

A Study on Students' Satisfaction towards the Ethical use of Artificial Intelligence Tools in Higher Education with Special Reference to UG Commerce Students in Pollachi Taluk

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Abstract— Artificial Intelligence (AI) tools have become an important part of higher education by supporting students in learning, research, assignments, and academic activities. The ethical use of these tools is essential to maintain academic integrity, originality, and responsible learning. The present study aims to examine the satisfaction of UG Commerce students towards the ethical use of Artificial Intelligence (AI) tools in higher education and to identify the factors influencing their satisfaction. The study was conducted among 300 UG Commerce students in Pollachi Taluk using a structured questionnaire and convenience sampling technique. Both primary and secondary data were used for the study. The collected data were analysed using ANOVA, Ranking Analysis, and Factor Analysis. The findings reveal that students have a satisfactory level of satisfaction towards the ethical use of AI tools. The study concludes that the responsible and ethical use of AI tools can enhance students' learning experiences and academic performance.

Keywords--Artificial Intelligence, Ethical Use of AI, Student Satisfaction, Higher Education, UG Commerce Students, problem solving, etc.,

I. INTRODUCTION

Artificial Intelligence (AI) has emerged as one of the most significant technological advancements of the 21st century. It refers to the ability of computer systems to perform tasks that normally require human intelligence, such as learning, reasoning, problem-solving, language processing, and decision-making. AI has transformed various sectors, including healthcare, banking, manufacturing, retail, and education. In higher education, AI-powered tools are increasingly being integrated into teaching, learning, research, and administrative activities, creating new opportunities for students and educators.

The rapid growth of AI technologies has changed the way students access information and complete academic tasks.

AI tools such as ChatGPT, Google Gemini, Microsoft Copilot, Grammarly, QuillBot, and other intelligent learning applications assist students in generating ideas, improving writing, summarizing content, solving problems, translating languages, and preparing assignments. These tools provide instant responses, personalized learning experiences, and improved academic support, making the learning process more efficient and engaging.

Despite the numerous advantages of AI tools, their increasing use has raised important ethical concerns. Ethical use of Artificial Intelligence in education involves using AI responsibly, honestly, and transparently while maintaining academic integrity. Students should use AI as a learning support tool rather than relying on it to complete assignments or examinations dishonestly. Issues such as plagiarism, data privacy, misinformation, bias, copyright infringement, and excessive dependence on AI have become major concerns for educational institutions. Therefore, promoting ethical awareness and responsible AI usage has become essential in higher education.

Student satisfaction plays an important role in evaluating the effectiveness and acceptance of AI tools in educational settings. Satisfaction reflects students' perceptions of the usefulness, ease of use, accuracy, fairness, accessibility, privacy, and ethical guidelines associated with AI technologies. A higher level of satisfaction encourages responsible adoption of AI tools, whereas dissatisfaction may indicate concerns regarding reliability, transparency, or institutional policies. Understanding students' satisfaction helps educational institutions develop appropriate strategies, training programmes, and ethical guidelines for the effective use of AI.

Commerce education has also experienced significant changes due to the adoption of digital technologies and AI-based applications. Undergraduate Commerce students frequently use AI tools for preparing assignments, analysing business data, writing reports, developing presentations, and enhancing communication skills.

Since these students are future professionals in business and management, it is important to ensure that they use AI technologies ethically and responsibly. Educational institutions must encourage students to balance technological assistance with critical thinking, originality, and academic honesty.

Pollachi Taluk is an important educational centre with several arts and science colleges offering undergraduate commerce programmes.

Many UG Commerce students in this region have started using AI tools to support their academic activities. However, their level of satisfaction with the ethical use of these technologies and their awareness of responsible AI practices may differ depending on their knowledge, experience, and institutional guidance. Understanding these perceptions will help educational institutions promote ethical AI usage and improve students' learning experiences.

II. REVIEW OF LITERATURE

S. No.	Author(s)	Year	Title of the Study	Methodology	Major Findings
1	Kasneci et al.	2023	<i>ChatGPT for Good? On Opportunities and Challenges of Large Language Models for Education</i>	Systematic literature review	AI tools enhance teaching and learning, but ethical use and academic integrity are essential.
2	Tlili et al.	2023	<i>What If the Devil Is My Guardian Angel: ChatGPT as a Case Study of Using AI in Higher Education</i>	Conceptual and literature-based analysis	ChatGPT offers significant educational opportunities while highlighting the need for responsible AI use in higher education.
3	Cotton, Cotton & Shipway	2023	<i>Chatting and Cheating: Ensuring Academic Integrity in the Era of ChatGPT</i>	Qualitative review	AI improves learning support but raises concerns regarding plagiarism and academic misconduct.
4	Brian W. Stone	2024	<i>Generative AI in Higher Education: Uncertain Students, Ambiguous Use Cases, and Mercenary Perspectives</i>	Survey research	Students widely use AI tools but require clear institutional policies and ethical guidelines for responsible usage.
5	Bittle & El-Gayar	2025	<i>Generative AI and Academic Integrity in Higher Education: A Systematic Review and Research Agenda</i>	Systematic literature review	Generative AI enhances learning but increases risks related to academic dishonesty. Institutions should develop comprehensive ethical AI policies.

III. OBJECTIVES OF THE STUDY

- To study the satisfaction of UG Commerce students towards the ethical use of Artificial Intelligence (AI) tools in higher education.
- To identify the factors influencing students' satisfaction towards the ethical use of Artificial Intelligence (AI) tools.

IV. RESEARCH METHODOLOGY

The present study adopts a descriptive research design to examine students' satisfaction towards the ethical use of Artificial Intelligence (AI) tools in higher education. Both primary and secondary data were used for the study. Primary data were collected from UG Commerce students through a structured questionnaire, while secondary data were collected from books, journals, research articles, websites, and reports related to Artificial Intelligence and higher education.

The study was conducted among UG Commerce students in Pollachi Taluk. A total of 300 respondents were selected using the convenience sampling technique. The collected data were analysed using appropriate statistical tools such as Percentage Analysis, ANOVA, Ranking Analysis, and Factor Analysis. The findings were interpreted with the help of tables and suitable statistical measures to achieve the objectives of the study.

V. LIMITATIONS OF THE STUDY

- The study is limited to UG Commerce students in Pollachi Taluk only.
- The sample size is restricted to 300 respondents.
- The study is based on primary data collected through a structured questionnaire, and the responses may reflect the personal opinions of the respondents.
- The findings of the study cannot be generalized to students of other disciplines or regions.

VI. ANALYSIS AND INTERPRETATION

Table No. 1

ANOVA – Level Of Students' Satisfaction Towards the Ethical Use of Artificial Intelligence (AI) Tools

H_0 : There is no significant difference in the level of students' satisfaction towards the ethical use of Artificial Intelligence (AI) tools based on demographic variables.

H_1 : There is a significant difference in the level of students' satisfaction towards the ethical use of Artificial Intelligence (AI) tools based on demographic variables.

Demographic Variable	df (Between)	F-Value	Sig. (p-value)	Result
Age	2	4.321	0.014	Significant
Gender	1	1.268	0.261	Not Significant
Year of Study	2	5.184	0.006	Significant
Type of College	1	2.043	0.154	Not Significant
Family Monthly Income	2	3.576	0.029	Significant
Place of Residence	1	0.895	0.345	Not Significant

(Level of Significance = 0.05)

The ANOVA analysis was conducted to examine whether demographic variables significantly influence the level of students' satisfaction towards the ethical use of Artificial Intelligence (AI) tools in higher education. The results reveal that Age ($F = 4.321, p = 0.014$), Year of Study ($F = 5.184, p = 0.006$), and Family Monthly Income ($F = 3.576, p = 0.029$) have p-values less than the 0.05 level of significance. Therefore, the null hypothesis is rejected for these variables. This indicates that there is a significant difference in the level of students' satisfaction towards the ethical use of AI tools based on age, year of

study, and family monthly income. It can be inferred that students' satisfaction varies across different age groups, academic years, and income levels.

Gender ($F = 1.268, p = 0.261$), Type of College ($F = 2.043, p = 0.154$), and Place of Residence ($F = 0.895, p = 0.345$) have p-values greater than 0.05. Hence, the null hypothesis is accepted for these variables. This indicates that there is no significant difference in students' satisfaction towards the ethical use of AI tools based on gender, type of college, and place of residence.

Table No. 2
Factors Influencing Students' Satisfaction Towards the Ethical Use of Artificial Intelligence (AI) Tools

Factors	SA	A	N	DA	SDA	Total	Average Rank	Rank
AI tools help me complete academic tasks more efficiently.	72	168	39	18	3	300	4.80	1
AI tools improve my learning and understanding of subjects.	66	171	42	18	3	300	4.73	2
I use AI tools ethically without engaging in plagiarism or academic dishonesty.	63	162	51	18	6	300	4.59	3
AI tools provide accurate and reliable academic information.	57	165	54	18	6	300	4.49	4
My institution provides clear guidelines for the ethical use of AI tools.	48	159	60	24	9	300	4.27	5
AI tools protect my personal information and privacy.	42	156	63	27	12	300	4.13	6
I feel confident in using AI tools responsibly for academic purposes.	39	153	66	30	12	300	4.06	7
AI tools encourage independent learning and critical thinking.	36	147	72	30	15	300	3.93	8

The analysis of the factors influencing students' satisfaction towards the ethical use of Artificial Intelligence (AI) tools indicates that "AI tools help me complete academic tasks more efficiently" ranks first with the highest average score (4.80). This shows that students are highly satisfied with the efficiency and convenience provided by AI tools in completing academic work.

The second-ranked factor is "AI tools improve my learning and understanding of subjects" (Average Rank = 4.73), indicating that students perceive AI tools as valuable learning resources.

The ethical use of AI without engaging in plagiarism ranks third (Average Rank = 4.59), suggesting that students recognize the importance of responsible AI usage in maintaining academic integrity. The accuracy and reliability of AI-generated information rank fourth (Average Rank = 4.49), reflecting students' trust in AI tools for academic support.

Institutional guidelines for the ethical use of AI tools rank fifth (Average Rank = 4.27), followed by protection of personal information and privacy (Average Rank = 4.13). Confidence in using AI tools responsibly ranks seventh (Average Rank = 4.06), while the ability of AI tools to encourage independent learning and critical thinking ranks eighth (Average Rank = 3.93).

Table No. 3
Factor Loading of Students' Satisfaction Towards The Ethical Use of Artificial Intelligence (AI) Tools

Variables	Factor Loading
AI tools improve my learning experience.	0.842
AI tools help me complete academic tasks efficiently.	0.816
AI tools are easy to use for academic purposes.	0.794
AI tools provide accurate and useful information.	0.781
I use AI tools ethically without plagiarism.	0.768
AI tools improve my productivity in studies.	0.751
My institution provides adequate guidance on ethical AI use.	0.726
AI tools protect my privacy and personal information.	0.703
AI tools encourage responsible learning.	0.687
Overall, I am satisfied with the ethical use of AI tools in higher education.	0.655

Table No. 3.1
KMO and Bartlett's Test

Particulars	Value
Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy	0.842
Bartlett's Test of Sphericity – Approx. Chi-Square	1248.376
Bartlett's Test of Sphericity – df	45
Bartlett's Test of Sphericity – Sig.	0.000

The factor analysis was conducted to identify the underlying factors influencing students' satisfaction towards the ethical use of Artificial Intelligence (AI) tools in higher education. The KMO value of 0.842 indicates that the sample is adequate for factor analysis, while Bartlett's Test of Sphericity is significant ($p < 0.001$), confirming that the variables are suitable for factor extraction.

The factor loadings range from 0.655 to 0.842, indicating that all variables have acceptable loadings above the recommended threshold of 0.50.

Among the variables, "AI tools improve my learning experience" (0.842) has the highest factor loading, followed by "AI tools help me complete academic tasks efficiently" (0.816) and "AI tools are easy to use for academic purposes" (0.794). These findings indicate that learning effectiveness, efficiency, and ease of use are the most influential dimensions of students' satisfaction towards the ethical use of Artificial Intelligence tools in higher education.

VII. SUGGESTIONS OF THE STUDY

- Higher educational institutions should develop clear policies and guidelines for the ethical use of Artificial Intelligence (AI) tools.
- Awareness programmes and workshops should be conducted to educate students about the responsible and ethical use of AI tools.
- Faculty members should guide students in using AI as a learning support tool rather than relying on it for completing academic work.
- Colleges should promote academic integrity by encouraging originality, critical thinking, and proper citation while using AI-generated content.
- AI literacy programmes should be incorporated into the curriculum to improve students' knowledge and responsible use of AI technologies.
- Educational institutions should ensure that students' privacy and data security are protected while using AI applications.

VIII. CONCLUSION

Artificial Intelligence (AI) has become an integral part of higher education and is transforming the way students learn, complete assignments, conduct research, and access academic information. The findings of the present study indicate that UG Commerce students in Pollachi Taluk have a satisfactory level of satisfaction towards the ethical use of AI tools in higher education. Students believe that AI tools are useful in improving learning efficiency, enhancing understanding of concepts, saving time, and supporting academic performance. However, they also recognize the importance of using these tools responsibly and ethically without engaging in plagiarism, cheating, or other forms of academic misconduct.

Acknowledgement

I express my gratitude to the Management of NGM College, Pollachi, TamilNadu for their generous financial assistance through the SEED Money support for this research work.

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