The Academic
International Journal of Multidisciplinary Research

An Online Peer Reviewed / Refereed Journal
Volume 4 | Issue 5 | May 2026
ISSN: 2583-973X (Online), SJIF IF: 5.6
Website: www.theacademic.in

Artificial Intelligence in Commerce Education: Assessing Its Impact on Student Academic Performance in Mysuru District

Dr. B.S. Yogesha

Associate Professor, Government First Grade College, Bilikere

DOI : https://doi.org/10.5281/zenodo.20622744

ARTICLE DETAILS

Research Paper

Accepted: 21-05-2026

Published: 10-06-2026

Keywords:

Artificial Intelligence, Commerce Education, Academic Performance, Higher Education, AI Tools, Mysuru District.

ABSTRACT

Artificial Intelligence (AI) has become an influential technology in higher education, transforming traditional teaching and learning practices. AI-powered tools such as intelligent tutoring systems, chatbots, automated content generators, and learning analytics platforms are increasingly used by students to enhance learning outcomes. This study examines the impact of AI tools on the academic performance of commerce students in Mysuru District. Primary data were collected from 150 commerce students studying in different colleges through a structured questionnaire. The study employed descriptive statistics, correlation analysis, regression analysis, and Chi-square tests to examine the relationship between AI usage and academic performance. The findings reveal that students possess moderate to high awareness of AI tools and actively use them for assignments, examination preparation, and conceptual learning. Statistical analysis indicates a strong positive relationship between AI usage and academic performance. However, challenges such as overdependence on technology, ethical concerns, and inadequate training were also identified. The study concludes that AI significantly enhances academic performance when used responsibly and under proper academic guidance. Educational institutions should therefore promote structured AI integration while ensuring ethical and critical use of these technologies.

Introduction

The rapid advancement of Artificial Intelligence has transformed various sectors, including healthcare, finance, manufacturing, and education. In the educational sector, AI has emerged as a powerful tool capable of improving learning experiences through personalized instruction, adaptive learning systems, intelligent tutoring, and automated assessment mechanisms. These technological developments have enabled students to access customized learning resources and receive instant feedback, thereby enhancing educational effectiveness.

Commerce education, which includes disciplines such as accounting, finance, taxation, marketing, and business analytics, increasingly relies on technology-based learning methods. AI tools assist students in understanding complex concepts, conducting data analysis, preparing assignments, and developing problem-solving skills. The integration of AI in commerce education has become particularly relevant in the context of digital transformation and industry requirements.

India has witnessed substantial growth in digital education initiatives, leading to greater adoption of AI-enabled learning platforms. However, the extent of AI utilization and its impact on academic performance vary across regions and institutions. Mysuru District, known for its educational heritage and growing technological infrastructure, provides an appropriate setting for studying the influence of AI on commerce students. Despite the increasing popularity of AI-based educational tools, limited empirical research exists at the district level. Therefore, this study investigates how AI influences the academic performance of commerce students and identifies the challenges associated with its adoption.

Review of Literature

Several scholars have highlighted the transformative role of AI in education. Holmes, Bialik, and Fadel (2019) observed that AI facilitates personalized learning by identifying individual learning needs and providing customized educational content. Their study emphasized the potential of AI to improve learning efficiency and student outcomes.

Luckin et al. (2016) introduced the concept of “Intelligence Unleashed,” explaining how AI can complement human teaching by supporting student engagement, critical thinking, and knowledge acquisition. Their findings suggest that AI acts as an effective learning companion rather than a replacement for educators.

In the Indian context, Sharma and Gupta (2022) reported that AI-based tools significantly improve assignment quality and student productivity. Students who frequently utilized AI applications demonstrated better academic performance than those who did not. Kumar (2023) identified challenges such as inadequate training, lack of awareness, ethical concerns, and overreliance on AI technologies.

The study stressed the need for institutional support and policy frameworks to ensure responsible AI adoption.

Although previous studies have explored AI in education, empirical investigations focusing specifically on commerce students at the district level remain limited. This research addresses that gap by examining the relationship between AI usage and academic performance among commerce students in Mysuru District.

Objectives of the Study

The study was conducted with the following objectives:

1. To examine the level of awareness and usage of AI tools among commerce students.
2. To assess the impact of AI usage on academic performance.
3. To understand student perceptions regarding AI-based learning.
4. To identify challenges and limitations associated with AI adoption in commerce education.

Hypothesis

H_0: Artificial Intelligence tools have no significant impact on the academic performance of commerce students.

H_1: Artificial Intelligence tools have a significant impact on the academic performance of commerce students.

Research Methodology

The study is descriptive and analytical in nature. Primary data were collected from 150 commerce students enrolled in undergraduate and postgraduate programmes across various colleges in Mysuru District. A structured questionnaire was used to gather information regarding AI awareness, usage patterns, perceptions, and academic performance.

Convenience sampling was adopted for selecting respondents. Statistical tools including percentage analysis, descriptive statistics, correlation analysis, regression analysis, and Chi-square tests were employed to analyze the collected data.

Results and Discussion

Table 1: Demographic Profile of Respondents (n = 150)

Variable	Category	Frequency	Percentage (%)
Gender	Male	72	48

	Female	78	52
Age Group	18–20 Years	65	43
	21–23 Years	70	47
	Above 23 Years	15	10
Course	B.Com	80	53
	BBA	40	27
	M.Com/MBA	30	20
Institution Type	Government	45	30
	Private	75	50
	Autonomous	30	20

The demographic profile demonstrates a balanced representation of male and female students. Most respondents belong to the age group of 18–23 years, representing the typical commerce student population. B.Com students constitute the largest category, reflecting the dominance of commerce programmes in the district. The inclusion of students from government, private, and autonomous institutions ensures broader representation.

Table 2: Awareness and Usage of AI Tools

Variable	Category	Percentage (%)
Awareness Level	Highly Aware	38
	Moderately Aware	42
	Low Awareness	20
AI Usage Level	High Usage	35
	Moderate Usage	47
	Low Usage	18

The results indicate that nearly 80 percent of respondents possess moderate to high awareness of AI tools. Students commonly use AI applications for assignment preparation, content generation, examination revision, and conceptual clarification. The findings suggest that AI technologies have become an integral component of the academic environment in commerce education. The widespread adoption of AI tools

reflects increasing digital literacy among students and the growing acceptance of technology-enhanced learning methods.

Table 3: Relationship between AI Usage and Academic Performance

Statistical Measure	Value
Mean AI Usage Score	3.42
Mean Academic Performance Score	3.67
Correlation Coefficient (r)	0.65
Regression Coefficient (β)	0.70
R^2	0.42
Chi-square (χ^2)	18.45
p-value	0.002

The statistical analysis reveals significant findings regarding the impact of AI on academic performance. The correlation coefficient ($r = 0.65$) indicates a strong positive relationship between AI usage and academic achievement. Students who use AI tools more frequently tend to perform better academically.

Regression analysis further confirms this relationship, with a regression coefficient of 0.70, indicating that AI usage significantly contributes to academic performance. The coefficient of determination ($R^2 = 0.42$) suggests that approximately 42 percent of the variation in academic performance can be explained by AI usage. This highlights the substantial influence of AI-enabled learning tools on educational outcomes.

The Chi-square test produced a p-value of 0.002, which is below the 0.05 significance level. Therefore, the null hypothesis is rejected, confirming a statistically significant association between AI usage and academic performance.

Findings

The study reveals several important findings. First, commerce students in Mysuru District possess considerable awareness of AI technologies and actively utilize them for academic purposes. Second, AI tools significantly contribute to improved academic performance by enhancing learning efficiency, conceptual understanding, and productivity. Third, a strong positive relationship exists between AI usage and academic achievement, supported by correlation and regression analyses.

The study also identifies certain challenges. Excessive dependence on AI may reduce students' independent thinking and problem-solving abilities. Ethical concerns related to plagiarism, misuse of AI-generated content, and academic integrity remain important issues. Furthermore, insufficient training and limited institutional guidance restrict the effective utilization of AI technologies.

Conclusion

Artificial Intelligence has become an important tool in commerce education, significantly enhancing student learning and academic performance. The study indicates that AI-supported learning helps students improve productivity, strengthen conceptual understanding, and achieve better academic outcomes. Students who effectively use AI tools generally perform better than those with limited exposure to such technologies.

However, the benefits of AI can be fully realized only through responsible and ethical usage. Educational institutions should promote awareness, provide training, and establish guidelines to ensure that AI supports rather than replaces independent learning and critical thinking.

Overall, AI holds considerable potential to transform commerce education in Mysuru District and beyond. Its successful integration can contribute to improved learning outcomes and better prepare students for the demands of a technology-driven economy.

References

- Holmes, W., Bialik, M., & Fadel, C. (2019). *Artificial Intelligence in Education: Promises and Implications for Teaching and Learning*. Center for Curriculum Redesign.
- Luckin, R., Holmes, W., Griffiths, M., & Forcier, L. B. (2016). *Intelligence Unleashed: An Argument for AI in Education*. Pearson Education.
- Sharma, R., & Gupta, P. (2022). Impact of Artificial Intelligence Tools on Student Productivity in India. *Journal of Educational Technology*, 18(2), 112–125.