Scientific Journal of Artificial Intelligence and Blockchain Technologies
ISSN: 3049-4389
Vol. 3, Issue 2, Apr – May 2026 || PP. 53 – 59 https://sjaibt.org

AI in Commerce Education : Digital Changes in India's Curriculum

DOI: https://doi.org/10.63345/sjaibt.v3.i2.101

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Date of Submission: 25-03-2026	Date of Acceptance: 27-03-2026	Date of Publication: 05-04-2026

Abstract— The rapid advancement of Artificial Intelligence (AI) is significantly transforming the landscape of commerce education in India, prompting a shift from traditional teaching methodologies to digitally enriched, skill-oriented learning environments. This study examines the evolving role of AI in reshaping the commerce curriculum, focusing on its impact on pedagogy, student competencies, and institutional practices. It explores how AI-driven tools such as adaptive learning platforms, automated assessment systems, and data analytics applications are enhancing educational delivery and enabling personalized learning experiences. The research also investigates the integration of interdisciplinary domains, including financial technology, business analytics, and digital marketing, into commerce education to meet contemporary industry demands. Furthermore, the study highlights the challenges associated with AI adoption, including limited faculty readiness, infrastructural disparities, and concerns related to data privacy and ethical usage. By analyzing existing literature and current educational practices, the paper identifies critical gaps in curriculum standardization, practical implementation, and long-term impact assessment. The findings suggest that while AI has the potential to significantly improve learning outcomes and employability, its effective integration requires strategic policy support, teacher training, and a balanced approach to ethical considerations. This research contributes to the understanding of digital transformation in India's commerce education system and provides insights for policymakers, educators, and academic institutions aiming to develop future-ready curricula aligned with technological advancements.

Keywords— Artificial Intelligence, Commerce Education, Digital Transformation, Curriculum Development, India, Educational Technology.

I. INTRODUCTION

The rapid evolution of digital technologies has fundamentally transformed the global education landscape, with Artificial Intelligence (AI) emerging as a key driver of innovation. In India, where commerce education has traditionally focused on theoretical knowledge in areas such as accounting, finance, and business management, the integration of AI is reshaping both curriculum design and teaching methodologies. The increasing reliance on data-driven decision-making, automation, and intelligent systems in the business world has created an urgent need to equip commerce students with advanced digital competencies and analytical skills.

Commerce education in India is undergoing a paradigm shift from conventional classroom-based instruction to technology-enabled, application-oriented learning. AI technologies—including machine learning, natural language processing, and predictive analytics—are being incorporated into educational platforms to enhance learning outcomes, personalize instruction, and improve administrative efficiency. These tools enable adaptive learning environments where content can be tailored to individual student needs, thereby promoting deeper understanding and engagement. Additionally, AI-powered

systems are supporting educators in tasks such as assessment, feedback generation, and curriculum planning, allowing them to focus more on conceptual teaching and mentorship.

The introduction of AI into commerce curricula is also fostering interdisciplinary learning by integrating emerging domains such as financial technology (FinTech), business analytics, digital marketing, and e-commerce. This integration reflects the changing demands of the job market, where employers increasingly seek graduates who possess not only domain knowledge but also technical proficiency and problem-solving abilities. As a result, higher education institutions and policy frameworks in India are gradually emphasizing skill development, innovation, and industry alignment within commerce programs.

Despite these advancements, the adoption of AI in commerce education is not without challenges. Issues such as inadequate digital infrastructure, limited faculty training, resistance to technological change, and concerns related to data privacy and ethical use of AI continue to hinder widespread implementation. Furthermore, there is a lack of standardized frameworks to guide the effective integration of AI into commerce curricula across institutions. These challenges highlight the need for a structured and strategic approach to ensure that the benefits of AI are fully realized while minimizing potential risks.

II. Literature Review

The integration of Artificial Intelligence (AI) into commerce education in India has emerged as a significant area of academic inquiry, driven by rapid digital transformation and evolving industry requirements. Recent studies highlight that AI is reshaping traditional commerce curricula by embedding data-driven decision-making, automation, and analytical competencies into educational frameworks. For instance, Jathan (2025) emphasizes that Indian universities are increasingly revising curricula to align with AI-driven industry demands, promoting personalized learning models and enhancing students' critical thinking and problem-solving skills [1]. This shift reflects a broader transition from theoretical instruction to skill-oriented, technology-integrated education.

Several studies focus on the pedagogical impact of AI tools in commerce education. Research indicates that AI-powered platforms—such as adaptive learning systems, chatbots, and automated assessment tools—have improved curriculum delivery, student engagement, and administrative efficiency [2]. Furthermore, AI-driven research tools are facilitating literature analysis, data processing, and collaborative academic work, thereby increasing research productivity among commerce students and educators [3]. However, these advancements are accompanied by concerns regarding academic integrity, data privacy, and algorithmic bias, highlighting the need for ethical frameworks in AI adoption.

Empirical studies conducted in the Indian context reveal varying levels of awareness and preparedness among stakeholders. A study on commerce students in Kerala found moderate awareness of AI applications in areas such as investment decision-making and e-commerce, but also identified gaps in practical understanding and confidence [4]. Similarly, faculty-focused research indicates that many educators are not adequately trained to integrate AI tools into teaching practices, suggesting a need for professional development and institutional support [5]. Teacher competency and attitude have been identified as critical factors influencing successful AI integration in commerce education.

In addition, interdisciplinary integration of AI with domains such as FinTech, digital marketing, and business analytics is gaining traction. Recent studies highlight the emergence of next-generation commerce education models that incorporate AI-based financial tools, predictive analytics, and real-world case studies to enhance employability and industry readiness [6]. These developments are further supported by policy-level initiatives and institutional efforts to embed AI courses and modules within commerce programs across India.

Despite significant progress, several research gaps remain. First, there is limited longitudinal research assessing the long-term impact of AI-integrated curricula on student outcomes and employability. Second, existing studies largely focus on urban or specific regional contexts, neglecting rural and under-resourced institutions. Third, there is insufficient exploration of standardized frameworks for AI curriculum design tailored specifically to commerce education. Finally, ethical considerations—particularly related to data governance, bias, and responsible AI usage—are underrepresented in commerce curricula, indicating a need for more comprehensive integration.

III. Research Methodology

This study adopts a structured methodological approach to examine the impact of Artificial Intelligence (AI) on commerce education and the resulting digital changes in India's curriculum. The methodology is designed to ensure systematic analysis, reliability, and relevance of findings.

Research Design: The research follows a combination of **descriptive and exploratory research design**. The descriptive aspect focuses on understanding the current state of AI integration in commerce education, including curriculum modifications and teaching practices. The exploratory approach is used to identify emerging trends, challenges, and

opportunities associated with the adoption of AI, especially in the context of India's evolving education system.

Data Type: The study is primarily based on **secondary data**, as it involves the analysis of already published academic and policy-related information. Secondary data enables a comprehensive understanding of existing research, trends, and institutional practices related to AI in commerce education.

Data Sources: Data has been collected from diverse and credible sources to ensure depth and accuracy. These include:

- Peer-reviewed **academic journals** and conference papers related to AI and education
- Government and institutional **reports** on digital education and curriculum reforms
- **National Education Policy (NEP 2020)** documents and related guidelines
- Published **surveys and studies** focusing on student awareness, faculty readiness, and technological adoption in education
- Reputed online academic databases and research platforms

Sampling Method: Since the study is based on secondary data, **non-probability purposive sampling** has been used to select relevant literature and reports. Sources were chosen based on their relevance, credibility, recency, and alignment with the research objectives. Priority was given to studies focusing on India and commerce or management education.

Tools and Techniques: The research employs **qualitative analysis techniques** to interpret and synthesize the collected data. Key methods include:

- **Thematic analysis** to identify recurring patterns, concepts, and trends in the literature
- **Comparative analysis** to examine differences in findings across various studies
- **Case study insights** from selected institutions or implementations of AI in education
- Analytical interpretation of survey findings reported in existing research

Role of AI in Commerce Education

Artificial Intelligence (AI) is playing a transformative role in commerce education by enhancing teaching methodologies, improving learning outcomes, and aligning academic content with industry requirements. Its integration is not only modernizing traditional educational practices but also preparing students for a data-driven business environment.

1. AI Tools in Commerce Education (Chatbots, Analytics Tools, Automation)

AI-powered tools are increasingly being used to streamline educational processes and improve efficiency. **Chatbots** act as virtual assistants, providing instant responses to student queries, guiding them through course materials, and offering academic support 24/7. This reduces dependency on faculty for routine queries and enhances accessibility.

Analytics tools are another significant contribution, enabling educators to track student performance, identify learning gaps, and make data-driven decisions. These tools help in evaluating student engagement, predicting outcomes, and customizing teaching strategies.

Additionally, **automation technologies** are simplifying administrative and academic tasks such as grading, attendance tracking, and content delivery. Automated assessment systems not only save time but also ensure consistency and reduce human error, thereby improving overall efficiency in commerce education.

2. Personalized Learning

One of the most impactful contributions of AI is the introduction of **personalized learning experiences**. AI systems analyze individual student data, including learning pace, strengths, weaknesses, and preferences, to deliver customized content and recommendations.

In commerce education, this allows students to better understand complex subjects such as accounting, finance, and business analytics at their own pace. Adaptive learning platforms can modify difficulty levels, suggest targeted resources, and provide real-time feedback, leading to improved comprehension and retention.

Personalized learning also encourages self-directed education, enabling students to take control of their learning journey. This is particularly beneficial in diverse classrooms where students have varying levels of understanding and learning capabilities.

3. Smart Classrooms

AI is facilitating the development of **smart classrooms**, which integrate digital technologies to create interactive and engaging learning environments. These classrooms utilize tools such as intelligent boards, real-time quizzes, virtual simulations, and AI-based monitoring systems.

In commerce education, smart classrooms enable practical learning through simulations of financial markets, business decision-making scenarios, and case-based discussions. AI-driven systems can also monitor student engagement and provide insights to educators for improving teaching effectiveness.

Furthermore, smart classrooms support blended and hybrid learning models, making education more flexible and accessible. They bridge the gap between theoretical knowledge and real-world application, thereby enhancing the overall quality of commerce education in India.

Digital Changes in India's Curriculum

The Indian education system, particularly in the field of commerce, is undergoing a significant digital transformation driven by advancements in technology and the growing influence of Artificial Intelligence (AI). These changes are reshaping curriculum design, teaching methodologies, and learning outcomes, making education more relevant to contemporary industry needs.

1. Integration of Technology-Oriented Subjects

One of the most notable changes in India's curriculum is the inclusion of technology-driven subjects within commerce education. Traditional courses such as accounting and business studies are now being complemented with emerging domains like business analytics, financial technology (FinTech), digital marketing, and e-commerce. This interdisciplinary approach equips students with both domain knowledge and technical skills, enabling them to adapt to modern business environments. Institutions are increasingly designing curricula that reflect real-world applications, ensuring that graduates are industry-ready.

2. Alignment with National Education Policy (NEP 2020)

The implementation of the National Education Policy (NEP 2020) has accelerated digital transformation in India's curriculum. The policy emphasizes multidisciplinary learning, skill development, and the integration of technology in education. It encourages institutions to adopt digital tools, promote flexible course structures, and incorporate vocational and experiential learning components. In commerce education, this has led to the introduction of AI-based modules, online certifications, and industry-linked training programs. NEP 2020 also promotes the use of digital platforms for content delivery, thereby enhancing accessibility and inclusivity.

3. Shift Towards Skill-Based and Practical Learning

Another major digital change is the transition from theoretical learning to skill-based and practical education. The curriculum now emphasizes hands-on training, project-based learning, internships, and case studies. Students are encouraged to use digital tools such as accounting software, data visualization platforms, and AI-based applications to solve real-world problems. This approach enhances critical thinking, problem-solving abilities, and employability. It also ensures that students gain practical exposure to industry practices during their academic journey.

4. Adoption of E-Learning and Hybrid Education Models

The rise of digital infrastructure has led to the widespread adoption of **e-learning and hybrid education models**. Online platforms, virtual classrooms, and learning management systems (LMS) are now integral parts of the curriculum. These platforms provide flexibility, allowing students to access course materials anytime and anywhere. Hybrid learning, which combines online and offline methods, is particularly beneficial in maintaining continuity and improving engagement.

Additionally, digital resources such as recorded lectures, interactive modules, and online assessments have enhanced the overall learning experience. This shift has also made education more inclusive by reaching students in remote and underserved areas.

Benefits of AI Integration in Commerce Education

The integration of Artificial Intelligence (AI) into commerce education offers numerous advantages that enhance the overall quality of teaching and learning. By leveraging intelligent technologies, educational institutions in India are becoming

more efficient, adaptive, and aligned with the needs of a rapidly evolving digital economy.

1. Enhanced Learning Efficiency and Accuracy

AI significantly improves the efficiency of academic processes by automating repetitive tasks such as grading, attendance tracking, and evaluation. Automated systems provide quick and accurate feedback, allowing students to identify mistakes and improve performance in real time. This reduces the workload on educators and ensures consistency in assessment, leading to a more reliable learning environment.

2. Improved Student Engagement and Interaction

AI-powered tools foster higher levels of student engagement by making learning more interactive and dynamic. Features such as chatbots, virtual tutors, and gamified learning platforms encourage active participation and continuous interaction. These tools create a more engaging educational experience compared to traditional lecture-based methods, thereby improving student motivation and interest in commerce subjects.

3. Data-Driven Decision Making

AI enables institutions and educators to make informed decisions based on data analysis. Learning analytics systems track student progress, identify patterns, and highlight areas where intervention is needed. This data-driven approach helps in designing effective teaching strategies, improving curriculum planning, and enhancing institutional performance. It also allows early identification of struggling students, enabling timely support.

4. Personalized and Adaptive Learning

One of the most significant benefits of AI is its ability to deliver personalized learning experiences. AI systems adapt content based on individual learning styles, pace, and performance. In commerce education, this helps students grasp complex concepts such as finance, accounting, and analytics more effectively. Personalized learning ensures that no student is left behind and promotes better academic outcomes.

5. Better Industry Readiness and Employability

AI integration bridges the gap between academic learning and industry requirements. By exposing students to modern tools such as financial analytics software, automation systems, and AI-driven platforms, institutions prepare them for real-world challenges. This enhances employability by equipping students with practical skills, technical knowledge, and problem-solving abilities that are highly valued in the job market.

IV. CASE STUDIES

The practical implementation of Artificial Intelligence (AI) in Indian education can be better understood through real-world case studies involving universities and EdTech platforms. These examples highlight how AI is transforming curriculum delivery, student engagement, and institutional efficiency.

1. Indian Universities Adopting AI

Several Indian universities have actively integrated AI into their academic frameworks, including commerce and management education.

A prominent example is **IIT Madras**, which introduced AI-based courses on the SWAYAM platform, making AI education accessible across disciplines, including commerce-related fields such as accounting and analytics. These courses emphasize practical learning and are aligned with national credit frameworks, enhancing employability and industry readiness .

Similarly, institutions like **IIM Ahmedabad, IIT Delhi, and Manipal University** have collaborated with global AI providers to integrate advanced AI tools into their teaching and research ecosystems. These collaborations enable students to use AI platforms for data analysis, business simulations, and research activities, thereby strengthening analytical and decision-making skills .

Another example is **Lovely Professional University (LPU)**, which has adopted AI across teaching, research, and administrative functions. The university utilizes AI-driven systems for personalized learning, academic planning, and smart campus management, demonstrating how higher education institutions are evolving into digitally intelligent environments .

Additionally, emerging universities such as Khwaja Moinuddin Chishti Language University are introducing AI courses along with smart classrooms and digital labs, reflecting the growing trend of integrating AI into mainstream education, including commerce programs .

These cases illustrate that Indian universities are not only incorporating AI into curricula but also transforming their overall academic infrastructure.

2. EdTech Platforms Leveraging AI

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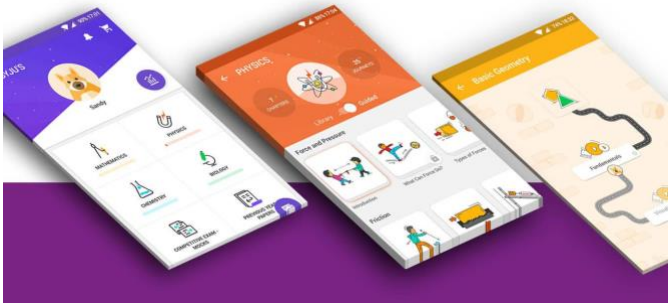
Vol. 3, Issue 2, Apr – May 2026 || PP. 53 – 59 https://sjaibt.org



EdTech platforms in India have been at the forefront of AI adoption, playing a crucial role in supplementing formal commerce education.

Platforms such as **Byju's** and **Vedantu** utilize AI-powered chatbots and adaptive learning systems to provide personalized learning experiences. These systems analyze student behavior and performance to recommend customized content, quizzes, and revision materials, ensuring improved learning outcomes .

Great Learning has introduced AI-driven features like "AI Mentor" and "AI Mock Interview," which help students develop job-ready skills by offering personalized guidance and real-time feedback. These tools simulate real-world scenarios, particularly useful for commerce students preparing for careers in finance, marketing, and analytics .

Another notable initiative is **SATHEE**, developed by IIT Kanpur in collaboration with the Government of India. This AI-based platform provides personalized learning paths, instant doubt resolution, and performance analytics, making quality education accessible even to students in remote areas .

EdTech platforms are also leveraging AI for automated content generation, intelligent tutoring systems, and learning analytics dashboards, enabling scalable and efficient education delivery. These innovations are bridging the gap between traditional commerce education and modern digital skills.

V. RESULTS AND DISCUSSION

The analysis of existing literature and secondary data reveals that Artificial Intelligence (AI) is significantly influencing commerce education in India by enhancing learning processes, modernizing curricula, and improving institutional efficiency. The findings are discussed below with supporting tabular representation for clarity.

1. Key Findings on AI Integration

The study indicates that AI adoption in commerce education is increasing steadily, particularly in urban and private institutions. The integration of AI tools has improved teaching effectiveness, student engagement, and administrative efficiency. However, the level of implementation varies across institutions due to infrastructural and training limitations.

Parameter	Observation	Impact on Education
AI Tool Adoption	Moderate to high in leading institutions	Improved efficiency and automation
Student Engagement	Increased due to interactive tools	Better participation and interest
Curriculum Modernization	Inclusion of analytics, FinTech, and AI modules	Industry-relevant learning
Faculty Readiness	Moderate, with need for training	Affects quality of AI integration
Infrastructure Availability	Uneven across regions	Digital divide persists

2. Impact on Learning Outcomes

AI-based personalized learning and analytics have positively influenced student performance. Students are able to learn at their own pace, leading to better conceptual understanding, especially in complex commerce subjects.

Learning Aspect	Traditional Approach	AI-Enabled Approach	Result
Learning Style	Uniform for all students	Personalized and adaptive	Improved understanding
Assessment	Manual and time-consuming	Automated with instant feedback	Faster and more accurate evaluation
Student Support	Limited to classroom hours	24/7 AI-based assistance	Continuous learning
Skill Development	Theory-focused	Practical and tool-based	Enhanced employability

3. Discussion on Digital Curriculum Changes

The results show that digital transformation in India's commerce curriculum is aligned with industry demands. The introduction of interdisciplinary subjects and practical training methods has made education more application-oriented. Policies such as NEP 2020 have played a significant role in encouraging institutions to adopt digital tools and flexible learning models.

However, the study also identifies challenges. While top-tier institutions are rapidly adopting AI, many colleges still lack adequate digital infrastructure and trained faculty. This creates a disparity in the quality of education. Furthermore, ethical concerns such as data privacy, over-reliance on AI, and lack of human interaction remain important issues that need attention.

4. Comparative Analysis of Benefits and Challenges

Aspect	Benefits of AI Integration	Challenges Identified
Teaching	Efficient, automated, and data-driven	Requires teacher training
Learning	Personalized and flexible	Digital dependency
Curriculum	Updated and industry-oriented	Lack of standardization
Accessibility	Wider reach through online platforms	Digital divide in rural areas
Ethics & Security	Enhanced monitoring and analytics	Privacy and data security concerns

VI. CONCLUSION

The integration of Artificial Intelligence (AI) into commerce education in India represents a significant step toward modernizing the academic landscape and aligning it with the demands of a digital economy. This study highlights that AI is not only transforming traditional teaching methodologies but also reshaping curriculum structures by incorporating technology-driven subjects such as business analytics, financial technology, and digital marketing. These changes are fostering a more practical, skill-oriented, and industry-relevant approach to commerce education.

The findings indicate that AI-powered tools, personalized learning systems, and smart classroom environments have improved student engagement, learning efficiency, and academic outcomes. Additionally, the adoption of digital platforms and hybrid learning models has increased accessibility and flexibility, making education more inclusive. Policy initiatives, particularly the National Education Policy (NEP 2020), have further accelerated this transformation by promoting multidisciplinary learning and the integration of advanced technologies.

However, the study also identifies several challenges that must be addressed to ensure effective implementation. These include disparities in digital infrastructure, limited faculty training, lack of standardized curriculum frameworks, and concerns related to data privacy and ethical use of AI. Such issues highlight the need for a strategic and balanced approach to AI adoption in education.

REFERENCES

[1] P. M. Jathan, “The influence of AI and automation on commerce curriculum in Indian universities,” 2025.
[2] Study on AI-powered tools in curriculum delivery, 2025.
[3] Study on AI-driven research enhancement in commerce education, 2025.
[4] Study on awareness of commerce students towards AI, 2025.
[5] Study on faculty readiness in AI adoption in commerce education, 2025.
[6] Study on AI and FinTech integration in commerce education, 2026.