

Impact of Artificial Intelligence on learning behaviour and employability skills among Undergraduate Students: A study in Bengaluru

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Abstract—Artificial Intelligence has emerged as a transformative technology in higher education, influencing students' learning patterns, academic performance, and employability skills. Various AI-enabled tools and technologies like ChatGPT, Google Gemini, Microsoft Copilot, Grammarly, etc., provide personalized learning, support skill development, and offer feedback. But this advancement has simultaneously triggered debates around unethical practices, overreliance on technologies, and lack of critical thinking. Therefore, this research aimed to analyse the impact of AI on the learning behaviour and employability skills of the undergraduate students of Bengaluru. The study used a descriptive research design, and both primary and secondary data were gathered and scrutinized to reveal insights and draw conclusions. The primary data was collected from 150 respondents using a well-structured questionnaire while secondary data was sourced from publications, reports, and journals. The findings revealed that AI-enabled tools and technologies facilitate effective learning, skill development, and higher employability rates among undergraduates. However, there are fears around plagiarism, misrepresentation of information, and overreliance on these technologies. Therefore, the study recommends that AI literacy and ethical considerations should be integrated into higher education curricula.

Index Terms—Artificial Intelligence, Learning Behaviour, Employability Skills, Higher Education, Undergraduate Students

I. Introduction

The use of Artificial Intelligence is transforming the education system by improving the way students are taught and assessed worldwide, as well as enhancing the way assignments are completed and submitted for teachers' grading and marking. Tools such as ChatGPT, Google Gemini, Microsoft copilot, Grammarly, and other emerging AI innovations can enable learners to gain new knowledge, insights, and summaries, as well as develop their communication and writing skills, improve their writing proficiency, complete assignments and examinations, among other benefits. Consequently, students can learn at their own time and convenience while enhancing their academic achievements.

Several educational institutions have started using AI software and robots to teach, train, and empower learners to receive quality education, acquire new skills and knowledge, as well as enable them to be future-ready through new technological developments. Similarly, the use of AI in teaching can support teachers during instruction, assessment, and feedback to enhance teaching and learning processes, therefore, improving the overall quality of education. However, there are several challenges associated with the use of

AI in education, including dependency on technology, compromising on mental intellectual developments, and ethical concerns.

The UNESCO State of Education Report for India highlights that AI can disrupt education, offer personalized learning experiences, provide access to quality education, as well as promote skills development. However, ethical issues such as responsible AI, digital literacy, equity, and inclusion should be considered in the educational sector to ensure effective implementation and use of AI in education to achieve sustainable development.

In addition, the National Education Policy (NEP) 2020 emphasizes the use of emerging technologies such as Artificial Intelligence (AI) to educate students on time, encouraging them to be creative, innovative, inventors, and acquire adaptive skills. With most organizations adopting AI to revolutionize their operations, it becomes essential to understand how AI will affect students' behaviors, performance, and employability skills. As a result, this study aims to assess the impact of Artificial Intelligence on the learning behaviors of undergraduate students while enhancing their employability skills and highlighting the numerous opportunities and threats associated with the technology.

Recent reports indicate that the job market expects students to not only be proficient in their area of study but also to have knowledge of AI. Various organizations are utilizing AI to perform tasks such as research, presentation, coding, report writing, and data analysis. The World Economic Forum (2025) reported that almost 39% of skills required in the current job market will change by 2030. Thus, there is a need for individuals to constantly update their skills, including technological and interpersonal skills. Those who graduate without technological skills such as AI may be at a disadvantage when compared to other graduates with similar skills but with the addition of AI skills. In India, the Government of Karnataka announced the opening of India's first AI University in July 2026. They are the first state in India to realize the significance of Artificial Intelligence in higher education and skill development. According to the India Skills Report (2026), India had an employability rate of 56.35%. Employers are now considering skills in AI as a key factor in determining the employability of graduates.

II. Statement of the Problem

Although Artificial Intelligence provides a wide range of educational solutions, its growing prevalence has sparked several concerns. Students have started to depend on AI-generated results for their homework, research, and other activities without question and in doing so may have compromised critical thinking, creativity, independent learning, and academic integrity.

This study aims at ascertaining the extent to which artificial intelligence is impacting learning behaviour and employability skills among undergraduate students in Bengaluru. Despite the prevalence of the technology in the higher education landscape today, little is known about its effect on the aforementioned skills in this

population. The study will help in informing the stakeholders on the need to promote or avoid the use of AI in higher education.

III. Review of Literature

The review of literature provides an overview of previous studies related to the impact of Artificial Intelligence on higher education, learning behaviour, and employability skills. It helps identify key findings, research trends, and the existing research gap.

UNESCO (2022) asserted that Artificial Intelligence (AI) could disrupt education by transforming teaching quality, personalizing learning, engaging students, and making education more accessible. The report also revealed that responsible AI entails ethical guidelines, AI literacy, digital inclusion, and regulation to achieve sustainable and equitable AI in education, ensuring that its use is appropriate and does not pose any risks to students. On the other hand, **Chan and Tsi (2023)** argued that AI should be viewed as an educational co-agent, not a substitute for instructors. Their study demonstrated that AI could be used to enhance teaching, offer personalized learning experiences, and reduce teachers' mundane tasks. However, they stressed the need for cultivating human-centric skills, including creativity, critical thinking, emotional intelligence, ethics, and interpersonal relationships, in higher education. The researchers recommended that educators should adopt a human-centered approach tousing AI in education, emphasizing the importance of balancing technology and human interaction in teaching and learning. Improving employability requires strengthening the quality of education, providing up-to-date skills and training to youth, increasing labour-force participation, and creating more employment opportunities. **Keshava (2010)** provides a systematic discussion of fundamental economic concepts that are relevant to understanding the broader dimensions of economic development. The study covers key issues including economic growth, national income, inflation, poverty, unemployment, and public finance, thereby providing a conceptual foundation for analysing economic conditions. It also emphasizes the significance of government policies and economic institutions in addressing developmental challenges and promoting economic stability. The work is therefore useful as a theoretical reference for examining economic issues and understanding their implications within the context of the Indian economy. **Keshava (2022)** argues that India needs to empower its young population with relevant skills and knowledge and improve the quality of its human capital to fully utilize its demographic dividend.

Katsamakos et al. (2024) demonstrated that AI-driven tools could make learning more effective by providing students with individualized feedback, improving academic results, promoting learning research, and helping them learn more efficiently. On the contrary, the researchers warned that relying too much on AI could hinder critical thinking, kill creativity, and impact academic integrity negatively. Therefore, they recommended that institutions should encourage responsible AI use while also fostering human skills,

including creativity, critical thinking, teamwork, and problem-solving, to ensure that students develop holistically.

UNESCO (2026) reported that Artificial Intelligence (AI) is disrupting higher education through enhanced teaching, learning, research, and management processes. The report recommended ethical AI governance, faculty readiness, and inclusion strategies, as well as policy considerations for integrating AI into higher education to maximize benefits. **Isaifan (2026)** asserted that AI has been increasingly used in higher education to foster improved learning, engagement, and efficiency in the academic settings. The study recommended that quality assurance strategies, AI literacy, and governance policies must be emphasized in higher education to achieve the potential benefits of AI while addressing the ethical implications. **Orsava et al. (2026)**, in their work on the scope of AI use in higher education, concluded that AI was widely adopted by undergraduates to enhance their learning, assignments, and overall academic performance. The researchers recommended that AI literacy and critical thinking be emphasized for effective adoption of the technology in higher education while addressing its ethical concerns. **Bariham (2026)** concluded that the use of AI in higher education promotes the development of twenty-first-century skills, such as digital, creative, collaborative, and problem-solving competencies among students. However, universities must invest in enabling students to develop these skills while maximizing the benefits of using AI in learning to enhance employability.

IV. Objectives

1. To assess the awareness level of the tools among the students studying at the undergraduate level.
2. To study the usage of AI in academic learning.
3. To analyse the impact of AI on learning behaviour.
4. To assess AI's influence on employability skills.
5. To identify challenges associated with AI use.
6. To suggest policy recommendations.

V. Research Methodology

The present study follows a descriptive research design to generate an indepth understanding of Artificial Intelligence's (AI) influence on the learning behaviour and employability skills of undergraduate students. The study is conducted in Bengaluru, and the target population is the undergraduate students pursuing their higher education in various colleges and universities. The convenience sampling technique was used, and a total of 150 respondents were selected. The primary data were collected by using a well-structured questionnaire that captured the students' level of AI usage, learning behaviour, and employability skills. Besides the primary data, secondary data were also gathered from various resources,

including UNESCO, UGC, AICTE, Ministry of Education, World Economic Forum, journals, research papers, articles, and books, to have a deeper perspective. Finally, the data were analysed using percentage, mean score, and correlation analysis to interpret the respondent's profile, level of AI usage, perception towards AI usage, and correlation between AI usage, learning behaviour, and employability skills of the respondents.

VI. Data Analysis

The present study utilizes a descriptive research design to examine the effect of Artificial Intelligence (AI) on the learning behavior and employability skills of undergraduate students in Bengaluru. The responses of 150 participants were collected and organized to meet the objectives of the current study. Firstly, the data was edited and coded before analyzing the results. Data analysis was done using percentages and mean scores to reveal major research findings.

Percentage analysis was used to determine the demography of the participants as well as establish the extent to which AI tools are used by the students for academic purposes. Similarly, mean score analysis was utilized to establish the level of agreement among undergraduate students on the effect of AI on their learning behavior and employability skills. Scores with high mean values suggest that participants agreed that AI has a positive effect on their employability skills and learning attitude.

Table 1: AI tools used among undergraduate students

Tool	Percentage
ChatGPT	35.94 %
Gemini	29.49%
Microsoft Copilot	12.90%
Grammarly	21.66%

The data provided in Table 1 above indicate that ChatGPT is the most common AI tool used by undergraduate students for their studies, as 35.94 % of respondents use it for this purpose. Additionally, Table 1 demonstrates that Gemini is the second most common AI tool used by students, as 29.49% of them use it for their studies, whereas Grammarly is the tool that is used the least (21.66%). Microsoft Copilot is only used by 12.90 % of students for their studies, which suggests that it is not as popular as other AI tools. Overall, it can be concluded that the most popular AI tools among students are chatbots, as they can be used in various settings and are convenient to use.

Table 2: Purpose of AI Use among undergraduate students

Purpose	Percentage
Assignments	25.99%
Exam Preparation	23.83%
Doubt Clarification	26.71%
Coding	8.66%
Communication	14.81%

Table 2 presents the students' responses to the question regarding the purpose of using AI in academic settings. It can be inferred from the table that the most common reason for employing AI is doubt clarification which was chosen by 26.71% of the respondents. The secondmost common reason is assignment preparation which was selected by 25.99% of the students. The third reason is related to exam preparation and was chosen by 23.83% of the respondents. Besides, 14.81 % of the students use AI for communication including email writing and improvement. Finally, only 8.66% of the students use AI for coding. Based on the data, it can be concluded that the majority of students use AI for academic purposes to improve their performance.

Table 3: Impact of AI tools on Learning Behaviour among undergraduate students.

Statement	Agree (%)
Saves study time	23.56
Improves concept clarity	22.70
Improves assignments	21.55
Encourages self-learning	19.83
Reduces critical thinking	12.36

The data provided in Table 3 indicate that 23.56 % of respondents believe that AI helps save time while studying, which is the most common advantage. Moreover, 22.70% of the students agree that AI helps

understand the concept better, while 21.55% claimed that it makes the assignments better. In addition, 19.83 % of students believe that using AI tools promotes self-learning. At the same time, 12.36 % of respondents said that relying on AI could limit critical thinking. Thus, it can be concluded that AI has a positive effect on students' learning behaviours; however, it should be used in a moderated way.

Table 4: Employability Skills

Skill	Agree (%)
Communication	20.17
Analytical Skills	19.32
Creativity	17.90
Interview Preparation	21.02
Confidence	21.59

Table 4 presents the information on students' views about the influence of AI on the improvement of soft skills. It can be seen that the biggest percentage of students agreed that AI affects confidence (21.59%). Interview preparation (21.02%) and communication (20.17%) were also viewed positively. Such skills as analytical skills (19.32%) and creativity (17.90%) were also positively perceived by students. Altogether, it can be concluded that AI can make a significant positive change in students' employability skill set.

VII. Discussion and Major Findings

The findings of the study reveal that the level of awareness of Artificial Intelligence among undergraduates towards its application in education was high, with many students reporting using AI for studying, research, assignments, and problem-solving purposes. ChatGPT and Gemini were the most common AI platforms that students used for assignments, learning, research, and problem-solving activities. The study revealed that AI had a positive effect on students' learning behavior, as it improved understanding of concepts, enhanced independent learning, increased productivity and efficiency in completing assignments, and reduced time spent on academic tasks. Similarly, the study found that AI had a positive impact on students' employability by boosting communication skills, critical thinking and problem-solving skills, creativity, digital literacy, and adaptability to modern working environments. These findings align with the results of previous studies by UNESCO (2022), Chan and Tsi (2023), and Katsamakas et al. (2024) on the impact of AI on learning outcomes and employment.

Despite the positive results, the poll also revealed some negative aspects of the AI use and risks that it poses. Many respondents highlighted issues such as plagiarism, inaccuracy of AI results, privacy and ethical concerns, and overreliance on technology that may remove the need for independent thinking or kill individuality and analytical skills. The analysis of open-ended answers also showed that most students are on board with the idea of using AI in higher education. Still, they believe that it should be implemented under certain conditions and rules because AI could become too powerful and fail the ethical testing, making decisions that are not in students' best interest. The study concluded with a statement that Artificial Intelligence has the extraordinary ability to change the higher education for the better by facilitating learning and fostering graduate employability, but it must be accompanied by proper literacy, teacher training, ethical concepts, and institutional policies to ensure that it is not misused, relied on too heavily, and that it complements rather than replaces human ingenuity and intellect.

VIII. Suggestions

Despite the positive outcomes, the study also highlighted several threats. According to the results of the study, colleges and universities should consider including AI literacy courses as part of undergraduate studies to help students acquire the needed skills and knowledge about Artificial Intelligence. Additionally, policymakers should come up with guidelines and develop policies regarding the responsible and ethical use of AI in higher education. In this way, institutions can ensure integrity and avoid misusing AI in their academic activities. Moreover, lecturers need to ensure that students are encouraged to engage in project-based, experiential, and collaborative activities instead of relying on AI to complete their tasks. This will ensure that students retain their critical thinking and problem-solving skills while engaging in research activities using AI. Lastly, colleges and universities should invest in training lecturers on how to use AI in teaching students. Policymakers should also create guidelines and ethical frameworks around the use of AI in higher education.

IX. Conclusion

Artificial intelligence has become an integral part of higher education, helping students enhance their learning capabilities and skills. The research results on the benefits of artificial intelligence in education proved that it contributes to personalized learning, academic achievement, productivity, and the development of workforce competencies, such as digital proficiency, communication, creativity, and problem-solving. The study revealed that artificial intelligence is increasingly integrated into the learning process of undergraduate students, making it an essential component of modern education. At the same time, the article suggests that there are ethical and responsible issues associated with the rampant use of artificial intelligence in education, such as academic integrity, data privacy, plagiarism, and reduced intellectual capabilities. Thus, the educational sector needs to invest in artificial intelligence literacy programs for faculty and students to ensure that they use this technology responsibly and ethically. To

conclude, artificial intelligence should be considered an essential educational tool that supports and complements traditional learning methods. By combining innovative educational technologies and critical thinking and being aware of the ethical and responsible issues surrounding artificial intelligence, higher education institutions will be able to produce competent and resilient graduates. As artificial intelligence continues to develop in India and around the globe, the need for AI-savvy professionals who can make the most of this ground breaking technology will grow even more.

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