ETHICAL ISSUES IN EDUCATIONAL TECHNOLOGY

Dr. Parvesh Kumar Sood

Principal, Shanti College of Education, Kailash Nagar, Nakroh,
Distt. Una, Himachal Pradesh

ABSTRACT

Technology is a tool to facilitate learning and when used appropriately it can have remarkable effects on early childhood education. Technology and interactive media promote learning and development when used intentionally and within the framework of developmentally-appropriate practice to support learning goals and expand educational opportunities for all children, students and teachers use information technologies every day in the academic environment to perform different educational activities. The use of information technology (IT) has also raised new ethical issues. These technologies provide many benefits, but the unethical use of IT by students and teachers raises a major cyber-ethics and professional ethics debate in educational institutions. The purpose of ethics is to help us behave in an honorable way and live in a way that preserves the fundamental values that make us fully human.

KEYWORDS : Education, Learning, Opportunities, Technology, …

INTRODUCTION

Throughout history, the use of teaching techniques and tools in the education of individuals has always been an important issue, and the search for more effective teaching approaches has never ended. Educational Technology is a complex and integrated process that involves people, procedures, ideas, devices, and organization to analyze all aspects of the human learning process and the problems experienced in this field and to design, implement, evaluate, and manage solutions to these problems". In general, the purpose of using technology in education has been to facilitate and enhance the processes of learning, teaching, and education. Educational technology has gradually evolved from clay tablets to blackboards and, ultimately, to artificial intelligence and robots, representing a significant area of development and progress. Within this historical timeline, various research has been conducted on educational technology, and it has become an important sub-discipline and research area within the field of Educational Sciences.

THE CONCEPT OF EDUCATIONAL TECHNOLOGY

The Association for Educational Communications and Technology defines educational technology as "the study and ethical practice of facilitating learning and improving performance by creating, using, and managing appropriate technological processes and resources" Different points are emphasized, and different approaches are highlighted when defining educational technology. These definitions can be grouped into three main categories :

1. The approach that considers educational technology as a branch of educational theory and practice, focusing on the design and use of messages that primarily control the learning process.
2. The approach that views educational technology as equipment, materials, and products used in the process of learning and teaching. According to this perspective, educational technology includes machines, materials, projectors, films, screens, and computer programs used for instructional presentations.
3. The approach that regards educational technology as "systematic knowledge obtained from scientific research." According to this perspective, educational technology is defined as the application of scientific data in the field of education. This study focuses on educational technology within the scope of the use of technological tools in the learning and teaching processes. These technological tools can be used in various areas, such as the design and development of learning materials, the improvement of teaching methods, and the assessment of student achievement.

THE ROLE OF TECHNOLOGY IN EDUCATION

In recent years, educational technology has rapidly evolved and changed. The widespread adoption of the internet and the increased use of digital devices have created significant opportunities for educational technology. Educational technology plays a crucial role in enriching students' learning experiences, enabling teachers to provide more effective instruction, and enhancing learning outcomes. Using technology in education offers new possibilities for stimulating and enriching young minds.

(a) The Internet : The internet, derived from the words "international network," has become indispensable in people's lives. It is a global network of interconnected computers used for information sharing. A life without the Internet has become almost impossible, and many services necessary for daily life have started to be realized through the Internet.

Internet technologies have a great impact on the transformative role of computers in individual and social life.

(b) **Smart phones and Tablets** : The proliferation of mobile devices has led to a significant change in educational technology. Smart phones and tablets provide students with access to learning materials and the ability to manage their learning processes.

(c) Digital Books : Digital books, which can replace traditional printed books, make it easier for students to access educational materials.

(d) Virtual Classrooms : Virtual classrooms enable students to attend live lessons via the internet, while teachers have the opportunity to better monitor student progress. These technological advancements have transformed the landscape of education, making it more accessible, interactive, and efficient for both students and educators.

(e) Artificial Intelligence (AI) : The emergence of big data, cloud computing, artificial neural networks, and machine learning has enabled engineers to create machines that can mimic human intelligence. Machines capable of perceiving, recognizing, learning, responding, and problem-solving are referred to as artificial intelligence increasingly widespread, aiming to provide students with personalized learning experiences and assess student development more effectively.

(f) Game-Based Learning : Game-based learning plays a significant role in making the learning process enjoyable for students Gamification, as a technique used in education, aims to enhance learning by gamifying it, increasing students' interest and motivation. In general, gamification in education seeks to strengthen learning behaviours by encouraging student participation, interest, and engagement with the learning environment

(g) Virtual Reality : Virtual reality is an educational model where students learn by experiencing and living within virtually created environments Virtual reality enables interactive learning, allowing students to gain experience in different settings and have more effective learning experiences. Some of the opportunities provided by virtual reality technology in education are listed below

- Conducting experiments that could be dangerous in the virtual world.
- Performing experiments and applications without the use of lab animals.
- Examining a virtual cadaver, any internal organ, or an unborn fetus as if handling them physically.
- Watching an operation, experiment, movie, play, fashion show, or lecture as if present in that environment.
- Taking a trip to Mars, walking on the Moon.

(h) Augmented Reality (AR) : Augmented reality technology enriches content by adding sound, images, and GPS data to an existing object, allowing individuals to feel as if they are in a constructed place and time. In education, augmented reality is used to provide students with experiences that do not exist in real life. Augmented reality can serve various purposes in education, making it easier for students to acquire, process, and remember information. Additionally, it makes learning more engaging and enjoyable. Augmented reality can be used at all education levels, from preschool to university and even in the workplace

(i) Blockchain : Blockchain can be described as a type of digital ledger or record list where data is encrypted and stored in digital form, and data in blockchain is stored in blocks that are connected to each other in chronological order Blockchain technology allows students to securely store their education records and achievements. Additionally, blockchain technology provides students with verified certificates and other education documents. Thanks to the possibilities brought by technology, educational institutions can provide all kinds of information, such as qualifications or achievement certificates, in a permanent and secure manner via blockchain.

(j) Cloud computing : The cloud computing model is a technology that extends the capabilities of computers, allowing users to access a range of software and services over the Internet. Cloud-based educational applications provide a new and flexible solution for accessing data and services, where knowledge and experiences can be shared effectively over the web, enabling collaborative work on projects .The use of cloud computing n education can take various forms

(i) Enabling students to carry out their educational activities without time and space limitations
(ii) To access library content and online resources electronically,
(iii) Recording student performance and grades electronically and querying them according to desired criteria,
(iv) Providing regular feedback to students and making progress,

(k) Robotics in Education : Social robots, with their lifelike behaviours and social sensitivities, appeal to students and are used to make education more engaging. The increasing trend of using robots in education offers significant contributions by providing students with a personalized learning experience that suits different learning styles, reducing the workload of teachers, and allowing them to focus more on individual student

needs. In today's world, where teachers have limited time to allocate to students, robots have great potential to teach every student in small groups and provide private lessons. The use of robots in education is expected to bring various benefits, such as making lessons more enjoyable for students through interactive learning experiences with robots, boosting students' self-confidence, making them more active and independent thinkers, and increasing their interest in science and technology.

ETHICS, TECHNOLOGY ETHICS AND ETHICS IN EDUCATIONAL TECHNOLOGY

In its broadest sense, ethics is concerned with what is good and bad, right and wrong, in the decisions and actions of individuals. The purpose of ethics is to help us behave in an honorable way and live in a way that preserves the fundamental values that make us fully human, Ethics demands that individuals' intentions, actions, values, and beliefs be carefully and critically examined in terms of good-bad, right-wrong. As human beings, we all have basic duties and obligations and certain things we should and should not do. In other words, there is an ethical dimension to human existence. As human beings, we experience life in a world of good and bad, and we characterize certain actions as right and wrong. Being human requires us to make choices. Ethical sensitivity to these choices depends on the responsible exercise of our freedom and guide sour struggle to answer fundamental questions that make us question how we should live our lives and how we can make the right choices. Every technological development brings its own ethical challenges. Humans design, produce, use, market, buy, and sell technology, but it is also necessary to question the purposes motives, and rules by which humans work to advance technology. The ability to communicate quickly and effectively, made possible by the creation of the Internet, has had a profound impact on people, transforming the daily lives of millions of people around the world. One of the most obvious benefits that technology offers is the opportunity for individuals to participate in a wide range of social and educational environments through cyberspace without giving up the comfort, and security of their homes.

METHOD/MATERIALS

In this study, the "Narrative Review" method was used. A narrative review method consists of a comprehensive and critical overview of previously published research on a particular topic of interest to a researcher. Also called a traditional review or literature review, narrative reviews help to establish a theoretical and methodological framework

or context for what is already known about a particular topic. By conducting a literature review, gaps in the field are found and existing patterns and trends are identified.

FINDINGS

With the increasing use of technology in education, the ethical responsibilities of technology producers, educators, and technology users have become an area of serious debate. Students and teachers use information technologies every day in the academic environment to perform different educational activities. The use of information technology (IT) has also raised new ethical issues. These technologies provide many benefits, but the unethical use of IT by students and teachers raises a major cyber-ethics and professional ethics debate in educational institutions. Some of the main ethical issues arising from the use of technology in education include privacy, security, and use of personal data, hacking, intellectual property, netiquette, vandalism, access, misdirection, impact of personalization on individual abilities, inappropriate use of resources, academic dishonesty, false virtual identities, online harassment and hate speech, academic and online freedom of expression. In addition, there are many ethical problems, such as the damage to their innocence, privacy, safety, health, and well-being of students, and the inability to protect them during the interaction process with the technology used for education and training purposes for minors under the age of 18. The ethical problems that technology poses to children are discussed below under 21 themes/ headings. Key Ethical Issues Raised by Educational Technology on Children and Young People within the scope of this research, the following findings were reached as a result of the systematic review of the main ethical issues related to the effects of educational technology on children and their world. The harmful effects of educational technologies used in and out of school on children and the main ethical issues are discussed below under the main headings by reviewing the relevant literature and research findings.

The widespread use of digital technology in economic, political, social, and cultural life around the world raises many concerns about the emergence of new forms of inequality and the exacerbation of existing inequalities between societies. At the same time, technology that makes our lives easier also leads to great inequalities, segregation, and division among individuals, social groups, or societies. There is a growing gap between those who can and cannot use ICT and between those who can and cannot access it. This situation, also known as the digital divide or digital disconnect, raises issues of inadequacy, inhibition, and inequality between different social groups in terms of access, use, and impact of information technologies.

CONCLUSION

Certainly, protecting children from the harmful effects of technology places significant responsibility on technology producers, education and school administrators, teachers, and parents. To achieve this goal technology creators, educators, and children should be educated about technology ethics. Training should be provided on the responsible, safe, and ethical use of technologies. Teaching children how to use technology correctly is crucial. They should be taught when and how to use technology, and awareness should be raised about internet safety and online privacy. Efforts should be made for "technology for humanity, not technology in place of humanity." Children should not be detached from an education process that allows them to acquire fundamental values like compassion, empathy, cooperation, interest, and responsibility.

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