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CHALLENGES AND OPPORTUNITIES: STUDENTS' EXPERIENCES WITH AI TOOLS

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Abstract

The increasing integration of artificial intelligence (AI) tools in education has transformed how students learn, research, and complete academic tasks. While AI-powered applications offer significant benefits such as instant information access, personalized learning support, and improved productivity, students also face several challenges in using these tools effectively. One major challenge is the over-reliance on AI, which can reduce critical thinking, problem-solving abilities, and independent learning skills. Another concern is the accuracy and reliability of AI-generated content, as these tools may sometimes provide outdated, biased, or incorrect information. The results show that ChatGPT is the most popular AI tool, followed closely by Perplexity, which is a strong competitor with a high acceptance rate. Microsoft Copilot is the least popular, followed by Grammarly, and QuillBot and Claude are in the middle. It seems that most of the students agree that using AI tools causes problems like lack of creativity, less human interaction, fewer jobs, copyright issues, poor data quality, and too much reliance on technology.

Keywords: Challenges-Students-AI Tools-Technology

Introduction

Artificial Intelligence (AI) tools are rapidly transforming the educational landscape by offering new ways of teaching, learning, and academic support. From intelligent tutoring systems and automated assessment platforms to personalized learning assistants and chat-based academic tools, AI is reshaping how students access knowledge and interact with educational content. While these technologies present significant opportunities for enhancing learning efficiency and engagement, they also introduce a range of challenges that influence students' overall academic experiences. On one hand, AI tools provide numerous benefits, including personalized learning pathways, instant feedback, improved accessibility to learning resources, and enhanced academic support outside the classroom. These features help students learn at their own pace and improve understanding of complex concepts. On

the other hand, students may face challenges such as unequal access to digital devices, limited digital literacy, over-reliance on AI-generated content, and concerns about data privacy and academic integrity. Additionally, technical issues and lack of institutional guidance can further affect the effective use of AI tools. Understanding both the positive and negative aspects of AI integration in education is essential for creating an inclusive and balanced learning environment. This study aims to explore students' experiences to better understand how AI tools can be effectively utilized while addressing existing challenges in higher education.

Review of Literature

AlBlooshi (2026) explains that artificial intelligence tools in higher education are transforming learning by providing real-time feedback, personalized instruction, and academic support systems. These tools improve learning efficiency and help students understand complex concepts more effectively. **Attewell (2025)** reports that student engagement with AI tools has increased significantly, with learners mainly using them for summarization, assignment assistance, and idea generation. However, usage levels differ based on digital literacy and institutional support. **Aguado-García et al. (2025)** identify that one of the major challenges of AI use in education is academic integrity, as students may rely excessively on AI-generated content, raising concerns about plagiarism and fairness. **Chen et al. (2025)** argue that overdependence on AI tools may negatively impact students' critical thinking and independent problem-solving skills, creating long-term learning concerns. **Lodhi and Shoaib (2025)** emphasize that digital inequality and data privacy concerns remain significant barriers, as not all students have equal access to AI tools or trust in how their data is used. **Ocen et al. (2025)** highlight that AI-based learning environments promote adaptive learning, where content is customized according to student performance, thereby improving academic outcomes and skill development. **Eaton (2023)** warns that excessive dependence on AI tools may lead to reduced critical thinking and problem-solving skills among students. **Williamson and Eynon (2020)** emphasize that AI tools raise concerns regarding plagiarism, over-reliance on AI-generated content, and academic honesty. **Zawacki-Richter et al. (2019)** found that AI-powered systems such as intelligent tutoring tools improve academic assistance outside classrooms, especially in large-scale higher education settings.

Statement of the Problem

The integration of Artificial Intelligence (AI) tools in education has introduced new opportunities for enhancing learning experiences. However, students face significant

challenges in effectively using these tools, which limits their potential benefits. These challenges highlight a pressing need to understand the barriers hindering students' engagement with AI tools and the underlying factors contributing to these obstacles. Critical issues include limited digital literacy, unequal access to necessary technology, ethical concerns surrounding data security, and insufficient training for effective utilization of AI tools. Socio-economic disparities further exacerbate these challenges, leaving some students unable to fully benefit from AI-driven educational innovations. While AI tools hold the promise of fostering inclusive and personalized learning environments, student feedback indicates barriers such as technical complexities, lack of institutional support, and trust issues related to AI algorithms and data usage. In this context, the research seeks to address the following questions: What is the socio-economic profile of the students using AI Tools? What are the common challenges faced by students in using AI tools? and What are the factors that significantly influence the level of issues for AI Tools?

Objectives

To find out the solution for the questions raised above, the following objectives have been framed.

- To know the socio-economic profile
- To identify the challenges faced by students in using AI tools
- To ascertain the variables that are associated with the level of issues in using AI Tools

Methodology

The study is based on primary data collected using google form from students using AI tools. It contains questions relating to the socio-economic profile and challenges faced by students in using AI tools. A sample of 150 students residing in Pollachi Taluk has been selected by adopting convenience sampling method. Simple Percentage, Friedman Rank Test and Chi-square test have been used to analyse the data.

Findings

The findings of this study are organized into four main sections namely the socio-economic profile of the student students, types of AI tool used, challenges faced by students in using AI tools and the variables that are associated with the level of challenges in using AI Tools.

(i) Socio-Economic Profile

- Most 73(48.7%) of the students are residing in urban area

- Majority 100(66.6%) of the students belong to the age group of above 18 years
- Majority of the students 122(81.3%) are unmarried
- Most of the students 62(41.3%) are under graduates
- Majority of the students 93(62%) monthly family income is up to Rs.50,000
- Majority 93(62%) of the students are from nuclear family
- Most of the students 61(40.7%) receive less than Rs.200 as pocket-money per month.
- Majority 104(69.3%) of the students have up to two earning members in the family
- Most of the students 59(39.3%) use AI tools weekly
- Most of the students, 69(46%) are comfortable while using AI tools
- Majority77(51.3%) of the students use Chrome to access AI tools
- Majority 93(62%) of the students have not subscribed for AI tools
- Most 51(34%) of the students have faced issues occasionally while using AI
- Most of the students 86(57.3%) came to know about AI tools through online research
- Most 68(45.3%) of the students are using mobile for using AI tools

(ii) Type of AI Tools - Friedman Rank Test

AI tools like ChatGPT, Grammarly, QuillBot, Microsoft Copilot, Perplexity and Claude are widely used for writing, research, and productivity. This study uses mean ranking to evaluate their performance, where a lower mean score indicates higher preference.

Table: 1

Types of AI Tools – Friedman Rank Test

AI Tools	Mean ranking	Rank
Chat GPT	1.79	I
Grammarly	4.73	V
Quillbot	3.17	III
Microsoft Copilot	4.90	VI
Perplexity	2.70	II
Claude	3.71	IV

The results show that ChatGPT is the most popular AI tool, with a mean score of 1.79, making it the best choice. Perplexity comes in second place as a strong competitor, with a high acceptance rate. QuillBot and Claude come in the middle, with average performance. Microsoft Copilot is the least popular, while Grammarly is ranked lower. Overall, the results clearly show that ChatGPT is the most popular tool, followed by Perplexity. The other tools are only moderately or not at all popular.

(iii) Challenges Faced in Using AI Tools

The table below shows the classification of students based on the level of issues faced in using AI Tools

Table:2

Challenges Faced in Using AI Tools

Issues	Strongly Agree	Agree	Disagree
High Cost	86 (57.33%)	51 (34.00%)	13 (8.67%)
Privacy Concerns	57 (38.00%)	63 (42.00%)	30 (20.00%)
Reduces Human Interaction	69 (46.00%)	55 (36.67%)	26 (17.33%)
Security Risk	64 (42.67%)	60 (40.00%)	26 (17.33%)
Reduces Human Employment	74 (49.33%)	63 (42.00%)	13 (8.67%)
Lack of Creativity	68 (45.33%)	67 (44.67%)	15 (10.00%)
Technology Overdependence	67 (44.67%)	61 (40.67%)	22 (14.67%)
Data Quality Issues	87 (58.00%)	34 (22.67%)	29 (19.33%)
Copyright Infringement	65 (43.33%)	61 (40.67%)	24 (16.00%)
Lack of Awareness	83 (55.33%)	49 (32.67%)	18 (12.00%)

The results show that AI users most strongly feel that high costs (57.33%) and poor data quality (58.00%) are problems. A large number of users (55.33%) say they don't know enough about AI, and 49.33% say they are worried that AI will take jobs away from people. There are moderate concerns about privacy issues (38% strongly agree, 42% agree) and less human interaction, which shows mixed but strong agreement. People also have mixed feelings about issues like lack of creativity, overreliance on technology, and copyright infringement, with "strongly agree" and "agree" responses showing steady concern. In general, the results show that users are mostly worried about cost, data reliability, and how it will affect their jobs. Other issues get moderate but consistent agreement.

(iv) Variables that are associated with the Level of Challenges in Using AI Tools

Chi-square test has used to find out the association between the selected variables namely age, area of residence, gender, marital status, educational qualification, family

income, pocket money received, period of usage, device used and comfort with technology and the level of challenges in using AI tools. Level of significance is five percent.

Table:3

Variables Associated with the Level of Challenges in Using AI Tools

Variables	Calculated Chi-Square Value	D.f	Table Value @ 5% Level
Age	6.341	4	9.488
Area of residence	2.451	4	9.488
Gender	0.436	2	5.991
Marital Status	1.612	2	5.991
Family Income	17.809*	6	12.592
Pocket Money Received	16.135*	6	12.592
Period of Usage	14.166*	6	12.592
Device Used	15.062*	6	12.592
Comfort with Technology	14.130*	6	12.592

The above table discloses that out of nine variables selected, five variables namely family income, pocket money received, period of usage, device used and comfort with technology are found to be significant with the level of challenges in using AI tools at five percent level.

Suggestions

- Students should get the right training to improve their digital and AI literacy so that they can use AI tools safely and effectively.
- Students should be encouraged to use AI tools in a balanced way so that they don't lose their ability to think critically or be creative
- Students should be motivated to reduce overdependence on AI tools and develop independent thinking and problem-solving skills.
- Educational institutions can reduce the burden of high costs by providing free or subsidized access to AI tools.
- Clear guidelines should be established by institutions regarding the proper and ethical

use of AI tools in academic work.

Conclusion

The study concludes that AI tools play a significant role in enhancing students' academic performance, productivity, and access to information. Tools such as ChatGPT and Perplexity are found to be highly preferred, while others like Grammarly, QuillBot, Claude, and Microsoft Copilot show moderate to lower levels of preference based on user experience. The findings also reveal several challenges faced by students, including high cost, privacy concerns, data quality issues, lack of awareness, and fear of reduced human interaction and employment opportunities. It is further observed that although AI tools are helpful in completing tasks quickly and efficiently, they may also lead to overdependence, reduced creativity, and potential misuse if not used responsibly. Concerns such as copyright infringement and misinformation highlight the need for careful and ethical use of AI-generated content. The study emphasizes that students should develop strong digital literacy skills to evaluate and verify AI outputs rather than relying on them blindly. Overall, the conclusion suggests that AI tools are highly beneficial when used appropriately, but their effectiveness depends on user awareness and responsible usage. Educational institutions should take active steps to guide students, provide training, and establish clear policies to ensure the ethical and balanced use of AI tools in academic work.

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