Role of Artificial Intelligence in Higher Education- An Empirical Investigation

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Abstract
The importance of artificial intelligence (AI) is growing in all economic sectors and thus also in higher education. In recent years, there have been significant developments in this concept of "Artificial Intelligence in Education (AIED)". The purpose of this study was to find out how the concept of artificial intelligence can be applied to teaching and learning in higher education and the implications of the use of artificial intelligence in higher education. The impact of the development of technologies on learning is often studied on the methods and scope of learning and teaching. Artificial intelligence enables higher education services to become easily accessible with extraordinary speed, not only in the classroom but also outside the classroom. This report seeks to explore how AI will become an integral part of universities and seeks to examine its immediate and future impact on various aspects of higher education. The challenges of implementing AI in these institutes were also explored. As artificial intelligence (AI) research in education increases, many researchers in the field believe that the role of teachers, schools and leaders in education will change. In this regard, the aim of this study is to investigate which are the possible scenarios for the arrival of artificial intelligence in education and what impact it can have on the future of schools. In this research, it confirmed that artificial intelligence has been widely adopted and used in various forms in education, especially educational institutions. Artificial intelligence was initially implemented in the form of computers and computer-related technologies, moving to web-based and web-based intelligent educational systems, and finally with the use of embedded computing systems and other technologies such as humanoid robots and web-based chatbots teachers & tasks and assignments independently or with tutors. With these platforms, teachers could perform various administrative tasks such as grading and work more effectively and efficiently and achieve higher quality in your learning activities. On the other hand, because the systems use machine learning and adaptability, the curriculum and content are adapted which improved uptake and retention, which improved the student experience and the overall quality of education.

Keywords: Artificial intelligence; education; school management.

1. Introduction
The future of higher education is closely related to the development of new technologies and the computing power of new intelligent machines. In this field, advances in artificial intelligence open up new opportunities and challenges [1] for teaching and learning in higher education and the possibility of fundamentally changing management and the internal architecture of higher education. Philosophical positions adopted since Aristotle have answered the question "what is artificial intelligence", so there is no consensus on a definitive definition. [2] The future of higher education is essentially related to the development of new technologies and computing skills. New intelligent machines. In this field, the development of artificial intelligence opens up new opportunities and challenges for teaching and learning in higher education, which can fundamentally change the management and internal architecture of higher education institutions. Artificial intelligence (AI), often expressed by the general public as the ability of machines or computers to think and behave like
humans, represents the efforts of computer systems to imitate human minds and actions. In this regard, [3] the basic definition of artificial intelligence can be expressed as the skillful imitation of human behavior or mind through tools or programs. According to Timms (2016) it may be an illusion of the current structure to think that artificial intelligence belongs to the form of home computers. It can enter our life in various functions and forms. The deepened development of artificial intelligence will affect many situations, from the reorganization of social order in the broadest sense to learning and administrative processes in classes and schools. Schools, which are expected to adapt to the digital age and make 21st century skills one of their main goals, are among the most important institutions that can be most affected by the development of artificial intelligence. Karsenti (2019) points out that new forms of technology fill our lives and attract our youth, and this case leaves schools with no choice but to make room for them. In this regard, the focus of this research paper is how legal, business, educational and engineering stakeholders view this development and AI in education. The purpose of this study therefore to examine what the [4] use of artificial intelligence in education means and what effects it will have on the future of education. [5] The mention of artificial intelligence brings to mind a supercomputer, a computer with enormous processing capabilities, including adaptive behavior such as sensors and other features that allow it to have human-like thinking and operational capabilities, and even enhance the supercomputer's interactions with humans. In fact, various films have been made to show the capabilities of AI in smart buildings, such as the ability to control a building's air quality, temperatures, and/or music playback based on the perceived mood of the room's occupants. The education sector has added AI, using conventional AI as a supercomputer, handling embedded computer systems. For example, built into robots, artificial intelligence or computers and as support devices, the basic unit of education, or early childhood education, can be used to create robots that enhance the student's learning experience. Indeed, Timms proposed that cobots or robot applications that work with teachers or collaborators (cobots) be used to teach children routine tasks such as spelling and pronunciation and adapt to student abilities. Similarly, various studies have listed online and web-based education as moving from simply using materials online or on the web to student’s [6] simply downloading, learning, and completing assignments. Systems that learn to adapt the behavior of teacher and student accordingly to enrich the educational experience. Artificial Intelligence in Education. Are covered by administration, teaching or teaching and learning. Those regions that identifying a framework for analyzing and understanding artificial intelligence in education, forms the scope of this research.

1.1 Objective of the study

1. To investigate the effect of animation (artificial intelligence) on student learning
2. To find out the relationship between the demographic variables of the respondents and the effect of artificial intelligence on learning.
3. This study aims to evaluate how various kinds of AI use in education have affected or had an impact on various elements of education.

4. The study will specifically look at how AI has impacted the fields of education administration and management, teaching, and learning.

5. The study's goal is to determine if artificial intelligence (AI) has increased instructional and learning effectiveness in general and has made administrative duties in education more effective and efficient.

2. Role of Artificial Intelligence in Education

Many studies show that artificial intelligence in higher education is important for both teachers and students, because the application of such technologies promotes more flexible learning solutions for students without limitations. With the help of artificial intelligence, thanks to increased flexibility and speed, many students enter universities around the world. Although its implementation in teaching has also proven to be relatively expensive, it is economically viable compared to other costs associated with manual labor. However, the long-term use of AI among university students is much more cost-effective compared to more traditional training and manual work. Developed countries of the world have already successfully implemented processes of artificial intelligence. However, developing countries are still at an early stage when it comes to introducing artificial intelligence compared to developed countries. Weak infrastructure, poor access to information, lack of support from institutions, insufficient resources, poor technical skills - these are various obstacles for developing countries should adopt artificial intelligence as a tool in higher education. The education system uses artificial intelligence for assessment, during which teachers can mechanize student assessment for specific set questions. Artificial intelligence can also be applied in adaptive and individualized learning to meet the demands of 4,444 students. Artificial intelligence helps teachers understand students during lectures and gives them the ability to give relevant tips to students. It acts as a teacher for the students and allows them to learn the concepts easily. Projects focused on artificial intelligence provide support for both students and teachers. This encourages teachers to review student achievement and allow them to improve the instruction they provide to students. Through concerted innovation, [7] AI frameworks for schools have transformed the way students discover and collaborate. It turns teachers into tutors, providing intuitive learning information to 4,444 students. Students can learn without fear through the testing strategy because the AI supports their learning and helps their development. The insights gained through the AI framework will transform the way schools discover, guide and support students. In fact, in some places, it can even alienate teachers in certain situations. It has become a study buddy that helps students in their learning. Artificial intelligence (AI) creates an encouraging environment, in particular, it can provide students with a favorable context for learning characteristics and processes. Artificial intelligence consists of all forms of electronically enhanced learning, processing and teaching. The simple and flexible structure of these environments influenced by AI allows learners to adapt to their personal needs during their learning. Thus, we can say that artificial intelligence is a well-thought-out tool that offers flexible organization, collaboration opportunities and teach process management that can give students and teachers the opportunity to continue learning effectively. Doctors are also responsible for artificial intelligence in colleges. AI teachers can create a learning environment that allows students to better understand content and build connections with teachers and students. [8] The entire globe is fully digitized. Education has certainly been influenced by the digital world. The high-speed technology offers unlimited opportunities for practice and learning for area residents. With worldwide interest in computers, artificial intelligence is focusing on the learning environment. This AI introduces various activities in an academic setting. Computers are of potential
benefit to both teachers and students. With the advent of the computer, artificial intelligence plays an important role in colleges. There have been many programs in different fields or professional categories. Conventional methods of teaching and learning usually lack effective methods to explain intuitive and clear material, while AI can compensate for new methods of software and hardware. From the point of view of Artificial Intelligence Program, classroom teaching has more possibilities compared to other mere teaching methods. Thus, the focus is on the adoption of artificial intelligence both in the classroom and outside the classroom. [9]

3. Challenges for Artificial Intelligence in Education

"Major Challenges of Artificial Intelligence in Education as suggested by Woolf et al. (2013)" includes virtual trainers for each student, where the inevitable help in coordinating user demonstration, social playback, and information presentation helps students learn., self-assessment, collaboration, and some combine vast amounts of data about individual learning, social contexts, learning and individual interests, increasing the interconnectedness and openness of classrooms worldwide and bringing learning beyond the classroom into students' lives. School The work of artificial intelligence in the advanced digital world is amazing, and in the near future these learning data will be trusted even faster. As already mentioned, AI has many benefits for teachers, students and institutions, the possibilities of AI are also impressive. However, there are also few challenges that colleges should face while implementing AI in their universities. Some of these are shown below Authorization and financial support must always limit the updated academic achievement and educational support provided by AI. Data protection rules are also an important constraint, as they must always be updated to take into account the ability of AI frameworks to observe data and use it for analytical research. Another limitation is communication with students. In the event that artificial intelligence takes over the few current tasks, such as answering and responding to student surveys, administrators and staff will likely focus on answering complex questions and interacting with students in deeper dimensions. To address the opportunities and challenges presented by the adoption of AI in the segment of higher education, we encourage institutions to consider "a) when to implement AI (short or long term"), b) in which areas institutions would benefit greatly from AI, (c) how to protect student privacy by using data to help them, and (d) what is the definition of success in implementing AI in a university. Artificial intelligence can open many new imaginable outcomes for higher education, and institutions that push aside efforts to integrate it will appreciate the benefits it brings to students, teachers and institute leaders. Figure 1 shows Artificial Intelligence.

Figure 1 Artificial Intelligence

4. Literature Review

Artificial Intelligence (AI) can be divided into two categories viz. Weak and strong AI. Let's talk briefly about both:

1. Weak AI: Also called narrow AI, it aims to focus on limited work. One case of weak AI is the self-driving vehicle. It is designed for a specific job.

2. Strong Artificial Intelligence: This is also known as artificial intelligence as opposed to weak artificial intelligence Strong artificial intelligence can perform most (if not every) mental function a human can have and intelligence to more than one specific problem (Kurzweil, 2010; Voss, 2017). Many famous experts and industry experts such as "Stephen Hawking, Bill Gates and Elon Musk" consider
strong artificial intelligence as an existential threat to human development.

4.1 Research Methodology

Telangana Colleges Admissions. A structured questionnaire was prepared and the teachers' understanding of is focused on during data collection. Frequency tables/graphs and one-way ANNOVA were used as statistical tools in analyzing the collected data to achieve the objectives of the study. Data collection is done through both primary and secondary data collection methods. To find out the meaning of the effect of animation of various gender groups on the learning of students, the following hypotheses were formulated and tested:

- **H01:** There is no significant difference between the opinions of male and female teachers about the impact of artificial intelligence on student learning.
- **H11:** The opinion of male and female teachers about the impact of artificial intelligence on student learning differs significantly.

**Conclusion**

In conclusion, this research reveals the perspective of students "to explore the perspective of teachers on learning through AI with special reference to selected universities in Telangana", which further helped to explore the role of various modern AI methods in universities. Successfully improves learning ability. The study also reveals that although the future prospects for AI in higher education are very high and contain many opportunities in this field, the current state of AI in universities still requires a strict investment in both funding and time. Thus, educational institutions planning to implement AI must consider many different factors just to ensure that the implementation of AI becomes a turning point in their teaching methods that benefits students, teachers and students institutes. Adoption of AI in higher education has lagged behind compared to the corporate sector, many companies that have already adopted AI and continue to invest more in AI applications are sure to stay ahead of their competitors. Colleges that incorporate AI into all of their programs remain leaders in their fields and are already reaping the benefits associated with it. At the end of the discussion and analysis of document, we can now say that artificial intelligence will significantly affect the top authorities

**References**

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