# IMPACT OF ARTIFICIAL INTELLIGENCE ON COLLEGE LEARNING IN HIGHER EDUCATION

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## ABSTRACT

***Introduction:*** *The most widely used AI-based learning models, in particular, suffer from the drawback of seeing the world as nothing more than a basic rehash of events from the past.*

***Aim of the study:*** *the main aim of the study is toImpact ofArtificial intelligence On College Learning In Higher Education*

***Material and method:*** *Artificial intelligence has a significant role to play at universities in light of the future of education and the requirements of education 4.0, as is obvious from the literature and from the published work by other scholars and by this researcher.*

***Conclusion:*** *It's fascinating to see how the data shows there is no discernible variation in the perception and views of various study programmes.*

## 1. INTRODUCTION

### 1.1 OVERVIEW

In specific domains, AI has already surpassed human performance. Last year, researchers at Stanford were able to utilise AI to identify 14 different medical ailments using frontal X-ray scans. The system creation took only one month, and the AI's accuracy exceeded that of human diagnosticians for pneumonia. The research was published in the journal Science. 9 In 2017, an artificial neural network system known as AlphaZero acquired a superhuman level of performance in chess, shogi, and Go in less than 24 hours. This was accomplished with no domain knowledge other than the game rules. 10 When Google CEO Sundar Pichai gave the keynote address at Google I/O in May 2018, he caused a stir by demonstrating an artificial intelligence system called Duplex. This system is capable of scheduling appointments over the phone without the need for human intervention, but it gives the impression that the two parties involved are having a natural conversation. It is tempting to imagine that artificial intelligence is rapidly becoming superintelligent and, as a result, attaining all of the positive and negative capabilities that have been attributed to it in fiction because of the avalanche of AI marvels such as self-driving automobiles and human-sounding robots. That is not the situation at all, of

course. Existing artificial intelligence (AI) systems have tremendous capabilities that are limited on a number of different levels, including the technological, social, scientific, and conceptual ones. The vast majority of breakthroughs in artificial intelligence that are discussed in the media are based on ideas that are older than thirty years, which suggests that AI may be "riding a one-trick pony," as one contemporary author put it.

The most widely used AI-based learning models, in particular, suffer from the drawback of seeing the world as nothing more than a basic rehash of events from the past. We, as humans, are the ones who need to provide them with the available categories and the success criteria for their training to be successful. As a direct consequence of this, artificial intelligence systems will inevitably exhibit some kind of prejudice, not just against people but also toward whole civilizations. A three-level model of human behaviour is presented in the next section, and one of its implications is that norms and values are often unstated and communicated via involuntary emotional responses. The greatest recent successes in artificial intelligence (AI) really reflect the oldest approach to AI, which is one in which almost all of the intelligence is produced from human input. This may seem unusual, but it's true.

## 1.1 APPLICATION OF ARTIFICIAL INTELLIGENCE TECHNOLOGIES IN PERSONALIZED LEARNING AND REACTIVE TEACHING

Traditional classrooms may be supplemented, improved, and even revolutionised by artificial intelligence. Improvements in artificial intelligence have made available a wide variety of methods, such as Machine Learning, Deep Learning, Natural Language Processing (NLP), and Computer Vision, that may be used to facilitate effective instruction and deep learning. By incorporating AI technology into the classroom, educators may save time while providing students with individualised support based on their unique needs. In recent years, there has been significant development in this area. Intelligent tutoring systems, simulated and virtual reality environments, and learning analytics platforms are just some of the cutting-edge tools in the field of education that are now using AI's core concepts. Insights into the AI components utilised to develop these cutting-edge instructional systems are provided in this research. Documents the evolution of instructional AI. The article also takes a look at how AI may improve educational settings. At last, we cover some of the highlights of commercially available AI-based learning systems.

As it is, the educational system does not encourage students to grow as individuals and instead emphasises a one-size-fits-all approach. Using the "one-size-fits-all" tenet, it allows students with wildly varying backgrounds and learning speeds to study and advance together. When class sizes are enormous, it may be more challenging for educators to meet each individual student's

unique educational requirements in such a setting. Modern Artificial Intelligence methods in education may help bridge these knowledge gaps. AI refers to the study and creation of intelligent computers that can mimic human intellect in areas like perception, voice recognition, decision making, and language translation. Open, collaborative, and lifelong learning are just a few of the many advantages of incorporating AI technology into educational settings. On top of all these gains, the education industry stands to gain significantly from AI's capacity to provide individualised and dynamic instruction. Educational programmes, learning experiences, instructional techniques, and academic-support measures all go under the umbrella term "personalised learning," and they're all designed to help students succeed academically by catering to their unique set of circumstances. Due to advancements in educational technology, there are now customised learning systems that use artificial intelligence to keep tabs on each student's progress in class.

## 2. LITERATURE REVIEW

**Panigrahi, Ashok & Joshi, Vijay (2020)** One of the cutting-edge technologies that can now change every aspect of our social connections is artificial intelligence. AI in education has started to develop novel teaching and learning techniques that are now being evaluated in various settings. The stakeholders in the education industry will be able to learn from this paper how much AI will be employed in education and its anticipated advantages. This article gives instances of how AI is being used in education, especially in developing nations like India where ensuring universal access to education is one of the sustainable development objectives. The reader is given an introduction to AI in this work.

**Tushar, Mrs &Ladda, & Rupali (2019)** As one of the fastest-changing industries, education is always adapting to new methods and technologies. India is home to the world's first formalised educational system. A lot has changed in education since those early days, including pedagogy, assessment, and outcomes. Higher education, however, will need a quantum leap if it is to stay up with the rapidly evolving global landscape. In this specific context, AI will prove to be useful. As a whole, the educational sector has lagged behind in adopting cutting-edge technology. At this study, we'll look at how AI is being used in today's universities.

**Zawacki-Richter, Olaf & Marín (2019)** Artificial intelligence in education (AIEd) is one of the newer areas of educational technology, according to several worldwide publications. Although it has been available for almost 30 years, educators are still unsure about how to use it pedagogically on a larger scale and how it may genuinely have a significant influence on teaching and learning in higher education. Through a systematic review, this study aims to provide an overview of the literature on AI applications in higher education. Using clear

inclusion and exclusion criteria, 146 articles out of 2656 originally discovered publications for the years between 2007 and 2018 were included in the final synthesis.

**Tuomi, Ilkka (2018)**The present status of artificial intelligence (AI) is discussed in this paper, along with any prospective effects it may have on education, learning, and teaching. It offers conceptual support for informed policy-oriented work, research, and forward-thinking initiatives that address the possibilities and difficulties brought on by current advancements in AI. The paper is intended for policymakers, but it also offers insights for those working on AI technology and academics researching how AI is affecting the economy, society, and the future of education and learning.

**Vampugani, Venkata & Swathi, Kailasam (2018)** In recent years, classrooms and teaching techniques have undergone modifications and reforms thanks to computer hardware, software, and internet services. However, the use of artificial intelligence has yet to cause the actual disruption of education (AI). Artificial intelligence has established itself as a game changer in a variety of industries, bringing about changes that were previously unthinkable.

## 3. METHODOLOGY

Artificial intelligence has a significant role to play at universities in light of the future of education and the requirements of education 4.0, as is obvious from the literature and from the published work by other scholars and by this researcher. Internet of Things, Big Data, Artificial Intelligence, Machine Learning, Augmented/Virtual Reality, and Mixed Reality are all technologies that have been identified as crucial to the future of education. Artificial intelligence is a necessary foundational technology for the deployment of these cutting-edge innovations. Therefore, artificial intelligence is very important for universities, and it is inevitable that these institutions will adopt this technology.

## 4. RESULTS

### 4.1 THE IMPACT OF ARTIFICIAL INTELLIGENCE ON COLLEGE LEARNING

Ten major indicators/factors were established to assess the impact of artificial intelligence on universities. After categorizing responses as Yes=1 and No=2, the data is handled as nominal parametric since they come from a normally distributed population.

The following inquiry is designed to gauge students' and faculty members' enthusiasm about artificial intelligence's growing significance in the academic world.
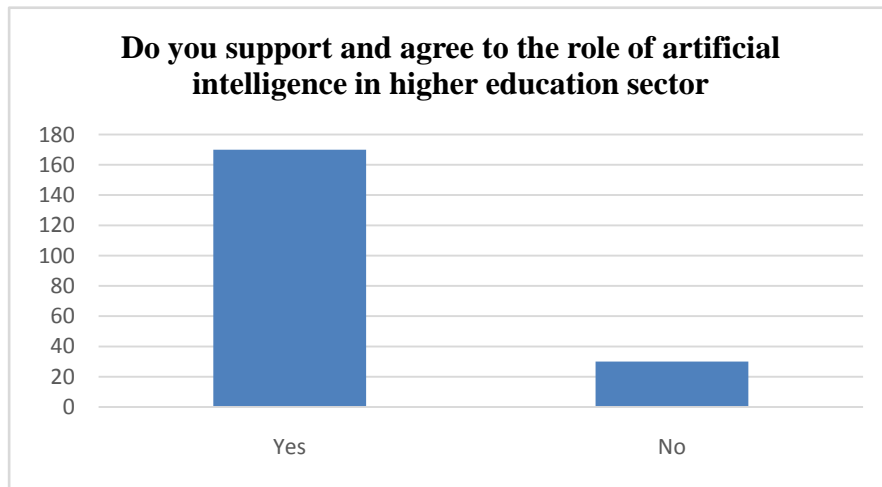
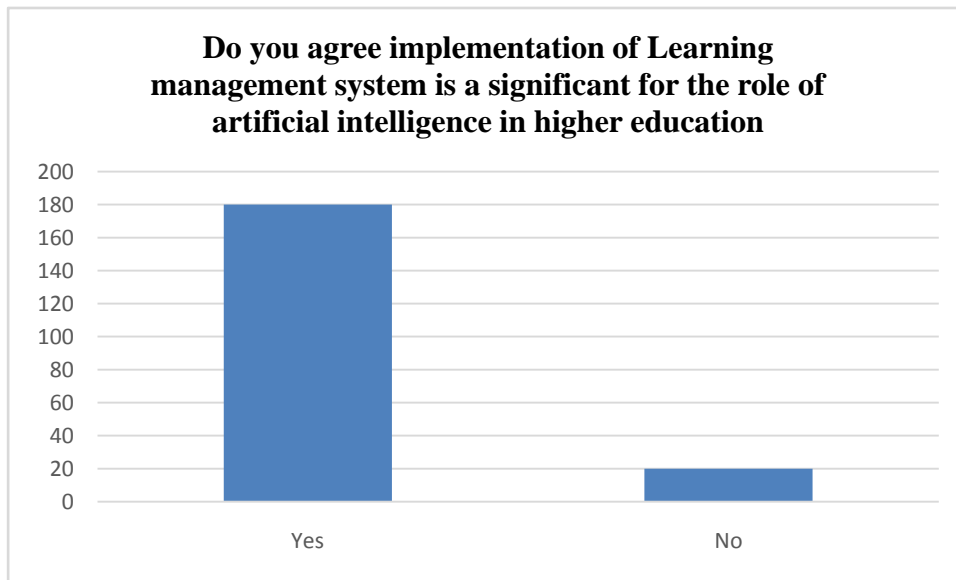**Figure4.1AttitudeRoleofArtificial intelligence**

The Figure 4.1 indicates that 170 respondents of the total respondents saying yes and 30 respondents saying no of this report. From the figure above indicate that 170 respondents agree to the role of artificial intelligence in higher education sector and other 30 respondents not agree with that.
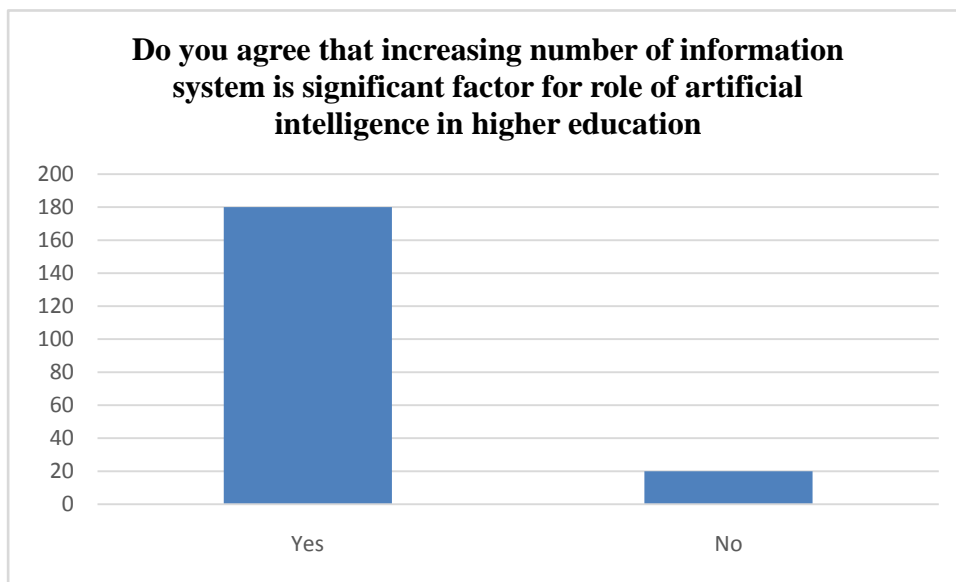

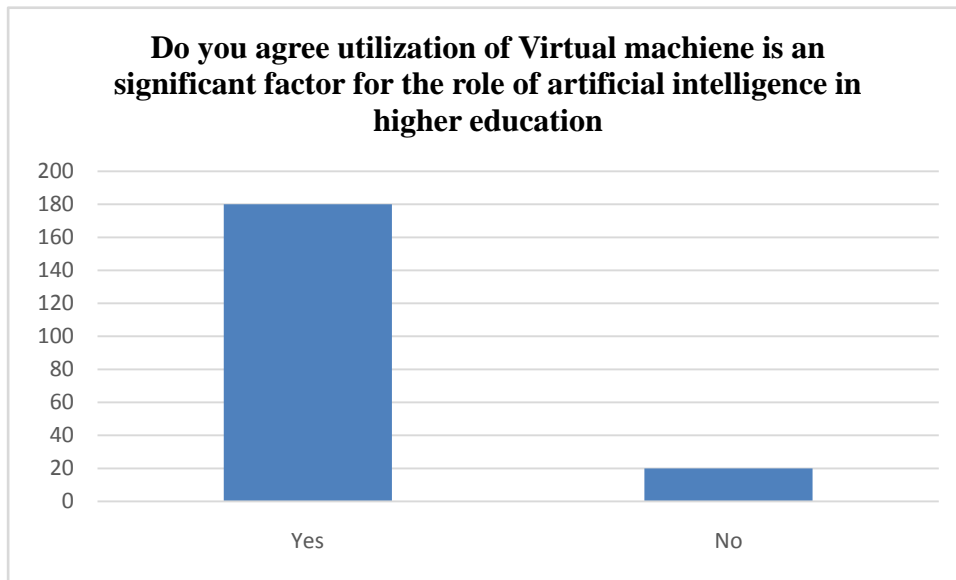
**Figure4.2 NumberofinformationSystems**

The Figure 4.2 indicates that 180 respondents of the total respondents saying yes and 20 respondents saying no of this report. From the figure above indicate that 180 respondents agree to increasing number of information system is significant factor for role of artificial intelligence in higher education and other 20 respondents not agree with that.



**Do you agree implementation of Learning management system is a significant for the role of artificial intelligence in higher education**
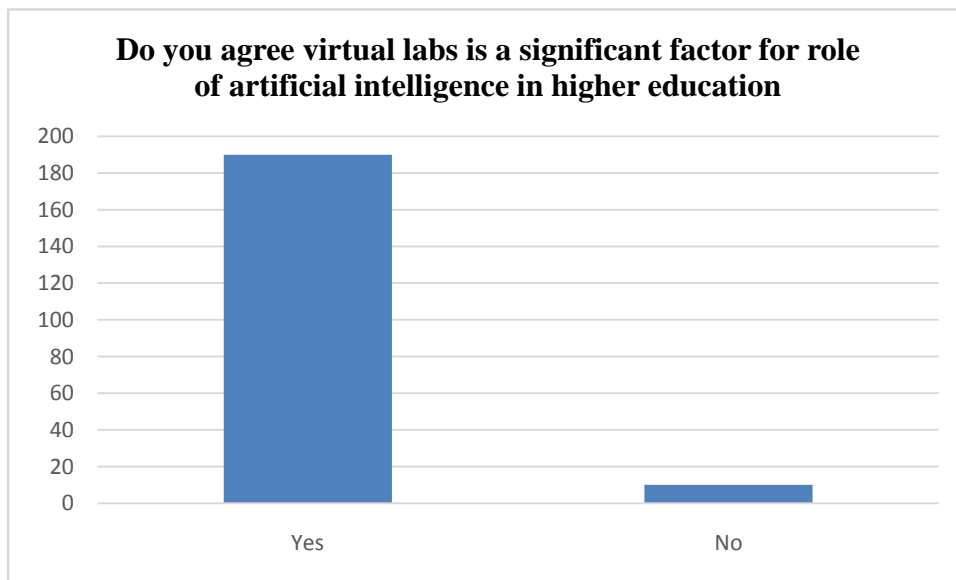
**Figure4.3LearningManagementSystems**

The Figure 4.3 indicates that 180 respondents of the total respondents saying yes and 20 respondents saying no of this report. From the figure above indicate that 180 respondents agree that implementation of Learning management system is a significant for the role of artificial intelligence in higher education and other 20 respondents not agree with that.
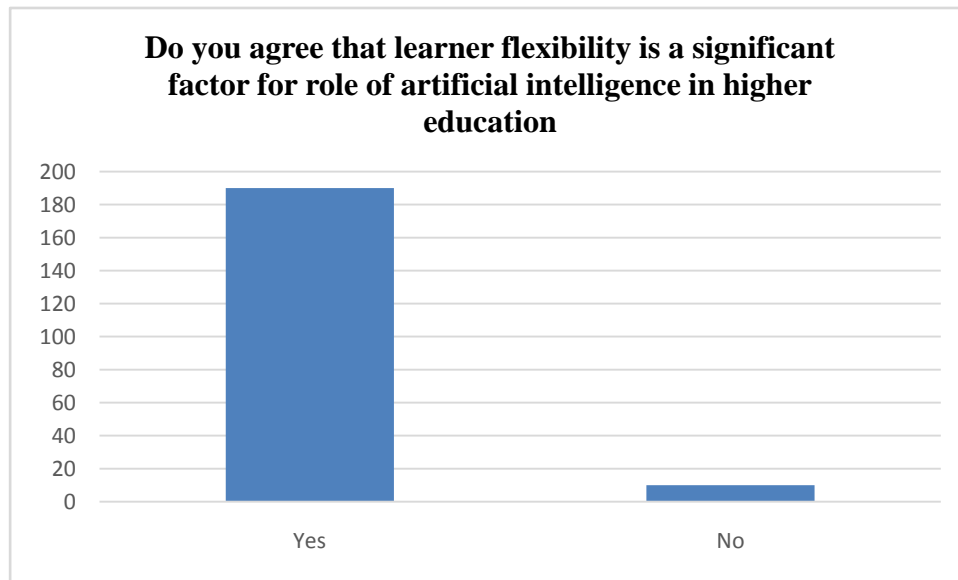
**Figure4.4 UtilizationofVirtualMachines**

The Figure 4.4 indicates that 180 respondents of the total respondents saying yes and 20 respondents saying no of this report. From the figure above indicate that 180 respondents agree that utilization of Virtual machine is a significant factor for the role of artificial intelligence in higher education and other 20 respondents not agree with that.
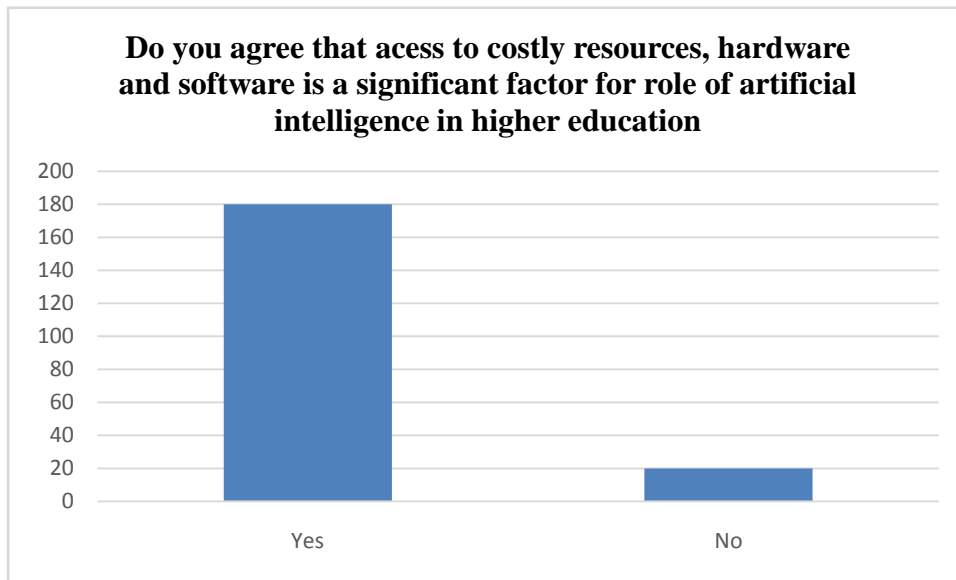


**Figure4.5VirtualLabs**

The Figure 4.5 indicates that 190 respondents of the total respondents saying yes and 10 respondents saying no of this report. From the figure above indicate that 190 respondents agree that virtual labs a crucial part of the function of artificial intelligencein higher education and other 10 respondents not agree with that.
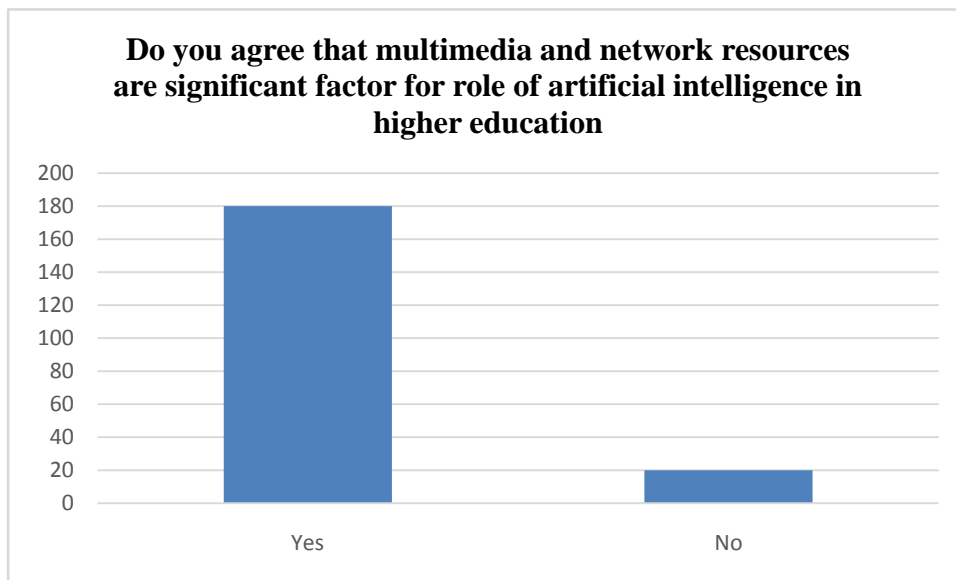


**Figure4.6Learner Flexibility**

The Figure 4.6 indicates that 190 respondents of the total respondents saying yes and 10 respondents saying no of this report. From the figure above indicate that 190 respondents agree that that learner flexibility a crucial part of the function of artificial intelligencein higher education and other 10 respondents not agree with that.

**Figure4.7CostlyResources**

The Figure 4.7 indicates that 180 respondents of the total respondents saying yes and 20 respondents saying no of this report. From the figure above indicate that 180 respondents agree that access to costly resources, hardware and software a crucial part of the function of artificial intelligence in higher education and other 20 respondents not agree with that.



**Figure4.8 MultimediaandNetworkResources**

The Figure 4.8 indicates that 180 respondents of the total respondents saying yes and 20 respondents saying no of this report. From the figure above indicate that 180 respondents agree that multimedia and network resources are significant factor for role of artificial intelligence in higher education and other 20 respondents not agree with that.

## 5. CONCLUSION

It's fascinating to see how the data shows there is no discernible variation in the perception and views of various study programmes. Different fields of study, both technical (such as Computer Science and Industrial Engineering and Management) and non-technical (such as Communication Science and the Philosophy of Science, Technology, and Society), have contributed to the study. Perhaps it would be simpler to analyse more organised replies than creative ones, which are more common in non-technical research, and thus one could have anticipated a more favourable attitude towards such a tool in technical studies.

Human judgement was shown to be more valuable than AI throughout the study's course of investigation. Overwhelmingly, respondents said that AI shouldn't replace human evaluators but rather serve as a helpful tool for them. This ensures that TA positions will remain available and that they will be compensated fairly. Each interviewee or reply had their own idea of what "assistance" included, such as resolving nagging problems so the assessor could more easily navigate the answer or having an AI double-check the work of the assessors to guarantee grading consistency. Given that a tool may be used for a variety of tasks, it is clear that TAs should continue to participate in the grading process.

## REFERENCE

1. Panigrahi, Ashok & Joshi, Vijay. (2020). USE OF ARTIFICIAL INTELLIGENCE IN EDUCATION. The Management Accountant Journal. 55. 64-67. 10.2139/ssrn.3666702.
2. Tushar, Mrs &Ladda, & Rupali, Mrs & Saraf, Atul & Mohammad, Sameer. (2019). Artificial Intelligence, its Impact on Higher Education. SSRN Electronic Journal. 6. 513-518.
3. Zawacki-Richter, Olaf & Marín, Victoria & Bond, Melissa & Gouverneur, Franziska. (2019). Systematic review of research on artificial intelligence applications in higher education -where are the educators?. International Journal of Educational Technology in Higher Education. 16. 1-27. 10.1186/s41239-019-0171-0.
4. Tuomi, Ilkka. (2018). The Impact of Artificial Intelligence on Learning, Teaching, and Education: Policies for the Future. 10.2760/12297.

5. Vampugani, Venkata & Swathi, Kailasam. (2018). Artificial Intelligence and its Implications in Education.

6. Agarwal, A. (February20, 2020). How Artificial Intelligence is transforming the education system. DTAQUEST. Retrieved on October 16, 2020 from https://www.dqindia.com/artificial-intelligence-transforming-education-system/

7. Bhaduri, N. (April 23, 2020). Artificial Intelligence (AI) in Indian Education. Sight in Plus. Retrieved on October 26, 2020 from https://sightsinplus.com/ insight/learning/artificial-intelligence-ai-in-indian-education/

8. Ilkka, T. (2018). The Impact of Artificial Intelligence of Learning, Teaching, and Education. JRC Science for Policy Report, Luxembourg: Publication Office of the European Union. Retrieved as on July 7, 2019 from http://publications.jrc.ec.europa.eu/repository/bitstream/JRC113226/jrc113226_ jrcb4_the_impact_of_artificial_intelligence_on_learning_final_2.pdf

9. Makkar, A. (2019). How Can AI be Effectively Used in the Indian Education System? Entrepreneur India. Retrieved on October 26, 2020 from https://www.entrepreneur.com/article/337165

10. Russell, S.J, & Norvig, P. (2010). Artificial intelligence: a modern approach, (3rd ed.). Upper Saddle River: Prentice-Hall. In Popenici, S.S.D, & Kerr, S. (2017). Exploring the impact of artificial intelligence on teaching and learning in higher education. Research and Practice in Technology Enhanced Learning, 12(12), 1- 13.