

Artificial Intelligence and its Uses Among Undergraduate Students in Sonitpur District, Assam

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Abstract

The rapid integration of Artificial Intelligence (AI) in education has significantly influenced the learning practices of undergraduate students. The present study investigates the level of use of Artificial Intelligence among undergraduate students in Sonitpur District of Assam. The study also examines whether a significant difference exists between male and female students in terms of AI use. A descriptive survey method was adopted for the study. The total sample consisted of 110 undergraduate students selected through a simple random sampling technique from Lokanayak Omeo Kumar Das (LOKD) College, Dhekiajuli and Darrang College, Tezpur. A self-developed questionnaire was used to collect data related to the use of AI tools for academic purposes. Mean, standard deviation, and t-test were employed for data analysis. The findings reveal that undergraduate students demonstrate a moderate level of AI usage, and no significant difference was found between male and female students with regard to the use of AI. The study highlights the growing relevance of AI in higher education and suggests the need for systematic orientation and training programs for effective and ethical use of AI tools.

Keywords: Artificial Intelligence, AI Use, Undergraduate Students, Gender Difference, Sonitpur District

1. Introduction

Artificial Intelligence (AI) has emerged as a transformative force in the field of education. AI-based tools such as chatbots, intelligent tutoring systems, plagiarism detection software, adaptive learning platforms, and content generation tools are increasingly being used by students for learning, assignment preparation, and academic support. In higher education, AI has the potential to enhance personalized learning, critical thinking, and problem-solving skills. However, the extent to which undergraduate students are engaging with AI tools varies depending on access, awareness, digital literacy, and institutional support.

In the Indian context, particularly in rural and semi-urban districts like Sonitpur, the adoption of AI in education is still at a developing stage. Understanding the level of AI use among undergraduate students is essential for planning academic interventions and policy decisions. Moreover, examining gender-based differences in AI usage can provide insights into issues of digital equity and inclusion. Against this backdrop, the present study attempts to explore Artificial Intelligence use among undergraduate students in Sonitpur District.

Need and Significance of the Study

The increasing presence of AI in education necessitates an understanding of how students interact with and utilize AI tools. This study is significant in the following ways:

- It provides empirical data on the level of AI usage among undergraduate students in Sonitpur District.
- It helps identify whether gender differences exist in AI use, contributing to discussions on digital gender divide.
- The findings may help teachers, administrators, and policymakers to design training and awareness programs related to AI literacy.
- The study adds to the limited body of research on AI use in higher education at the district level in Assam.

Objectives of the Study

The study was conducted with the following objectives:

- To find out the level of use of Artificial Intelligence among undergraduate students of Sonitpur district of Assam.
- To find out the difference between the use of Artificial Intelligence among male and female undergraduate students of Sonitpur district of Assam.

Hypothesis of the Study

The following null hypothesis was formulated for the study:

H₀: There is no significant difference between the use of Artificial Intelligence among male and female undergraduate students of Sonitpur district of Assam.

Operational Definitions

Artificial Intelligence Use: In the present study, AI use refers to the extent to which undergraduate students use AI-based tools and applications for academic purposes such as learning, assignments, information retrieval, and problem-solving.

Undergraduate Students: Students enrolled in undergraduate degree programs in LOKD College and Darrang College under Sonitpur District.

Limitations of the Study

- The study was limited to only two colleges of Sonitpur District of Assam.
- The sample size was limited to 110 undergraduate students.

Methodology:

Research Method

In the present study, the researcher has adopted the descriptive survey method. The descriptive survey method helps in exploring the phenomenon in a natural setting.

Population

The population of the study comprised all undergraduate students studying in degree colleges of Sonitpur District of Assam.

Sample and sampling technique

A sample of 110 undergraduate students were selected from Lokanayak Omeo Kumar Das (LOKD) College, Dhekiajuli and Darrang College, Tezpur. Out of which 50 from Lokanayak Omeo Kumar Das (LOKD) College and 60 from Darrang College, Tezpur. From the total sample 63 were male and 47 were female students. Simple random sampling technique was used to select the samples from the population.

Tool Used

A self-developed questionnaire on use of Artificial Intelligence was used for data collection. The questionnaire consisted of items related to the frequency and purpose of using AI tools in academic activities.

Statistical Techniques Used

The following statistical techniques were used for data analysis:

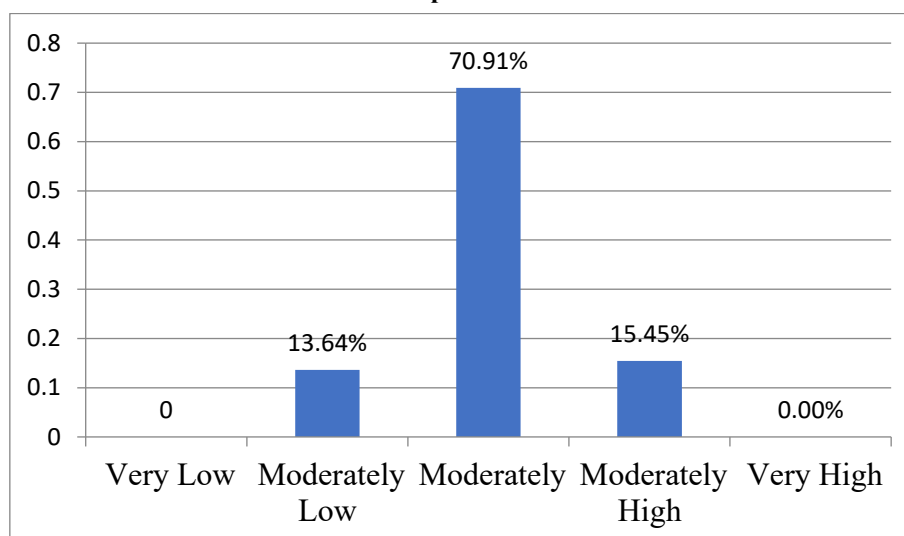
- Mean and Standard Deviation
- t-test for comparing male and female students

Analysis and Interpretation of Data:

Objective 1: To find out the level of use of Artificial Intelligence among undergraduate students of Sonitpur district.

Table no. 1.1 Level of use of AI among undergraduate students of Sonitpur district

Sl. No	Level of Use	Range	Number of Students	Percentage
1	Very Low	24-43.2	0	0
2	Moderately Low	43.2-62.4	15	13.64
3	Moderate	62.4-81.6	78	70.91
4	Moderately High	81.6-100.8	17	15.45
5	Very High	100.8-120	0	0
Total			110	100%

Figure no. 1.1 Graphical representation of the Level of use of AI among undergraduate students of Sonitpur district

Interpretation: The data in Table 4.4 and figure no.4.3 presents the level of use of Artificial Intelligence. The table categorizes the students into five levels of use of artificial intelligence: very low, moderately low, moderate, moderately high and very high. None of the students fall under the "Very Low" category, indicating that no students has a very low level of use of artificial intelligence. A small portion of the students 13.64%, fall into the "Moderately low" use level. A dominant portion of the students 70.91% have a "Moderate" level of use. A significant portion of students 15.45% exhibit a "moderately High" level of use of artificial intelligence. From this graphical representation, it has been evident that majority of students have a moderate level of use of artificial intelligence in their academic and non-academic life.

Analysis of objective no 2: To find out the difference between the use of Artificial Intelligence among male and female undergraduate students of Sonitpur district.

Table No. 1.2 Independent sample t-test

Test variable	Gender	N	Mean	S.D.	t-value	Df	Sig(2-tailed)
Use of AI	Male	63	100.14	4.486	.045	108	.965
	Female	47	100.11	3.908			

An independent sample t-test was run to compare the mean scores of male and female students. From the test statistics, it is found that the sig. value $p = .965$, which is > 0.05 . Since, the p value is greater than 0.05, hence the null hypothesis is accepted and concluded that there is no statistically significant difference in the use of artificial intelligence among the undergraduate students of Sonitpur district of Assam. This suggests that both male and female students have similar access to and use with AI tools for academic purposes.

Major Findings of the Study

1. Undergraduate students of Sonitpur District exhibit a moderate level of use with Artificial Intelligence tools.
2. AI tools are mainly used for academic support activities such as concept clarification, assignment work, and information gathering.
3. No significant difference was found between male and female students in the use of Artificial Intelligence.
4. Gender does not appear to be a determining factor in AI use among undergraduate students.

Recommendations

- Colleges should organize workshops and orientation programs to enhance AI literacy among students.
- Teachers may integrate AI-based tools in teaching-learning processes to promote effective and ethical use.

- Institutional support is required to guide students in responsible use of AI in academics.

Suggestions for Further Study

- Similar studies may be conducted with a larger sample covering more colleges.
- Comparative studies may be undertaken between rural and urban colleges.
- Future research may include variables such as stream of study, digital literacy, and socio-economic background.

Conclusion

The present study reveals that undergraduate students in Sonitpur District are moderately engaged with Artificial Intelligence tools for academic purposes. The absence of significant gender differences indicates equitable access and usage of AI among male and female students. As AI continues to reshape higher education, structured guidance and training are essential to ensure its effective and ethical utilization by students.

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