EJCBLT

ISSN:3031-7347

https://doi.org/10.61796/ejcblt.v1i7.871

THE ROLE OF INNOVATIVE TECHNOLOGIES IN SOCIETY

Makhmatkulova Hikoyat Ghiyosiddin qizi
Teacher of Tashkent State University of Economics

Kholdarova Fotima Mahammadjon qizi
Teacher of Tashkent State University of Economics

Received: Jun 22, 2024; Accepted: Jul 29, 2024; Published: Aug 27, 2024;

Abstract: This topic discusses the significance of innovative educational technologies in contemporary times. It provides information about the role of modern methods and technologies during the course of lessons.

Keywords: innovation, method, technology, complex, material, pedagogy, distance learning.

Introduction

In today's world, there is a growing need to further develop education and enrich it with foreign experiences. As innovative technologies advance, there is an increasing focus on improving the quality of education by utilizing innovative pedagogical and informational tools in the educational process.

The 21st century is rightly called the information age. Today, innovation is entering all fields, including education. The integration of innovation into the teaching system is evident in the content of education, teaching methods, and educational tools. Consequently, it is important to recognize the continuous enrichment of education with information. Additionally, the use of a wide range of knowledge and information is broadening students' perspectives. This requires us to adopt new ways of thinking and innovative methods. The more innovations there are in a teacher's practice, the higher the quality and content of the lessons will be.

When a teacher organizes a lesson based on innovative technologies, they utilize various technical tools (such as computers, projectors, electronic boards, etc.). Accordingly, each teacher introduces innovations in education in an individual manner. The primary goal of using innovative technologies is to strengthen the didactic connection between the teacher and the students, to spark students' interest in the subject, to improve their attitude towards education, to prevent them from being influenced by harmful ideas, and to enable them to apply the knowledge they have acquired and develop practical skills.

U. Xodjamkulov defines innovation as long-term and systematic activities involving changes and approaches in a specific field.

Innovation means deviating from the existing state, changing, or differing.

Innovation is an idea, process, and tool whose results contribute to the quality and effectiveness of education through the improvement of the educational system.

In today’s world, there is a serious focus on implementing innovations across all sectors. One such innovation is the “cluster model,” which is currently widely used in sectors such as the economy, agriculture, textiles, light industry, and pharmaceuticals. In a short period, the cluster

model has been recognized as a promising innovative direction in the economy, and attempts are being made to apply it in other fields as well.

Innovations in education encompass a range of complex activities aimed at the emergence of innovations in all fields. In other words, innovative education is a program where the outcome of pedagogical innovative activities results in students becoming creators of future innovative ideas. Creativity is not confined to a single field but can be applied across many areas. Old methods and skills may not be as effective with newer generations of students. Educators need to understand that, along with implementing innovative methods, it is crucial that the material helps students assimilate it effectively. The rapid development of society is creating a need to advance educational technologies and methods to a new level. To this end, it is necessary to implement technologies that focus on individualized approaches and distance learning.

Information technology serves as the scientific and methodological foundation for organizing processes that guarantee the formation of a well-rounded individual. From this perspective, the process of teaching students in the field of information technology involves training them to engage in independent reading, acquire knowledge, and think freely. In our country, as with all sectors, information and communication technologies are rapidly developing, presenting educators with new and evolving tasks.

Information technology is a person-centered technology that focuses on the intellectual and emotional-motivational development of students, the formation of knowledge and professional skills, ensuring an attitude towards the educational process as a value, increasing activity, self-awareness, and the development of independence.

Currently, the following key information technologies are widely used and studied in education:

Electronic Teaching Tools. The teaching process involves the interaction between the teacher, the learner, and the teaching tools. Modern computer tools and information technologies offer the possibility to offload some of the tasks of the teacher and the learner to the teaching tools.

Methods

Electronic Educational-Methodological Complexes are composed of didactic, software, and technical interactive components for teaching within the environment of modern information technologies. They present educational materials using computer technologies, audio-visual tools, and other means.

Electronic Educational-Methodological Materials include electronic textbooks, electronic study guides, electronic lecture materials, electronic libraries, and audio-visual materials in various formats (such as GD, Flash, etc.), interactive educational courses, laboratory tasks for conducting computing experiments on computers, and test examination systems.

Electronic textbook - A learning tool designed to apply computer technology-based teaching methods, facilitate independent learning, and comprehensively assimilate educational materials and scientific information related to a specific subject.

Result and Discussion

Multimedia - A technical or software suite for computers consisting of a collection of sound, video, and various animation effects. The components of sound, video, and animations can be referred to as "multimedia elements."

Multimedia technologies integrate many types of information. For example, images obtained

from scanners, recorded sound, musical effects, and music, complex videos with visual effects, and various animations. Additionally, multimedia tools may include projectors and interactive whiteboards. It is also worth noting that knowledge acquired through multimedia is retained in a person's memory for a long time and can be applied in practice when needed. Overall, the use of multimedia achieves the following effectiveness in teaching:

- Acquiring knowledge is not mandatory but is carried out at the student's discretion.
- Multimedia is welcomed with joy by students, and this joy, in turn, positively changes their attitude towards the subject."
- The student will have the opportunity to demonstrate themselves in comparison to others.
- A new objective criterion emerges for students to evaluate their own performance: those who know more and can use it successfully will come out on top.
- They are given the opportunity to indulge in their fantasies, experience a sense of fear, and create a healthy competitive and contest environment with others in the team.
- The possibility of truly implementing interdisciplinary connections arises.

The scientific and methodological basis for establishing a process that guarantees the development of a well-rounded individual is provided by information technology. From this perspective, the process of training students in information technology ensures their ability to engage in independent reading, acquire knowledge, and think freely. In our country, as in all sectors, information and communication technologies are rapidly developing, placing new demands on educators.

In the process of teaching upper-grade classes, it is necessary to be knowledgeable about methods, tools, and principles of using information technology. Currently, providing education with highly qualified professionals is a demand of the times, and applying information technology in education requires educators to know the following:

When discussing how information technology can address prospective issues, it is important to consider its didactic basis. - Acquiring knowledge and creating through information as a process;

- Information and creative processes in science, technology, and culture;
- Issues of societal development through information.
- Knowledge of and ability to use information systems for educational materials;
- Familiarity with software tools for implementing universal and problem-based distance information technologies;
- Automation systems for teaching and assessment;
- Utilization of the global Internet computer network;
- Development of question sets for independent study, mastering, and reinforcement;
- Creation of test questions, conducting tests and exams;
- Identification of methods for performing educational exercises, monitoring their sequence, and evaluating them;
- Analyzing and improving teaching outcomes;
- Conducting supervision activities.

The didactic principles of information technology are interrelated and complement each other.

The modern threats largely make information security, and primarily its component of life security, a critical aspect of quality of life. For high school students, the goal of training in information security (hereinafter IS) is to acquire skills in the field of IT that will enable successful socialization

in the information society after graduation. To achieve this, graduates need to form a comprehensive understanding of information security. Accordingly, it is essential to develop a broad understanding of information security for high school graduates. In a modern society, high school students actively seeking their place are offered development models, behavior, and consumption standards through mass media, which also perform the role of information filtering by emphasizing and reinforcing certain contexts and silencing others, sometimes completely silencing the voices of others. The socialization of high school graduates in the information society is not only related to their integration into the information space but also involves shaping new ways of thinking and understanding about the world and implies active use of information and communication technologies. In the developmental process of high school students, forming knowledge and skills about information and its security in computer science topics plays a significant role in their personal development.

In the section "Developing Students' ICT Competencies" of the Fanlararo Curriculum, graduates are expected to acquire knowledge on information culture, adherence to ethical and legal norms, and respect for the personal information and information rights of others. The results from studying the "Informatics" subject and interdisciplinary programs show that through the "Information and Its Presentation Methods" section, the graduate will learn to use and apply terms such as "text encoding and decoding" with a specific code table. Most importantly, they will gain the knowledge and skills to protect themselves and their sensitive (not visible to outsiders) information from external threats and risks. This, in turn, helps prevent many inconveniences. By studying the "Working in the Information World" section, the graduate will learn:

- Individual data storage devices
- Creating a personal data field using internet services and others
- Basics of Information Ethics and Compliance with Legislation

In addition, the graduate will have the following opportunities:

- Understanding how reliable the information is and whether it is supported by evidence
- Familiarizing yourself with possible approaches to assessing the reliability of information (evaluating the credibility of sources, comparing information from different sources, and at different points in time, etc.)
- Knowing that there are international and national standards in the field of information technology and computer science.

In the section "Main Content of Informatics Subjects," the following topics are studied in the subsection "Information and Its Presentation Methods":

- Encoding texts.
- Code tables.
- Representation of texts on a computer. All data on a computer is text in binary alphabet.
- Using software systems and services.

In general, the computer science curriculum in general education schools significantly contributes to achieving the main goals of basic education, while also developing digital skills. It provides competencies in key areas such as programming, data management, communication in modern digital environments, information security, and responsible and safe handling of information.

Conclusion

In conclusion, it is worth noting that due to the increasing threats to information security in today's world, improving knowledge and skills related to information security in the field of computer science positively impacts not only individuals but also entire nations. If we do not keep pace with

the times, addressing existing shortcomings becomes increasingly difficult. This, in turn, demands continuous striving, being knowledgeable, proactive, and not negligent from us

References

[1]. X. M. Eshpulatova, "Ta'limda Innovatsion Texnologiyalarning Turlari va Ahamiyati," in Proceedings of the Republican Scientific-Practical Conference "Ilm-Fan Muammolari Yosh Tadqiqotchilar Talqinida", 1st ed., 2022, pp. 31–35.

[2]. S. E. Primov, "Innovatsion va Samarali O'qitishning Bugungi Kundagi Imkoniyatlari," Talqin va Tadqiqotlar Ilmiy Jurnali, no. 4, pp. 140–142, 2022.

[3]. "Konventsiya ob Obespechenii Mezhdunarodnoy Informatsionnoy Bezopasnosti (Kontseptsiya)" [Online]. Available: http://www.mid.ru/bdomp/ns-osndoc.nsf/e2f289bea62097f9c325787a0034c255/542df9e13d28e06ec3257925003542c4!OpenDocument. Ministry of Foreign Affairs of the Russian Federation, 22-Sep-2011.

[4]. "Doktrina Informatsionnoy Bezopasnosti Rossiyskoy Federatsii," Rossiyskaya Gazeta, no. 187, 28-Sep-2000.

[5]. Federal'nyy zakon Rossiyskoy Federatsii ot 19.05.1995 № 82-FZ "Ob Obshchestvennykh Ob"yedineniakh" [Online]. Available: http://www.referent.ru/1/78600.

[6]. Federal'nyy zakon Rossiyskoy Federatsii ot 29.12.2010 № 436-FZ "O Zashchite Detey ot Informatsii, Prichinyayushchey Vred Ikh Zdorov'yu i Razvitiyu," Rossiyskaya Gazeta, Federal Issue no. 5376, 31-Dec-2010.

[7]. T. P. Abdulova, "Sotsializatsiya Podrostkov v Informatsionnom Prostranstve," Mir Psikhologii, no. 3 (67), pp. 197–207, 2011.

[8]. L. L. Bosova, "Nepreryvnyy Kurs Informatiki v Osnovnoy Shkole. UMK 'Informatika' dlya V-IX Klassov," Informatika i Obrazovanie, no. 6 (245), pp. 25–31, 2013.