretical and Applied Science*, Volume 81, Issue 01. p-ISSN: 2308-4944; e-ISSN: 2409-0085, Philadelphia, pp. 426-434.
7. Barotova, M.B. (2019). Differences in Transference of Proverbs in Prosaic Works by E.A'zam. *The Philosophical Quest*, Volume 16, ISSN: 23194-634, India, pp. 57-66.
 8. Barotova, M.B. (2020). The Problems of Recreating Writer's Style in Translation. *International Scientific Journal: Theoretical and Applied Science*, Volume 82, Issue 02, USA, pp. 189-192.
 9. Safarova, X.S., Vosiyeva, Sh.I. (2020). A book of protection Hoja Ahmad Yassawi's "DevoniHikmat". *International Journal on Integrated Education*, Volume 3 ISSN : 2620 3502 ISSN :2615 3785, America, pp.156-160.
 10. Alimova, N. R. (2020). Individualization in Education and Methods of Improving Teaching the English Language. *Psychosocial Rehabilitation journal*, Volume 24, Issue 1, UK, pp. 91-96.
 11. Khodjaeva, D. I., & Mustafoyeva, P. U. (2020). Positiuon and combination of sounds in speech. *International Journal on Integrated Education*, Volume 3, Issue 1, e-ISSN: 2620 3502; p-ISSN 2515 3785, pp. 182-185.
 12. Norova, M.B., & Vosiyeva, Sh.I. (2020). Various Approaches to Terminology. *International Journal of Psychosocial Rehabilitation*, Volume 24 Issue 09, ISSN : 1475-7192, America, pp.394-397.
 13. Mamedova, M. A. (2020). "Homonyms their types and sources". *Modern problems of philology and linguistics*, Vol.1, Issue 1, February.
 14. Mamedova, M.A. (2019). "Classification of homonyms of the English language",- UK, Vol. 7, No 12.
 15. Mamedova, M.A. (2020). "Comparative analysis of homonyms of english and uzbek languages for methodological purposes",- USA, *International scientific journal theoretical & applied science*, Vol.83, Issue 03.
 16. Aripov, M. (2008). *"Introduction to programming"*. Study guide. Toshkent.
 17. Nazirov, Sh., Musayev, MM, Ne`matov, A., & Qobulov, R.V. (2006). *"In Delphi basics of programming "*. Study guide. Toshkent.
 18. Aripov, M.M., & Otakhanov, N.A. (2007). *delphi programming language. / Textbook.* (p.544). N.: Namangan.
 19. Nazirov, Sh.A., & Divald, G. (2007). *Fundamentals of programming. Information and communication of professional colleges in the field of technologies "Information and communication Textbook for students majoring in systems.* Tashkent.
 20. Nazirov, Sh.A., & Qobulov, R.V. (2007). *Object-oriented programming. Profession a textbook for colleges.* Ghafur Ghulam Publishing House creative house Tashkent.
 21. Azamatov, A.R. (2010). *Fundamentals of algorithms and programming.* Vocational colleges tutorial for Tashkent.
 22. Nematov, A., Kulmuradov, M., Tangirov, A., & Akbarova, N. (2011). *Basics of programming.* Toshkent.
 23. Ahmedov, A., & Tayloqov, N. (2008). *Informatics.* Tashkent, Uzbekistan.
 24. Kulakov, A.G., Lando, S.K., Semyonov, A.L., & Shen, A.X. (1997). *Algorithmics.* V - VII classes. Moscow: Drofa.
 25. Boltayev, B.J., Azamatov, A.R., Askarov, A.D., Sodiqov, M.Q., & Azamatova, G.A. (2011). *Basics of computer science and computer engineering.* For 9th grade textbook.Tashkent.
 26. Otakhanov, N.A. (2008). Teaching object-oriented programming technologies in particular. *Problems of education*, Tashkent, № 3, pp.168-172.
 27. Roziyev, R.A. , Yodgorov, G.R., & Mirsanov, U.M. (2012). *Delphi programming language study.* Guidebook. Navoi.
 28. Otakhanov, N. A. (2008). Do you know how to work in DELPHI programming language. *Education and contemplation*, Namangan, № 4, pp. 16-17.