INNOVATIVE TECHNOLOGY, PEDAGOGY AND EDUCATION –
THE THREE PILLARS OF CONTEMPORARY TEACHING

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ABSTRACT

Teacher Educators are not looking at their class as a collective but they see them as different individuals with different modern technological needs.Technology integration is an integral component of teaching and learning . It has been widely investigated during the past several decades as teacher education programs have struggled to implement and model best teaching technology integration practices in the preparation of pre-service teachers. Initiatives led by educational organizations at the federal, state, and local levels have recognized these challenges and have, in response, allocated time, money, and effort to develop and incorporate methods to better prepare pre-service teachers to teach with modern and innovative technology. With technology, education has taken a whole new meaning that it leaves us with no doubt that our educational system has been transformed owing to the ever advancing technology. We can prepare students for their lifelong learning which requires new approaches to education that incorporate technologies in students' lives. It's accepted that a well-rounded education is a gateway to personal success. Through education, individuals can expand their minds and embrace new ideas and opportunities, and at the same time, build better lives for themselves and their communities.

Keywords : Teacher Education, Technology, Educational reform, innovation.

INTRODUCTION

Emerging trends and innovations are usually understood as the introduction of something new and useful like introducing new methods, ideas or practices to get something unique and productive. Teacher education institutes can carry out creative or innovation on any aspect of their work related to teaching, learning, training or management of schools in order to improve efficiency of the institution to overcome problems and obstacles that has been faced in day to day functioning of teaching-

learning experiences. Teacher education is now becoming more important to the emerging demands from the school system. Because the modern changes of educational needs of the students and advancement in technology has widened the area of responsibilities of the teacher. Now-a-days, a teacher has to perform various roles and duties like encouraging, supporting and facilitating in teaching - learning situations which enables learners to discover their talents, to realize their physical and intellectual potentials , to develop character and desirable social and human values to function as responsible citizens.

LITERATURE REVIEW

Technology is a recent marvel in our everyday life that has taken off. Technology allows the most difficult tasks to become seamlessly easy and more efficient. In education, technology has allowed the dissemination of knowledge to be dispersed instantly and it allows for quicker and more effective communication. Also, technology has allowed students to be engaged and learn in ways that they never have in a classroom setting before. According to Spears (2012) she cites Donovan, Hartley & Strudler (2007) and describes the first 1:1 technology program that was used in a school setting. Spears (2012) states, "The first provider of 1:1 computer access for teachers and students was Apple Classrooms of Tomorrow (ACOT). The goal of ACOT was to promote change in the context of education" (1). Spears continues in her study and describes Microsoft's 1:1 initiative through the Anytime Anywhere Learning (AAL) program. Spears cites the work of Donovan et al. (2007),"An increase in enthusiasm for teaching and learning with technology, an improvement in student writing skills, an increase of authentic and purposeful use of technology…are some of the benefits of 1:1 technology integration programs like the AAL program." These programs in the 1980's and 1990's paved the way for presidents, legislators, administrators, and educators to become aware of how positively technology could impact the student and teacher in the classroom, alike.

WHY DOES EDUCATIONAL TECHNOLOGY MATTER?

In contemporary's schools, the internet and computers are as prevalent as textbooks and pencils. These devices, paired with educationaltechnology, can enhance students' performance. Technology can assist educators in determining every student's needs and requirements and creating personalized solutions. Technology like auto-grading can lessen educators' burden and provide a more engaging learning experience.

Technology is already a part of many students' daily lives, so there is an opportunity to use it to show the path of success and development through education. Modern learners don't want to sit passively while a teacher lectures to them — they want to experience and do the things in practical ways . Educational technology allows educators to connect with young minds and interactively educate them. Altogether, the current trends in educational technology help teachers keep up with their students' interests.

CERTAIN ADVANTAGES OF MODERN EDUCATIONAL TECHNOLOGY IN PEDAGOGY

Modern Educational technology can offer the following advantages in the classroom:

Incorporation of Different Learning Styles

Student needs are diverse, and adjusting the learning plan accordingly can be challenging. Innovative Technology can help educators to modify their lessons. Incorporating technology can allow students to learn with a medium that interests them. For example, kids who like to draw can create infographics and demonstrate their understanding of the content. Innovativetechnology can help the teachers to determine and assess all students' capabilities and intellectual abilities with a tailored experience.

Improved Collaboration

Technology also increases collaboration among students by encouraging them to work together. When teachers assign a group project, students are more likely to cooperate when they have access to technology. Small activities become much more engaging when students work together in small groups. Modern Technology also helps the teachers to maintain track record of the students that how they are contributing their self in the particular project.

Preparation for the Future

Many schools and institutions have incorporate the latest technologies in their workflow, and being comfortable with technology that can make it easy for students to settle in. If students are used to working with technology in school, they can apply that familiarity to work-oriented software like PowerPoint, Ms – Excel, Computer Languages, etc. In this way, incorporating technology in the classroom can prepare students for future job success and new ventures of life.

CURRENT INNOVATIVE EDUCATIONAL TRENDS

1. E-Learning

When schools worldwide shut down to limit the spread of COVID-19, distance learning quickly became the norm. That resulted in a rising demand for e-learning platforms, and overnight, this technology became one of the most important educational trends. E-learning platforms let you deliver educational content through phones, laptops and computers.

E-learning has opened a door of opportunity for educators to teach students without the boundaries of a classroom. Many educators also use animations, podcasts , diagrams, flowcharts and videos to make the e-learning experience more innovative and interactive.

2. Audio – Visual Learning

Another trend that has been beneficial both during and after the pandemic shutdowns is video-assisted learning. This tech is somewhat similar to e-learning, because it also relies on videos and other visual modes. However, instead of a real-time class, students can watch these lecture videos at any time.

Though this medium predates the need for widespread e-learning, the pandemic forced people to make updates to suit modern needs. It is not the same as "movie day," where teachers play educational films for students to enhance their knowledge of a topic. It is a much more subtle medium that has been instrumental in distance learning.

3. Distance Learning Trend

Since various educational institutions adopted the distance learning trend following the pandemic shutdowns, we saw bigger datasets than ever. Since many schools operated remotely, educational institutions had a unique opportunity to collect student data, including their responses and engagement levels. This data could significantly improve the student learning experience, but losing critical information amid this flood is understandable. Here is where big data shines.

4. Learning Analytics

Researching, tracking progress and analyzing data have all improved the learning process. Learning analytics relies on those pillars, but it also offers new opportunities to use the collected information.

Learning analytics uses computational analysis techniques from data science and AI to improve the quality of learning and teaching. Learning analytics programs help educators measure students' growth and predict academic success.

5. Gamification

Educators are always looking for ways to provide knowledge through fun activities, and gamification can be the answer. Gamification is applying game-like mechanics to daily activities to increase student engagement. This emerging trend is gaining momentum in primary education. Students can learn valuable information while feeling like they're playing a fun game.

Gamification improves student engagement and allows them to learn without feeling bored. Gamification has several benefits, including aiding in kids' cognitive development. Gamification can also create a positive environment in the classroom and help students collaborate.

6. Easy Learning With Audio and Visual aids

Audio and visual aids can help the classroom become more interactive and immersive. Students want new experiences, and effective learning . Immersive learning is a style that engages students' senses. AV aids givea better and enhanced view of the image. It helps to retain knowledge for a long period of time.

IMPROVE CRITICAL THINKING SKILLS

Critical thinking as well as innovative thinking is a paramount to the development of students and should be the goal of all teacher, no matter what subject they teach.A teacher should build critical thinking skills in all the rubrics and lesson plans they use in their classrooms. Critical thinking skills can be taught in any classroom and any subject with the help of modern technology and inventions of gadgets.

CONCLUSION

The contemporary innovative technology focuses on initial teacher education that presents a major opportunity to significantly improve this critical component of a high quality education system. Examination of existing effective practices can provide a strong foundation for further reform. Since the teacher is the pivot of the entire pedagogical system and the demand of modernization is the main catalytic agent for introducing desirable changes in the teaching learning process, all attempts need to

be made for motivating teachers to become innovative and creative with the help of advance modern technology.

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