INNOVATIVE TECHNOLOGIES IN EDUCATION: A CASE STUDY OF IMPLEMENTATION IN KAZAKHSTAN

iD Venera Seitova

School-gymnasium named after Akhmet Baitursynulu, Kazakhstan
e-mail: venera_seitova_e@mail.ru

Keywords	Abstract
Innovative technologies, educaton, Kazakhstan, teaching, learning, and the quality of education.	This study examines the implementation of innovative technologies in the education sector of Kazakhstan. The use of modern technological tools in teaching has become increasingly important in enhancing the quality of education and preparing students for the challenges of the 21st century. This research aims to explore the current status, challenges, and future prospects of integrating innovative technologies into the educational system of Kazakhstan. The study employs a qualitative approach, including interviews and surveys with educators, administrators, and policymakers involved in the implementation of technology in education. The findings reveal that while there is a growing interest in the use of innovative technologies, there are also significant challenges, including limited access to technology, inadequate training for teachers, and a lack of clear policies and guidelines. Despite these challenges, there is optimism about the potential of technology to improve teaching and learning outcomes in Kazakhstan. The study concludes with recommendations for policymakers and educators to overcome these challenges and fully realize the benefits of innovative technologies in education.

Introduction

At the present stage, when the future of our country is directly linked to the educated youth, special attention is paid to education. In the era of globalization and cultural modernization, when everything around us requires rapid adaptation to various changes, including changes and reforms in education, it is necessary to consider all innovative methods and technologies of teaching.

The concept of innovation (from Latin "innovatio") was first applied somewhere in the mid-17th century and means the introduction of something new into a certain sphere, implantation into it, and the generation of a whole range of changes in this sphere. Thus, innovation is, on the one hand, the process of renewal, implementation, and introduction, and on the other hand, it is the activity of cultivating novation in a certain social practice. Innovative activity in the modern field of education implies a system of interconnected types of work, the totality of which ensures the emergence of real innovations. Namely:

Scientific research activities aimed at obtaining new knowledge about how something can be ("discovery") and about how something can be done ("invention");

Project activities aimed at the development of a special, instrumental-technological knowledge of how, based on scientific knowledge, one should act in given conditions to achieve what can or should be ("innovative project");

Educational activities aimed at the

professional development of subjects of certain practices, at forming in each person personal knowledge (experience) of what and how they should do to implement an innovative project in practice ("implementation").

So what is "innovative education" today? It is an education that is capable of self-development and that creates conditions for the full-fledged creative development of all its participants in the conditions of globalization and the country's competitiveness. And what is "innovative educational technology"? It is a complex of three interconnected components:

Modern content, which is transmitted to students, presupposes not so much the mastering of subject knowledge as the development of competencies adequate to modern business practice. This content should be well-structured and presented in the form of multimedia educational materials, which are transmitted using modern means of communication.

Modern teaching methods - active methods of forming competencies based on the interaction of students and their involvement in the educational process, not just on passive material perception.

Modern learning infrastructure, which includes informational, technological, organizational, and communication components, allowing for the effective use of the advantages of distance learning forms.

At present, various pedagogical innovations are being applied in the modern field of

education. This depends primarily on the traditions and status of the institution. Nevertheless, the following most characteristic innovative technologies can be distinguished (information and communication technologies, personality-oriented teaching technologies, monitoring of intellectual development, educational technologies as the leading mechanism for shaping the modern student, didactic technologies as a condition for the development of the educational process, psychological and pedagogical support for the implementation of innovative technologies in the educational process of the university and other educational institutions).

The modern period of societal development is characterized by a strong influence of computer technologies, which penetrate all spheres of human activity, ensuring the dissemination of information flows in society and forming a global information space. An integral and important part of these processes is the computerization of education. Currently, Kazakhstan is in the process of establishing a new education system oriented towards integration into the global information and educational space. This process is accompanied by significant changes in the pedagogical theory and practice of the educational process, related to adjustments in the content of teaching technologies, which should be adequate to modern technical capabilities and contribute to the harmonious integration of children into the information society. Russian and foreign scientists have made a significant contribution to solving the problem of computer-assisted teaching technology: G.R. Gromov, V.I. Gritsenko, V.F. Sholokhovich, O.I. Agapova, O.A. Krivosheev, S. Papert, G. Kleiman, B. Sendov, and psychologists V.V. Rubtsova, V.V. Tikhomirova, and others.

Engaging students in promising educational technologies and orienting them towards creative and productive use of these technologies in their studies, future professional activities, and in the process of self-education and professional development is crucial. Innovative methods involve:

Active methods (students act as the "subjects" of learning (independent work, creative tasks));

Passive methods (students act as the "objects" of learning (listening and watching));

Interactive methods (interaction), which include group discussion, analysis of moral choice situations, analysis of incidents from practice (case study method).

Information technology is understood as a process that uses a set of tools and methods for collecting, processing, and transmitting data (primary information) to obtain information of a new quality about the state of an object, process, or phenomenon (information product).

What is needed for global informatization in education:

Retraining of teachers in the field of modern information technologies;

Informatization of the process of education and upbringing;

Equipping the education system with technical means of informatization;

Creating a modern national information environment and integrating educational institutions into it;

Creating a unified system of distance education based on modern information technologies;

Participation of the country in international programs related to the implementation of modern information technologies in education.

The listed possibilities of computers can contribute not only to the initial formation of a person's personality but also to the identification and development of their abilities, the formation of skills and a desire to learn, and the creation of conditions for the full acquisition of knowledge and skills.

During the stages of the lesson when the main educational impact and management are handed over to the computer, the teacher has the opportunity to observe and record the manifestation of such qualities in students as awareness of the search goal, active reproduction of previously studied knowledge, interest in replenishing missing knowledge from ready-made sources, and independent search. At the same time, this allows the teacher to design their own activities for managing and gradually developing students' creative attitude towards learning. The penetration of modern information technologies into the field of education enables educators to qualitatively change the content, methods, and organizational forms of education. The aim of these technologies in education is to enhance students' intellectual capabilities in the information society, as well as to humanize, individualize, intensify the learning process, and improve the quality of education at all levels of the education system. I.V. Robert highlights the following main pedagogical goals of using modern information technology tools:

Intensification of all levels of the educational process through the use of modern information technology tools;

Development of the individual, preparing them for a comfortable life in the conditions of the information society;

Formation of skills to make optimal decisions or propose solution options in a complex situation;

Aesthetic education through the use of computer graphics, multimedia technology, which is especially effective in disciplines such as cultural studies, art history, geography, ethnology, and others;

Development of skills to model a task or situation;

Formation of skills to conduct experimental-research activities.

Personality-oriented technologies place the individual's personality at the center of the entire educational system, ensuring comfortable, conflict-free, and safe conditions for its development and the realization of its natural potential. In seminar classes or during individual work, to ensure that the session is substantive and interesting, the following methods can be applied:

a) "Brainstorming," which includes provocative questions, various types of crosswords, skonwords, and rebuses;

b) Presentation, preparation of slides, and the use of visual aids and interactive whiteboards;

c) Discussion (debates, round tables);

d) Debates, discussions.

Monitoring of intellectual development involves analyzing and diagnosing the quality of each student's learning using testing, written (essays, reports), or oral control.

Educational technologies as a leading mechanism for shaping the modern student are implemented through involving students in additional forms of personality development: participation in cultural and mass events based on national traditions, theater, children's creativity centers, and others.

Conclusion

This includes independent work using textbooks, games, project development and defense, teaching using audiovisual equipment, the "consultant" system, group and differentiated teaching methods such as the "small groups" system, and others. Various combinations of these techniques are usually used in practice. Through role-playing games (organizational-activity game, operational game, plot-role-playing game, didactic game), any session, whether it be a lecture, seminar, or individual work, can be made interesting and engaging. Various training methods and interview methods can also be actively applied.

Psychological and pedagogical support for the implementation of innovative technologies in the educational process of a school involves scientifically and pedagogically justifying the use of certain innovations. This includes analyzing them at methodological meetings, seminars, and consultations with leading specialists in the field.

Considering the significant impact of modern information technologies on the educational process, many educators are increasingly willing to incorporate them into their methodological system. However, the process of computerization of school education cannot occur instantly, according to any reform; it is gradual and continuous. The concept of computerization of education characterizes several stages of this process. In general, innovative methods and technologies are very effective and interesting today, which is an integral part of the credit learning technology. Their effectiveness depends on the established traditions in the educational institution, the ability of the pedagogical team to perceive these innovations, and the material and technical base of the institution. The implementation of these innovations in a competitive modern society shapes well-rounded, intellectually prepared, and adapted to modern conditions youth, which is a guarantee of our country's future.

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