

The impact of AI on university students Performance

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Abstract: The artificial intelligence is has emerged as the one the brightest tool for the human being. Every aspect of human is being influenced by AI. It has eased the complexity of many documents. The students have solved many complex problems within the seconds. It is being used widely. Hence the researcher felt the need of time to evaluate role of AI in students' performance. Personal and psychological factors, Socio economic factors and institutional and academic factors are the three factors on which the performance was studied. The Chi-square test was utilised for the hypothesis testing. The students opinion on the said parameters before and after the use of AI was tested. It was found that there is significant improvement in all the three studied parameters.

Keywords: AI, Personal and psychological factors, Socio economic factors and institutional and academic factors.

1. INTRODUCTION

The fundamental idea of education as initiation implies that education is more than just imparting knowledge. It highlights how education may help students get a broader awareness of the world, culture, values, and ways of thinking while promoting a nation's sustainable growth (Chen & Shih, 2025). Higher education is essential to promoting sustained national development, and the political, economic, and cultural circumstances of any country greatly influence its effects and difficulties. The university students are the backbone of any country. their academic performance provides boost to the economy. (Sharma & Kaldewey, 2025) concluded that in terms of institutional volume and enrolment, India's higher education system is among the biggest in the world. India's higher education landscape exhibits both promise and complexity, ranging from well-known public universities to up-and-coming private colleges, as well as from prestigious research-centric institutions to varied vocational training centers. (Ali et al., 2025) mentioned that the rise of artificial intelligence in the technology world has altered every aspect of life especially education sector. While evaluating role of AI in Education (Chaudhari, 2024) suggested that humans have had the greatest impact on the field of education, even though artificial intelligence has started to make progress in this domain as well. Thanks to the gradual adoption of AI, faculty members have become more successful and have been able to redirect their focus from office or administrative tasks to students. The university students age is between 18 to 22 years. This is the age of maximum productivity and energy. The performance of university student will increase the standard of living. In the opinion of (Satish Dhokare et al., 2022) NEP is the milestone in the India's education system which target the overall development of the students. (Chaudhari, 2026) pointed out that by the year 2040 NEP will transform India's education system. According to (Raj, 2025) With the goal of changing the nation's educational framework, India's National Education Policy (NEP) 2020 has been widely acknowledged as a major and revolutionary reform initiative. In order to make India, also known as Bharat, a sustainable, just, and dynamic knowledge society, it seeks to develop an education system firmly anchored in Indian ethos. The advent of online assessment tools has brought about significant changes in educational programming, transforming traditional teaching dynamics and evaluation methods. Due to the rapidly evolving digital environment, it is essential to have an educational model that not only incorporates technological advancements but also addresses the unique challenges and possibilities they present (Shaikh & Ali, 2025). (Allen, 2020) has defined AI as the capability of machines to carry out tasks that usually necessitate human intelligence. While describing the concept of AI (Lerner & Stern, 2019) propagated that there is great potential for artificial intelligence to transform the economy significantly. The prospect of enhanced productivity growth is, on the one hand, welcome in light of the decades-long deceleration of productivity growth in advanced economies. Conversely,

the risk of AI-induced labor disruptions could worsen current issues within the workforce, such as the long-term decrease in the male labor force participation rate. The bibliometric analysis findings of (Sahar & Munawaroh, 2025) show a notable increase in research outputs, particularly after 2021, indicating the growing interest in how artificial intelligence (AI) is affecting education. This growth, the digital revolution accelerated by the COVID-19 pandemic, and more global funding and cooperation have all been fuelled by advances in artificial intelligence technology. In this field, nations like China, India, and the United Kingdom have emerged as leaders. All these study have prompted the researcher to analyse the impact of AI on students performance.

2. REVIEW OF LITERATURE

- (Bećirović et al., 2025) highlighted the significance of improving students' comprehension, awareness, skills, knowledge, and competencies; incorporating AI applications into curricula; and addressing potential risks to ensure the efficient, ethical, and lawful use of AI-powered tools to improve students' academic performance.
- In the opinion of (Sahil Mansur, 2025) In order for students to benefit academically, cognitively, and emotionally in the evolving educational environments, artificial intelligence (AI) must be responsibly integrated, taking into account innovation, ethical integrity, humanness, and human-centered approaches.
- (Ngonso et al., 2025) suggest that in order for professors and students to comprehend the ethical ramifications of using AI for academic purposes, Nigerian higher education institutions should provide official training on the subject. Although a small percentage of students currently use AI for exams, this could be construed as exam malpractice and should not be tolerated in the educational system. However, curricula at Nigerian postsecondary institutions should properly incorporate the proper application of AI.

Statement of the problem

The AI is the biggest thing in the world. All the aspect of human life are being influenced by the AI. The education has its own impact. People might argue about the positive or negative aspect of it. This study has considered personal and psychological factors, Socio economic factors and institutional and academic factors.

Objectives

- 1) To analyse the impact of the AI on education sector.
- 2) To compare the performance of students before and after use of AI.

Hypothesis

- 1) There is no significant relationship between use of AI personal growth of students.
- 2) There is no significant relationship between use of AI socio economic growth of students.
- 3) There is no significant relationship between use of AI academic growth of students.

3. RESEARCH METHODOLOGY

The said research is conducted in the Rashtra Sant Tukdoji Maharaj Nagpur university, Nagpur. The one hundred and thirty-two students were the sample size. The sample size belongs to both rural and urban area. The well-defined questionnaire was designed. The respondent students were asked to give their opinion on five point likert scale.

Table 1: Profile of Respondents

Sr. No.	Particulars	Frequency
1	Gender	
	Male	45
	Female	87
2	Faculty	
	Humanities	28

	Commerce and Management	57
	Science and Technology	12
	Interdisciplinary	06
3	Locality	
	Urban	69
	Rural	63
4	Age	
	0-20	54
	21-25	41
	26 and Above	37

Testing of the hypothesis

1) There is no significant relationship between use of AI personal growth of students.

The Likert scale was designed to judge the opinion of respondents regarding their personal growth before and after the use of AI. The response was as follows

Particular	Strongly Agree	Agree	Neutral	Strongly Disagree	Disagree
Before the use of AI	23	16	41	15	37
After the use of AI	51	11	28	30	12

The expected frequencies

	Before the use of AI	After the use of AI
Strongly Agree	37	37
Agree	13.5	13.5
Neutral	34.5	34.5
Disagree	22.5	22.5
Strongly Disagree	24.5	24.5

31.725 is the chi square value. The threshold value is 0.05. Therefore, null hypothesis is accepted.

2) There is no significant relationship between use of AI socio economic growth of students.

The Likert scale was designed to judge the opinion of respondents regarding their socio economic growth before and after the use of AI. The response was as follows

Particular	Strongly Agree	Agree	Neutral	Strongly Disagree	Disagree
Before the use of AI	23	16	41	15	37
After the use of AI	51	11	28	30	12

The expected frequencies

	Before the use of AI	After the use of AI
Strongly Agree	39	39
Agree	12	12
Neutral	41	41
Disagree	27.5	27.5
Strongly Disagree	12.5	12.5

Chi square value is 19.1534 The p value is 7.3323 which is greater than the threshold value of 0.005. hence the null hypothesis i.e. No significant relationship is found between use of AI and personal growth of students is accepted.

3) There is no significant relationship between use of AI academic growth of students.

The Likert scale was designed to judge the opinion of respondents regarding their academic growth before and after the use of AI. The response was as follows

Particular	Strongly Agree	Agree	Neutral	Strongly Disagree	Disagree
Before the use of AI	11	06	51	45	19
After the use of AI	51	08	11	40	22

The expected frequencies

	Before the use of AI	After the use of AI
Strongly Agree	31	31
Agree	7	7
Neutral	31	31
Disagree	42.5	42.5
Strongly Disagree	20.5	20.5

The chi square value is 52.4124 The p value is 1.131, which is more than the threshold value of 0.005. hence the null hypothesis i.e. There is no significant relationship between use of AI academic growth of students is accepted.

4. FINDINGS

The majority students are utilising CHATGPT, Grammarly, DeepSeek for their work. It is seen that the purpose of their AI use is to prepare assignments, create short notes. It is seen there is no significant difference in utilising AI in urban and rural areas. The use of AI is increasing day by day because of its user friendliness particularly the its application n regional languages. The teachers also on the other hand are utilising the AI. They are using for preparation of daily notes, teaching plan etc.

5. CONCLUSION AND RECOMMENDATIONS

This research is in tune with (Gavira Durón & Jiménez-Preciado, 2025) institutions of higher learning should concentrate on giving students the AI skills that employers require and bridging the knowledge gap between academic instruction and business demands. It is also necessary that students should concentrate on creating something. They should use AI as the brainstorming tool. It is also necessary that AI generated documents should be avoided at the preparation of the assignments. Like (Jiao et al., 2022), this research also recommends that students' self-evaluation, involvement in discussions, and the instructor's summative assessment should all be taken into account when designing an online course.

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