

EFFECTIVENESS OF THE APPLICATION OF ACTIVE LEARNING TECHNOLOGIES

Aktif Öğrenme Teknolojileri Uygulamasının Etkinliği

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ABSTRACT

Taking into account the results of numerous studies in the field of theory, methodology and methods of computer science, we note that "the scientific apparatus of computer science has not yet been stabilized." Given the new trends in the development of education, the application of reproductive and control methods in the system of methodological training of teachers engaged in professional activities, there is reason to argue that there is a debate based on the reproduction of learners and not motivating creative cognition and profession: student-oriented activity. At present, the teaching of computer science in grades 5-11 in secondary schools is not conducted in this direction. The aim of the research is to develop training on the use of active forms and teaching methods in the process of teaching computer science to grades 5-11.

Keywords: Training, method, technology, education, computer, informatics.

ÖZET

Bilgisayar bilimi teorisi, metodolojisi ve yöntemleri alanındaki çok sayıda çalışmanın sonuçlarını dikkate alarak, "bilgisayar biliminin bilimsel aygıtının henüz stabilize edilmediğini" not ediyoruz. Eğitimin gelişimindeki yeni eğilimler göz önüne alındığında, mesleki faaliyetlerde bulunan öğretmenlerin metodolojik eğitim sisteminde üreme ve kontrol yöntemlerinin uygulanması göz önüne alındığında, öğrencilerin yeniden üretilmesine ve yaratıcılığı motive etmemeye dayalı bir tartışma olduğunu tartışmak için bir neden vardır. biliş ve meslek: öğrenci odaklı etkinlik. Günümüzde ortaöğretim okullarında 5-11. Sınıflarda bilgisayar bilimi öğretimi bu yönde yürütülmektedir. Araştırmanın amacı 5-11. Sınıflara bilgisayar bilimi öğretimi sürecinde aktif formların ve öğretim yöntemlerinin kullanımı konusunda eğitim geliştirmektir.

Anahtar Kelimeler: Eğitim, yöntem, teknoloji, eğitim, bilgisayar, bilişim

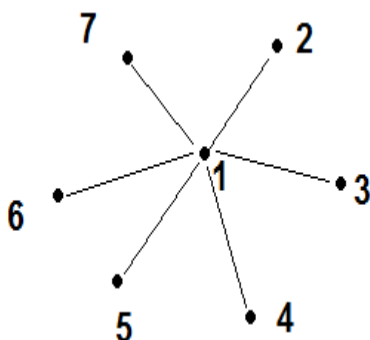
1. INTRODUCTION

Let's look at the organization of the lesson "Computer networks and their classification" with the application of active learning technologies in grades 9-11:

First, to reinforce the concept of "computer network", students are asked a few questions: "What is a computer network?", "What is a local area network?". Additional questions can be asked: "What are the similarities between graphs and computer networks?", Etc. In the "Activity" section, students are asked to show a schematic (graph) of the existing network in the classroom. If there is no local area network in the classroom If a "client-server" network is set up in the classroom, then the graph showing it will be an ordinary graph, because the information is transmitted both from the client computer to the servant computer, and vice versa.

2. USING AN ACTIVE LEARNING TECHNOLOGIES

For example, a local area network can be represented as a graph:



Then we talk about the types of local networks. Brief information about computer networks and their topologies is given.

The main characteristic of a computer network is the speed of information transmission.

This quantity is determined by how many bits of information are transmitted per second (bits / s).

1 Kbit/s = 1024 bit/s;

1 Mbit/s = 1024 Kbit/s;

1 Gbit/s = 1024 Mbit/s.

Speaking of corporate networks, we can talk about the www.az.edu.net education network operating in the Azerbaijani education system. At present, the Ministry of Education and about 2,000 subordinate institutions - education departments, divisions, higher, secondary and secondary vocational education institutions - have joined the Azerbaijani education network. Educational institutions are connected to the Internet by various technologies: fiber optic, ADSL and wireless (3G, satellite antenna, etc.). Provides the highest speed fiber optic connection (up to 100 Mbit / s). The speed of ADSL (up to 4 Mbit / s) and wireless (up to 10 Mbit / s) connections depends on the technical conditions.

To date, only 60 educational institutions use fiber-optic connection. In addition to network servers and client computers, most networks use two other types of network equipment: communication devices and transmission devices (devices that connect network cables and amplify signals).

Various devices are used to transmit data on local and global networks. The most important piece of hardware for a computer network is the NIC (network interface card) network adapter. It is sometimes called an Ethernet adapter or network card. It can be a separate card or part of the computer motherboard.

To find out if your computer has a network card, look for the RJ-45 slot on the back panel of the system unit. It looks like an enlarged socket for a telephone cable, except that a network cable is inserted instead of a telephone cable. An aggregator is used to organize a local area network of several computers. This type of device simply transmits all the information it receives. That is, all devices connected to the collector's port receive the same information.

In the "Investigate-Learn" section of the textbook, students must determine which network topologies the graphs indicated correspond to.



Bus



Star



Linear bus

In the "Check What You Learned" section, students can answer the questions.

Evaluation criteria: differentiation, enumeration.

Level 1	Level 2	Level 3	Level 4
Computer networks to the structure with difficulty distinguishes.	Computer networks to the structure according to the teacher's help distinguishes by.	Computer networks according to the structure small when distinguishing makes mistakes.	Computer networks to the structure properly due distinguishes.
Computer networks types with difficulty lists.	Computer networks types teacher's help lists with.	Computer networks types small when enumerating makes mistakes.	Computer networks types lists correctly.

After planning a modern lesson, a comprehensive analysis of the pre-lesson, lesson process and post-lesson stages should be conducted, before moving on to the content of the lesson, questions about the importance of the topic, as well as its goals and objectives.

The majority and types of questions should be chosen so that learners have the knowledge (ability to repeat information in the form they hear), comprehension (the ability to repeat any idea on a topic in their own words or in any other way), application (using the method they have just learned), the ability to solve a new task), analysis (the ability to find the causes, consequences and other components of a complex idea), synthesis (the ability to combine several ideas with a new idea, the ability to find a new version of an old idea) and evaluation (the formation of skills and abilities such as the ability to assess the suitability of any process for an explanation) and to enable learners to draw certain conclusions for themselves during the thinking phase of the lesson.

3. PRACTICAL SIGNIFICANCE

The application of new technologies in the teaching-learning process, the use of new approaches in the management of the pedagogical process, opens wide opportunities for the establishment of a quality classroom system. Unlike traditional lessons, the organization of a modern lesson plays a crucial role in ensuring the quality of the classroom system.

In this case, extremely significant changes take place in the classroom environment, the teacher-learner, the students themselves and the school and parents interact in accordance with modern requirements. New opportunities are emerging for the widespread use of interactive teaching methods and ICT, one of the modern teaching methods. It should be noted that the importance of an active lesson depends not only on its content, but also on its form. With the help of information and communication technologies, the student tries to get information freely, develops his thinking and psychological skills.

4. CONCLUSION

The results obtained during the systematic application of information and communication technologies in education show that information technologies completely change the environment in education, allowing the interactive organization of the teaching process. As a result of the wide and comprehensive application of information and communication technologies, human activity, society as a whole is undergoing changes, completely new realities and values are being formed in the socio-psychological environment.

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