

FUTURISTIC TRENDS IN HIGHER EDUCATION: ROLE OF ICT AND E-LEARNING



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Abstract

In this contemporary era when education is in great demand, learners are keen to find more information to level up their studies to be a part of this competitive environment. Some universities have gradually been more receptive to the idea of e-learning, and they are now incorporating e-learning into their curriculum to meet students' varied needs for learning and to offer more interactive resources that make knowledge easier to access. E-learning has the potential to change how everyone teaches and learns in the future. It can raise learning engagement levels and set standards. This cannot take the place of lectures or professors, but it can improve the effectiveness and cut down on time spent when used in conjunction with current teaching techniques. As soon as feasible, Information and Communication Technologies (ICT) should be included into the educational process due to the accelerating growth of information systems and technology. Therefore, an effort was made to produce a review of potential ICT application features in the teaching process in this study. The paper's major objective was to consider how to include ICT into lectures because it would soon become necessary. The use of ICT in the classroom opens up a wide range of opportunities for the presentation, simulation, and visualisation of educational content. The use of ICT in the classroom presents significant issues for instructors, which this paper attempts to address.

Keywords: Knowledge, Education, E-learning, ICT.

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1. Introduction

With its adoption and development as a method of communication, the internet has altered the way we work and is now poised to impact education. Academics have recognized its enormous potential as a learning tool, and some institutions have grown more enthusiastic about the potential of online learning to deliver accessible and up-to-date education to individuals of all ages and social backgrounds, independent of time or place. The internet is the only method to break down obstacles to injustice, create chances for young people to actually become 21st century learners, and enable them to study in ways that fit their learning needs and styles. Therefore, in order to do this, teachers must use technology to provide students with the option to study anything, at any time and from any location. [1]. The incorporation of e-learning and information and communication technology (ICT) into the educational system may provide professors with a chance to upgrade and improve their lectures. Technology in education has the potential to increase student performance. ICT development is accelerating, and there is an urgent need to include ICT into the teaching and learning processes [2]. The use of ICT in education has been shown to increase knowledge in the subject of interpretation not only during the learning process, but also in future professional activity [3]. Substantial changes in teaching and learning might be facilitated by continually emerging new ICT, which has disrupted traditional teaching and learning methodologies [4]. The Government of India and the University Grants Commission (UGC) have realised that using information and communication technology (ICT) in higher education will help the present higher education system. E learning is now the most appreciated trend in India, however implementation of E learning systems comes with as many obstacles as advantages, which must be

addressed prior to making any significant investment in the E-learning system of education. This is why we conducted a study to find the benefits, constraints, and hurdles that are anticipated to encounter the spread of E-learning in higher educational institutions in India. This information is expected to aid in the efficient implementation of a new education system, making the process of sharing knowledge easier, faster, and less expensive for many students in India and other countries across the world. Understanding the hurdles and other limiting variables would also assist professionals in addressing such challenges in advance, Increasing the possibilities of realising the much-needed advantages of e learning in Indian universities. The incorporation of ICT into traditional institutions is certain to have a substantial influence on the entire education system by increasing access to underserved educational opportunities and improving their quality at a low cost. To reap the greatest benefits from E-learning at the lowest possible cost, effective policies and strategies must be created to integrate accessible local technology with the present educational system. To satisfy the rising need for flexible learning systems in the domestic and worldwide markets today, India's University Grants Commission (UGC) has determined to use ICTs to improve virtual education through E-learning in the majority of its higher education institutions. This necessitates the creation and execution of a well designed E-learning strategy at both the national and institutional levels [5].

Review of Literature

1. The traditional method of teaching execution

The execution of the learning process in conventional teaching is based on a preplanned, programme of each school class, which clearly outlines goals and methods of work, the outcome of learning,

teaching materials, and content of work. Each school lessons are separated into three sections: introduction, main portion, and conclusion. Traditional teaching instruments include the following: a board, chalk, worksheets, books, workbooks, and so on. There are four major types of lessons in conventional learning implementation:

i) Learning new things:

Processing new lessons: The process generally starts with a motivator. A phrase that is being processed is already known (supplement particular content) or an example from everyday life is provided. It comes after the introduction of new conceptions (definitions, theorems and their consequences). The activities are designed so that students, in addition to well

crafted questions from professors, may enhance their knowledge on their own by answering questions. A typical example is assigned to new content.

ii) Check your knowledge:

Students on the board solve a number of issues, ranging from simple to difficult. Often, the instructor begins with modest examples of difficulties and gradually increases. Finally, the teacher assigns a homework assignment.

iii) Written knowledge test for grade:

The instructor must plan for a written knowledge exam at the start of the school year (in line with school-based hours) and record the test dates in the work log.

iv) Verbal knowledge test for grade:

The teacher assesses students verbally by asking them questions to see if they can apply theoretical knowledge to a particular issue [19].

2. Role of E-Learning in Higher Education

The fast progress of information and communication technology (ICT) has altered students' learning methods [6]. Electronic learning (e-learning) has drastically influenced the global education industry, capturing many strategies for boosting content quality [7]. E-learning

employs the World Wide Web and the internet to continue the delivery of information and services [8]. E-learning has grown in popularity and appears to be a pressing requirement. It has been explained in light of the current environment and context in which it functions [9]. E-learning might be described in a variety of ways. Jenkins and Hanson's [10] definition of e-learning is learning that is aided and assisted by the use of ICTs. According to this definition, e-learning is the use of ICTs (such as the internet, computer, telephone, radio, video, and so on) to assist teaching and learning activities. It is characterised as an information system capable of integrating a wide range of educational materials (through audio, video, and text mediums) delivered via email, live chat sessions, online conversations, forums, quizzes, and assignments [11]. It offers a novel method of learning that allows the teacher to give learning instructions in a variety of formats while also allowing students to study regardless of time or location. The e learning system is regarded as an important component of the current university environment for curriculum delivery [12]. Several research studies have demonstrated the value of e-learning and ICT for both professors and students in higher education [13]. The goal of higher education is to generate and share knowledge in order to bring about inventive and creative progress in the globe [14]. The higher education system is one of the most important tools for enriching a society in terms of value, knowledge, and culture, as well as for empowering the economy by producing specialised knowledge and trained labour.

Since independence, the Indian higher education system has been expanding with the establishment of new universities. The Indian higher education system is now one of the largest in the world, with 51,649 institutions [15]. However, the Indian education system is currently facing a number of challenges, including a lack of

hands-on and practical experience, outdated curriculum, a lack of infrastructure, an increase in the cost of education, and a shortage of highly skilled academicians. To address these problems, e learning or an online education system is used in conjunction with conventional methods of learning or brick and mortar classes since significant concerns such as accessibility, quality, and cost may be addressed [16]. To successfully integrate e-learning model (Fig.1) in the Indian education system, we must first understand the characteristics that shape students' attitudes about e-Learning. As a result, it is critical to investigate the many elements

that impact students' real use of e-learning in order to make it a more effective teaching and learning tool in education [17]. In the midst of this epidemic, e-learning has unquestionably become the need of the hour, as well as the future of India's higher education system. During the COVID-19 epidemic, most colleges worldwide used online teaching approaches to accomplish the aim of "no suspension of learning" [18]. It is critical that each student participate actively in elearning technologies. It is vital to understand how students' conduct in higher education affects their acceptance of e learning.

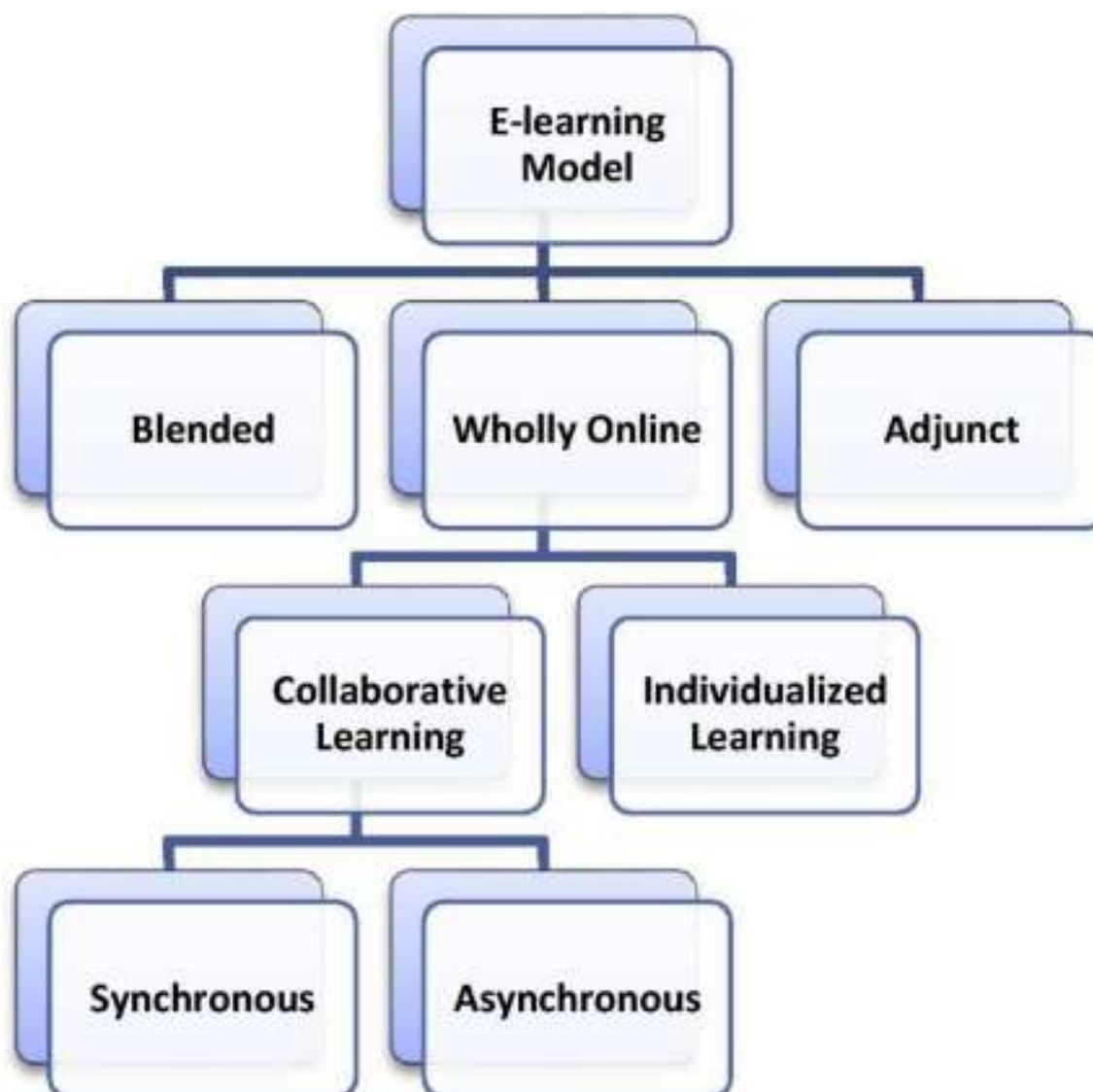


Fig.(1): A Model of using e-learning in education[26].

3. Role of ICT in Higher Education

Information and communication technology (ICT) is becoming more accessible and influential across the world. As a result, most countries see ICT as a means to improve educational quality [20]. ICT (**Fig.2**) is increasingly being utilized to help teachers teach students. It has made technology-based and technology-mediated resources for teaching and learning possible. It can make use of the transmission of information about scarce educational resources to increase their availability or reach. The days of lecturing using Black boards in a lecture hall are long gone. The scene is no longer viewable nowadays. On the one hand, instructors use technology to make their classes more interesting by providing practical insights. Students, on the other hand, use it to obtain in-depth knowledge about a subject of interest. India has the world's biggest population of around 500 million people aged 5 to 24, creating enormous opportunities in the education industry [21]. The Indian online education sector is presently worth USD 247 million, and it is predicted to rise eightfold over the next five years (KPMG Report, May 2017). India has implemented a programme to rebuild the present system of tertiary and vocational education by incorporating ICT technologies [22,23]. Rising disposable income, lower online education costs, Internet penetration, smart phone user base, and higher employability quotient all contribute to the expansion of online education in India. Educational patterns are also fast changing: there are many more part-time students, mature students, and

students from a wider range of backgrounds [24]. Apart from student learning, ICT in education is being utilised to improve creativity, interaction, and information exchange. The Government of India (GoI) has launched government funded initiatives in this aim, such as Educational Technology (ET) and Computer Literacy and Studies in Schools (CLASS).

Nationally approved ICT in educational curriculum for students and instructors are being implemented across the country. NCERT created e-Pathshala to display and disseminate all educational e-resources. Another significant achievement of the GoI is the launch of SWAYAM. SWAYAM provides an integrated platform for online courses that uses ICT and includes all higher education disciplines as well as skill sector courses to assure the supply of high-quality higher education at an economical cost. Apart from that, the National Digital Library of India (NDL), a virtual repository of learning resources, has been established for greater accessibility to books (in the form of ebooks) (Press release by the Ministry of Human Resource Development, December 17, 2018). The Government of India (GoI) is promoting e-learning. Instead, the Department of Electronics and Information Technology (DeitY) has been actively creating tools and technology to encourage it. Content creation, R&D technology initiatives, human resource development projects, and faculty training initiatives to increase literacy through online education are among these programmes [25].



Fig.(2): Incorporation of ICT in Higher Education[27].

2. Discussions

The use of digital technologies for teaching and learning is referred to as e-learning. It makes use of modern technologies to allow students to study whenever and wherever they choose. It entails training, knowledge delivery, and feedback. It encourages students to communicate with one another, exchange ideas, and appreciate diverse points of view. It facilitates communication and strengthens the relationships that support learning. E-learning improves education, literacy, and economic growth in poor and emerging countries. This is especially true in nations where technical education is prohibitively costly, opportunities are scarce, and economic inequities abound. If effectively implemented, e-learning may be extremely useful to both students and institutions. The impact of e-learning and internet technologies on the quality of education in higher education institutions has had a significant influence on current research. E-learning is a vast and expanding sector with significant potential in higher education, and students who used e-learning outperformed those who did not utilise elearning. To leverage this potential, e-learning initiatives should

make every effort to meet the interests and concerns of all stakeholder groups.

3. References

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