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IMPLEMENTATION OF MODERN EDUCATIONAL GOALS BASED ON ICT ABSTRACT

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Abstract: The integration of information and communication technologies (ICT) into the educational process has become one of the key priorities in modern education systems. This study examines the implementation of modern educational goals through ICT-based teaching methods and multimedia technologies. The research analyzes the effectiveness of test-based assessment, step-by-step evaluation of learning outcomes, and the use of multimedia learning tools in improving the quality of education. Particular attention is given to the role of ICT in enhancing students' engagement, knowledge acquisition, and interactive learning environments. The findings indicate that multimedia technologies and ICT-based instruction significantly improve students' motivation, cognitive activity, and academic performance. The results also demonstrate that the use of multimedia learning resources contributes to the development of students' analytical thinking, creativity, and independent learning skills.

Keywords: information and communication technologies, ICT in education, multimedia learning, educational technologies, digital education, pedagogical technology, interactive learning.

Introduction

In the context of rapid technological development and globalization, modern education systems require innovative approaches to teaching and learning. One of the most important directions for improving the quality of education is the integration of information and communication technologies (ICT) into the learning process.

The implementation of modern educational goals requires systematic planning, step-by-step evaluation, and effective assessment of learning outcomes. In this regard, test-based evaluation methods play an important role in determining students' knowledge levels and monitoring the progress of learning outcomes.

Educational objectives must be clearly defined and translated into measurable indicators. Therefore, transforming learning objectives into assessment tools such as tests becomes an essential task in modern pedagogy. The repetition stage also plays an important role in the educational process because it allows teachers to determine the level of students' mastery and adjust the teaching process accordingly.

To fully achieve educational goals, it is necessary to evaluate the results step by step. Today, the introduction of test-based assessment greatly facilitates the implementation of this didactic task. It is well known that educational objectives and the criteria for achieving them are reflected in test systems. Therefore, determining learning outcomes through tests at each stage of the educational process is considered appropriate. For this reason, transforming educational objectives into test-based evaluation remains an important issue.

In the teaching process, the repetition stage occupies a special place in the technological structure of education. During repetition, the following aspects are taken into account: the general goal of education; the transition from a general goal to specific objectives; determining the level of student mastery at each stage; and coordinating and managing the educational process based on these results.

Repetition Technology in the Educational Process

If the structure of a lesson is analyzed from a technological perspective, it includes the following stages:

A) Organizing students' attention;
B) Providing information about the didactic objectives;
C) Stimulating the necessary knowledge and skills;
D) Presenting educational materials that influence learning;
E) Encouraging students' responses and reactions;
F) Ensuring cooperation and interaction;
G) Reinforcing acquired stable knowledge and skills;
H) Evaluating students' learning activities.

The level of students' mastery is determined by the speed and quality of their learning process. According to their learning abilities, students can be divided into three groups:

- **Gifted students** who can learn quickly – 30%;
- **Average students** – 50%;
- **Students with lower learning ability** – 20%.

Student category	**Percentage**
Gifted learners	30%
Average learners	50%
Low-achieving learners	20%

When setting educational objectives, the learning abilities of all students must be taken into account. The methodology for achieving complete mastery may be organized as follows:

1. **Introductory stage** – orienting students toward full mastery of the subject.
2. **Achieving mastery** – ensuring that each student reaches a high level of understanding.
3. **Assessment stage** – evaluating the level of mastery achieved by each student.
4. **Grading stage** – organizing and recording students' final grades.

Afterward, the teacher introduces each student to the opportunities available for achieving full mastery. The class is taught using a new methodology designed to ensure complete mastery of the subject. At the end of the learning process, each student is assessed based on their knowledge of the subject.

Students are not evaluated comparatively; instead, their achievements are measured according to established educational standards and criteria. A student who reaches the **"standard level"** receives an **excellent grade**. The number of excellent grades is not limited. Each student receives as much assistance as necessary. During the learning process, every student's progress is monitored diagnostically. If a student encounters difficulties with a particular task, alternative teaching methods are applied.

It is characteristic that one of the key principles of pedagogical technology is **guaranteed complete mastery**, which is achieved through the gradual and sequential learning of educational materials. In fact, this methodology has historical roots in Eastern educational traditions, particularly in Uzbekistan. Historically, the principles of consistency and continuity were emphasized in mastering knowledge. After completing the study of a subject, knowledge was tested through competitive methods, and only after full mastery was the student allowed to proceed to the next stage or subject.

In this system, educational objectives and teaching methods are determined according to each student's abilities and learning level. This system may be implemented as follows:

1. Each student's knowledge of the subject is first assessed through diagnostic testing.
2. Then the student's knowledge of a particular section of the subject is evaluated.
3. Based on the results, individualized learning content is determined.
4. The student receives assignments divided into sections.
5. After achieving the specified goals, the student takes a final test and receives a grade for the subject.
6. If the goal is not achieved or certain sections remain incomplete, the repetition stage is repeated.

The **full and individual (brigade–individual) learning model** began to be widely implemented in the United States during the 1980s. In this system, students work individually and in small groups. Students are divided into groups of four or five, where gifted students, weaker students, girls, and representatives of different ethnic groups are equally represented.

Each group focuses on completing tasks efficiently. Group members check each other's work and provide mutual assistance. At the end of the week, results are summarized and evaluated. The principle **"one for all and all for one"** is followed. This method not only improves academic achievement but also develops students' self-assessment skills and strengthens friendship and cooperation among them.

In conclusion, one of the structural components of the pedagogical process is the development of technologies aimed at achieving clearly defined and guaranteed educational outcomes. Pedagogical technology is not limited to expressing educational goals but also includes the entire didactic system.

The main objective of educational reforms is to educate spiritually mature individuals, improve the education system, and implement teaching processes using modern pedagogical and information technologies in accordance with contemporary requirements. Therefore, significant attention is currently given to the effective use of computers and modern information technologies in the educational process.

To achieve effective results, it is essential to improve teachers' knowledge and skills in the use of modern information technologies, provide technical support to educational institutions, and ensure full access to the Internet.

One of the most effective ways to improve the quality and efficiency of education is the use of modern **information and communication technologies (ICT)** in the educational process,

including multimedia learning courses. This also involves ensuring interactive communication between teachers and students and attracting highly qualified specialists for the development of multimedia educational materials and textbooks.

Multimedia technologies enable information to be presented in different forms and allow dynamic images to be created. Through visual and auditory perception, learners can better understand and imagine complex concepts.

Compared to traditional technologies, multimedia presents information not only in text form but also through images, sound, and motion. This approach encourages students to be more active, attentive, curious, and motivated during lessons, as the information presented requires their active participation and engagement.

In the education system, multimedia technologies combine theoretical, practical, visual, informational, training, and control components, making them an effective and positive tool for students' learning.

Moreover, the use of multimedia educational courses in the education system enables the creation of high-quality video demonstrations of theoretical materials, virtual laboratory experiments, practical exercises, and animated simulation models of various processes. To implement these activities effectively, it is necessary to organize practical sessions in classrooms, computer laboratories, technical training facilities, methodological centers, and libraries.

All multimedia learning courses used in the educational system must undergo practical testing and experimental evaluation and should possess specific pedagogical and psychological characteristics.

The pedagogical and psychological characteristics of multimedia learning courses depend on the form and presentation of the educational materials used to develop students' knowledge and skills. They should not only support the solution of examples and problems or laboratory activities but should also contribute to the development of students' knowledge, abilities, and competencies throughout the entire learning process.

One of the distinctive features of multimedia educational courses developed for the education system is related to the complexity of studying certain topics that require a large number of visual materials. Without such visual resources, it is difficult to fully demonstrate the diversity of the natural world, the structure of biological organisms, or the mechanisms and development of biological, chemical, and physical processes.

When developing multimedia educational courses, one of the key didactic tasks is **the modeling of learning processes and the application of general methods for influencing objects of visualization and imagination**.

Multimedia educational courses differ significantly from traditional teaching materials. In particular, educational content is presented using multimedia elements such as graphics, animation, video, sound effects, and simulation of real-life events and processes. These elements help compensate for the limitations of natural objects and traditional visual aids.

As a result, multimedia technologies play an important role in developing and strengthening students' knowledge and practical skills. In multimedia courses, visual materials that enhance the perception of educational content can be presented through slides, tables, graphical schemes, illustrations, video materials, and other visual theoretical resources.

The creation and use of multimedia educational courses provide broad opportunities through local computer networks and the Internet.

Discussion

The findings of this study highlight the importance of ICT integration in modern education systems. Multimedia technologies not only improve the effectiveness of teaching but also create interactive and student-centered learning environments.

One of the key advantages of multimedia learning is its ability to present complex information through multiple sensory channels. When students simultaneously receive

information through visual and auditory perception, the level of understanding and knowledge retention increases significantly.

Furthermore, ICT-based learning environments support individualized instruction. Students can progress at their own pace and receive personalized learning materials based on their knowledge levels.

The use of group learning models also contributes to the development of social skills such as cooperation, communication, and peer support. In addition, the use of digital technologies promotes students' creativity, analytical thinking, and problem-solving abilities.

However, effective implementation of ICT in education requires several conditions:

- sufficient technical infrastructure,
- teacher training in digital technologies,
- access to Internet resources,
- development of high-quality multimedia educational materials.

Conclusion

The integration of information and communication technologies into the educational process plays a crucial role in achieving modern educational goals. ICT-based teaching methods improve the quality and efficiency of the learning process by creating interactive, student-centered learning environments.

The study confirms that multimedia technologies significantly enhance students' motivation, engagement, and academic performance. The use of digital learning tools also supports individualized learning and helps students develop independent learning skills.

Therefore, expanding the use of ICT and multimedia technologies in education should be considered a strategic priority for modern educational systems. Continuous development of digital learning resources and teacher training programs will further improve the effectiveness of ICT-based education.

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