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A Study on Impact of Artificial Intelligence on Commerce Education

Ms. Srujana H V, II M.Com, Department of PG studies, Government First Grade College, Thirthahalli – 577432, Karnataka,

Ms. Suphala K S, II M.Com, Department of PG studies, Government First Grade College, Thirthahalli – 577432, Karnataka,

Ms. Alnaz B A, II M.Com, Department of PG studies, Government First Grade College, Thirthahalli – 577432,

Ms. Navyashree K II M. Com, Department of Commerce, Government First Grade College Thirthahalli, Karnataka, India.

Abstract

Artificial Intelligence (AI) is significantly transforming commerce education by reshaping teaching methodologies, learning processes, and skill development. The integration of AI driven tools such as intelligent tutoring systems, data analytics platforms, automated assessment systems, and virtual assistants has enhanced personalized learning, improved student engagement, and increased academic efficiency. In subjects like accounting, finance, marketing, and business analytics, AI enables real-time feedback, predictive analysis, and practical exposure to industry-oriented applications. This study examines the impact of AI on commerce education by analysing its benefits, challenges, and long term implications. Based on secondary data collected from research articles, academic journals, and educational reports, the study finds that AI enhances conceptual understanding, supports adaptive learning, and prepares students for technology-driven business environments. However, challenges such as data privacy concerns, high implementation costs, digital divide, and lack of technical expertise remain significant barriers. The study concludes that while AI cannot replace human educators, it acts as a powerful supportive tool that makes commerce education more flexible, skill oriented, and aligned with modern industry requirements.

Key words Artificial Intelligence (AI), Commerce Education, Personalized Learning

Educational Technology (EdTech), Digital Transformation

INTRODUCTION

Artificial Intelligence (AI) has emerged as a transformative force in the field of education. In commerce education, AI-driven tools such as smart learning platforms, data analytics, virtual simulations, and automated assessment systems are reshaping teaching and learning processes. Artificial Intelligence (AI) is transforming commerce education by enhancing teaching methodologies and equipping students with skills for an AI-driven business world. It is used for personalized learning, automation of administrative tasks, and the integration of data driven decision making into the curriculum. AI helps in personalized learning, enhances

analytical skills, and prepares students for a technology driven business environment. Therefore, studying the impact of AI on commerce education has become highly relevant in the present era.

STATEMENT OF THE PROBLEM

Artificial Intelligence (AI) is increasingly being used in the field of education, including commerce education. AI tools can improve teaching methods and help students understand commerce subjects more effectively. However, the use of AI in commerce education is still limited and not fully adopted in many institutions. Although AI provides several benefits for students and teachers, such as personalized learning, quick feedback, and easy access to digital resources, many institutions face challenges like lack of technical knowledge, inadequate infrastructure, and difficulties in implementing AI technologies. Therefore, it is important to study the impact of AI on commerce education, its benefits for students and teachers, and the challenges involved in its implementation.

OBJECTIVES OF THE STUDY:

1. To Analyse the impact of AI on teaching and learning in commerce education.
2. To Examine the benefits of AI for commerce students and teachers.
3. To Identify the challenges in the implementation of AI in commerce education.

RESEARCH METHODOLOGY

For the present study, only secondary data have been used. The data have been collected from different books and various websites.

SCOPE OF STUDY

The study identifies the challenges faced by educational institutions in implementing AI technologies. This study is limited to commerce education and does not cover other streams such as science or engineering. The findings of the study may help educational institutions understand the importance of AI and promote the effective use of AI in commerce education.

COMMERCE EDUCATION

Commerce education focuses on the study of business activities, trade, finance, and management. It helps students understand how organizations operate and how economic systems function. It covers subjects like accounting, economics, business studies, marketing, finance, and human resource management. The goal is to develop analytical thinking, decision-making skills, and business awareness. Commerce education also prepares students for professional careers such as Chartered Accountant (CA), Company Secretary (CS), banking, entrepreneurship, and corporate management. In today's world, it is becoming more practical and technology-driven, including areas like e-commerce, digital marketing, and financial technology (FinTech).

ARTIFICIAL INTELLIGENCE (AI)

Artificial Intelligence (AI) is a branch of computer science that enables machines to think, learn, and perform tasks like humans. It uses technologies such as machine learning, natural language processing (NLP), robotics, and data analytics. AI systems can analyze large amounts of data, recognize patterns, and make decisions with

minimal human intervention. Common examples include chatbots, virtual assistants, recommendation systems, and automation tools. AI is widely used in sectors like education, healthcare, banking, marketing, and manufacturing, improving efficiency, accuracy, and productivity. It also supports personalized learning, predictive analysis, and smart decision-making.

IMPACT OF AI ON COMMERCE EDUCATION:

Artificial Intelligence (AI) is transforming commerce education by making teaching, learning, and evaluation more effective, practical, and industry-oriented.

1. Changes in Teaching Methods

AI-based tools help teachers explain complex concepts in accounting, finance, economics, and business management using real-time data, simulations, and visual models. Teaching has become more interactive and learner-centered.

2. Enhanced Learning Experience

AI enables personalized learning by adapting content according to students' abilities and learning pace. Virtual assistants and Chatbot's help student's clear doubts instantly, improving understanding and confidence.

3. Assessment and Evaluation

Automated assessment systems evaluate assignments and tests quickly and accurately. AI also analyses students' performance and identifies strengths and weaknesses, helping in continuous improvement.

4. Curriculum Innovation

AI has introduced new subjects such as data analytics, fintech, AI in accounting, digital marketing, and business intelligence. The curriculum is becoming more practical and aligned with industry needs.

5. Career Opportunities

AI in commerce education prepares students for emerging roles like data analyst, financial analyst, business intelligence analyst, fintech expert, and digital marketing specialist.

6. Improves Personalized and Adaptive Learning

AI helps customize learning according to individual students' abilities, speed, and interests. Weak students get extra support, while advanced learners receive challenging content. This makes learning more effective and student-centric.

7. Enhances Practical and Analytical Skills:

AI tools provide real-life business cases, simulations, and data analysis exercises. Students learn practical applications of accounting, finance, marketing, and management, which improves analytical thinking and problem-solving skills.

8. Supports Data-Driven Decision Making:

AI enables students to analyse large amounts of business data accurately. It helps them understand trends, forecasts, and risks, which is essential for managerial and financial decision-making in commerce.

9. Increases Student Engagement through Virtual Tools:

Virtual classrooms, AI tutors, Chatbot's, and interactive platforms make learning more interesting. Students actively participate, ask questions freely, and stay engaged throughout the learning process.

10. Makes Education More Industry-Oriented:

AI aligns commerce education with industry needs by teaching current tools and technologies like data analytics, fintech, and business intelligence. This improves employability and job readiness.

CHALLENGES

Although AI has many benefits, its implementation in commerce education faces several challenges.

1. Many institutions lack proper hardware, software, internet connectivity, and trained faculty. This limits effective implementation of AI in commerce education, especially in rural and underdeveloped areas. Encourages innovation and entrepreneurship.
2. There is unequal access to technology between urban and rural regions. Many rural institutions lack reliable internet, computers, and digital tools, making it difficult to implement AI-based education equally.
3. Effective use of AI requires teachers who are technically skilled and trained in AI tools. Many faculty members lack proper training, which limits the successful integration of AI in commerce education.
4. AI software, hardware, and maintenance are expensive. Small colleges and institutions with limited budgets often find it difficult to afford AI-based educational tools and infrastructure.
5. AI systems collect and analyse large amounts of student data. Ensuring data security, privacy, and ethical use is a serious concern. Some educators and institutions are reluctant to adopt new technologies due to fear of complexity or job displacement.

FINDINGS OF THE STUDY

1. AI has significantly improved teaching and learning methods in commerce education.
2. AI-based tools provide personalized learning and improve students' understanding of commerce subjects.
3. Automated assessment and evaluation systems make the learning process faster and more efficient.
4. AI has introduced new and industry-relevant subjects such as data analytics, fintech, and digital marketing in commerce education.
5. AI helps students develop practical, analytical, and decision-making skills.
6. The adoption of AI improves students' employability and career opportunities.
7. Lack of infrastructure and technological facilities is a major barrier to AI implementation.
8. Many teachers lack proper training to effectively use AI tools in teaching.
9. High costs and data privacy concerns also limit the use of AI in educational institutions.
10. There is a digital divide between urban and rural institutions in accessing AI technologies.

SUGGESTIONS

1. Educational institutions should invest in better technological infrastructure such as computers, internet facilities, and AI-based learning platforms.
2. Training programs and workshops should be conducted to help teachers learn how to use AI tools effectively in teaching.
3. Government and educational authorities should provide financial support and funding for implementing AI technologies in colleges.
4. Institutions should ensure data privacy and security while using AI-based educational platforms.

5. Colleges should update the commerce curriculum regularly by including subjects like data analytics, fintech, and digital marketing.
6. Awareness programs should be organized to reduce resistance to new technologies among educators and students.
7. Special attention should be given to rural institutions to reduce the digital divide and ensure equal access to AI-based education.

CONCLUSION

Artificial Intelligence (AI) is playing an important role in transforming commerce education by improving teaching methods, learning experiences, and evaluation systems. AI helps make learning more interactive, personalized, and practical for students. It also introduces modern subjects such as data analytics, fintech, and digital marketing, which prepare students for future career opportunities. However, the successful implementation of AI in commerce education requires proper infrastructure, trained faculty, and adequate financial support. By overcoming these challenges, educational institutions can effectively use AI to enhance the quality and relevance of commerce education.

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