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Awareness on Artificial Intelligence Tools and Applications among Post Graduate Students in Madurai District

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ABSTRACT

This study aims to determine the degree of awareness among post graduate students in Madurai District regarding the use of Artificial Intelligence (AI) tools in educational activities based on four demographic variables: gender, age, stream, and year of study. In this study descriptive survey method was adopted and a simple random sampling technique was used to select the sample. 70 post graduate students were selected as a sample of the study. The awareness of artificial intelligence tool was used to collect the data from the respondents. Descriptive analysis and 't' were used to analyse the data. The findings indicate that there is no statistically significant variation in the degree of AI awareness in educational activities based on factors such as gender, age, study year and stream. The current study only looks at PG students in the Madurai District to determine how aware they are of the newest developments in artificial intelligence in the classroom. Just four demographic factors have been collected. Future research can be expanded by adding more variables.

Keywords: *Artificial Intelligence, Awareness, PG Students, Education System.*

INTRODUCTION

Artificial intelligence is a cutting-edge technology that gives computers and machines the ability to learn and think like humans. It encompasses a broad range of abilities, including learning, figuring out problems, coming to conclusions, and even understanding natural language in digital contexts. Artificial intelligence (AI) is revolutionizing several industries through task automation, prediction, and varied insights. In the process, it is enhancing our daily lives and shaping the course of technology. Artificial intelligence (AI) introduced through educational4 activities can be a powerful tool for educators and learners alike (Tegmark, 2018). It can speed up the grading procedure, improve how easily accessible learning resources are, automate processes, and let students have a personalized educational experience.

Educators can benefit from improved analysis of assessment data and tailored learning by leveraging the latest technological advancements, such as natural language processing and machine learning algorithms. Classroom engagement has increased thanks to the delivery of more individualized instructional content made feasible by AI solutions (Hinojo et al., 2019). With the help of interactive tools like virtual reality simulations and catboats, students may study difficult subjects without ever leaving their seats.

Applications of artificial intelligence (AI) in education are becoming more common and have drawn a lot of attention in recent years. With a two- to three-year adoption period, artificial intelligence (AI) and adaptive learning technologies are highlighted as significant advancements in educational technology in the 2018 Horizon study (Educause, 2018). The research states that experts forecast a 43% growth in AI in education between 2018 and 2022. However, the Horizon research 2019 Higher Education Edition (Educause, 2019) projects an even greater growth in AI applications connected to teaching and learning. "There is little doubt that the [AI] technology is inexorably linked to the future of higher education," according to Contact North, a significant non-profit online learning society in Canada (Contact North, 2018).

The growth of AI applications in higher education brings with it new ethical considerations and risks, notwithstanding the immense benefits that AI might give to help teaching and learning. For instance, administrators may find it enticing to switch from teaching to automated AI solutions that are profitable during budget constraints. Academic staff, teaching assistants, student counselors, and administrative personnel can worry about their professions being taken over by chatbots, expert systems, and intelligent tutors. Although artificial intelligence (AI) has the potential to improve learning analytics, these systems require massive amounts of data, including private student and faculty information, which presents significant privacy and data protection concerns. In their seminal work on artificial intelligence, Russell and Norvig (2010) remind us that "all AI researchers should be concerned with the ethical implications of their work." We therefore want to investigate what new ethical issues and dangers the authors raise in the context of AI-enhanced education. This article's goal is to give educators a summary of the research on artificial intelligence applications in higher education. A survey of the literature on artificial intelligence in higher education is necessary given the field's recent rapid progress and the increasing interest of educators in it.

NEED AND SIGNIFICANCE OF THE STUDY

Artificial intelligence (AI) originated in computer science and engineering, but other academic disciplines including philosophy, cognitive science, neurology, and economics have also had a big impact. Because AI is a heterogeneous field, there is no agreement among academics over a single definition and understanding of AI—or intelligence in general. When it comes to the introduction of AI-based products and services in higher education, the statement "AI technology is already being introduced in the field of higher education, although many teachers are unaware of its scope and, above all, of what it consists of" is made. Explaining vocabulary and assessing students' knowledge are critical to our examination of AI in higher education.

Objectives of the Study

➢ To study the relationship between different demographic variables in awareness level of PG Students about Artificial Intelligence in Education.

➢ To compare Awareness about Artificial Intelligence (AI) in use Educational activities on the basis of Gender.

➢ To Compare Awareness about Artificial Intelligence (AI) in use Educational activities on the basis of Age

➢ To compare Awareness about Artificial Intelligence (AI) in use Educational activities on the basis of Stream of Study.

➢ To compare Awareness about Artificial Intelligence (AI) in use Education activities on the basis of Year of Study.

Hypotheses of the Study

➢ Tofindtherelationshipbetweendifferentdemographicvariablesinawareness level of PG students' about AI in education.

➢ ThereisnosignificantdifferencebetweenMaleandFemaletowardsawareness level of Artificial Intelligence (AI) in Education.

➢ There is no significant difference between Age (Less than/more than 23) towards awareness level of Artificial Intelligence (AI) in Education.

➢ There is no significant difference between Stream of Study (Science / Arts) towards awareness level of Artificial Intelligence (AI) in Education.

➢ There is no Significant difference between of year of Study (First year/Second year) towards awareness level of Artificial Intelligence (AI) in Education

METHODOLOGY OF THE STUDY

Method

Descriptive survey method was used to conduct the study.

Sample

For the present study simple random sampling technique was used to select the samples. Totally 70 post graduate students selected as a sample for the present study and they were selected from various college from Madurai district.

Instrument Used in the Present Study

The following research instrument was used in the present study for collecting the data: The investigator developed a draft of awareness on artificial intelligence scale. The draft awareness on artificial intelligence scale is consisted of 27 items.

A panel of experts scrutinized the items of the draft. Based upon the comments of the experts the researcher modified the items to establish the content validity of the research tool.

A pilot study is conducted with a sample size of 50 post graduate students. The sample for the pilot study is selected from American college and Madura college, Maurai district, Tamilnadu.

Item analysis was computed to establish the construct validity of the research tool and 15 items are selected for final tool. The split-half method was used to find the reliability of the awareness on artificial intelligence scale. The reliability value of the scale was 0.889.

The final awareness on artificial intelligence scale is prepared after establishing the content and construct validities with split-half coefficient reliability. The final tool comprised of 15 items.

Statistical techniques Used

The study employed descriptive and inferential statistics to analyze the data. Descriptive statistics includes mean, standard deviation and inferential statistics included the independent sample 't' test are used to analyze the data.

Data Analysis and Interpretation

Table-1

Mean and Standard deviation scores of PG students on the Level Awareness in Artificial Intelligence in use of Educational Activities.

Variables	Sub Variables	N	Mean	Percentage (%)
Gender	Male	30	19.03	**42.85**
	Female	40	18.97	**57.15**
Age	Lessthan23	59	18.91	**84.28**
	Morethan23	11	19.45	**15.72**
Stream of Study	Science	49	19.04	**70.0**
	Arts	21	18.90	**30.0**
Year of Study	First	17	18.58	**24.28**
	Second	**53**	**19.13**	**75.72**

Hypothesis

There is no significant difference between the mean Level of awareness in the uses of Artificial Intelligence scores of PG students in Madurai District, sub grouped on the base of their Gender.

Table-2

Significant difference between the mean scores on AI Awareness in Education among PG Students with respect to their Gender

Gender	N	Mean	SD	't' Value
Male	30	19.03	1.82	*0.12**
Female	**40**	**18.97**	**2.23**	

*Notsignificantat0.05level

From table (2) it is evident that the 't' value is 0.12 which is not significant at 0.05 level it indicates that the mean score of level awareness in the use of artificial intelligence in educational activities score of male and female of PG students in Madurai District do not differ significantly. Hence the null hypotheses there is no significant difference between the mean AI awareness score of PG students in Madurai District sub grouped on the base of their gender is accepted.

Further it can be see that, the Mean AI Awareness Score of the male PG Students in Madurai District is 19.03 which is slightly higher than that of female PG Students in Madurai District whose mean AI awareness score is 18.97.It is therefore concluded thatmale PG students in Madurai District are slightly better than female PG students in Madurai District in their use of AI tools in the educational activities of awareness.

Hypothesis

There is no significant difference between the mean Level of awareness in the uses of Artificial Intelligence Tools scores of PG students in Madurai District, sub grouped on the base of their Age.

Table-3

SignificantdifferencebetweenthemeanscoresonAwarenessinAIinEducation among PG Students with respect to their Age

Variables	Age	N	Mean	SD	't' Value
Level of Awareness	Lessthan23	59	18.91	1.96	*0.66**
	Morethan23	**11**	**19.45**	**2.54**	

*Notsignificantat0.05level

From table 3, it is evident that the 't' value is 0.66 which is not significant at 0.05 level it indicates that the mean score of awareness in the use of artificial intelligence in educational activities score of age of PG students in Madurai District do not differ significantly. Hence the null hypotheses there is no significant difference between the mean AI awareness score of PG students in Madurai District sub grouped on the base of their age is accepted.

Further it can be see that, the Mean AI Awareness Score of the more than 23 age group of PG Students in Madurai District is 19.45 which is slightly higher than that of less than 23 Age group PG Students in Madurai District whose mean AI awareness score is 18.97.It is therefore concluded that more than23 age group of PG students in Madurai District are slightly better than less than 23 age group of PG students in Madurai District in their use of AI tools in the educational activities of awareness.

Hypothesis

There is no significant difference between the mean Level of awareness in the uses of Artificial Intelligence Tools scores of PG students in Madurai District, sub grouped on the base of their Stream of Study.

Table-4

SignificantdifferencebetweenthemeanscoresonAwarenessinAIinEducation among PG Students with respect to their Stream of Study

Variables	Stream of Study	N	Mean	SD	't' Value	Sig
Awareness score	Science	*49*	*19.04*	*1.69*	*0.20*	*0.03**
	Arts	**21**	**18.90**	**2.77**		

*Notsignificantat0.05level

From table (4) it is evident that the 't' valueis0.20whichisnotsignificantat0.05 level it indicates that the mean score of awareness in the use of artificial intelligence in educational activities score of Stream of Study of PG students in Madurai District do not differ significantly. Hence the null hypotheses there is no significant difference between the mean AI awareness score of PG students in Madurai District sub grouped on the base of their Stream of Study is accepted.

Further it can be see that, the Mean AI Awareness Score of the Science PG Students in Madurai District is 19.04 which is slightly higher than that of Arts PG Students in Madurai District whose mean AI awareness score is 18.90.It is therefore concluded that Science PG students in Madurai District are slightly better than Arts PG students in Madurai District in their use of AI tools in the educational activities of awareness.

Hypothesis

There is no significant difference between the mean Level of awareness in the uses of Artificial Intelligence Tools scores of PG students in Madurai District, sub grouped on the base of their year of study.

Table-5

Significant difference between the mean scores on Awareness in AI in Education among PG Students with respect to their year of Study

Variables	Year of Study	N	Mean	SD	't' Value	Sig
Awareness Score	First	*17*	*18.58*	*2.47*	*0.83*	*0.41**
	Second	**53**	**19.13**	**1.91**		

*Not significant at 0.05 level

From table (5) it is evident that the 't' value is 0.83 which is not significant at 0.05 level it indicates that the mean score of awareness in the use of artificial intelligence in educational activities score of Year of Study of PG students in Madurai District do not differ significantly. Hence the null hypotheses there is no significant difference between the mean AI awareness score of PG students in Madurai District sub grouped on the base of their Year of Study is accepted.

Further it can be see that, the Mean AI Awareness Score of second year PG Students in Madurai District is 19.03 which is slightly higher than that of first year PG Students in Madurai District. whose mean AI awareness score is18.58.Itisthereforeconcluded that second year of PG students in Madurai District are slightly better than the first year of PG students in Madurai District in their use of AI tools in the educational activities of awareness.

MAJORFINDINGS:

> ➤ It concludes that male PG students in Madurai District are slightly better than female PG students in Madurai District in their use of AI tools in the Educational Activities of awareness.

- ➢ It concludes that more than 23 age group of PG students in Madurai District are slightly better than less than 23agegroupPG students in Madurai District in their use of AI tools in the Educational activities of awareness.

- ➢ It concludes that science PG students in Madurai District are slightly better than Arts PG students in Madurai District in their use of AI tools in the Educational activities of awareness.

- ➢ It concludes that second year PG students in Madurai Districtare slightly better than first year PG students in Madurai District in their use of AI tools in the Educational activities of awareness.

CONCLUSION

Artificial Intelligence (AI) has revolutionized many facets of human thought, learning, and work. According to the findings of my research, there is no discernible difference in the level of artificial intelligence awareness among PG students studying the arts and sciences. All of the students agree that artificial intelligence (AI) is incredibly helpful for their academic work, and they are using it for other related fields as well. A further limitation of this study is the small number of demographic variables. The research work may be expanded further into a large geographical area. Future studies might incorporate additional parameters. AI is without a doubt the most revolutionary technology of the future. Better educational outcomes for students may result from this**.**

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