



A STUDY ON AWARENESS AND USES OF AI AMONG SECONDARY SCHOOL STUDENTS

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ABSTRACT

Artificial Intelligence is the latest advancement in the field of technology. It is such a field that has not left any other field untouched with its effect, be it education or any other. Artificial intelligence uses and awareness in education is a broader field in itself but here we will narrow down and discuss the uses and awareness of artificial intelligence to secondary school level. This study is related to the awareness present among the secondary school students; how much they are exposed to artificial intelligence technology and how they use these technologies in their learning process. This study is focused on the amount of awareness held by secondary school students. This study will help teachers to understand the level of awareness of artificial intelligence and its uses among secondary school students and help them make inculcate the same in the teaching learning process. The study has been carried out in the boys and girls of both CBSE and ICSE students. The results have been compared between boys and girls first and then between boards. The method of the study is descriptive survey method and non-experimental in nature. Data collection was done from the secondary schools of CBSE and ICSE board with total 120 respondent using stratified random sampling. Artificial Intelligence awareness was measured by standardized tool. The data was analysed using Mean and further t-test. Result showed significant difference in the awareness of boys and girls and also significant difference was found in the awareness of CBSE and ICSE students. The finding shows that boys have more awareness than girls and ICSE students have more awareness than CBSE students.

Key words: Artificial Intelligence awareness, uses of Artificial Intelligence, secondary school students.

1. INTRODUCTION

Artificial Intelligence is the latest advancement in the field of science and technology. It is even more recent than quantum mechanics, despite being recent it has achieved another level of

significance and success. It has improved all the spheres of human's life. Artificial Intelligence has rolled in the very field of education as well, be it in the teaching learning process, training teachers, teaching learning materials, teaching learning apps, different software, research etc. Here we will discuss the importance of artificial intelligence awareness and uses among secondary school students.

Gone are the days of traditional teaching learning set up. Today artificial intelligence is no less significant in the field of education than its uses in other sectors like health, economy, corporate. We have many theories in education of very great people, but it is important to understand those theories in the light of recent advancement and adopt them in the context of relevant technologies in education system. Today the demand of the country has changed, our economy condition has changed so does education needs to change. Today the service sector of our economy is the most flourishing one and it is the sector that feeds on artificial intelligence, coding, various computer languages etc. Therefore, for such economy it is necessary to build a base of students who are aware about artificial intelligence and its uses. It is important that our students know how to use artificial intelligence according to the level of their study and it is also the responsibility of the school, teachers and curriculum designers that students do not solely rely upon these applications of Artificial Intelligence. For this it is necessary to educate children about the uses and misuse of artificial intelligence without their cognitive ability getting compromised. It is required that secondary school students make use of these AI apps to develop their potential full rather than depending them on these heavily slowing down their cognition.

Secondary school students are themselves in a very tender age of learning and blooming. This study will be useful to have knowledge about their attitude towards artificial intelligence uses and the amount of awareness they owe towards it. It will help in improving preparedness of teachers towards teaching learning process. It will help the teachers to introduce the relevant artificial intelligence software needed for teaching learning. It will motivate students to develop positive attitude towards learning, making learning more perceptual and breaking the monotony of traditional classroom setup. Since the field of artificial intelligence in education system is recent development, limited research is found in this topic. Therefore, this study will help the teachers to gain knowledge about the secondary students' attitude, awareness towards artificial intelligence along with its uses. This study will also benefit the teachers, curriculum developers, researchers, schools of different boards to get the required knowledge about artificial intelligence awareness and its uses among secondary school students and act accordingly.

2. REVIEW OF RELATED LITERATURE

There is number of literatures that has examined students' awareness and uses of artificial intelligence in educational frame. These studies have explored both benefits and limitations of artificial intelligence awareness and its uses among secondary school students. All these studies shows that there has been seen a greater inclination towards use of artificial intelligence by the students in their learning process. Awareness about artificial intelligence also helps them to

adapt different available technologies that can be used in learning process. Studies also shows that artificial intelligence has provided students with personalized learning and better engagement with their studies.

Rafat Fatima (2026) Artificial intelligence awareness among school students, in her study she found out that artificial intelligence awareness is extensively scattered attribute in secondary school students', not all of them have deeper knowledge about these.

Manhas et al. (2025) conducted a study on artificial intelligence readiness and its application among higher secondary school students found that despite many students having basic knowledge about artificial intelligence. There was seen significant difference in the readiness of artificial intelligence being used in school education by female students and students from urban locality showed favourable response towards artificial intelligence readiness and its application as compared to male students and students coming from rural locality. The study suggested that schools should provide students with better support to help students to use AI in their studies more effectively.

Debets et al. (2025) Chatbots in education: A systematic review of objectives, underlying technology and theory, evaluation criteria and impact. The study suggested to use different types of chatbots in education. It also suggested to develop chatbots in pedagogical framework of education in such a way that it becomes integral part of education not merely as add-ons. It was also recommended to develop enhanced chatbots according to pedagogical requirement of education

Linnet and Gnanalilly (2024) in their study Students' perception towards use of artificial intelligence tools in higher education reported that students generally hold a positive attitude towards artificial intelligence tools present in educational system, but the study also showed concern regarding awareness on ethical use of artificial intelligence. It also showed concern regarding too much dependency in artificial intelligence tools.

Tudor and Sova, (2024) Artificial intelligence tool in higher education: a structural equation modelling approach to understanding impact factors among economic students. In this study it was noted that students possess good amount of artificial intelligence awareness and knowledge about different tools of Artificial Intelligence. It was also suggested to the institutions to conduct training or orientation programs so that students are competitive enough for job market. Findings of the study revealed that many of the students possess knowledge about AI tools but there are significant number of students around 9 per cent who did not know much about artificial intelligence tools.

Naz Huma (2023) A Study of the Use of the Products of Artificial Intelligence by Secondary School Students in Relation to their School Adjustment concluded that students differed widely in the level of Artificial Intelligence use based on gender, boards of school and locality(rural/urban) also the study found out positive relationship between the use of Artificial Intelligence products and

school adjustment, the students who owe more awareness towards Artificial Intelligence showed more positive attitude towards school adjustment.

Huang and Zhang (2023) students' acceptance of Artificial Intelligence powered educational platforms provided a cross-disciplinary perspective, showing that perceived usefulness and trust strongly influence students continued use of Artificial Intelligence tools, especially when supported by adequate digital literacy.

Singh and Sharma (2022) Artificial Intelligence in higher education: Perception, potential and pedagogical impact noted that there exists a notable difference between the students and teachers in terms of accepting artificial intelligence in teaching and learning process. It was also recommended that institutional intervention is necessary in this field for better adoption.

3. RESEARCH GAP

Review of related literature suggests that studies on artificial intelligence in education is being conducted with good pace, but the field is till so vast that studies looks scattered. One can find many studies related to artificial intelligence but as we tend to refine studies become limited. Since artificial intelligence is the recent topic that is still evolving so is the research in this field is evolving. There are studies being conducted on artificial intelligence readiness, view towards artificial intelligence tools and artificial intelligence in higher education but if we directly take the topic of artificial intelligence awareness and its uses among secondary school students studies become limited. There is a need to analyze this very area for further development of use and awareness of artificial intelligence among secondary school students. There are many studies that have been conducted in various developed and developing countries but in India studies are limited. Therefore, present study will help in fulfilling this gap in Indian level on the level of awareness of artificial intelligence among secondary school students.

4. STATEMENT OF THE PROBLEM

A study on awareness and uses of Artificial Intelligence among secondary school students.

5. OBJECTIVES OF THE STUDY

1. To study the difference in artificial intelligence awareness between secondary school boys and girls.
2. To study the difference in artificial intelligence awareness between secondary school students of CBSE and ICSE boards.

6. HYPOTHESES

1. There is no significant difference in the level of Artificial Intelligence awareness between secondary school boys and girls.
2. There is no significant difference in the level of Artificial intelligence awareness between secondary school students studying in CBSE and ICSE boards.

7. DELIMITATION

1. The study was delimited to secondary school students only
2. The study was delimited to 60 CBSE and 60 ICSE secondary school students only.

3. The study was delimited to 60 boys and 60 girls of secondary school only.
4. The students were selected based on stratified random sampling technique only.

8. METHODOLOGY

There are various methods used to conduct research. In this study we have taken descriptive survey method of research.

9. SAMPLE OF THE STUDY

In this study total 120 sample of secondary school students have been taken in which 60 students are from CBSE and 60 students are from ICSE. Further, from 60 students of CBSE (30 GIRLS and 30 Boys) and from 60 ICSE student (30 boys and 30 girls) have been taken. Sampling technique employed here was stratified random sampling.

10. TOOLS

Artificial Intelligence awareness scale – Huma Naz

11. STATISTICAL TECHNIQUES

The statistical techniques that were used for this study are Mean, Standard Deviation and t-test.

12. DATA COLLECTION

The data for the study was collected in a very systematic manner. At first approval from the schools were obtained. After this the researcher explained to the students about the purpose of the study. They were assured that data collected would be kept confidential and would be used for academic purpose only. Then, the questionnaire was distributed among the students and they were asked to fill it. They were instructed about the questionnaire in an elaborated manner and were asked to clear their doubts if they had any. Adequate time was provided to students to fill the questionnaire. After the students filled the questionnaire data was collected by the researcher carefully for further investigations. This procedure was conducted in two different schools.

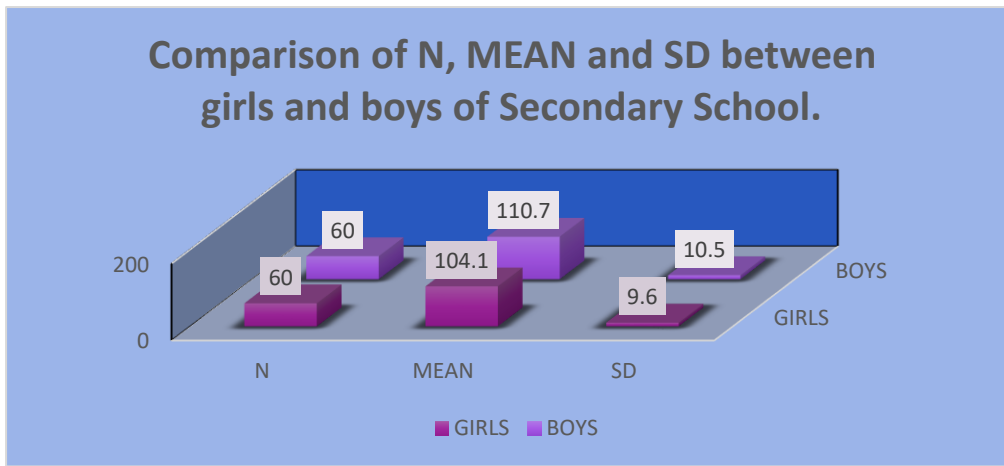
13. DATA ANALYSIS AND INTERPRETATION

HYPOTHESES 1. There is no significant difference in the level of Artificial Intelligence awareness between secondary school boys and girls.

TABLE 1. MEAN, SD and t-value of 60 boys and 60 girls of secondary school.

VARIABLE	GENDER	N	M	SD	t-value	Significance
Artificial Intelligence	GIRLS	60	104.1	9.6	3.57	Significance at 0.05 level
	BOYS	60	110.7	10.5		

$df=118$



GRAPH 1. Artificial Intelligence awareness among boys and girls of secondary school

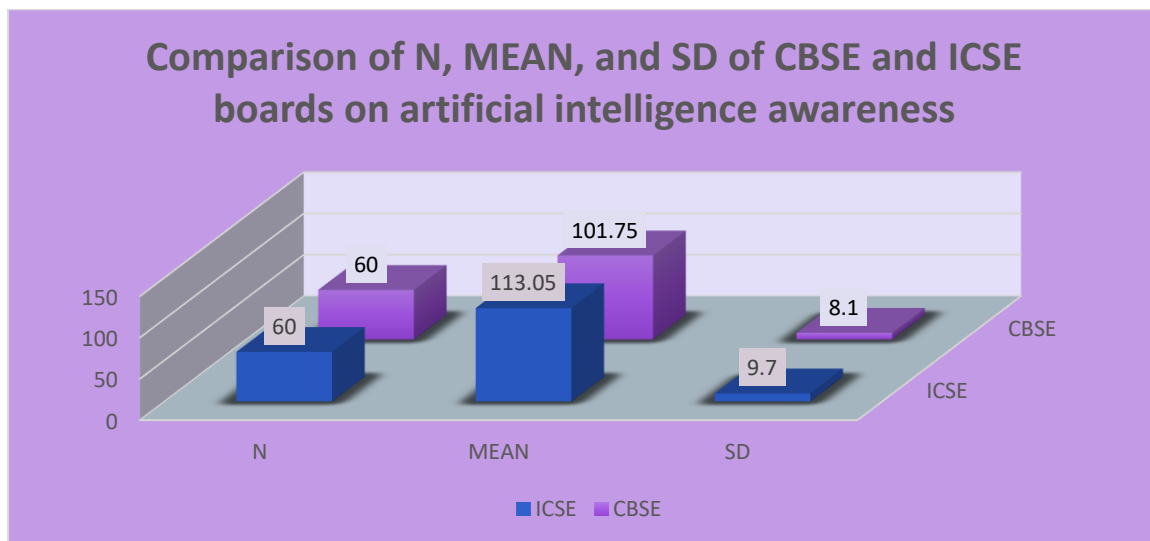
INTERPRETATION: The calculated mean for boys is 110.7 and for girls is 104.1, the mean score of boys is 6.6 points higher than that of girls indicating that boys have more artificial intelligence as compared to girls. Whereas t-value is 3.5, which is greater than the critical t-value (1.98) at the 0.05 level of significance. Therefore, null hypotheses is rejected and we can conclude that there exists significant difference between boys and girls of secondary schools in terms of artificial intelligence awareness and uses. It can be concluded that boys show more awareness regarding artificial intelligence and its uses than girls.

HYPOTHESES 2: There is no significant difference in the level of Artificial intelligence awareness between secondary school students studying in CBSE and ICSE boards.

TABLE 2: Mean, SD and t-value of 60 CBSE and 60 ICSE of students of secondary school.

VARIABLES	BOARD	N	M	SD	t-value	Significance
ARTIFICIAL INTELLIGENCE AWARENESS	ICSE	60	113.05	9.7	6.8	Significance at 0.05 level
	CBSE	60	101.75	8.1		

$df = 118$



GRAPH 2. Artificial Intelligence awareness among ICSE and CBSE board students of secondary school.

INTERPRETATION: The calculated mean for ICSE board is 113.05 and for CBSE board is 101.75, the mean score of ICSE board students is 11.30 points higher than that of CBSE board students, indicating that ICSE students have a higher level of artificial intelligence awareness than CBSE students. The obtained t-value is 6.8, which is higher than the critical t-value (1.98) at the 0.05 level of significance. Therefore, null hypotheses is rejected. It can be concluded that there is significant difference between secondary students of ICSE and CBSE in terms of Artificial Intelligence awareness and uses. ICSE students show more awareness regarding artificial intelligence than CBSE students.

14. CONCLUSION

The present study examined the artificial intelligence awareness among secondary school students with respect to gender and boards. It was found out that there is significant difference between girls and boys in relation to artificial intelligence awareness. Mean, SD and t-value were used to compare different variables used in the study. It was found out that artificial intelligence awareness in boys is comparatively higher than girls. The reason for this could be the amount of technological exposure that could be more to a greater extent than girls of the same age. It was also found out that artificial intelligence awareness is higher in ICSE board students than CBSE board students. The reason for this could be possibly on the factor of availability of technological resources which could be higher in ICSE school than CBSE school. The other reasons could be either difference in the syllabus of both the boards, or the teachers of ICSE board might be more technologically trained than CBSE boards. Classroom environment, parental encouragement and interaction between students are some other factors that can be attributed to the fact that awareness is higher in ICSE board than CBSE board and boys show more awareness in artificial intelligence than girls.

15. SUGGESTIONS FOR FURTHER STUDY

This study was limited on selected private schools and private boards'; the study can be conducted further on public schools and public boards. This study was limited to certain area further studies could be taken on different regions. This study was conducted on secondary school students only, future researchers can conduct such study for senior secondary, higher educational levels and university level. The sample and variables of the study can be increased in further studies. One more test can be applied along with the artificial intelligence awareness and correlation can be found. There is also scope for experimental studies on this field. The same study can be carried out for teachers of the school and colleges.

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