



# "A STUDY ON STUDENTS' PERCEPTION TOWARDS ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION"

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**Abstract:** Artificial Intelligence is enabling personalized learning, which is quickly changing the face of higher education, enhancing academic efficiency, and automating tasks. This study investigates students' perceptions of AI integration in higher education, with a specific focus on engagement, trust, and ethical concerns. Conducted in Shivamogga, India, the study adopts a quantitative and descriptive approach, collecting primary data from 50 college students using structured questionnaires. The findings reveal that students widely use AI tools like ChatGPT, Gemini, and Grammarly, appreciating their role in improving academic performance, understanding, and feedback. However, notable concerns include data privacy, reduced human interaction, and over-reliance on AI, which may hinder critical thinking and job security. An independent t-test confirmed no significant gender-based differences in perceptions. The study suggests the necessary for ethical AI integration, inclusive training, and transparent usage policies. These insights can guide educators, policymakers, and AI developers in implementing student-centered AI strategies that promote equity, efficiency, and ethical use in academic environments.

**Keywords:** Artificial Intelligence in Education, Student Perception, AI-Based Learning Tools.

## 1.INTRODUCTION

Artificial Intelligence is a dynamic area of computer science focused on building intelligent systems having the power to performing tasks that traditionally have a human cognition, like a learning, reasoning, language processing, and decision-making. With the advancement of deep learning, machine learning, and neural networks, AI has been categorized into narrow AI framed for particular tasks like translation or image identification and general AI, which is having goal to replicate broad human intelligence.

A more recent development is generative AI, which can produce original content, including text, images, and code. As AI continues to expand across various sectors such as healthcare, communication, finance, and education, its presence in the educational landscape is growing significantly. In parallel, higher education comprising undergraduate, postgraduate, doctoral, and professional learning has undergone major transformations driven by globalization, technological innovation, and the demand for flexible learning.

Institutions are increasingly adopting digital platforms, AI-driven tools, and hybrid learning models to enhance access, engagement, and learning outcomes.

In this evolving academic environment, students' Perception is important a important role in the successful execution and effectiveness of new technologies. Perception, shaped by cognitive, emotional, and behavioural factors, determines how individuals interpret and respond to innovations. It influences user acceptance, trust, and interaction with AI tools. Therefore, understanding how students perceive AI integration in academic contexts is essential for designing ethical, inclusive, and impactful education systems that align with learners' expectations and needs.

AI is rapidly transforming in higher education globally, with India emerging as a key player in its adoption. According to a 2022 NASSCOM report, over 60% of Indian higher education institutions have begun integrating AI tools for tasks like personalized learning, automated assessments, and academic research. The Union Education Ministry's 2023 survey highlighted that 54% of Indian students use AI-powered platforms such as ChatGPT and Gemini for assignments, while 68% believe AI enhances their learning efficiency. However, this growth is uneven: metropolitan institutions lead in AI adoption (73%), compared to 41% in non-metro regions, reflecting infrastructural and awareness gaps. The Indian AI education market, approximately valued at \$2.5 billion in 2023, is projected to increase at a CAGR of 25% to reach \$7.8 billion by 2025, driven by initiatives like the National Education Policy (NEP) 2020, which improves AI integration to foster skill-based learning. Despite this momentum, debates persist about AI's ethical implications, including data privacy risks, academic dishonesty, and potential job displacement a concern echoed by 49% of Indian students in an AICTE-UGV 2023 study. (NASSCOM, 2022) (Ministry of Education, 2023) (AICTE-UGV, 2023) (India AI, 2023)

## 2.REVIEW OF LITERATURE

This section summarizes existing studies related to the topic, highlighting key findings, methods, and concepts. It helps identify what is already known and reveals the research gap that this study seeks to address.

**Sandu and Gide (2019)** elucidated the implementation of AI to improve students seeking experience in higher education. Methodology is used for this study is empirical and quantitative methods and data is collected sample size is 47 students. Data is analysed by using the SPSS software, the study looked at how students in Indian higher education are utilising the chatbots to enhance their learning experience. Students finds chatbots very easy for solving issues, making payments, and quick communication, though they worry about privacy and getting false advice. Still, Chatbots are a big step forward, helping students connect, research, and even get exams more easily.

**Bhattacharjee (2020)** carried out a quantitative examination on use of AI in higher education using Structural Equation Modelling and the UTAUT framework. Based on data from 329 respondents, the study analysed how stakeholders perceive and implement AI technologies for improving decision-making in academic institutions. The findings suggest that adoption models like UTAUT can guide authorities in effectively integrating AI into higher education systems.

**George et al. (2023)** examined the capable of quick engineering in India: An analysis of the part of higher education and the future of the AI-driven labour market its aims to explore the evolution and scope of prompt engineering as a profession, accessing its demand, required skills, and potential of AI in education, later opportunities of it. The methodology for this study is comprehensive exploration and data is collected by using primary and secondary data. The study revealed that India have an immense potential in prompt engineering, utilizing its role with integration of industry demand, and the need for AI specialized education. Somehow, it is difficult for universities to adapt curricula and excel in this promising field while addressing ethical challenges and fostering progress.

**Malik et al. (2023)** analysed a quantitative study of 245 Indonesian university students to assess perception of AI in scholarly writing. Students viewed tools like grammar checkers and content generators positively for improving quality and efficiency but expressed concerns over inventiveness, analytical abilities, and ethics. The study emphasizes balanced AI use that enhances rather than substitutes human input.

**Venugopal and Mamatha (2023)** examined the AI's effects on education in India's higher education system using secondary data. The study discussed types of AI, its benefits in education, and challenges faced by educators. It concluded that while AI enhances efficiency and has transformed sectors like education and healthcare, ethical concerns remain. The authors stress the need for responsible AI development to ensure positive societal impact.

**Arvinth and Geeta (2024)** studied impacts of AI on scholars in India's higher education system, this study attempts to examines how AI shapes Indian higher education, enhancing learning and job readiness while addressing limitations like privacy and biases. The primary data is collected from the 150 respondents and study revealed that AI is positively impact in higher education, tolls like personalized learning platforms boosting grades and engagement. Stress ethical AI integration through transparent governance, teacher training, and inclusive tools, alongside further research on long-term effects, cultural influences, and ethical challenges to ensure equitable, future-ready education.

**Zhou et al. (2024)** examined the mixed-approaches research at Queen Mary University of London to examine students' use and perception about AI tools in entrepreneurship education. On bases of surveys and interviews with 28 students, the study found frequently use of AI tools like Grammarly, ChatGPT, Copilot, etc. for academic and administrative tasks. While students valued AI for enhancing productivity and personalized learning, concerns were raised about academic integrity, data privacy, and inconsistent university policies. The study calls for stronger institutional guidelines and the moral incorporation AI in education.

### 3.RESEARCH GAP

While existing research concentrated on the use of AI in higher education, its benefits, challenges, and impact on academic performance, there is a considerable gap in understanding students' individual perceptions of AI, particularly in terms of engagement, trust, and concerns about its integration. Additionally, AI use in education has not been investigated in this region. Addressing these issues could yield useful insights into developing student-cantered AI solutions in higher education. Hence, present study entitled “**A study on students' perception towards artificial intelligence in higher education**” has been undertaken to full fill the present existed research gap.

#### 4.OBJECTIVES

The below given are the list of objectives of current study

1. To examine the perception of students towards the use of AI in higher education, emphasizing their engagement, trust, and concerns.
2. To explore students' perception towards AI role in higher education concerning academic purposes, personalized learning, and assessment.
3. To identify students' concerns about AI integration, including ethical issues, reduced human interaction, and potential job displacement.

#### 5.HYPOTHESIS

The present study null and alternative hypotheses are given below.

**H<sub>0</sub>** - Male and female students do not significantly differ in their view towards artificial intelligence in higher education.

**H<sub>1</sub>** - Male and Female students have a significant differ in their view towards artificial intelligence in higher education.

#### 6.SCOPE AND METHODOLOGY OF THE STUDY

This study investigates students' perception towards AI integration in higher education within Shivamogga Town, focusing on their engagement, trust, and concerns such as ethical issues, reduced human interaction, and job displacement. Using a quantitative and descriptive approach, data was collected from 50 higher education students through a structured questionnaire (primary data) and supported by secondary sources like books, journals, and websites. Convenience sampling was used, and the data was analysed using statistical tools such as percentages, mean, and standard deviation. Independent sample t-test was used to test hypothesis.

#### 7.FINDINGS AND DISCUSSION

This part presents the findings from information acquired through a survey of fifty respondents in tables that summarize rates, proportions, rankings, average scores, and testing the hypothesis. The survey results represents an objective description of demographic features, awareness levels, favoured applications of AI technologies in tertiary education and perceived barriers or advantages. The Discussion interprets the results, exploring implications for educational strategies, student attitudes, and AI's possible effects on educational experiences. By examining these trends, the conversation identifies advantages, disadvantages, and broader consequences for fostering better understanding, adaptation, and combination of AI in higher education systems.

**Table No. 1: Respondents' Demographic Profile**

Demographical Factors	Variables	Responses	Percentage
<b>Gender</b>	Male	38	76%
	Female	12	24%
	<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Age</b>	Below 20	6	12%
	21 – 25	35	70%
	26 – 30	9	18%
	Above 30	0	0%
	<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Educational Qualification</b>	Graduation	15	30%
	Post Graduation	30	60%
	Others	5	10%
	<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Field of Study</b>	Science & Technology	10	20%
	Commerce & Management	33	66%
	Humanities	2	4%
	Others	5	10%
	<b>Total</b>	<b>50</b>	<b>100%</b>
<b>Institution Type</b>	Government	31	62%
	Private	15	30%
	Autonomous	4	8%
	<b>Total</b>	<b>50</b>	<b>100%</b>

*Source: Data from survey*

The Demographical data reveals a predominantly male (76%), young adult cohort (70% aged 21 - 25) with advanced educational backgrounds (60% postgraduates), largely specializing in Commerce & Management (66%) and affiliated with government institutions (62%). The sample lacks representation from individuals above 30 and those in Humanities, suggesting a focus on early-career, academically oriented groups in business/management fields within public-sector education systems. The gender imbalance and institutional skew may limit generalizability but highlight the targeted demographic's characteristics.

**Table No. 2 Frequency of Higher Education Students' Use of AI Tools**

AI Tools	No of Respondents	Rank
ChatGPT	42	1
Google Gemini	26	2
Grammarly	25	3
Copilot	15	4
Others	6	5

Midjourney	2	6
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*Source : Survey Data*

ChatGPT dominates as the top choice (42 users), followed by Gemini (26) and Grammarly (25). Copilot (15) and smaller tools like Midjourney (2) lag far behind, showing a sharp drop-off. This reflects a clear preference for mainstream, versatile AI tools over niche or specialized options. The data highlights market prioritization of accessibility and broad functionality in AI adoption.

**Table No. 3 Perception regarding AI integration in higher education, focusing on engagement, trust, and concern.**

(Responses were rated on a 1-5 scale, from strong disagreement to strong agreement.)

SI. No	Perception	1	2	3	4	5	Total	Mean	Standard Deviation
1	AI tools boost learning engagement.	1	1	7	20	21	50	4.18	9.90
2	I feel comfortable using AI platforms.	1	4	10	14	21	50	4	7.97
3	AI ensures data and privacy protection.	1	4	13	16	16	50	3.84	7.04
4	AI tools might reduce critical thinking skills	1	5	10	17	17	50	3.88	7.14
5	AI might lead to academic dishonesty or misuse (e.g., plagiarism).	1	4	14	16	15	50	3.8	6.96

*Source : Survey Data*

The survey indicates a positive perception of AI in education, with strong agreement on its role in enhancing engagement (Mean=4.18) and comfort in usage (Mean=4.00). However, concerns about data privacy (Mean=3.84), reduced critical thinking (Mean=3.88), and academic dishonesty (Mean=3.80) highlight ethical and cognitive risks. High variability in confidence (standard deviations: 7.04 - 9.90) underscores the need for balanced AI implementation, robust safeguards, and strategies to foster critical thinking while minimizing misuse. Institutions must address these concerns to maximize AI's benefits.

**Table No. 4 Perception regarding academic tasks like research, personalized learning, and assessment.**

(Responses were rated on a 1-5 scale, from strong disagreement to strong agreement.)

Sl. No.	Perception	1	2	3	4	5	Total	Mean	Standard Deviation
1	AI tools can enhance the quality of academic work.	2	2	5	21	20	50	4.1	9.67
2	AI improves academic content understanding	1	2	15	18	14	50	3.84	7.91
3	AI-powered personalized learning recommendations are helpful.	2	5	6	18	19	50	3.94	7.91
4	AI offers fair, unbiased assessments	1	6	12	17	14	50	3.74	6.44
5	AI-generated feedback helps me improve academically	2	6	7	20	15	50	3.8	7.31

*Source : Survey Data*

The survey highlights moderate to positive perceptions of AI in academia, with strong agreement on enhancing academic quality (Mean=4.10) and offering personalized recommendations (Mean=3.94). While AI aids content understanding (Mean=3.84) and feedback (Mean=3.80), concerns about fairness (Mean=3.74) and algorithmic bias remain. Variability in opinions (SD: 6.44 - 9.67) underscores the need for ethical oversight, transparency, and improvements to ensure reliable academic applications.

**Table No. 5 Perception regarding ethical issues, reduced human interaction, and potential job displacement.**

(Responses were rated on a 1-5 scale, from strong disagreement to strong agreement.)

Sl. No.	Perception	1	2	3	4	5	Total	Mean	Standard Deviation
1	Concerned about AI data misuse.	1	3	6	18	22	50	4.14	9.41
2	AI limits teacher-peer interaction.	1	5	10	20	14	50	3.82	7.45
3	AI risks future job loss.	1	3	8	21	17	50	4	8.72
4	Overuse of AI reduces human expertise.	1	4	9	20	16	50	3.92	7.97
5	AI lacks result transparency.	2	5	11	15	17	50	3.8	6.40

*Source : Survey Data*

The survey highlights concerns about AI's ethical and social impacts, with strong agreement on risks like data misuse (Mean=4.14) and job loss (Mean=4.00). Moderate concerns include reduced human expertise (Mean=3.92), limited teacher-peer interaction (Mean=3.82), and transparency issues (Mean=3.80). High variability in opinions (SD: 6.40 - 9.41) underscores tensions between AI's efficiency and its perceived threats, improving the need for safeguards, ethical guidelines, and responsible integration.

## 8. TESTING THE HYPOTHESIS

This section examines if a statistically significant difference exists in students' perception of AI in higher education on the bases of gender. An independent samples t-test is used to compare male and female responses across key perception variables.

**H<sub>0</sub>** - Male and female students do not significantly differ in their view towards artificial intelligence in higher education.

**H<sub>1</sub>** - Male and Female students have a significant differ in their view towards artificial intelligence in higher education.

Perception	Group Statistics			Levene's Equality of Variances Test		t-test for Means Equality			
	Gender	N	Mean	Levene's Sig.	Equal Variances ?	t	Df	Sig. (2-tailed)	Mean Difference
AI tools boost learning engagement.	Male	12	1.75	0.246	Assumed	0.151	48	0.881	0.039
	Female	38	1.71			0.114	13.369		0.039
I feel comfortable using AI platforms.	Male	12	2.02	0.028	Not Assumed	-0.076	48	0.953	-0.026
	Female	38	2.03			-0.061	14.027		-0.026
AI ensures data and privacy protection.	Male	12	1.83	0.692	Assumed	-0.901	48	0.372	-0.298
	Female	38	2.13			-0.792	15.504		-0.298
AI tools might reduce critical thinking skills	Male	12	2.42	0.188	Assumed	0.788	48	0.434	0.285
	Female	38	2.13			0.699	15.419		0.285
AI might lead to academic dishonesty	Male	12	1.75	0.628	Assumed	-1.383	48	0.173	-0.461

or misuse (e.g., plagiarism).	Female	38	2.21			-1.205	15.332		-0.461
AI tools can enhance the quality of academic work.	Male	12	1.92	0.663	Assumed	0.066	48	0.948	0.022
	Female	38	1.89			0.059	15.929		0.022
AI improves academic content understanding	Male	12	2	0.034	Not Assumed	-0.259	48	0.843	-0.079
	Female	38	2.08			-0.202	13.71		-0.079
AI-powered personalized learning recommendations are helpful.	Male	12	1.92	0.675	Assumed	-0.584	48	0.562	-0.215
	Female	38	2.13			-0.546	16.506		-0.215
AI offers fair, unbiased assessments	Male	12	2.42	0.003	Not Assumed	0.936	48	0.489	0.311
	Female	38	2.11			0.711	13.382		0.311
AI-generated feedback helps me improve academically	Male	12	2.08	0.225	Assumed	-0.759	48	0.452	-0.285
	Female	38	2.37			-0.658	15.25		-0.285
Concerned about AI data misuse.	Male	12	1.83	0.463	Assumed	0.056	48	0.956	0.018
	Female	38	1.82			0.047	14.835		0.018
AI limits teacher-peer interaction.	Male	12	2.33	0.021	Not Assumed	0.616	48	0.637	0.202
	Female	38	2.13			0.482	13.732		0.202
AI risks future job loss.	Male	12	2	0.816	Assumed	0.086	48	0.932	0.026

	Female	38	1.97			0.074	15.192		0.026
Overuse of AI reduces human expertise.	Male	12	1.92	0.254	Assumed	-0.579	48	0.566	-0.189
	Female	38	2.11			-0.488	14.789		-0.189
AI lacks result transparency.	Male	12	2.25	0.2	Assumed	-0.035	48	0.972	-0.013
	Female	38	2.26			-0.031	15.455		-0.013

*Source: SPSS output*

A significance criterion of 0.05 was established for the p-value, For each item, if the Sig. (2-tailed) value was less than 0.05, it would indicate a statistically significant distinction between students who are male and female, leading to the rejection of the null hypothesis. If the value was more than or equal to 0.05, the null hypothesis was not rejected, suggesting no significant difference between the groups.

The results are presented in the table below:

SI. NO	Statement	Sig. (2-tailed)	Decision	Interpretation
1	AI tools boost learning engagement	0.881	H <sub>0</sub> could not be rejected	There is no Notable difference
2	Comfortable using AI platforms	0.953	H <sub>0</sub> could not be rejected	There is no Notable difference
3	Ensures data & privacy protection	0.372	H <sub>0</sub> could not be rejected	There is no Notable difference
4	Reduces critical thinking skills	0.434	H <sub>0</sub> could not be rejected	There is no Notable difference
5	Leads to academic dishonesty	0.173	H <sub>0</sub> could not be rejected	There is no Notable difference
6	Enhances academic work quality	0.948	H <sub>0</sub> could not be rejected	There is no Notable difference
7	Improves academic understanding	0.843	H <sub>0</sub> could not be rejected	There is no Notable difference
8	Personalized learning helpful	0.562	H <sub>0</sub> could not be rejected	There is no Notable difference

9	Offers fair, unbiased assessments	0.489	H <sub>0</sub> could not be rejected	There is no Notable difference
10	AI-generated feedback helps	0.452	H <sub>0</sub> could not be rejected	There is no Notable difference
11	Concern about AI misuse	0.956	H <sub>0</sub> could not be rejected	There is no Notable difference
12	Limits teacher-peer interaction	0.637	H <sub>0</sub> could not be rejected	There is no Notable difference
13	Risk of the future jobs' loss	0.932	H <sub>0</sub> could not be rejected	There is no Notable difference
14	Reduces human expertise	0.566	H <sub>0</sub> could not be rejected	There is no Notable difference
15	Lacks result transparency	0.972	H <sub>0</sub> could not be rejected	There is no Notable difference

Based on the above table showing that all 15 perception items p-values have more than 0.05, which means there is no notable statistically significant difference in perception towards artificial intelligence in higher education between male and female students. Therefore, the null hypothesis (H<sub>0</sub>) is accepted (or more accurately, we fail to reject it) for all statements.

## 9.SUGGESTIONS

In research, suggestions refer to practical recommendations or actionable insights derived from the study's findings. They are intended to help stakeholders (like educators, policymakers, or institutions) improve practices, address issues, or guide future strategies based on the research outcomes.

1. Educational institutions should provide inclusive AI training across all disciplines, especially Commerce and Management. AI must complement rather than replace human teaching, and transparent tools with strong privacy measures can help address fairness and security concerns.
2. Policymakers should develop regional AI strategies in Tier-2 and Tier-3 cities, integrate AI ethics into academic curricula, and subsidize AI tools in public institutions to ensure equal access.
3. Faculty members need training on the moral and efficient application of AI technologies. They should promote critical thinking about AI's limitations and monitor AI-assisted work to maintain academic integrity.
4. AI developers and EdTech companies must design user-friendly tools with transparent operations and strong privacy features. Enhancing feedback and supporting regional languages can improve accessibility.
5. Future researchers should include diverse disciplines and age groups in their samples, adopt qualitative methods for more in-depth understanding, and carry out long-term research to monitor shifting attitudes toward AI in higher education or whole education system.

## 10.CONCLUSION

This study reveals that students in higher education generally hold a positive perception towards the integration of Artificial Intelligence, recognizing its advantages in improving academic performance, personalized learning, and efficiency. However, concerns remain about privacy of data, reduced critical thinking, and the ethical implications of AI use. Importantly, the findings show no significant gender-based differences in perception, indicating a uniform outlook across male and female students. The study examines the required for balanced implementation of AI tools that complement rather than replace human interaction, alongside ethical guidelines, and inclusive training. These insights serve as a foundation for the related parties like policymakers, educators, and AI developers to foster responsible, fair, and efficient application of AI technologies in tertiary education, specifically region like Shivamogga.

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