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«AMALIY MATEMATIKA VA AXBOROT TEXNOLOGIYALARINING ZAMONAVIY MUAMMOLARI» XALQARO ILMIIY-AMALIY ANJUMAN



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**«AMALIY MATEMATIKA VA AXBOROT TEXNOLOGIYALARINING
ZAMONAVIY MUAMMOLARI»
XALQARO ILMIIY-AMALIY ANJUMAN
TEZISLAR TO'PLAMI**

**ABSTRACTS
INTERNATIONAL SCIENTIFIC AND PRACTICAL CONFERENCE
«MODERN PROBLEMS OF APPLIED MATHEMATICS AND
INFORMATION TECHNOLOGIES»**

**ТЕЗИСЫ
МЕЖДУНАРОДНОЙ НАУЧНО-ПРАКТИЧЕСКОЙ КОНФЕРЕНЦИИ
«СОВРЕМЕННЫЕ ПРОБЛЕМЫ ПРИКЛАДНОЙ МАТЕМАТИКИ И
ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ»**



2021 YIL 15 APREL
BUXORO

**ЎЗБЕКИСТОН РЕСПУБЛИКАСИ
ОЛИЙ ВА ЎРТА МАХСУС ТАЪЛИМ ВАЗИРЛИГИ
БУХОРО ДАВЛАТ УНИВЕРСИТЕТИ
АХБОРОТ ТЕХНОЛОГИЯЛАРИ ФАКУЛЬТЕТИ**

**АМАЛИЙ МАТЕМАТИКА ВА
АХБОРОТ ТЕХНОЛОГИЯЛАРИНИНГ
ЗАМОНАВИЙ МУАММОЛАРИ**

ХАЛҚАРО МИҚЁСИДАГИ ИЛМИЙ-АМАЛИЙ АНЖУМАН

МАТЕРИАЛЛАРИ

2021 йил, 15-апрель

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Talabaning axborot qobiliyatining asosiy tarkibiy qismlari quyidagilardan iborat:

- axborot manbalarini to'g'ri tanlash qobiliyati;
- turli manbalardan ma'lumotlarni topish va o'zgartirish qobiliyati;
- texnik vositalardan foydalanish bo'yicha aniq ko'nikmalar;
- o'z faoliyatida kompyuter axborot texnologiyalaridan foydalanish qobiliyati;
- kerakli sohada axborot oqimlarining xususiyatlarini bilish.

Ostida axborot-kommunikatsiya texnologiyalari biz ma'lumot bilan ishlash usullari va ulardan foydalanish ta'lim va ta'limning markaziy vazifalarini hal qilishni ta'minlaydi.

O'quv jarayonida AKTdan foydalanish:

- darsda va darsdan keyin talabalarning bilim faolligini kuchaytirish;
- mavzuga doimiy qiziqishni saqlash;
- darslarda ko'rib chiqiladigan murakkab jarayonlar va hodisalarni turli mavzularda modellashtirish va vizuallashtirish;
- talabalarni Internetda mustaqil ravishda izlash, tanlash va tahlil qilish;
- ijodiy qobiliyatlarni rivojlantirish, talabalar o'rtasida umumiy va axborot madaniyatini shakllantirish.

AKTdan foydalanishning asosiy afzalliklari quyidagilar:

O'rganishga tayyorlik darajasidagi turli darajadagi talabalarga tabaqalashtirilgan yondashuvni amalga oshirish qobiliyati.

Darsda vizual, audiovizual va video hamkasblaridan foydalanish.

Dars, darslarning yuqori sur'atlarini saqlash.

O'qituvchi va talabalar o'rtasida samarali aloqani ta'minlash.

Talabalarning talabalar ta'limi bo'yicha tezkor va ob'ektiv nazoratni amalga oshirish.

Talabalarni sifatli o'qitishga erishish.

Foydalanilgan adabiyotlar ro'yxati

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USAGE OF INTEGRATION OF INFORMATION TECHNOLOGIES IN TEACHING FOREIGN LANGUAGES

¹Nazarov Shakhzod Erkinovich, ²Khakimova Nasiba Khidirovna

¹Teacher of the Department of Information Technology, Bukhara State University,
nazarov_shakhzod@mail.ru

²The teacher of Bukhara region specialized art boarding school, Bukhara, Uzbekistan
nasiba.kh.85@mail.ru

Annotation: The article discusses the ways and signs of the effective use of information technology in the system of higher and secondary specialized education, as well as provides methodological tips and recommendations for teachers on the productive use of information technology.

Keywords: teaching style, modern pedagogical technologies, educational activities, visual information, individual research work, computer modeling, teaching effectiveness.

With the advent of computers in educational institutions of higher and secondary specialized vocational education of the Republic of Uzbekistan, the teaching style began to change, and the design form of educational activity began to be used more and more. A computer with a special software package helps the student conduct experiments, process the

results, really see the physical processes that are taking place with their graphic display, and during the experiment, acquire the skill of reading graphic information.

The use of computers in teaching and extracurricular activities in high school looks quite natural about the terms of the student and is one of the effective ways to increase motivation and individualization of his teaching, the development of creative skills and create a safe emotional background. Each lesson causes students an emotional upsurge, even lagging students are willing to work with a computer. A computer lesson enriches the feedback between all participants in the pedagogical process and the interaction of all its components, promotes differentiation and individualization of instruction, motivates students' learning activities, promotes the development of self-education, makes learning material more accessible, and facilitates the solution of many didactic tasks in the lesson.

Using a computer in the classroom should lead to the following positive results:

- increasing the amount of visual information significantly improves the quality and effectiveness of teaching foreign languages;
- computer capabilities attract students, activate their creative potential;
- the colorfulness of computer graphics also attracts students, allows you to better develop visual-figurative thinking;
- the process of employment corresponds to the nature of modern labor (work with a computer);
- students are able to process a huge stream of information that they receive, and the desire for independence;
- students are given the opportunity of individual research work with a computer model, during which they can independently experiment, quickly test their hypotheses, establish patterns;
- students are provided with an individual pace of learning;
- students acquire the skill of optimal use of a personal computer as a learning tool;
- learning process effectiveness;
- the teacher frees up time for individual work with students (especially those with lagging behind), during which he can adjust their learning process;
- computer technologies in teaching helps both teachers and students to keep in touch with the world (through internet), to obtain information from other sources;

Computer technology is based on the use of some formalized model of content, which is represented by pedagogical software tools stored in the computer's memory and the capabilities of the telecommunication network. Computer learning tools are called interactive, they have the ability to respond to the actions of the student and teacher, to "enter" into dialogue with them.

The effectiveness of using the latest information technologies in the educational process largely depends on the successful solution of tasks of a methodological nature related to the information content and the way in which automated training systems are used in the educational process. There is a close relationship between existing teaching methods (pedagogical techniques) and the methodological content and pedagogical purpose of the program-methodological complex.

The modern capabilities of new information technologies aimed at maximum unification, at the level of software and hardware, allow you to create software and methodological training complexes as a set of training fragments combined by algorithmic means that define the learning path.

Accompaniment of the lecture material with a dynamic image, high-quality static graphics, texts with various styles, sound, is carried out with the help of copyright information systems, helps the teacher in explaining this material.

To expand the effectiveness of the educational process, a central place in personal education and providing students with knowledge is necessary for a teacher with excellent training who is constantly working on himself, consolidating the experience gained, using modern pedagogical technologies and interactive methods in practice. In order for the teacher to

use the learning time as efficiently as possible, he needs to arm himself with all the achievements of modern pedagogical technologies, interactive methods, and knowledge. The teacher must know the psychology of students and master the practice of communication, know the various methods of pedagogical technologies and be able to use them in practice.

A computer can be used at all stages of the learning process.

When presenting new material, the computer allows you to accompany it with dynamic illustrations, computer models, texts and video clips. Computer models enliven the presentation of the material, provide a demonstration of what cannot be shown in a natural experiment and is difficult to perceive in static drawings. Some models allow simultaneously with the progress of experiments to observe the construction of the corresponding graphical dependencies. Such models are of particular value, as students, as a rule, experience significant difficulties in constructing and reading graphs. It would seem that (video) films have the same opportunities. But the film, no matter how good it is, is devoid of interactivity, i.e. does not allow the teacher to change the model parameters in accordance, for example, with the question that arose: "What will happen if ...?" In my lessons I use created computer presentations. I draw on computer literate students to develop them.

In a demonstration experiment, a computer is used as part of the installation, or as an auxiliary device, allowing to demonstrate to the whole class such phenomena that usually can only be observed with a microscope (for example, Brownian motion). In addition, the computer allows you to speed up the processing of experimental results in cases where the demonstration experience needs to be processed.

When solving problems, the computer is used to present task texts, verify answers, and automate calculations. Another, less traditional way of using a computer is to verify a solution to a problem using a computer model of the "task situation". The teacher can offer students for independent solutions in the classroom or as homework tasks, the correctness of the solution of which they can verify by putting computer experiments. Independent verification of the results using a computer experiment enhances the cognitive interest of students, makes their work creative, and in some cases brings it closer to scientific research in nature. Tasks of a creative and research nature significantly increase students' interest in studying physics and are an additional motivating factor.

Results:

- improving the quality and effectiveness of teaching foreign languages;
- increasing cognitive interests in the subject;
- increasing the level of independence;
- the ability to conduct individual research with a computer model, during which students can independently experiment, quickly test their hypotheses, and establish patterns.

Problematic learning is an indispensable feature of a modern lesson; it is a way of developing students' creative thinking. According to psychologists, intellectual development is carried out only in the conditions of overcoming obstacles, intellectual difficulties. These difficulties lie in the fact that the student cannot complete the task in ways known to him and must find a new way to solve the learning problem. The problem tasks presented by the teacher, problem situations in the lesson, as a rule, cause great interest and serve as motivation for the cognitive activity of students.

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ОСОБЕННОСТИ ИНТЕГРИРОВАНИЯ ИНФОРМАЦИОННЫХ ТЕХНОЛОГИЙ В ПРЕПОДАВАНИИ ПРЕДМЕТА ФИЗИКИ

¹Назаров Э.С., ²Мардонов Н.А.

¹Кандидат технических наук, доцент, Бухарский государственный университет

²Студент физико-математического факультета, Бухарский государственный университет

Аннотация: Использование компьютеров в учебной и внеурочной деятельности обогащает обратную связь между всеми участниками педагогического процесса и взаимодействие всех его компонентов, способствует дифференциации и индивидуализации обучения, мотивирует учебную деятельность учащихся, способствует развитию самообразования, делает учебный материал более доступным, облегчает решение многих дидактических задач на занятии.

Ключевые слова: Учебная деятельность, внеурочная деятельность, дифференциация обучения, индивидуализация обучения, мотивация, информационные технологии, компьютерное моделирование.

С появлением компьютеров в учебных заведениях средне-специального профессионального образования Республики Узбекистан начал меняться стиль преподавания, все больше стала использоваться проектная форма учебной деятельности. Компьютер со специальным пакетом программ помогает студенту провести опыты, обработать результаты, реально увидеть происходящие физические процессы с их графическим отображением и во время проведения эксперимента приобрести навык чтения графической информации.

Тема актуальна и важна. Физика – наука экспериментальная, и для её полноценного изучения необходимо проводить опыты. Но современная физика стала еще и наукой компьютерной: физик-экспериментатор использует компьютер как неотъемлемую часть исследовательской установки, физик-теоретик работает с ним для моделирования изучаемых явлений – оба они обращаются к компьютерным базам данных. Поэтому полноценное изучение физики предполагает включение компьютера в учебный процесс.

Использование компьютеров в учебной и внеурочной деятельности в академическом лицее выглядит вполне естественно с точки зрения студента и является одним из эффективных способов повышения мотивации и индивидуализации его учения, развития творческих способностей и создания благополучного эмоционального фона. Каждое занятие вызывает у студентов эмоциональный подъем, даже отстающие студенты охотно работают с компьютером. Компьютерное занятие обогащает обратную связь между всеми участниками педагогического процесса и взаимодействие всех его компонентов, способствует дифференциации и индивидуализации обучения, мотивирует учебную деятельность учащихся, способствует развитию самообразования, делает учебный материал более доступным, облегчает решение многих дидактических задач на занятии.

Использование компьютера на занятиях должно привести к следующим положительным результатам:

– увеличение объёма зрительной информации существенно повышает качество и эффективность преподавания физики;

– возможности компьютера привлекают учащихся, активизируют их творческий потенциал;

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