

## Chapter 29

# Role of Technology in Using Artificial Intelligence to Improve Educational Learning Challenges With Reference to India

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### **ABSTRACT**

*Artificial education intelligence (AIEd) is one of the emerging educational technological fields. A most logical question which comes up is, Is it possible to ensure quality in higher education? Can use of AI and sister technologies help us deliver in the mission? Will it be able to tackle all or most of shortcomings in the field of education? This study aims in a systematic review to provide an overview of AI applications research in education. Technology use in education and learning has undergone a remarkable transformation in the education sector. In order to accomplish this purpose, a quantitative analysis approach was used by open end questionnaire for a survey of scholars. This chapter examined the possible impacts of artificial intelligence on universities. The empirical findings indicate that the knowledge of AI is declining and there is a need to disperse knowledge of technology in higher education.*

DOI: 10.4018/978-1-7998-7638-0.ch029

## **INTRODUCTION**

Artificial Intelligence (AI), one of the new age technologies is making great inroads into each and every domain, may it be the manufacturing, health, automobiles, service, education, banking, retail and many others. As it essentially entails mimicking human intelligence by machines and doing the same tasks a human would do, requires a multidimensional view of a complex problem, which at first may seem simple. Precise definition of AI may elude us but at the same instant one has to be aware of the fact that when it is applied in various fields including the paradigm shifts it can generate within the limitations and constraints. At the core of AI we have the machine learning algorithms, which build a mathematical model. This is a logical follow up on sample data. The end result is helping us to make decision without actually having make an explicit effort for the same. Other sister technologies are also complimentary to AI. For instance if AI helps us to predict, then Data Mining makes an intelligent analysis from the huge amount of data to come to a logical conclusion. Block chaining gives the requisite security to digital exchanges where 'blocks' are considered as digital information being stored in a 'chain' the public database. The list of such technologies is long with each contributing in ensuring viability of AI.

There has to be clarity in the understanding of what AI is in current scenario and what developments it will bring in future when widely implemented in society. This will be the only way to appreciate the prospects that artificial intelligence (AI) creates. AI can make new approaches of work of teachers, students and education per se, and it can also modify culture in ways that bring about new challenges to educational institutions and the field of education.

A few of the important contributions that AI has made in the humanity are mentioned. Stanford researchers were able to use AI to use frontal-view X-ray images to diagnose 14 forms of medical conditions, exceeding the human diagnostic precision for pneumonia (Rajpurkar et al., 2017). The Google CEO, Sundar Pichai, in May 2018, caused a bustle when he demonstrated in his keynote an AI device, Duplex, that could independently arrange phone appointments, making people believe that they are talking to another human being. It might be easy to imagine that AI is quickly overpowering society with its intelligence by developing self-driving vehicles, talking robots, and the flood of other AI miracles, and to obtain all the good and evil powers granted to it in popular culture (Tuomi, 2018).

To become qualified, people need an era; a high school diploma no longer promises lifelong work opportunities. Now that the economy has changed from manual workforces to knowledge workers, there is a need to modify skills and qualifications and individuals need to be prepared to change occupations as many times as they can in a lifetime. Lifelong learning entails lifelong schooling, which in turn includes understanding teachers, good resources and committed time. Information and improved individual efficiency are the driving force of an information society. Knowledge staff use more data and execute more tasks. Digital technology has made drastic changes in culture, but education has only been slightly altered so far. Earlier inventions (e.g., film, radio, television) were touted as educational savers, but almost all had little effects, partly because they did not strengthen previous educational instruments, but instead only automated or repeated existing teaching techniques. The confluence of the Internet, artificial intelligence, and cognitive science, on the other hand, presents a potential that varies qualitatively from that of previous innovations and goes beyond merely duplicating current teaching processes.

The potential effect of IT on education and schools is uncertain, but it is likely to generate a turning point impacting all quadrants. By taking advantage of advances in artificial intelligence and cognitive science and by harnessing the full power of the Internet, educators can augment and redefine the learn-

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