



RESEARCH ARTICLE

INNOVATIVE TECHNOLOGIES IN MODERN EDUCATION

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ABSTRACT

In modern society, innovation technologies expand to almost every field of human activity, including in education and due to integrating innovation technologies into the educational process practice, the whole phenomenon gained special significance within improvement and modernization of the established at all educational system. Currently, the problem of active integration and wide application of innovation technologies in education is highly significant and the present study explores innovation technologies of learning in the modern education. Every aspect of life have been touched by the technological innovations over time. Information and Communication Technology (ICT) plays an important role in education particularly in the age of globalization and ICT in education increases student engagement and knowledge retention: Students are more focused on their work when technology is incorporated into lessons and is because using technology to teach the same concepts in various ways can make learning more entertaining and fun and it not only makes the learning joyful but also caters to the needs of diverse learners in classroom so that the present and future generation of 21st century earners to be self-regulated and promote lifelong learning.

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INTRODUCTION

The future of the educational system will be determined by technological innovation and educators and industry experts agree with the tendency of incorporating technology tools and applications into every aspect of the educational system since it may be a source of distraction for students. As educational institutions strive to offer their students the finest education possible, the use of technology in the classroom is growing in popularity always. Effective technological integration, however, aids students in better understanding all of the subjects covered in class. National Education Policy (NEP) 2020 places a strong emphasis on five pillars: accessibility, accessibility, quality, equality, and accountability. It has been designed to meet the demands of the people because society and the economy both require knowledge, which necessitates the continual acquisition of new skills and technologies can improve education quality in a number of ways, including by boosting student motivation and engagement, enabling the learning of fundamental skills, and improving teacher preparation and are transformational resources that, when properly applied, can support the transition to a learner-centered environment. Innovative teaching methods and the introduction of fresh concepts are necessary to get pupils interested in what they are learning.

Due to its significance in the modern educational landscape, the use of educational technology by teachers has become mandatory and demands every device we use to be as technologically advanced as possible since technology has permeated every aspect of our life as it has become more available. Schools now offer computer science classes where students can learn how to code computers and utilize them for their work or projects as a result of the widespread adoption of technology in education. Because it gives students the chance to study at a far faster rate than they would otherwise, be able to, the use of educational technology has therefore become crucial for today's students and innovation theory in education is a new field of scientific pedagogic knowledge; it is a paradigm of inseparable unity and interconnection of the three main pedagogic processes in the field of education: creation of novelties, their mastering and application. In other words, the subject of innovation theory is the studies of integration of development, mastering and integration of novelties. Innovation theory in education is an innovative process in the educational system, innovative activity, novelty and innovative environment, in which the innovative processes take place. Innovative processes are considered in three main aspects like social-economical, psychological, organizational-regulatory, etc. These aspects define the general climate and conditions, in which innovative processes take place and which either prevent or facilitate the innovative process.

Moreover, innovative process does not have a spontaneous nature, but rather it is consciously regulated. Integrating the novelties is a highly significant new function of management. Innovative activity is nothing but a system of conducted measures for providing innovative process on a certain level of education. Novelties in education present themselves as creative exploration of new ideas and principles, which, in single cases, brings them to becoming typical projects containing the conditions for their adaptation and application. Innovative learning is currently replacing supporting learning. It is considered to be the educational system's reaction to the society's transition to a higher stage of development and reaction to the changed goals of education. Innovative learning is learning that stimulates innovative changes in the existing culture and social environment and it acts as an active reaction to the problem situations, which appear in front of each single person and the 21st century society in general.

Objectives of the Study

- Learn concept of innovation in education
- Highlight educational technologies benefits
- Discuss innovative technologies in modern education

METHODOLOGY

The present study is mainly established on secondary data which are gathered from renowned research articles, journals, position papers, etc. and are all related to "Innovative Technologies in Modern Education."

REVIEW OF LITERATURE

According to Sahlberg (2009), the force that will take the global society to the future is knowledge, and innovation Ng (2009) stated that globalization had placed a strain on education to build a creative and innovative workforce, to achieve a competitive advantage. Thus, it shifted the current focus on innovation. Globalisation has also driven education companies to deliver innovative educational goods, procedures, and market models to bid with increasingly 'savvy' global clients. Efficiency calculated by the utilization of the gap of capital expended and outcomes in student success and equity. Innovation in education has been a prevalent subject of public debates but is nevertheless obscure of nature and vague in reality (Smith, 2009). The current study in educational innovation often focused more on the research and development (R&D) spending and patenting or innovation data collected through surveys of firms. This measure is not enough to address the significant issues in innovation in education. According to Popescu and Crenicean (2012), the idea of innovation was discussed, developed, and defined from the viewpoint of various academic fields, such as anthropology, economics, psychology, management, linguistics, cognitive science, philosophy, and many other fields. OECD (2016) emphasized that innovation in education is vital to bring improvement in education. Innovation will improve the nation's efficiency and also outcomes in learning quality and equity and makes a single definition of innovation in education did not exist nowadays. The educational system as a social institution is essential to the survival and well-being of the needs of society in every nation and education should

not only be extensive, affordable, and excellent but should also be continually developing to address the demands of a quickly shifting and volatile globalized environment. (Serdyukov, 2017). The educational system needs to be designed to nurture creative and critical thinkers that focused on contributing knowledge to society. (Serdyukov, 2019).

Educational Technology Benefits

- It provides a greater selection of easily accessible materials.
- Students have a wide range of possibilities from which they can select the best learning technologies from today's enormous selection of educational technology.
- Enabling them to excel as professionals in their field of choice.
- It enhances learners' communication competency in individual and career
- Students who can communicate more successfully using technology will also do better in the classroom and at business.
- It gives students a fun and engaging learning experience
- It enables students to use the internet at any time and from any location.
- Students must be able to use the internet at all times and from any location in order to complete their projects and research without having to travel great distances or wait for a specific time to do so, which is vital in today's environment.
- Students who use technology benefit from being able to connect to the internet whether they are in a classroom, school, or at home.
- It helps students in learning new skills and knowledge
- Learners can build these abilities and their knowledge through a variety of online programmes that are available through the use of educational technology.
- Give students the chance to learn about a variety of subjects that are intriguing and pertinent to their chosen fields of study/employment.
- It enables students to develop their mental and physical skills.
- Students can increase their learning and cognitive abilities by using these tools, and as a result, both their academic performance and physical health are improved.
- It makes it possible for students to keep up with technological developments.
- Students who can stay current with technological advancements will be better able to broaden their knowledge in numerous subjects and develop new skills that they may utilize in the future.
- Students will also have a better chance of finding employment.

Innovative Technologies in Modern Education

E-Learning: The need for online learning systems increased as a result. E-learning refers to instruction or training that is delivered online, it exercises using slides are one option, but an online course that aids in providing employees with the necessary abilities is another and desktops, laptops, tablets, smart phones, E-learning allows instructors to offer educational material to students. Additionally, many E-

Learning courses incorporate movies, podcasts, and animation to provide a multimodal and useful learning experience and final reason is that eLearning is still cutting edge and evolving even if it has been around for a while. The advantages of technology are being used by educators to improve learning and the best aspect of online learning systems is their diversity.

Video-Assisted Learning: There has been a tremendous increase in recent years in the usage of video-assisted learning in classroom presentations. The "video day" no longer involves bringing a television into the classroom on a cart. "Video day" could happen any day with the internet and current technologies and trend is also growing in environments where students learn remotely through computer screens. Videos are a fantastic method to enhance lessons and increase student understanding of the content, especially animated ones. While lessening the workload for teachers, it improves student accomplishment.

Block chain Technology: It is used by Massive Open Online Courses (MOOCs) and e-Portfolios to verify students' abilities and knowledge. The DLT systems will offer answers to the problems of authentication, scale, and affordability for eLearning companies additionally, it can help job applicants who are students post their accomplishments when they are looking for work.

Big Data Will Get Bigger: The appropriate data regarding student experiences may be used by instructional designers to make adjustments and deliver the course in the proper manner. To learn more about the course content, student enrolment, student performance like course time, completion, exam result, etc. and student feedback, you should do some research (rating, survey).

Computerized Intelligence (AI): By 2021, AI is expected to increase by more than 45 percent, overtaking all other trends, according to some predictions. The US Ed-Tech sector has helped to make AI more well-known and is there a trend boom in one of the biggest global markets for educational technology and AI may also be beneficial for both teachers and students.

Learning Analytics: The modern learning analytics environment has undergone a significant transition, particularly for higher education. Educators can track and report online student progress by using learning analytics. They can maximize their knowledge of learning by using the information and 21st century teachers can enhance their students' knowledge and skill acquisition by reading insights from the learning processes of their pupils.

Gamification: Gamification features contribute to a light-hearted and supportive learning environment. Gamification is most commonly employed in K–12 education. This is a result of children becoming quickly absorbed in gaming videos or winning more games. But that doesn't negate the need for entertaining elements to increase learners' levels of engagement in business training/ higher education.

Immersive Learning with VR and AR: Since Virtual Reality (VR) and Augmented Reality (AR) entered the classroom, the

learning environment has experienced a significant change. Learning with VR and AR is progressing as a result of the growing need for experiential education. Compared to older teaching approaches, learning has become far more participatory. AR offers an augmented picture of a real image, whereas VR offers a created reality and to be more specific, VR gives students the option to practice low-risk, real-world surgery.

STEAM: The most recent EdTech advancement above STEM curricula is STEAM-based education, through practical learning exercises and innovative design, this new Ed-Tech trend applies relevant Science, Technology, Engineering, Art (the new element), and math material to resolve real-world problems and the first benefit of STEAM is that it encourages children to become more inquisitive about their surroundings. Additionally, it fosters a secure environment where students can explore their ideas and think beyond the box and students collaborate more effectively with others when they are comfortable with their learning methods.

Social Media in Learning: Social-media can impact the learning process, teachers can utilize social media as an effective tool to advance learning when every student, young and old, spends so much time there. It is the origin of the concept of using social media for education. Social media has become a common communication medium used by educational institutions so that students may readily engage with one another. Sharing study resources, having group discussions, and leaving simple comments on other people's posts are all options for students.

DISCUSSION AND CONCLUSION

Innovations in education can only transform the educational system if there are widely accepted by the students, teachers, administrators, communities, and any stakeholders related to the educational system. The introduction of the innovation must have a significant impact on the educational system/achieved its objectives. It is not only applied to educational technology innovations but also various types of other innovations. Innovation generates such a powerful impact on promising a newer, better, and improved educational system for a better future. Finland, Singapore, China, and Hong Kong are the example of the few countries that make innovation as their core transformation and succeed in achieving a higher result in student's performance and the process of educating teachers to apply innovation pedagogic technologies as an object of theoretical studies is also not studied enough, and therefore, does not have an integral theory. One might think this fact is also one of the reasons for insufficient level of mastering professional knowledge, abilities and skills of using educational novelties in general education schools' teachers. Now it is obvious that in the problem of improving teachers' professional training it is necessary to focus on the idea of the approach based on studying and integrating new educational technologies. Currently, graduates of the pedagogic specialties in colleges are not prepared enough, both psychologically and professionally, for innovative educational activity in school. Because of this, it is necessary to develop a new approach to teaching proficiency in the prospective teachers in advance.

This approach has to consider, first of all, specifics of the development and preparation of a teacher's activity and corresponding abilities providing it. It is necessary to say that these problems are currently not being studied enough; despite that, they are highly significant because their exploration would help creating an integral picture of the specifics of a teacher's educational activity, and consequently, optimizing the process of professional training in the system of pedagogic education. In order to understand the logic and tasks of the study, we would like to point out that we consider the most significant knowledge in training the prospective school teachers the following: mastering new teaching techniques like professional abilities to organize and regulate innovation educational processes; knowledge of the main forms of teacher's innovation activity. Insufficient knowledge about these and other problems of teachers' professional preparation for using innovation pedagogic technologies slows down the improvement of teachers' professional preparation in general. It can be explained by the complexity of these questions and the problem in general, as well as by the ignorance of the significance of the aforementioned aspects in teachers' professional preparation. Innovations in education can only transform the educational system if there are widely accepted by the students, teachers, administrators, communities, and any stakeholders related to the educational system. The introduction of the innovation must have a significant impact on the educational system or achieved its objectives. It is not only applied to educational technology innovations but also various types of other innovations. Innovation generates such a powerful impact on promising a newer, better, and improved educational system for a better future. Finland, Singapore, China, and Hong Kong are the example of the few countries that make innovation as their core transformation and succeed in achieving a higher result in student's performance. However, they faced many challenges in the early stage of implementation.

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