

A STUDY ANALYSING THE AWARENESS AND RECOGNITION OF ARTIFICIAL INTELLIGENCE IN INSTITUTES OF HIGHER LEARNING WITH RESPECT TO CHENNAI CITY.

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ABSTRACT

Artificial intelligence which is a substitute for human intelligence is expected to be applied in almost all the sectors, such as education, marketing, e-commerce, banking and so on in the near future. The implementation of artificial intelligence is expected to increase the efficiency of the work performed, reducing the manual labour. The application of artificial intelligence in education would ensure teachers' focus in building higher and competing knowledge of the students. Thus, performance analysis of the students, self-monitoring assessments and analysis of dropouts shall be taken over by artificial intelligence. In the institutes of higher learning, professors are expected to manage various responsibilities such as evaluation of the students' performance, assigning the grades, preparing question papers, preparing mark sheets, etc. All these multiple tasks lead to lesser focus and concentration in building the core competency of the students. With the introduction of artificial intelligence, most of the assessment task could be shifted from teachers to machines. This would help the teachers to focus and contribute more towards the learning abilities and building the knowledge of the students. From the student's perspective artificial intelligence would ensure absolute fairness and transparency without any bias. Thus, the current study focuses on the awareness and recognition of artificial intelligence and the acceptability of the same by both teachers and students in the educational institutions. The study also aims to analyse the comfort level of applicability of artificial intelligence, for the students, as a substitute for multiple tasks of assessment in the institutes of higher learning.

KEYWORDS: Artificial Intelligence, Institutions of Higher Learning.

INTRODUCTION

The advancement of digitization has led to the introduction of Artificial intelligence. It is the ability of machines and computer systems to perform or imitate human intellect. Artificial intelligence is taking a quick lead in almost all the sectors. With artificial intelligence being introduced, humans would be replaced by machines and computers, thus resulting in improved effectiveness and efficiency of the work performed.

Artificial intelligence is a process of imitation of the human intelligence through system analysis which in turn helps to take actions, in order to maximize the success. Artificial intelligence is used in many fields, which includes Education, Banking, E-commerce, Marketing, Research, Computer Science, Psychology,

Medicine and even in agriculture.

Currently, Artificial intelligence is used in many educational institutions, business sectors, multinational companies and in the corporate world. Artificial intelligence in the banking sector quickens the process of banking transaction and supports the digital transactions, ensuring effective auditing policy compliance and maintaining databases of customer queries.

In the retail sector of business, artificial intelligence is likely to transform the areas such as customer service, purchase and operations decision. The healthcare sector also would have a major transformation after the implementation of artificial intelligence, with regard to follow up of the patients.

The education sector is expected to undergo a bigger transformation. The important aspects of transformation in the education sector would be personalized learning, performance analysis and upgrading students learning profile. The top most countries which have adapted artificial intelligence in various sectors are South Korea, Germany, Singapore, Japan, Canada, UK and Australia.

Artificial Intelligence, in higher learning would help the teachers to focus more on the success of the students on the basis of their academic performance. The advantage of application of artificial intelligence in higher learning is that data is already gathered by the institutions and with the applicability of artificial intelligence, the data shall be updated on a time to time basis, thus reducing the task of the teacher. The performance analysis and student behavior analysis could be done with the help of machines by shifting the multiple task which are vested upon the teachers. Further, the application of artificial intelligence would reduce manipulation and ensure absolute transparency in the performance evaluation of the students. Institutions will be able to spend more time in providing personalized education to the students, rather than spending time on gathering data.

Apart from performance evaluation, application of artificial intelligence would help students with their respective course materials and assignment materials, by providing online access for the same. Thus, this would reduce physical handling of these materials, in order to save time and to prevent damage and loss. The institutions will also be able to identify and admit the prospective candidates and easily filter such candidates on the basis of several criteria, in a very less time. This would help to finalize and choose the prospective candidates quickly.

Application of artificial intelligence in institutes of higher learning would improve the reputation of the institutions and offer high quality learning experience for the students. The foremost advantage of application of artificial intelligence is its time saving nature. It would help teachers focus on the development of the knowledge and learning abilities of the students.

The role of teachers would play a major role in contributing towards the student's success academically with the application of artificial intelligence, as it would perform all the evaluation work.

REVIEW OF LITERATURE

The study relating to the impact of artificial intelligence on teaching and learning in higher education by Stefan A. D. Popenic and Sharon Kerr explores the phenomena of the emergence of the use of artificial intelligence in Higher Education. It investigates educational implications of emerging technologies about the way in which students learn and the methods in which institutions teach and evolve. Recent technological advancements and the increasing speed of adopting new technologies in higher education are explored in order to predict the future nature of Higher Education in a world where artificial intelligence is part of the fabric of the universities. Some challenges are pinpointed for institutions of Higher Education and student learning in the adoption of these technologies for teaching, learning, student support, and administration and explore further directions for research.

A study analysing the impact of artificial intelligence in Higher Education by Yizhi Ma states that artificial intelligence (AI) will change the world and higher education. AI will change the way of work, the way of learning, and the way of living. This study explains and analyses the impact of artificial intelligence on higher education. Specifically, this qualitative research identifies the changes in Higher education caused by AI. This study aims to analyse the contribution of higher education towards AI development. Further, this research examines the use of AI in higher education delivery and support. As a pioneering research in this field, the study provides insightful information for educators and detailed knowledge for academic theory building.

OBJECTIVES OF THE STUDY

1. To study the awareness of application of artificial intelligence in the institutions of higher learning.
2. To identify the areas where artificial intelligence could be substituted in higher learning.
3. To assess the effectiveness of application of artificial intelligence in the teaching and learning methods.

RESEARCH METHODOLOGY

The study was conducted by way of collecting primary data through questionnaires distributed among the students of the higher learning institutions. The research is restricted to Chennai city. The sample size tested for the research is 50. Secondary data was also collected through information published online. Data analysis was done through IBM SPSS STATISTICS by way of Descriptive Statistics, Friedman Rank Test and Chi-square test.

AWARENESS AND RECOGNITION OF ARTIFICIAL INTELLIGENCE AMONG RESPONDENTS

The percentage analysis on 5 indicators relating to awareness are given below in table 1.

TABLE 1- AWARENESS AND RECOGNITION LEVEL OF RESPONDENTS

S.NO	PARTICULARS	CATEGORY	FREQUENCY	PERCENT	VALID PERCENT	CUMULATIVE PERCENT
1.	AWARENESS	Yes	38	76.0	76.0	76.0
		No	12	24.0	24.0	100.0
		TOTAL	50	100.0	100.0	
2.	FAMILIARITY	FAMILIAR	33	66.0	66.0	66.0
		NOT FAMILIAR	17	34.0	34.0	100.0
		TOTAL	50	100.0	100.0	
3.	POSITIVE OUTCOME	YES	45	88.0	88.0	88.0
		NO	5	12.0	12.0	100.0
		TOTAL	50	100.0	100.0	
4.	DESTROYS NATURAL THINKING	YES	21	42.0	42.0	42.0
		NEUTRAL	7	14.0	14.0	14.0
		NO	22	44.0	44.0	100.0
		TOTAL	50	100.0	100.0	
5.	THREAT TO HUMAN INTELLECT	YES	4	8.0	8.0	8.0
		NO	22	44.0	44.0	44.0
		POSSIBILITIES	24	48.0	48.0	100.0
		TOTAL	50	100.0	100.0	

INTERPRETATION

The above table reveals that the awareness level of the respondents is high. Out of the 50 respondents 76% are only aware of the concept of artificial intelligence. The table also shows that 66% of the respondents are familiar about artificial intelligence in the institutions of higher learning. Majority of the respondents agree that implementation of artificial intelligence is a positive outcome and would not destroy natural thinking. Majority of the respondents also agree that artificial intelligence is not a threat to the human intellect.

AREAS WHERE ARTIFICIAL INTELLIGENCE CAN BE SUBSTITUTED

Friedman Rank Test showing the indicators of areas of substitutes of artificial intelligence are given below in table 2

TABLE 2-FRIEDMAN RANK TEST-DIFFERENT AREAS OF SUBSTITUTE OF AI

AREAS OF SUBSTITUTE OF AI	MEAN RANK	RANK
ASSESSMENT	3.77	6
MENTORING	3.38	2
UPDATING LEARNER'S PROFILE	3.16	1
PERSONALIZED LEARNING	3.67	5
LEARNING MANAGEMENT SYSTEM	3.48	3
PROFESSIONAL LEARNING	3.54	4

INTERPRETATION

Friedman Rank Test reveals that Assessment of the students has the highest rank and identifies it as the top priority segment for introduction of Artificial Intelligence followed by personalized learning methods, professional learning methods. Learning management system, mentoring and updating learner's profile.

OVERALL PERFORMANCE OF ARTIFICIAL INTELLIGENCE OVER THE TEACHING AND LEARNING METHODS

HYPOTHESES

H₀: There is no significant association between overall performance and use of AI for teaching and learning methods.

H₁: There is a significant association between overall performance and use of AI for teaching and learning methods.

Chi square test showing the overall performance of AI in teaching and learning methods are given below in table 3.

TABLE 3- CHI SQUARE TEST SHOWING OVERAL PERFORMANCE OF AI

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	21.229 ^a	9	.012

INTERPRETATION

The above table discloses the results the association between the overall performance, and use of artificial intelligence in the teaching and learning methods. The chi square test proves that there is no association between the overall performance and use of artificial intelligence in the teaching and learning methods. The calculated value 0.012 is less than the table value 3.325 at 5% significance level. Thus, the null hypothesis is accepted. It is evident that the implementation of artificial intelligence would not have much impact on the overall performance of the teaching and learning methods as artificial intelligence is still to be accepted and implemented in many of the higher education institutions.

FINDINGS OF THE STUDY

- There is higher level of awareness and familiarity of the concept of artificial intelligence among the respondents.
- Friedman rank test reveals that the assessment of students is identified as the major area where AI can be substituted followed by mentoring, updating learner's profile, learning management system, personalized learning and professional learning.
- The chisquare value reveals that artificial intelligence would not have any significant impact on the teaching and learning method which is majorly attributed to the fact that artificial intelligence is only a new concept to be used in educational institutions where increased level of awareness is required.

CONCLUSION

Artificial intelligence is expected to bring a major transformation in all the sectors including the education sector. However, there is not much of awareness about the scope and impact of artificial intelligence. It is yet

to be implemented in full in India, thus the awareness level of artificial intelligence is little less than expected, resulting in uncertainty about the implications of artificial intelligence in higher learning. Artificial intelligence would definitely, emerge to be one of the most effective and efficient tools in the institutions of higher learning. It would act as a major substitute in the areas of evaluation and would be the most efficient tool among both teachers and students for higher learning, compared to the current methods. There would be fair and transparent disclosures without any bias or manipulation which in turn would result in error free evaluation of the students.

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