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Attitude of Secondary School Teachers Towards the Use of Artificial Intelligence

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Abstract
The purpose of present investigation was to study attitude of Secondary School Teachers towards the use of Artificial intelligence. The sample consisted of 100 Secondary School teachers selected randomly from different Government and Private schools of Ambala district. For data collection, Attitude towards the use of Artificial Intelligence scale developed and standardized by investigators' was used. Analysis of data was done using t-test. The findings of the study revealed that there is no significant difference in the attitude of Secondary School teachers towards the use of artificial intelligence with respect to gender, stream and type of school. The results of the study highlighted a readiness among Secondary School teachers to integrate Artificial Intelligence into their day to day teaching practices.

Keywords: Attitude, Secondary School Teachers, Artificial Intelligence

INTRODUCTION

Information and Communication technologies (ICT's) are one of the important and indispensable parts of our education system. It paved the new path ways for improving quality of education at all levels. In modern era, the increasing technological developments and improvised technique, artificial intelligence at the forefront, prompted teachers towards collaboration of these techniques in their teaching and learning process. Teachers play an important role in mediating the use of technology and artificial intelligence in their class room situation. Their attitude towards artificial intelligence can significantly shape the classroom environment and end result on the part of the teachers and students both. Attitude is a way of thinking or feeling about someone or something that is reflected in their behavior. Attitude is a mental or neutral state of readiness organized through experience, exerting a directive and dynamic influence on behavior of the individuals (Allport, 1935). Campbell (1963) stated attitude as consistency in response to a social object. Additionally, Moreno (1979) also explained attitude as some disposition or preparedness to attend to some parts of objects rather than others. On the other side, Artificial intelligence can be termed as the capability of computational systems to perform typical tasks that are associated with human intelligence. It is a branch of research in computer science which enables the software to perceive its environment and apply reasoning and problem-solving techniques that maximize the chance of realizing aims and objectives in different fields. Artificial Intelligence is the use of computers that can stimulate human intelligence through technological innovation (Russell & Norvig, 2010). It is revolutionizing communication, lifestyle, work environments and education (Chiu et al., 2020). This change has ignited the significant interest for integration of AI for educational purpose. In

other words, it can be said that attitude towards AI is a state of mental behavior, feeling or thinking towards the use and integration of AI.

RATIONALE OF THE STUDY

In contemporary world, focus is on quality education. The developments in the field of Artificial Intelligence influenced the way to learn, interact and work with teachers and peers. It provides individualized support and time saving techniques for quick accessibility of quality content. Several researches have been conducted in the field of artificial intelligence. Luckin and Cukurova (2019) proved that the integration of AI in educational setting remains less prevalent as compared to other sectors. Seufert et al., (2021) also supported the notion about insufficient consideration of teachers' role in integrating AI into learning environments. Luckin et al., (2022) further stated that this disparity is partly due to under utilization of AI's potential in education. On the other side some studies examined the impact of artificial intelligence on education and teachers' attitude towards these AI. Chen et al., (2020) proved that AI is increasingly being adopted in the education sector improving both administrative efficiency and teaching quality. Dai (2021) proved that teachers' cognitions and attitudes toward the application of artificial intelligence in education are important indicator of their artificial intelligence literacy. The effectiveness of AI in education heavily depends on teachers' readiness and positive attitudes towards the technology (Ayanwale et al., 2022). Polak et al., (2022) revealed that teachers have a positive attitude toward artificial intelligence education and highly motivated to integrate artificial intelligence content in schools. Cai (2023) talked about improved teaching quality, digital literacy and using information wisely. Hence, from above researches it may be concluded that attitude towards AI helps in making efficient and intelligent use of resources for making teaching learning process effective and permanent.

Therefore, the investigators took up the study to find out the attitude of secondary school teachers towards artificial intelligence and suggested certain measures to be implemented in the present scenario.

OBJECTIVES

1. To find the difference in the attitude of Male and Female Secondary School teachers towards the use of AI
2. To find the difference in the attitude of Science and Humanities Secondary School teachers towards the use of AI.
3. To find the difference in the attitude of Government and Private Secondary School teachers towards the use of AI

HYPOTHESES

1. There exists no significant difference in the attitude of Male and female Secondary School teachers towards the use of AI
2. There exists no significant difference in the attitude of Science and Humanities Secondary School teachers towards the use of AI
3. There exists no significant difference in the attitude of Government and Private Secondary School teachers towards the use of AI

METHOD USED

The present study is descriptive in nature. To meet the objectives of the present study descriptive survey method of investigation was employed. Statistics namely mean, standard deviation and t-test were used by the investigator to arrive at the results.

SAMPLE

In the present study, the investigator used simple random sampling technique for selecting the sample. The sample consisted of 100 Secondary School teachers teaching in different Government and Private schools of Ambala district.

TOOLS USED

Attitude towards the use of Artificial Intelligence scale developed and standardized by the investigators was used. The scale consisted of 20 items. These 20 items were categorized in the following four areas viz., Acceptance, Awareness, Usefulness and Integrating AI with teaching learning process. Each question is scored on a Likert-type scale of 1-5 (based on these replies: "Strongly Disagree," "Disagree," "Neutral," "Agree" and "Strongly Agree"). Overall assessment is done by total score. The total raw scores range from 20-100.

ANALYSIS AND INTERPRETATION

Table: 1

Significance of Mean Difference between Male and Female Secondary School Teachers towards the use of Artificial Intelligence

Variable	N	Mean	Standard Deviation	t-ratio	Level of Significance
Male	50	70.67	14.30	0.266	N.S
Female	50	71.38	12.21		

Table 1 revealed that the t-value between the attitude of Male and Female Secondary School teachers towards the use of AI is found to be 0.266 which is not significant at 0.05 level of significance. It implies that there is no significant difference in the attitude of Male and Female Secondary School teachers towards the use of AI. Thus, the null hypothesis is accepted. The mean scores of Female Secondary School teachers (71.38) are higher than the Male Secondary School teachers (70.67). Hence, it depicts that the attitude of Female Secondary School teachers towards the use of AI is more than the Male Secondary School teachers. The results are similar with the study of **Acem, Arslantas, Bisirici & Erdogan (2024)** who revealed that teachers' attitude towards artificial intelligence were at high level in terms of gender. Female teachers have higher attitudes towards AI than the male teachers. On the contrary, **Ahammad (2023)** revealed that male pupil teachers show more positive attitudes towards AI than female pupil teachers. **Khuraijam, Khogendra & Singh (2025)** also highlighted that male student-teachers showed more positive attitude towards AI compared to female student-teachers.

Table: 2
Significance of Mean Difference between Science and Humanities Secondary School Teachers towards the use of Artificial Intelligence

Variable	N	Mean	Standard Deviation	t-ratio	Level of Significance
Science	50	72.57	12.83	1.29	N.S
Humanities	50	69.22	13.25		

Table 2 revealed that the t-value between the attitude of Science and Humanities Secondary School teachers towards the use of AI is found to be 1.29 which is not significant at 0.05 level of significance. It implies there is no significant difference in the attitude of Science and Humanities Secondary School teachers towards the use of AI. The mean scores of Science Secondary School teachers (72.57) are higher than the Humanities Secondary School teachers (69.22). Hence, it depicts that the attitude of Science Secondary School teachers towards the use of AI is more than the Humanities Secondary School teachers. The results are similar with the study of **Ahmmad (2023)** who revealed that science stream pupil-teachers exhibit more positive attitude towards AI compared to those from the arts stream. Similarly, **Khuraijam, Khogendra & Singh (2025)** revealed that science stream student-teachers demonstrated significantly more positive attitude towards artificial intelligence compared to arts stream student-teachers. The findings of **Opesemowo (2025)** indicated that academic discipline significantly influenced attitudes, with male teachers and those in the Sciences showing more favourable attitudes toward ChatGPT.

Table: 3
Significance of Mean Difference between Government and Private Secondary School Teachers towards the use of Artificial Intelligence

Variable	N	Mean	Standard Deviation	t-ratio	Level of Significance
Government	50	69.06	13.65	1.49	N.S
Private	50	73.0	12.63		

Table 3 revealed that the t-value between the attitude of Government and Private Secondary School teachers towards the use of AI is found to be 1.49 which is not significant at 0.05 level of significance. It implies there is no significant difference in the attitude of Government and Private Secondary School teachers towards the use of AI. The mean scores of Private Secondary School teachers (73.0) are higher than the Government Secondary School teachers (69.06). Hence, it depicts that the attitude of Private Secondary School teachers towards the use of AI is more than the Government Secondary School teachers. The results are similar with the study of **Singh, Gautam and Pradhan (2024)** who revealed that teachers from private colleges showed better AI awareness and utilization than teachers from government colleges. On the Contrary the findings of **Acem, Arslantas, Bisirici & Erdogan (2024)** showed that government college pupil-teachers exhibit more favorable attitudes towards artificial intelligence than private college counterparts.

CONCLUSION AND EDUCATIONAL IMPLICATIONS

Artificial intelligence in education is helping both teachers and students in their teaching learning process and making the education system much better and more effective. AI in education is developing new solutions for teaching and learning in different situations. The potential of AI for education and learning have received increased attention in the present scenario. The results of the present study also indicated that there is no significant difference in the attitude of Secondary School Teachers with respect to gender, stream and type of school. Teachers have AI literacy as well are using AI in their teaching learning process.

Keeping in view the results of the study it is recommended that to ensure the responsible and effective integration of Artificial Intelligence (AI) in education among secondary school teachers, AI tools should be strictly applied as instructional aids rather than as replacements for teachers. Educators must promote a balanced use of AI by blending it with traditional teaching strategies and teacher-designed materials. Along with teachers both students and parents should be provided proper orientation on AI tools to prevent its misuse and excessive dependency. It is also suggested that the school administrators and the school education boards should make arrangements for the professional development programs on regular basis regarding ethical and pedagogical use of AI. These should include hands-on training on the use and the development of AI-based programs specifically designed for classroom instruction. Teachers should be encouraged to use artificial intelligence-based tools more effectively in their lessons so as to increase their attitudes toward the use of artificial intelligence in education to higher levels. To increase the knowledge and experience about AI technology, experience sharing communities can also be established among teachers.

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