EDUCATION TECHNOLOGIES: TYPES AND TOOLS

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ABSTRACT:

Education technologies are playing key role in information era. The introduction of latest technologies improves the quality of learning and teaching. For effective learning, the teachers must have in depth knowledge in usage of technologies. Integrated technologies will help the teachers to drive the classroom teaching. This paper discusses various tools and technologies in education.

Keywords: Weather Prediction, forecast accuracy

Introduction:

Today is the era of science and modern technology. The world is moving towards huge change in the life style of human being aligning with technological changes especially after the impact of COVID-19. This pandemic drastically shifted the education system from traditional chalk and board model to online technology based education model.

This situation forces the importance of technology integration in education. During pandemic time, students are restricted to their home and did not have access to their school or classrooms. At the same time, opportunities were given to teachers in various streams forced to update their competencies. Education institutions taken steps to restructure their learning model and classroom environment in online to minimize the gap between teaching and learning.

[1] discusses the various findings of the technology integration of higher education system during pandemic time. A survey using 'Technologic Pedagogical Content Knowledge (TPACK) model' were conducted among 256 teachers to assess their knowledge level in usage online teaching methodologies. The study also suggested various technological competencies to improve the quality of the online education system.

2. Literature review

The role of Information and communication technology (ICT) for the 21st century teacher education is well discussed in [3].

The usage of various education technologies were discussed in [3],[4],[7],[8].[9],[11],[12]. [5] discusses Theory based methodology for exploring the usage of computer by faculties in College of Education (COE).

 A case study of teacher education system is discussed in [6]. A survey related to computer technologies in education were discussed in [10]. The role of ICT in distance education system is discussed in [13]. Online exam related systems discussed in [14], [15].

3. Technology in Education

Nowadays, technology is playing a major role in every field. It has a great impact in Education also. Faculties are using various IT tools and technologies effectively to convert the classrooms into more innovative and adopt enjoyable teaching methodology. The usage of technology increases the involvement of the students and improves the understanding level to get deeper knowledge. Even though, many teachers prefer traditional way of teaching, technology oriented methodologies bring numerous innovation in the classroom are endless.

With the usage of latest technologies like artificial intelligence, teachers can prepare highly creative and innovative teaching materials to get the attention of their students. This will help to bridge the gap between teachers and students. The learning becomes much easier with the technology oriented appropriate tools is not only easier in the classroom but also easy to learn from home. It simplifies the method the teacher do their jobs, providing efficient method to build the relationship between teacher and student. Usage of Tablet in the classrooms, students can raise their queries and get appropriate answers quickly from their teachers. Various educational technologies are discussed below

a) Digital tablets: It replaces the bulk hard copy of textbooks. Digital textbooks are easily accessible via tablet. Periodical updates of digital textbooks eliminate the cost of purchasing all editions. For example, State council of educational research and training Tamilnadu is providing textbooks for all classes in their website. Latest textbooks uploaded in the website itself.

b) Virtual reality: This fast developing technology is a game changer in education. This ensures a physical presence in the real world, along with the virtual world. Major benefit of this technology in education is the students can have the real-time experience on products or places to visit.

c) Gamification : Fun filled education will give a better result. Usage of gaming based education in the classroom will yield a better student engagement, enthusiasm on education and better result.

d) Artificial intelligence: This technology helps the students to provide valuable feedback and provide personalized learning opportunities. Also it gives learning insights about the student.

4. Major tools in education

Various online Applications and tools are available for the benefit of teacher and students. This section provides various tools used in online

Kahoot

Kahoot is an online game based learning platform. This tool is used to create learning games and quizzes easily within minutes. This tool allows to create in any language. In 2021, this is ranked as 7th out of 40 educational technology tools.

Pear Deck

Google slide is a simplest way of creating presentation. Pear Deck helps to create excellent presentations on google slides. Pear Deck and Google slide can be combined together to make interactive presentations. This is selected as one among top 10 good school tool by EdSurge

Canva

Canva is used to create attractive collage, creative worksheets, lesson plans, tutorials and record video lessons. No prior experiences in designing skills needed to work on this tool Many customized templates are available in Canva. This helps to remove the background image and more than 50 million stock images are available in this tool.

Headspace

This app improves the mental health of the students and teachers also. In a recent study by Mc.Kinsey & company , more than 25% of the parents reported the stress and anxiety level of the students increased and that causes their change in the behaviour of the children. Head space provides various relaxation methods and distraction techniques for special learners.

Mote

During pandemic, it was a difficult task for the teachers to correct the paper and provide appropriate feed to rectify student's mistakes. Providing audio feedback in the google slides and google forms will be more interactive and will help to students to improve their areas. Mote helps to provide verbal feedback, voice messages, translating audio messages into some other language, adding verbal responses in google Docs and Slides and create effective language lessons.

Bulb Digital portfolio

This tool can be accessed from any digital devices like, mobile phones, tabs and laptops. The worksheets , video lessons, lesson plans, quizzes, question papers and teaching related materials can be kept at one place. This is an excellent and simple tool for professional development.

Explain Everything Interactive Whiteboard

This is an interactive whiteboard which provides a variety of functions for the teachers. This facilitates to add Video , Audio and PDF's and different forms of media which are required during our lecture.

Poll everywhere

This is a good educational technology tool used to get asynchronous responses in the classroom. This helps introvert student to provide their feedback.

Edpuzzle

This is an excellent interactive video making tool for teachers. With this, the teachers can make their own video lessons by using the readily available videos in the website. Along with the videos, it provides option to add voiceovers and questions in the video.

5. Summery

The current education system requires teachers to learn and understand the technology. Latest classrooms require technologically enabled teachers. Various education technology tools help the educationalist to increase the productivity and save time and effort. In the year 2022, many different things are happening and bridging the education gap. The Education technology provides more opportunities in adapting learning and teaching to individual needs. Educators are successful only when they are good at education technology. AI in the education will increase more in the upcoming years.

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