# Examining the Ethical Implications of AI in Higher Education: A Student Perspective

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| ARTICLE DETAILS | ABSTRACT |
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The study emphasizes the significance of continuous exploration into the long-term impact of artificial intelligence (AI) on learning processes, critical thinking abilities, and knowledge retention. It also underscores the importance of aligning AI integration with broader sustainability principles in education, considering its potential to enhance or hinder sustainable learning practices. This research is a foundation for future studies and policy discussions on AI's role in higher education, advocating for collaborative efforts to develop AI-enhanced learning environments that are effective, ethical, inclusive, and aligned with long-term educational objectives. Findings reveal widespread adoption of AI tools among students, with usage patterns differing based on academic discipline and level. While students recognize AI's efficiency and potential advantages, concerns remain regarding its influence on learning quality and academic integrity. The study highlights the necessity of a balanced approach to AI integration in education, ensuring its educational benefits and ethical considerations are addressed. This in-depth research explores AI tool usage trends, student attitudes, and perceptions within private degree institutions, emphasizing sustainable learning in higher education. A structured questionnaire was distributed to 80 participants from four different streams of academic backgrounds to evaluate multiple dimensions of AI tool utilization. Statistical analyses, including

ANOVA, were conducted to test hypotheses related to variations in AI tool usage across different academic levels and fields of study. The research underscores the importance of ongoing investigation into AI's long-term effects on learning processes, critical thinking skills, and knowledge retention. It also highlights the necessity of aligning AI integration with broader sustainability principles in education, considering its potential to contribute to or detract from sustainable learning practices. This study provides a foundation for future research and policy discussions on AI's role in higher education, calling for collaborative efforts to create AI-enhanced learning environments that are effective, ethical, inclusive, and aligned with long-term educational goals.

## Introduction

The study's focus on undergraduate students of Degree College, while providing depth in a specific context, limits the generalizability of the findings. Educational systems, students' attitudes toward technology, and access to AI tools can vary significantly across different streams in a private college. As a result, the patterns and perceptions observed in this undergraduate students sample may not accurately reflect those of students in the college. Moreover, the study may overlook important cross-stream differences in AI adoption and attitudes. Educational policies and technological infrastructure can significantly influence how students perceive and utilize AI tools.

Additionally, the research could benefit from exploring the potential long-term implications of AI usage on students' learning outcomes, critical thinking skills, and academic integrity. These aspects are crucial for understanding the full impact of AI integration in education and developing appropriate policies and guidelines. Lastly, the study could be enhanced by incorporating perspectives from educators and institutions, providing a more comprehensive view of the AI landscape in higher education. A structured questionnaire was designed to collect quantitative data. Analyzing this collected data, we explored three key aspects: usage patterns, attitudes, and perception. We examined the types of AI tools students utilize in their academic work and how frequently they use them.

Additionally, we observed when and where undergraduate students use AI technologies and assessed their familiarity with these tools. Our analysis further included students' perceptions regarding the results

provided by AI tools, paying close attention to their level of trust and any potential concern associated with AI usage. The insight gained from our literature review informed the research design and lightened gaps in understanding AI tools used among undergraduate students.

## Review of Literature

1. **Ladda and Saraf (2019)** examined the current applications of AI and its impact on the academic landscape in their paper Artificial Intelligence: Its Impact on Higher Education, published in the Journal of Emerging Technologies and Innovative Research. Their research highlights how AI is already being integrated into higher education and discusses potential future developments. Additionally, the study addresses the opportunities AI presents, as well as the challenges institutions may face in adopting these technologies.

2. **Gera and Chadha (2021)** conducted a systematic review of 29 peer-reviewed studies on AI in higher education from 2000 to 2020, using the PRISMA approach. Their analysis revealed a concentration of research in regions like the USA, Taiwan, and China, with a peak in publications during 2017–2020. Common themes included machine learning applications such as decision trees, prediction models, cognitive assessment, and learning analytics. The authors recommend broadening the geographical scope and exploring advanced algorithms like Bayesian and fuzzy logic for future research.

3. **Sandu and Gide (2019)** explored the adoption of AI-powered chatbots in Indian higher education to enhance student learning. Using quantitative survey data from leading institutions, the study highlights the potential of chatbots to improve communication, teaching support, and engagement. The findings aim to guide developers and educators in creating more effective, student-centred chatbot platforms.

4. **Bhatnagar, Khanna, and Rana (2021)** examined the role of AI-enabled digital learning tools in addressing VUCA (Volatility, Uncertainty, Complexity, Ambiguity) challenges within Indian higher education. The study emphasizes the need for strategic investment, training, and public-private collaboration to fully realise the potential of AI-powered platforms in line with the goals of the National Education Policy 2020.

5. **Jatwani, Tomar, and Dhingra (2021)** reviewed government initiatives promoting AI-driven digital education in Indian higher education. Highlighting efforts by the MHRD, the study discusses how AI can enhance teaching by automating cognitive tasks and supporting the transition toward a digitally empowered education system.

6. **Sahai, Khattar, and Goel (2021)** conducted a systematic review on the role of AI in addressing educational challenges in Indian higher education. Using survey data, the study highlights the transformative potential of AI in universities, while noting a decline in AI awareness and the need for broader technological literacy.

7. **Kasinathan (2020)** explored the potential impact of AI on educational processes and outcomes in India, emphasising the importance of ethical, inclusive, and rights-based development. Based on interviews with education experts and organisations, along with desk research by IT for Change, the study highlights the need for responsible AI policy frameworks to support equitable education.

8. **Roy (2020)** analysed the growing role of AI in the Indian education system, highlighting its potential to automate tasks, personalise learning, and enhance interactivity. The study also examined the relationship between gender and awareness of AI, as well as perceptions of its impact on transforming education in India.

9. **Devassy et al. (2023)** developed and tested an Immersive Learning Framework (ILF) aimed at enhancing key personal attributes in postgraduate students. The study found significant improvements in well-being, trustworthiness, willpower, altruism, and independence, though no notable effect on depression.

10. **Kataria, Mishra, and Lalwani (2020)** explored the strategic integration of AI with traditional teaching methods in India to enhance educational equity and lifelong learning. Based on survey data from students and teachers in Mumbai, the study highlights the need for institutional support and teacher readiness to adopt AI in education.

## Statement of Problem

The rapid integration of Artificial Intelligence (AI) into academic and social environments has significantly transformed how undergraduate students engage with learning and technology. While there is a high level of awareness and usage of AI tools among students, this growing dependence raises critical concerns. The lack of regulatory frameworks, fears of AI replacing human educators and jobs, and the potential erosion of essential cognitive skills such as critical thinking and independent analysis pose serious challenges. Despite educational institutions making efforts to adapt to the AI revolution, the balance between technological advancement and its ethical, educational, and psychological implications remains uncertain. Therefore, it is essential to investigate students' perceptions, usage patterns, and concerns regarding AI to inform policies that ensure responsible integration, safeguard educational integrity, and promote human-AI coexistence in academic settings.

## Objectives of the Study

1. To examine the impact of artificial intelligence (AI) tools on undergraduate students' learning abilities and problem-solving skills in private degree colleges.

2. To evaluate how AI tools influence these students' critical thinking development.

## Research Methodology

The study adopts a descriptive survey research design, which is particularly well-suited for capturing students' diverse perceptions and experiences of AI tools. This design facilitates an in-depth understanding of how students perceive the influence of AI on their learning abilities, problem-solving skills, and critical thinking. By gathering quantitative data through a structured questionnaire, the research aims to uncover meaningful trends and relationships that may inform future pedagogical practices and policy decisions concerning AI integration in higher education. The research was conducted at Sri Vidyaniketan Degree College, a reputed institution affiliated with Koppal University, Karnataka. Koppal University, officially established by the Government of Karnataka in 2022, provides a dynamic academic environment conducive to studying the evolving role of technology in education. The college offers a range of undergraduate programs, making it a fitting context for this investigation.

The study focused on undergraduate students in B.Com, BBA, B.Sc, and BCA programs. A stratified sampling method was employed to ensure a balanced representation. Twenty students were selected from each stream, resulting in a total sample size of 80 students. The participants were drawn from the second and fourth semesters, offering perspectives from students at varying stages of their academic journey. This sampling technique ensured a diverse yet structured respondent pool, enhancing the validity of the study's findings.

## Data Analysis and Interpretation

### Table 1: Gender of Students

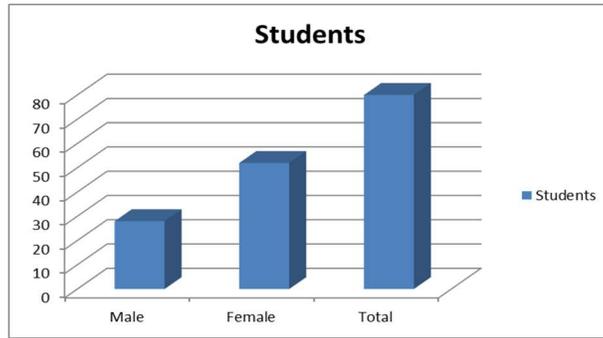| Gender | Students | Percentage (%) |
|---|---|---|
| Male | 28 | 35 |
| Female | 52 | 65 |
| **Total** | **80** | **100** |

**Source:** Primary data

Table 1 presents the demographic breakdown of the respondents, highlighting the gender distribution. Among the 80 participants, 52 (65%) were female, and 28 (35%) were male. This indicates a higher representation of female respondents in the study.

**Table 2: Classification of different streams of Students**

| Students Classification | | | | | |
|---|---|---|---|---|---|
| Gender | B.com | B.Sc | BBA | BCA | Total |
| Male | 8 | 6 | 7 | 7 | 28 |
| Female | 12 | 14 | 13 | 13 | 52 |
| Total | **20** | **20** | **20** | **20** | **80** |

**Source:** Primary data
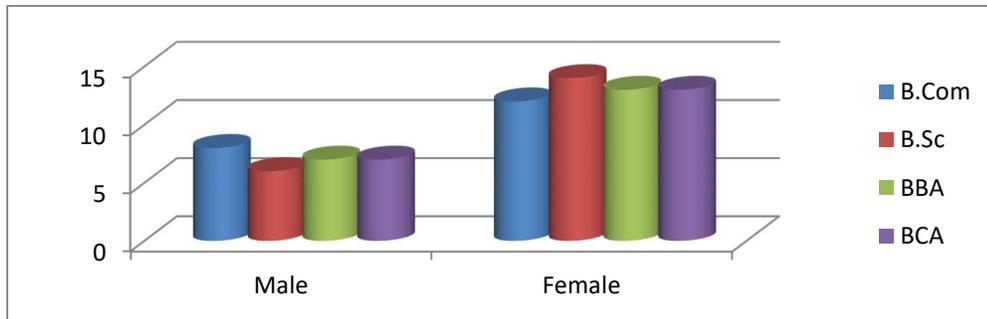


The sample consisted of 80 students from four streams B.Com, B.Sc, BBA, and BCA, with 20 students from each stream. The gender distribution revealed a female dominance, with 52 female students (65%) and 28 male students (35%). The breakdown by stream was as follows: (12 females, 8 males),(14 females, 6 males), BBA (13 females, 7 males), and BCA (13 females, 7 males), respectively.

**Table 3: Students about the Awareness Level of Readers**

| SI NO | Questions | Yes | No | Total | (%) of Y | (%) )of No |
|---|---|---|---|---|---|---|
| | | | | | | |

| | | | | | e s | |
|---|---|---|---|---|---|---|
| 1 | Have you heard of Artificial Intelligence (AI)? | 80 | 0 | 80 | 100 | 0 |
| 2 | Do you use AI-powered social media platforms? | 67 | 13 | 80 | 83.75 | 16.25 |
| 3 | Have you used any AI tools for academic purposes? | 75 | 5 | 80 | 93.75 | 6.25 |
| 4 | Do you think AI can improve the quality of higher education? | 77 | 3 | 80 | 96.25 | 3.75 |
| 5 | Are universities adequately preparing students for the AI revolution? | 64 | 16 | 80 | 80 | 20 |
| 6 | Are there any regulations required for the development and use of AI? | 56 | 24 | 80 | 70 | 30 |
| 7 | Use of AI to improve mental health and well-being? | 52 | 28 | 80 | 65 | 35 |
| 8 | Do you think AI will eventually replace human teachers? | 45 | 35 | 80 | 56.25 | 43.75 |
| 9 | Do you believe AI will replace human jobs in the future? | 60 | 20 | 80 | 75 | 25 |
| 10 | Do you believe AI will significantly dominate the world in the education sector? | 55 | 25 | 80 | 68.75 | 31.25 |
| 11 | Do you feel AI will significantly impact your future career? | 66 | 14 | 80 | 82.5 | 17.5 |
| 12 | Do you have any concerns about the use of AI in higher education? | 64 | 16 | 80 | 80 | 20 |
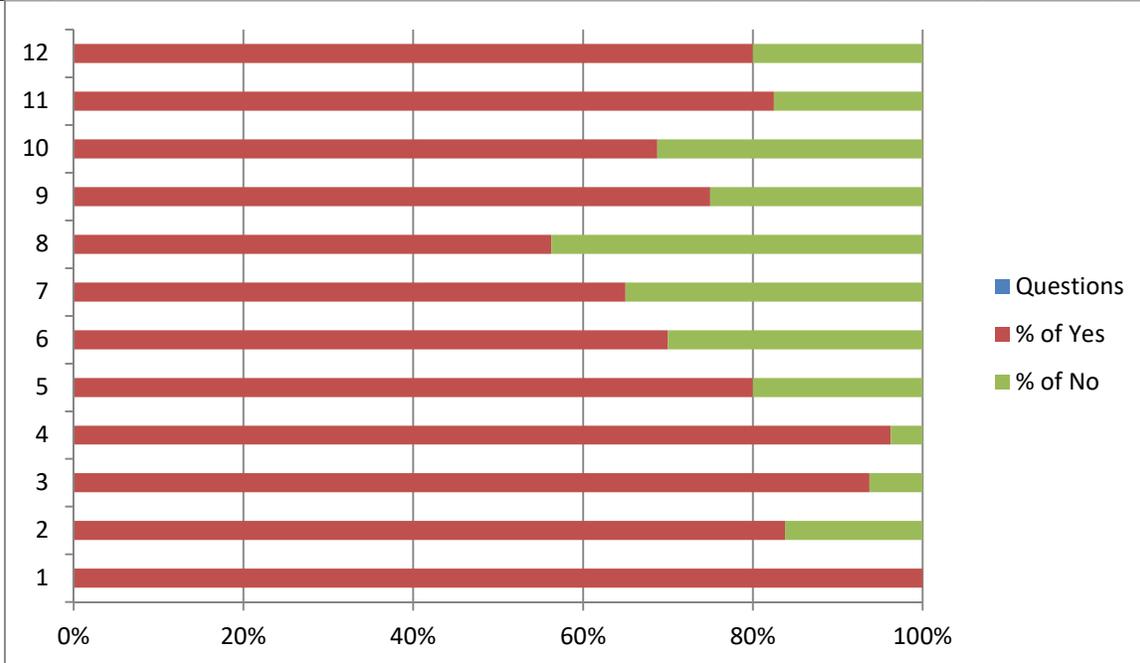


**Students' attitudes towards AI tools (*N* = 80).**

The survey results revealed notable insights into students' perceptions of AI. All respondents (100%) were familiar with AI and its common use among peers. A significant majority reported using AI-powered social media platforms (84%) and utilizing AI tools for academic purposes (94%). Most students believed AI can enhance higher education quality (96%), and a substantial proportion thought universities were adequately preparing students for the AI revolution (80%). Additionally, 70% advocated for AI regulations, and 65% saw potential benefits for mental health and well-being. Students were divided on AI replacing human teachers (56% agreed), but many expected AI to replace human jobs (75%), dominate education (69%), and impact their future careers (82%). Lastly, 80% expressed concerns about AI's use in higher education.

**Table: 4: How often do you use AI tool**

| Criteria | Not at all | Infrequently | Occasionally | Regularly | Frequently | Total |
|---|---|---|---|---|---|---|
| Response | 3 | 4 | 38 | 23 | 12 | 80 |
| In (%) | 4 | 5 | 48 | 29 | 14 | 100 |

**Sources:** Primary data collected
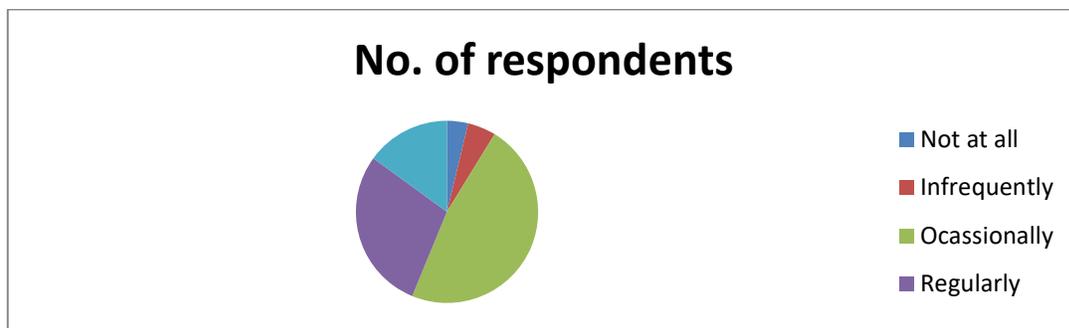


The survey results (Table 13) indicate the frequency of AI tool usage among students. The majority (48%) reported occasional use, followed by regular use (29%), frequent use (14%), infrequent use (5%), and non-use (4%). These findings provide insight into students' AI tool utilisation patterns.

**Table: 5: To what extent do you use AI tools for student work?**

|   | Extent of Usage | Response | Average(%) |
|---|---|---|---|
| a | I use AI tools to complete an assignment and then turn it in as it is, with no edits | 11 | 14 |
| b | I use AI tools tool to complete an assignment but revise as needed | 18 | 22 |
| c | I use AI tools for some part of an assignment but complete majority myself | 46 | 58 |
| d | I do not use AI tools for students work | 5 | 6 |
|   | Total | 80 | 100 |

**Sources:** Primary data collected

## No of respondent
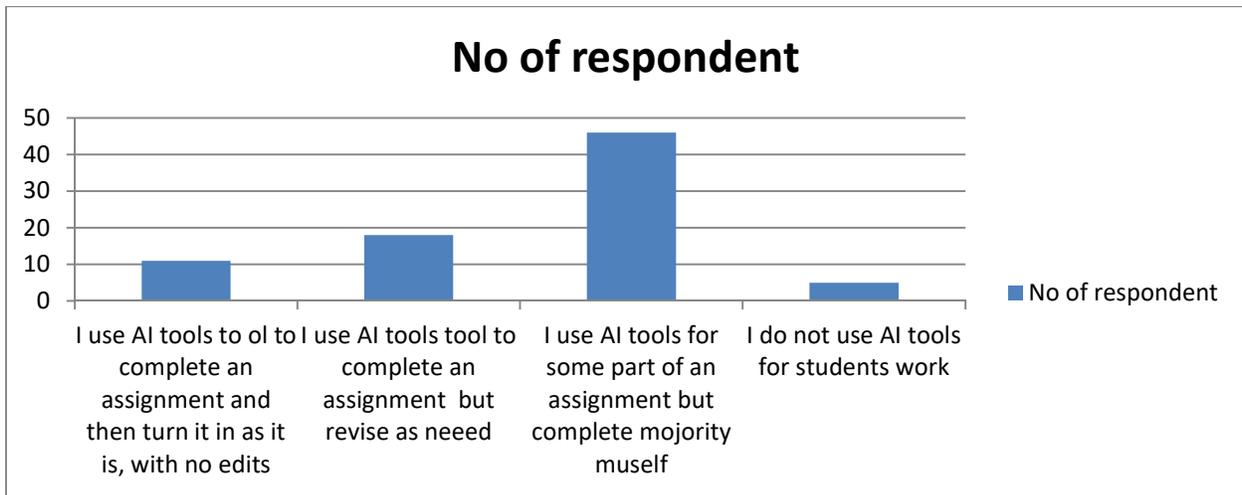


According to Table 5, students' usage of AI tools for assignments varies. The majority (58%) reported using AI tools for specific parts of an assignment, while completing the majority of the work themselves. Additionally, 22% of students use AI tools to complete assignments, revising as needed, and 14% use AI tools to complete assignments without making any edits. A smaller proportion (6%) indicated that they do not use AI tools for academic work. These findings highlight diverse approaches to AI tool integration in academic tasks.

**Table -6: With which AI tool you are most familiar and you found it easy and useful**

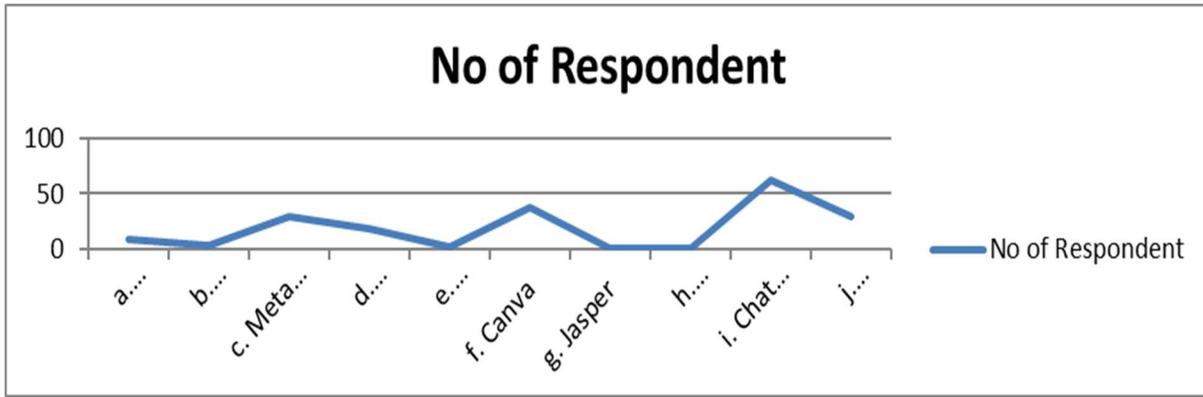| AI Tools | No of Respondent | Average(%) |
|---|---|---|
| a. Grammarly | 9 | 4.6 |
| b. Duolingo | 4 | 2.1 |
| c. Meta AI | 30 | 15.5 |
| d. Google Lens | 18 | 9.3 |
| e. Midjourney | 2 | 1.0 |
| f. Canva | 37 | 19.1 |
| g. Jasper | 1 | 0.5 |
| h. Pictory AI | 1 | 0.5 |
| i. Chat GPT | 62 | 32.0 |
| j. Jemini AI | 30 | 15.5 |

**Sources:** Primary data collected

Table 6 presents the familiarity of students with various AI tools. The survey results indicate that ChatGPT is the most familiar and useful AI tool, chosen by 32% of students. Canva follows with 19%, while 15% of students are familiar with both Gemini AI and Meta AI. Google Lens is familiar to 9% of students. Other AI tools, including Grammarly, Duolingo, Midjourney, Jasper, and Pictory AI, each garnered less than 5% of the responses. These findings highlight the varying levels of familiarity with AI tools among students.

**Table 7: How many AI tools have you used?**

| Categories | Student Response |
|---|---|
| a. One AI tool | 9 |
| b. Two AI tool | 26 |
| c. Three AI tool | 14 |
| d. Four AI tool | 11 |
| e. Five AI tool | 9 |
| f. Six AI tools | 11 |
| g. Zero to all | 0 |
| Total | 80 |

**Sources:** Primary data collected
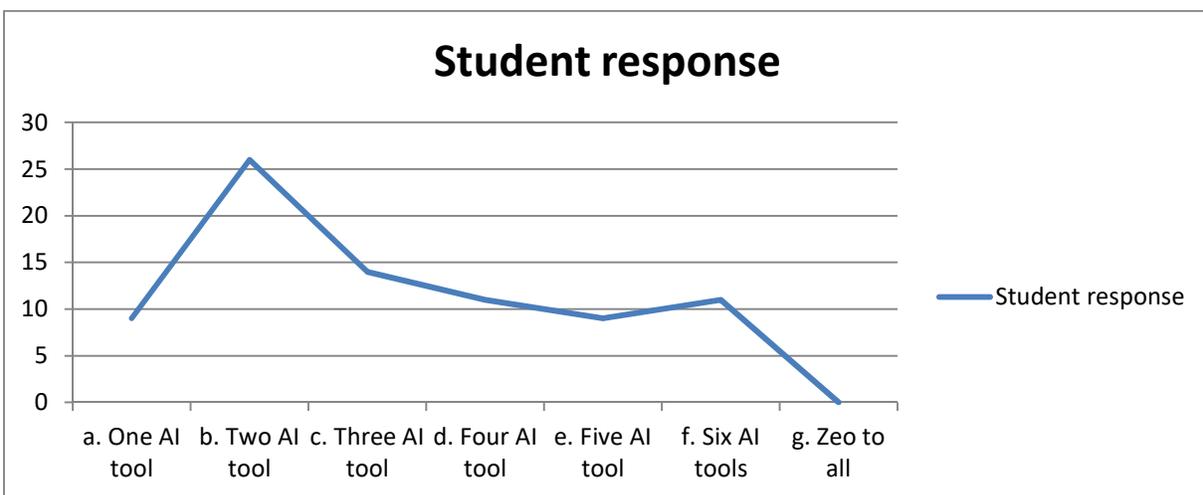
According to Table 7, the survey results reveal the number of AI tools currently used by students. The findings indicate that 26 students utilize 2 AI tools, 14 students use 3 AI tools, and 11 students use 4-6 AI tools. Additionally, 9 students reported using 5 AI tools, and 9 students use only 1 AI tool. Notably, none of the students reported using all available AI tools. These results provide insight into the scope of AI tool adoption among students.

**Table 8:  What is your level of trust in the accuracy and reliability of AI tools for academic purposes?**

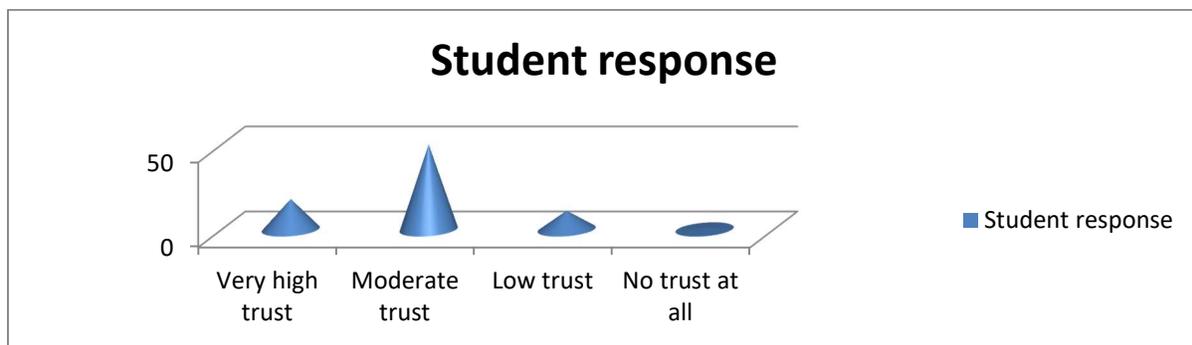| Classification | Student Response | Average(%) |
|---|---|---|
| a) Very high trust | 18 | 22 |
| b) Moderate trust | 50 | 63 |
| c) Low trust | 11 | 14 |
| d) No trust at all | 1 | 1 |
| Total | 80 | 100 |

**Sources:** Primary data collected



Table 8 presents the level of trust and reliability students have in AI tools. The results show that the majority (63%) exhibit moderate trust, while (18%) students express very high trust. In contrast, (14%) students have very low trust, and only (1%) respondent reported having no trust at all in AI tools. These findings indicate varying levels of confidence in the reliability of AI tools among students.

**Table 9:  How do you feel about the ethical implications of using AI tools in your academic work?**

| Questions asked | Student Response | Average(%) |
|---|---|---|
| a) I believe AI tools are ethically acceptable | 20 | 25 |
| b) I have some concerns but think they are acceptable | 30 | 38 |
| c) I have strong concerns about their ethics | 14 | 17 |
| d) I think AI tools should not be used ethically | 16 | 20 |
| Total | 80 | 100 |

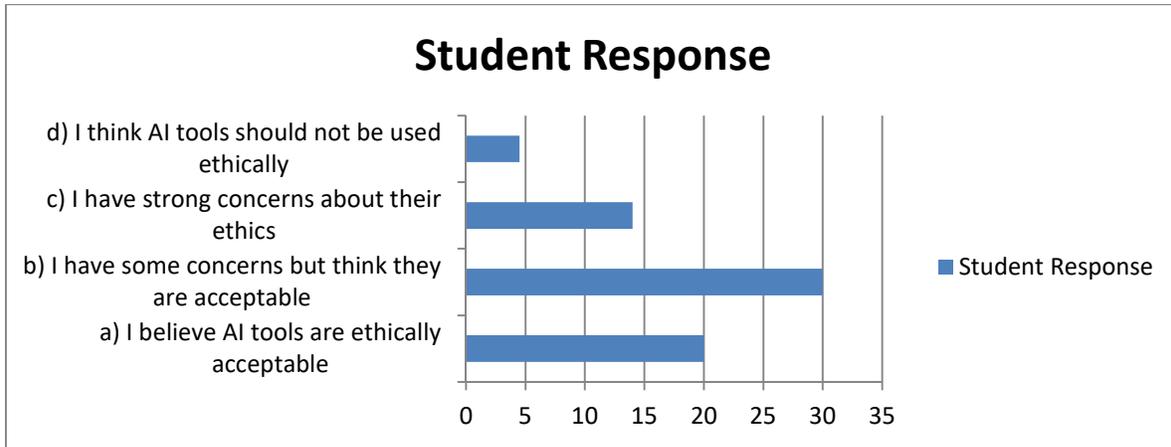**Sources:** Primary data collected

Table 9 presents students' perspectives on the ethical implications of using AI tools in academic work. The results indicate that (38%) students have some concerns but consider AI tool usage acceptable. Additionally, (25%) students believe AI tools are ethically acceptable, while (20%) students think AI tools should not be used due to ethical concerns. Furthermore, (17%) students expressed strong concerns about the ethics of AI tool usage. These findings highlight diverse views on the ethical implications of AI tool integration in academia.

**Table – 10: Do you believe AI tools can help improve your critical thinking and problem-solving skills?**

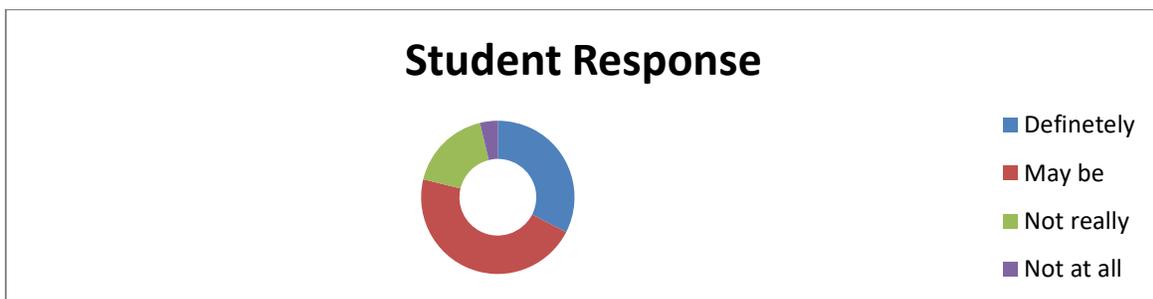| Classification | Student Response | Average(%) |
|---|---|---|
| a)    Definitely | 26 | 32 |
| b)    Maybe | 37 | 46 |
| c)     Not really | 14 | 18 |
| d)    Not at all | 3 | 4 |
| Total | 80 | 100 |

**Sources:** Primary data collected



Table 10 presents students' beliefs about the potential of AI tools to enhance critical thinking and problem-solving skills. The results show that (46%) students believe AI tools may be helpful, while (32%) students are more definitive, stating that AI tools are indeed helpful. In contrast, (18%) students are skeptical, indicating that AI tools do not really contribute to improving these skills, and (4%) students believe they

are not useful at all. These findings highlight varying perspectives on the role of AI tools in developing critical thinking and problem-solving abilities.

**Table – 11: Which skill is most at risk of decline due to excessive use of AI in academic work?**

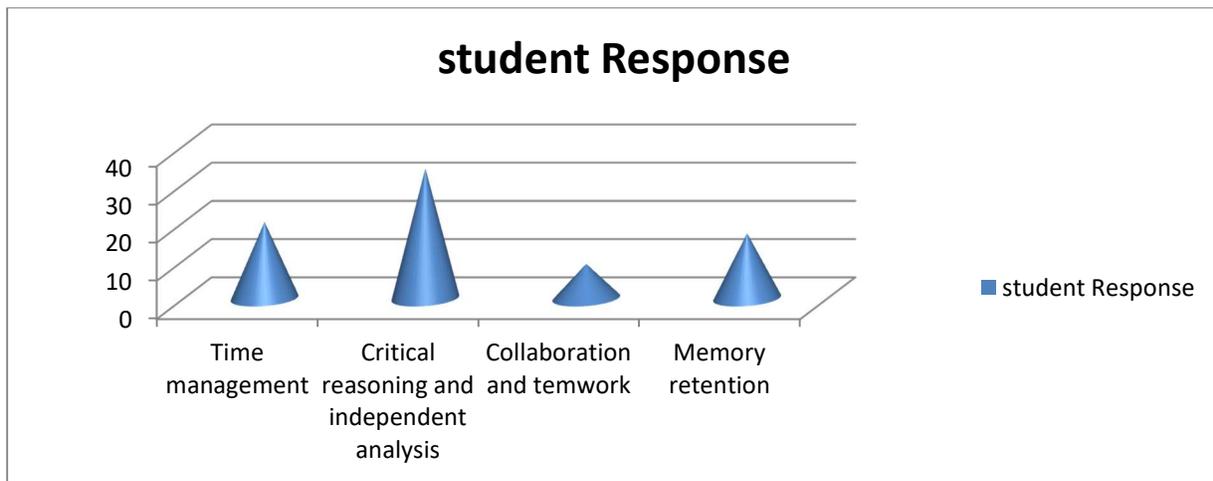| Classification | Students Response | Average(%) |
|---|---|---|
| a) Time management | 20 | 25 |
| b) Critical reasoning and independent analysis | 34 | 43 |
| c) Collaboration and teamwork | 9 | 11 |
| d) Memory retention | 17 | 21 |
| Total | 80 | 100 |

**Sources:** Primary data collected



Table 11 presents students' perceptions of the skills most at risk of decline due to excessive AI use in academic work. According to the results, (43%) students believe critical reasoning and independent analysis are at risk, while (25%) students identify time management as a high-risk area. Additionally, (21%) students think memory retention is most vulnerable, and (11%) students believe collaboration and teamwork are at high risk. These findings highlight students' concerns about the potential impact of AI overreliance on various skills.

## Findings of the Study

The research offers important insights into undergraduate students' awareness, usage, and perceptions of Artificial Intelligence (AI), along with their concerns regarding its impact on education and employment:

1. The study involved 80 undergraduate students, with equal representation from four academic streams: B.Com, B.Sc., BBA, and BCA (20 students each). The sample consisted of 52 female and 28 male participants.

2. All participants (100%) reported being aware of AI. A significant majority (84%) use AI-integrated social media platforms. Most students (94%) utilize AI tools for academic purposes.

3. 80% of respondents believe that colleges and universities are adequately preparing students for the AI revolution, reflecting a generally positive perception of the educational system's responsiveness to technological advancements.

4. 70% of participants support the establishment of a regulatory body to oversee AI tool usage. 56% believe that AI may eventually replace human teachers.

5. 75% anticipate that AI could potentially replace most jobs in the near future.

6. A large proportion (80%) expressed concern about the overuse of AI in higher education.

7. These concerns raise important questions about the implications for student learning, academic integrity, and the overall quality and efficiency of education when AI tools are heavily relied upon.

8. Approximately 47% of respondents felt that AI use does not contribute to the development of critical thinking or problem-solving skills.

9. A small but noteworthy 3% identified critical reasoning and independent analysis as the most vulnerable cognitive skills under the influence of AI.

10. These concerns highlight the importance of further research into the long-term cognitive and educational impacts of AI dependency.

Overall, the findings underscore both the high level of AI adoption among students and their nuanced views on its benefits and drawbacks. The results suggest a growing need for balanced AI integration, accompanied by ethical regulations and strategies to preserve essential cognitive skills in educational settings.

**Conclusion**

This study provides a nuanced understanding of how undergraduate students perceive and interact with artificial intelligence (AI) across academic and personal spheres. With a well-distributed sample representing key academic disciplines and a majority of female participants, the findings offer a balanced cross-sectional view. The most striking insight is the universal awareness and widespread use of AI, highlighting students' adaptability and readiness to embrace emerging technologies. While there is strong appreciation for educational institutions' efforts to integrate AI, the research also brings to light critical concerns. A significant portion of students advocate for regulatory oversight, expressing fears that AI may eventually displace educators and reshape the job market. Additionally, there is a growing apprehension that overreliance on AI could erode essential cognitive skills like critical thinking and independent

reasoning. These concerns underscore the importance of thoughtful and ethical integration of AI into the educational system. As AI continues to evolve, institutions, policymakers, and developers must work together to ensure it serves as a tool for enhancement rather than replacement. Promoting responsible usage, implementing clear ethical guidelines, and fostering digital literacy will be key to harmonizing AI with human learning and development.

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