

Artificial Intelligence in Higher Education

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Abstract—Artificial intelligence (AI) is gaining significance in all the sectors of the economy and hence in higher education too. From last few years, this concept of “Artificial Intelligence in Education (AIED)” has experienced significant developments. This study attempted to find out how the concept of artificial intelligence can be applied in teaching and learning in higher education and impacts of using AI in higher education. It examines the learning implications of frequently evolving technologies on the methods and extent of learning as well as teaching. AI gives opportunities to higher education services to become easily accessible at an extraordinary speed, not only inside the class but also outside the classroom. This report attempts to figure out the how AI can become an integral part of universities and tried to access it’s immediate and future implications on different areas of higher education. The challenges in implementing AI in these institutes were also explored. This study will successfully deliver the profound information for educators and in depth knowledge for educational model building that will provide opportunities for growth in future.

For the purpose of the study higher education institutes of Udaipur, Rajasthan will be taken. Structured questionnaires were framed and data collection is done with the help of them taking teachers perception as the focal point. To achieve the objectives of the study statistical tools that were applied for analysing the collected data are frequency tables/graphs and one way ANNOVA. Results of the study shows that implementing AI in higher education institutes is enhancing learning capacities of students up-to a large extent and AI holds massive future prospects in higher education sector.

Index Terms—Higher education, Technology, artificial intelligence, automation, Machine learning, teaching, student attributes

I. INTRODUCTION

The future of higher education is intrinsically linked with developments on new technologies and

computing capacities of the new intelligent machines. In this field, advances in artificial intelligence open to new possibilities and challenges for teaching and learning in higher education, with the potential to fundamentally change governance and the internal architecture of institutions of higher education. With answers to the question of ‘what is artificial intelligence’ shaped by philosophical positions taken since Aristotle, there is little agreement on an ultimate definition The future of higher education is intrinsically linked with developments on new technologies and computing capacities of the new intelligent machines. In this field, advances in artificial intelligence open to new possibilities and challenges for teaching and learning in higher education, with the potential to fundamentally

change governance and the internal architecture of institutions of higher education. With answers to the question of ‘what is artificial intelligence’ shaped by philosophical positions taken since Aristotle, there is little agreement on an ultimate definition Education undoubtedly plays a large and significant role for people residing in developing countries. Higher education institutes are playing an important role in a nation’s development. Economic and social development of individual depends upon two important factors viz. Knowledge and learning. People who are highly educated are more likely to get high skilled jobs and compensation, hence have more probability to enhance their living standards. Thus people of developing country have more deep implications of higher education as education equips a person to live the life chosen by them to lead a creative and more productive live. Good Education and skilled students also leads to higher growth and improvement for the country as a whole particularly in developing countries. Thus in developing nation like India role of higher education becomes more prominent and hence the learning process should be

optimized.

It's a well-known fact that higher education is heavily dependent on human and manual work. This not only increases the operational cost for the higher education institutes but also accounts for increase in the errors and slow processing in the field. Higher education institutes due to its labour intensive framework will have to spend a big budget on hiring and retaining educators and also in the processing of data in their institutes. Apart from financial losses in the form of salaries of highly qualified personnel's these institutes are also bearing increased amount of effort that institutions put into the admission, learning and success of all their students. Lot of information and efforts are being wasted in higher education institutes on repetitive tasks that can be minimized. Hence being a labour sensitive field it is facing both financial and physical loss. Thus adoption of artificial intelligence will bring a cheaper and more responsive approach to higher education industry. WHAT IS ARTIFICIAL INTELLIGENCE?

Artificial intelligence (AI) is the impersonation of human knowledge procedures, for example, discourse and visual acknowledgment, interpretation of the dialects and virtual decision making by machines and robots. The capacity of machine to think and act like people, has given AI an extraordinary place in all fields. Artificial intelligence is available wherever in different parts of our lives beginning from smart sensors to individual associates.

Recent developments in AI have gotten numerous enormous changes in the higher education field. "Artificial intelligence helps students and teachers to make their educational experience wonderful".

Artificial intelligence (AI) is characterized as the capacity and improvement of a data innovation based PC frameworks or different machines to finish the jobs that typically require human knowledge and rational thinking. Despite the fact that AI can make the world a superior spot, AI accompanies its very own issues (Siau, 2018). Take the case of driverless vehicles. Driverless vehicles open another time of innovation progression in transportation. It carries colossal advantage to both the vehicle business and the clients from both financial and reasonable

viewpoints. The use of driverless vehicles liberates the drivers from the ordinary assignment of driving and decreases mishap rates (e.g., weariness driving). By and by, driverless vehicles will supplant taxi, truck, and Uber drivers!

Artificial intelligence is presently advancing at a quickened pace, and this as of now impacts on the significant idea of administrations inside advanced education. For example, "universities already use an incipient form of artificial intelligence, IBM's supercomputer Watson. This solution provides student advice for Deakin University in Australia at any time of day throughout 365 days of the year (Deakin University 2014)". Regardless of whether it depends on calculations appropriate to satisfy dull and moderately unsurprising assignments, Watson's utilization is a case of future effect of AI on the managerial workforce profile in advanced education. This is changing the structure for the nature of administrations, the dynamic of time inside the college, and the structure of its workforce.

II. ROLE OF ARTIFICIAL INTELLIGENCE IN EDUCATION

Many research works demonstrate that in higher education, artificial intelligence is important for teachers and students because application of such technologies encourages more flexible learning solutions for students without any limitation. With the help of artificial intelligence universities around the world are enrolling increased number of students due to increased flexibility and speed. However, its implementation in teaching has also proven relatively expensive but when compared with the other manual work related costs it comes out as economical. Though, use of artificial intelligence in the long run among college students is far more cost effective compared to education being conducted in a more traditional way and tasks done manually. Developed countries of the world have already implemented the process of artificial intelligence successfully. However developing countries are still at a preliminary stage compared to developed countries in artificial intelligence implementation. Weak infrastructure, poor information access, lack of support from institutes, insufficient necessary resources, poor technological skills, these are various

obstacles for developing countries wanting to implement artificial intelligence as a tool in higher education.

AI is used in education system in grading, in this process teachers can mechanize grading of students for certain fixed set of questions. AI can also be applied in adaptive and individualized learning to fulfill students requirements. AI assists the teachers to access the understanding capacity of the students on their lectures and empower them to give the appropriate clues for AI Effects on Higher Education With the job substitutions and relocations created by AI, future job market and required ranges of skills would be fundamentally unique in relation to now (Siau, 2017, 2018; Rainie and Anderson,). Various examinations revealed that jobs that include routine tasks and organized are simpler to computerize and will be supplanted by AI soon. Despite what might be expected, work assignments that are progressively unstructured and included overseeing individuals are harder to be supplanted by AI. Advanced education should be versatile and develop ceaselessly.

Advanced education will be affected by AI from numerous points of view and the two noteworthy territories are educational programs and admissions. To begin with, AI will sweepingly affect educational plan in advanced education. The quality of AI is its speed, precision, and consistency. It is an act of futility to contend with AI on these measurements. students. It works as a teacher for the students and makes them learn concepts easily.

The other effect of AI in advanced education is admissions. Aesthetic sciences and humanities majors may turn out to be increasingly well known as these zones are less susceptible to "AI-invasion." Areas, for example, bookkeeping and budgetary

investigation that might be hit hard by AI may see an intense drop in admissions. Likewise, with the wealth gap and conceivably millions (if not billions) out of occupations, advanced education may never again be reasonably priced to many.

III. OBJECTIVE OF THE STUDY

- To study the impact of animation (artificial intelligence) on learning of students.
- To find out the relationship between demographic variables of respondents and AI impact on learning.

IV. RESEARCH METHODOLOGY

For the purpose of the study higher education institutes of Udaipur, Rajasthan will be taken. Structured questionnaires were framed and data collection is done with the help of them taking teachers perception as the focal point. To achieve the objectives of the study statistical tools that were applied for analysing the collected data are frequency tables/graphs and one way ANNOVA. Data collection is done through both primary and secondary data collection method.

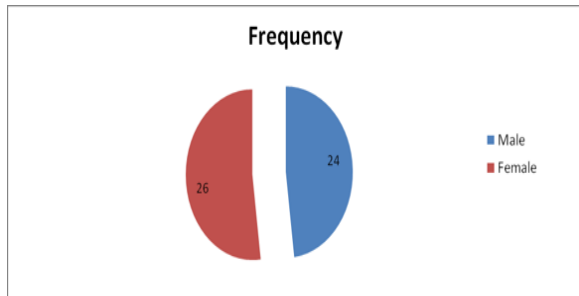
For finding out the significance of impact of animation of different genders groups on learning of students the following hypotheses have been established and tested;

H01:- There is no significant difference between the male & female teachers perspective about the impact of AI on the learning of students.

H11:- There is a significant difference between the male & female teachers perspective about the impact of AI on the learning of students.

Table 1: Frequency Table of Gender of teachers

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	24	48	48	48
	Female	26	52	52	100
	Total	50	100	100	



According to Table 1 and Graph 1 when respondents were classified on the basis of teachers gender it was found that out of total 50 respondents 24 (48%) were male and remaining 26(52%) were females. This shows that colleges under consideration possess almost equal male and female ratio and also graph indicates that the females' number is higher than male teacher respondents in colleges as education is the only sector where majority of females prefer to work due to its working hour flexibility.

V. CONCLUSION

In conclusion, this research reveals the Students Perception on “study the perspectives of the teachers about learning through AI with special reference to the selected universities of Rajasthan” which helped in further inspecting the role of various modern artificial intelligence methods adopted by universities in successfully enhancing the learning capability. The study also reveals that though the future prospects of artificial intelligence in higher education institutes are very high and it holds lot of possibilities in this field, But the present state of AI in higher education institutes is demanding rigorous investment in terms of funding and time. Thus Institutions that are planning to adopt AI are required to consider a wide variety of factors just to make sure that adoption of AI will become a turning point in their learning methodology to be sure that it will benefit students, teachers as well as the institutes.

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