

Use of Technology In Higher Education

Mrs. Dnyaneshwari Shantanu Patil Research Scholar, Bharati Vidyapeeth Deemed University, Pune.

• **Abstract –**

This paper systematically focuses on the **Use of Technology in Higher Education**. Specifically this paper has focus on the technologies that have affected on education system. . Importance of education in all kinds of different backgrounds has expanded with the help of information and communication technologies (ICT) .The use of various ICT tools in higher education in expanding in all states of India. The utilization of technology will benefits students as well as teachers in designing their teaching module, preparing tests, sharing study materials with students, conducting lectures in an online mode. Since the devastating spread of COVID-19 across continents from 2020, the usage of technology has increased. Technology has transformed teaching and learning by providing access to education that goes beyond the boundaries of gender inequity, costs, and physical constraints.

Technology has become an essential part of higher education in the 21st century. It has transformed the way students learn, teachers teach, and institutions operate. The last two decades have witnessed the developments in ICTs in higher education systems around the world. Even then the challenge to develop a higher education system that is flexible and dynamic so as to holistically integrate the technology in the management and delivery of learning programmes is daunting.

Technology has the potential to revolutionize the traditional teaching and learning process. It can eliminate the barriers to education like space and time and expand access to learning. Students no longer have to meet in the same place at the same time to learn together from an instructor. Basically, modern technologies have the ability to change the conception of a higher education institution. Higher education institutions not necessarily a physical place with classrooms and residence halls where students come to pursue an advanced education. Technology can boost learning outcomes. Technology can also create new challenges and opportunities for higher education that require continuous adaptation and innovation.

Keywords – Technology, ICT, Higher Education, Information Technology.

Introduction –

Education system's most critical role is to shape a brighter future for our nation's students as specialists and citizens. It hinges its ability to provide students with the skills to obtain well-paying, valued careers. Education helps you develop critical skills like decision-making, mental agility, problem-solving, and logical thinking. The importance of education in all kinds of different backgrounds has expanded with the help of technologies.

Computers and telecommunications are the principal technologies reshaping higher education. Due to advances in each of these domains, electronic mail, fax machines, the World Wide Web, CDROMs, and commercially developed simulations. Globally, higher education institutions are using technology-based learning tools such as learning management systems (LMS) or virtual learning environments, virtual and augmented reality, chatbots, videoconferencing, social media and mobile learning. Educational tools like these helps instructors to create engaging learning contents for their students, leading to several short and long- term academic and social outcomes. Additionally, educational tools can be used to facilitate communication between students and instructors, as well as to provide individualised feedback to students.

Technology plays a vital role in higher education by enhancing the learning experience for students and improving the teaching practice of educators by optimising the operations of institute. Technology has become an essential part of higher education in the 21st century. It has transformed the way students learn, teachers teach, and institutions operate. Technology has also enabled new possibilities for access, quality and innovation in higher education.

Role of technology in Higher Education –

- ***Technology transformed educational experience of students-***

Students have provided with more interactive, personalised and engaging ways of learning through online resources, such as e-books, videos, podcasts, simulations and games. Facilitating collaboration and communication among students and teachers through social media platforms, discussion forums, virtual study groups and online feedback systems. Supporting students' self-regulation and met cognition skills by providing them with tools to monitor their progress, set goals and reflect on their learning.

- ***Technology improves teaching practice for educators -***

By helping them to design more effective and innovative curricula and pedagogies that align with the learning outcomes and competencies they want to foster in their students. Technology enables them to use data analytics and artificial intelligence to personalise learning paths, assess learning outcomes and provide adaptive feedback and support for each student. It empowers them to adopt new teaching approaches, such as flipped classrooms, blended learning, project-based learning, that can increase student engagement, motivation and retention. Enhancing their professional development by providing them with opportunities to access online courses, webinars, podcasts, blogs, and communities of practice that can update their knowledge and skills.

- ***Technology optimises management and operation of institutions -***

By streamlining their administrative processes, such as enrollment, admission, registration, scheduling, grading and reporting. Reducing operational costs by using cloud computing, open-source software and renewable energy sources. Expanding their reach and impact by offering online courses, programmes, degrees and certificates that can attract more diverse and global learners.

Improving their quality assurance and accreditation by using digital portfolios, e-portfolios, badges, micro-credentials and blockchain technologies that can document and verify students' learning achievements.

- ***Technology promotes an effective education system by:***

With the help of technology we can encourage student growth by making learning easier, more exciting and more enjoyable. Improving communication and collaboration among students, teachers and parents by using various online platforms and tools. Providing more opportunities for online project-based learning that can foster creativity, problem-solving and critical thinking skills is possible using.

Contribution of ICTs in various measurements of the Indian higher education framework is occurring at a quick pace. Utilization of audio visual aids, radio, TV to help education and broadcasting of information for nation development is not new. The utilization of satellite in higher education began as Satellite Instructional Television Experiment (SITE) in 1975-76. This prompted the foundation of Central Institute of Educational Technology (CIET) and State Institute Of Educational Technology (SIET) studios for generation and transmission of school situated projects in several universities and colleges.

LMS Technologies –

A learning management system is a software application or web-based technology used to plan, implement and assess a specific learning process. It's used for e-learning practices and, in its most common form, consists of two elements: a server that performs the base functionality and a user interface (UI) that is operated by instructors, students and administrators.

Typically, an LMS provides an instructor with a way to create and deliver content, monitor student participation, and assess student performance. It might also provide students with interactive features, such as threaded discussions, video conferencing and discussion forums.

The LMS helps colleges and universities to implement remote learning. The students can access the LMS anytime and anywhere over the internet. Also, they can access the content using either computers or mobile devices.

Visualization Technologies -

Data visualization is the practice of translating information into a visual context, such as a map or graph, to make data easier for the human brain to understand and pull insights from. The main goal of data visualization is to make it easier to identify patterns, trends and outliers in large data sets.

Data visualization tools can help educators monitor individual student progress and performance over time. By visualizing key academic metrics, such as grades, attendance, and assessment scores, teachers can identify struggling students early on and provide timely interventions to improve their chances of success.

Use of Web-based tools –

The application of the Web tools in Indian higher education is still marginal and will have to overcome a lot of obstacles in order to hold its ground as in higher education of developed countries. The majority of the faculty members have been using Web tools for the three major purposes; for Web based teaching & research; for interactive learning features; and to keep themselves up to date on related topic of interest.

The use of Web based tools (wiki's, blogs, RSS feed, social networks, podcast etc.) can support innovative teaching methods and is associated with concepts like communities of practice, syndicated content, learning as a creative activity, peer-to-peer learning, creation of personal learning environments, and non-formal education . Such tools can be used to develop Learning strategies that can enhance student motivation, improve participation, facilitate learning and social skills, stimulate higher order cognitive skills, and increase self-directed learning.

Use of Social Media –

Today, we can see education institutions adapting these developments into their systems and relying on group resources and mechanisms to improve student life. The use of social media in education helps students, teachers and parents to get more useful information, to connect with learning groups and other educational systems that make education convenient.

Social network tools afford students and institutions with multiple opportunities to improve learning methods. Through these networks, you can incorporate social media plug-in that enable sharing and interaction.

Tech Tools for Higher Education -

Tech tools for teaching refer to a wide range of digital resources, software applications and online platforms that support and enhance teaching and learning. These useful tools can benefit students of all ages in a multitude of ways. Educators use these tools to engage students, promote active learning and facilitate collaboration in a variety of educational contexts.

EdTech or EduTech tools are software systems that combine education with technology. The primary idea behind these tools is to take learning to a digital level and give traditional classrooms a new look and feel. You must have seen projection screens, tablets, and other technical equipment in the advanced classrooms.

1. Google Workspace -

It is the perfect teaching assistant for modern educators who wish to make classroom sessions fun and engaging. It stands tall in the list of best EdTech tools in 2023, as many students and teachers use it regularly. Google Workspace includes docs, slides, forms, lenses, and drawings that help students and teachers take learning to another level.

2. ChatGPT -

It is an interactive model that makes learning happen conversationally. It is an elaborate question-answer-based platform based on OpenAI that provides answers to complex questions. Educators widely use this tool to answer their remote students automatically in their absence.

3. Canva -

Canva is a design tool that allows you to drag and drop various features onto a page to help you create graphics for your classroom. It offers multiple templates to create handouts or lecture presentations. This tool also includes a video editor to help you create educational material.

4. Zoom -

Zoom is a video call program that allows you to host video chat meetings with multiple people. Using a video chat service can allow teachers to connect with students, parents and other staff members without being in the same space as them. Zoom also enables you to teach remote courses, lead study groups and hold meetings with parents.

5. Google Classroom -

Google Classroom is a virtual learning platform that helps educators create curricula, run classes online, and share assignments with learners in a paperless manner. It enhances student-teacher collaboration by encouraging the use of Google Workspace services like Meet, Chat, Sheets, Docs, and Slides. Many consider Google Classroom a Learning Management System (LMS) that creates a collaborative educational environment. Some call it a blended learning platform that makes the entire process of creating, distributing, and grading assignments more comprehensible and efficient.

6. Grammarly –

Grammarly is an online grammar-checking and proofreading tool that helps users identify and correct errors in their writing. It provides personalized feedback and suggestions on grammar, spelling, and punctuation.

Zotero -

Zotero provides a way to organize and store citation information about the books, articles, and other materials you find through your research. You create your own personalized library than can also store PDFs and can be backed up to a cloud server Citation management tools like Zotero or Endnote can be a big help to your organization and time management, especially for larger projects. Zotero can also help facilitate group projects if you are working with collaborators who would like to set up a group library.

- **Other helpful tech tools -**

- 1. Text-to-speech tools -**

These tools translate text into audio.

- Azure text to Speech
- Natural Reader
- Amazon Polly

- 2. Survey and quiz tools -**

- IBM Watson
- LiSTNR
- Speechify etc.
- These tools help to make surveys, polls or quizzes.
 - Quizlet
 - SurveyMonkey
 - Quiz Maker
 - QuizGame

- 3. Google Forms**

Bibliography and citation tools -

- Zotero
- EndNote
- Citation Machine
- EasyBib
- Citation Guides

- 4. Mendeley**

Collaborative tools-

- Moodle
- Canvas
- Blackboard Learn
- Schoology
- D2L Brightspace
- Microsoft Teams
- Classroom
- Edmodo
- Chromebooks

Conclusion -

The present paper depicts certain findings-

Major finding of this paper is that the technology is an important part of our education. The use of technology is an important step to make learning effective. The top EdTech tools listed above can help in to make classroom learning technology-driven and much more interactive for students. By doing so, the students' performance will improve, and they will be the best fit in the competitive world ahead of them.