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THE IMPACT OF ARTIFICIAL INTELLIGENCE ON BUSINESS EDUCATION: A STUDY OF MBA STUDENTS AT TUMKUR UNIVERSITY

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Abstract
The integration of Artificial Intelligence (AI) into higher education has increasingly transformed teaching, learning, and assessment practices, particularly in the field of business education. This study investigates the extent to which MBA students at Tumkur University utilize AI tools, their awareness levels, perceived benefits, and associated challenges. Using primary data collected from 50 respondents through structured questionnaires, the study reveals high levels of AI awareness and frequent usage, especially for assignment support and academic writing. Tools such as ChatGPT and Grammarly were widely used, with students reporting improved time management, better understanding of topics, and enhanced research skills. However, concerns regarding over-reliance, ethical implications, and inaccurate information were also prevalent. Hypothesis testing through chi-square analysis showed a significant relationship between frequency of AI usage and assignment support, but no significant link between gender and AI awareness. These findings highlight the growing importance of digital competency in business education and accentuate the need for structured AI integration into curricula that balances innovation with ethical and critical thinking skills.

Keywords: **Artificial Intelligence, Business Education, MBA Students, Tumkur University, AI Tools, Student Awareness, Educational Technology.**

Introduction

The rapid advancement of Artificial Intelligence (AI) has initiated a profound transformation across various sectors, and higher education is no exception. In particular, business education—a domain traditionally grounded in human judgment, experiential learning, and real-time strategic thinking—is experiencing a structural shift influenced by the integration of intelligent systems. From automating administrative processes and assessments to facilitating personalized learning and simulating real-world business environments, AI is redefining how business concepts are taught, learned, and applied. Business schools are increasingly incorporating AI tools such as chatbots, intelligent tutoring systems, generative platforms like ChatGPT, and predictive analytics into their pedagogical strategies. These technologies offer potential advantages in terms of efficiency, scalability, engagement, and adaptive learning. However, the implications of such integration extend beyond surface-level convenience and raise deeper questions about cognitive development, ethical considerations, academic integrity, and long-term learning outcomes.While AI has been broadly applied in educational settings, its use within business education poses unique opportunities and challenges. Business programs often emphasize critical thinking, ethical decision-making, market analysis, and entrepreneurial innovation—all of which require nuanced human judgment. The growing presence of AI in this context forces educators, students, and institutions to reconsider traditional models of teaching and assessment. For instance, generative AI tools may support student creativity and autonomy in developing business strategies but may also lead to overreliance on algorithmic outputs, thereby diluting essential skills like critical analysis and independent problem-solving. Moreover, concerns regarding plagiarism, data privacy, and fairness become more pronounced in courses that rely on open-ended assignments, presentations, and collaborative projects.Despite the growing body of literature addressing AI in general education, there remains a lack of discipline-specific research focusing on business schools. Studies often fail to address how AI integration affects specific learning outcomes such as leadership readiness, employability, ethical awareness, and innovation capacity among business students. This gap emphasizes the need for a focused examination of the pedagogical and institutional impact of AI technologies in business education. Accordingly, this study aims to critically review existing literature, identify the strengths and limitations of

AI applications in business teaching and learning, and highlight areas where further empirical research is needed to optimize AI's role in shaping future business leaders.

Review of literature

Artificial Intelligence (AI) is rapidly and profoundly transforming the landscape of business education, introducing paradigm shifts in pedagogical models, curriculum development, and the broader learning experience for students. The traditional structure of business instruction, which heavily relies on lectures, static case studies, and manual assessments, is being challenged by AI technologies that promise adaptability, interactivity, and real-time data-driven learning. ***Ocen et al. (2025),*** in their influential study published in *Frontiers in Education*, examine the application of AI tools across higher education, emphasizing the enhancement of personalized feedback, automation of routine assessments, and tailoring of educational content to individual student needs and learning trajectories. These features support a more responsive learning environment. However, while their work provides a broad overview of AI in general educational contexts, it falls short of exploring how these innovations specifically benefit or alter the pedagogical structure in business schools, particularly within specialized programs like MBAs or executive education, where learning often hinges on strategic decision-making, real-world simulations, and leadership-oriented assessments.Expanding on applied AI within business education, ***Zhu and Luo (2025)*** present a case-based study via *arXiv* that delves into AI-enabled scaffolding systems in entrepreneurship courses. Their research showcases how AI tools help students independently construct viable business models and plans, fostering self-directed learning. While the initial results are promising, indicating higher engagement and more structured business ideation among participants, the study remains limited to a small pilot setting. The absence of longitudinal follow-up data or comparative academic performance metrics leaves critical questions about the sustained educational and entrepreneurial outcomes of such interventions unanswered. Similarly, ***Kusetogullari et al. (2025)*** conducted a comprehensive systematic review of generative AI in entrepreneurship education, identifying its role in enhancing students' creativity, improving market forecasting, and supporting ideation processes. Nonetheless, they highlight a significant gap in formal curricular integration, particularly in mainstream business education programs. The majority of AI applications remain supplementary rather than embedded into core pedagogical structures. Furthermore, while qualitative observations are optimistic, there is a lack of empirical, quantitative evidence demonstrating improved learning outcomes, such as higher business success rates or deeper analytical competencies.***Dias and Lauretta (2024)*** take a different angle in their review of AI's growing impact on business operations, especially within marketing, logistics, and financial modeling. Their findings stress how deep learning and AI are revolutionizing corporate practices, prompting a necessary shift in business education to align with new industry standards. Despite this, their research is primarily situated within corporate application and lacks insights into whether, and how, business school curricula are evolving to equip students with the requisite AI-related skills. This reveals a growing disconnect between academic preparation and industry expectations. In summary, although the current body of literature confirms AI's growing footprint in higher education, its application in business education remains under-researched. There is a clear need for rigorous, context-specific, and longitudinal research that assesses the pedagogical value of AI in business disciplines. Key gaps include the impact of AI on student employability, entrepreneurial success, innovation output, ethical behavior, and leadership development—all of which are cornerstones of 21st-century business education.

Objectives of the study

1. To examine the extent to which Artificial Intelligence (AI) technologies have been integrated into business education curricula, pedagogy, and assessment practices across higher education institutions.
2. To identify the challenges, limitations, and research gaps associated with the use of AI in developing core business education competencies such as critical thinking, decision-making, ethical reasoning, and innovation.

ResearchHypothesis

1. Hypothesis 1: There is no significant relationship between the frequency of AI tool usage and the perceived benefit in assignment completion among MBA students.
2. Hypothesis 2: Gender has no significant effect on the level of awareness about AI in education.

Research Methodology

This study employed a descriptive research design to explore the impact of Artificial Intelligence (AI) on business education among MBA students of Tumkur University. A structured questionnaire was used as the primary data collection tool, comprising both closed-ended and multiple-response questions to capture student demographics, awareness, usage patterns, perceived benefits, challenges, and attitudes toward AI in education. The sample consisted of 50 MBA students selected through purposive sampling, ensuring that participants had prior exposure to AI tools during their academic activities. Data collected were organized into frequency tables and analyzed using descriptive statistics and inferential methods, including chi-square tests, to examine relationships between variables such as frequency of AI tool usage and assignment support, as well as gender and AI awareness. The results were interpreted to assess the educational value of AI integration, student satisfaction, and the broader implications for pedagogical practices in business education.

Table 1- Key Statistics on the Impact of AI in Business Education

Theme	Data Point	Source	Implication
AI in Business Schools	80% of business schools have integrated AI into teaching and learning	Financial Times (2024)	AI is becoming mainstream in business curricula
Student Expectations	46% of MBA aspirants expect hands-on AI training (up from 29% in 2022)	GMAC via SF Chronicle (2025)	Growing demand for AI-rich business programs
Faculty & Student Adoption	86% of students, 93% of faculty plan to expand AI use in 2 years	SF Chronicle (2025)	Future of business education is increasingly tech-integrated
Program Integration	Over 75% of MBA programs now use AI in some capacity	SF Chronicle (2025)	AI is no longer optional—now a core part of MBA learning
Administrative Use of AI	65–70% of universities use AI for grading, chatbots, and personalization	Gitnux.org (2024)	AI improves efficiency but lacks focus on pedagogy
Learning Outcomes	AI tutoring improves performance by 30–33%; grading time cut by 75%	WiFiTalents.com (2024)	AI helps streamline faculty workload and enhances student outcomes
Student Engagement	92% of students using AI report higher motivation	WiFiTalents.com (2024)	AI positively affects student engagement and participation
Employer Expectations	49% of business leaders value ChatGPT experience over a college degree	Business Insider (2024)	AI fluency may become more valuable than traditional credentials
Workforce Demand	73% of Indian businesses plan to adopt AI by 2025	Reddit via India AI Trends (2024)	Business schools must prepare graduates for AI-driven roles
Cost Efficiency	AI leads to 25% savings in educational administration	Zipdo.co (2024)	Institutions can reallocate resources toward innovation and pedagogy

A number of recent studies and industry surveys provide valuable statistical insights into how Artificial Intelligence (AI) is reshaping business education. For instance, a 2024 report by the *Financial Times* indicates that approximately 80 percent of business schools worldwide have already integrated AI into their teaching and learning environments. This widespread adoption reflects a conscious shift toward producing business leaders who are not only strategic thinkers but also technologically fluent. Similarly, a survey published in the *San Francisco Chronicle* (2025) based on GMAC data reveals that 46 percent of MBA aspirants now expect hands-on AI exposure as part of their coursework, which marks a significant rise from 29 percent just three years earlier. This shift in student expectation aligns with broader institutional changes; the same source confirms that over 75 percent of MBA programs have adopted AI tools in some capacity to support instruction and content delivery. Furthermore, the enthusiasm for AI adoption is not limited to students alone. According to the *SF Chronicle* article, 86 percent of university students and a striking 93 percent of faculty members plan to expand their use of AI in education over the next two years. On the administrative front, Gitnux.org (2024) reports that between 65 and 70 percent of higher education institutions currently use AI for grading, academic advising chatbots, and personalized student engagement, thus easing the operational workload. These digital interventions are not only efficient but also impactful; according to a report by WiFiTalents.com (2024), AI-powered tutoring systems have improved student learning outcomes by 30 to 33 percent, while reducing faculty grading time by as much as 75 percent. Moreover, 92 percent of students who used AI tools reported an increase in academic motivation, and 87 percent of faculty stated that AI enhances their ability to deliver personalized instruction. The relevance of AI in business education extends beyond academia into the job market. A 2024 *Business Insider* survey found that 49 percent of business leaders consider hands-on experience with generative AI tools like ChatGPT to be more valuable than a traditional college degree in certain hiring situations. Moreover, 80 percent of these employers expect new hires to be familiar with AI applications relevant to their field. In the Indian context, adoption trends are even more aggressive. A Reddit-based AI employment trends discussion, referencing regional data from 2024, reports that while 23 percent of Indian businesses have already integrated AI into operations, a substantial 73 percent plan to do so by 2025. These figures reflect the growing importance of equipping business graduates with applied AI competencies. Lastly, from a cost-efficiency perspective, Zipdo.co (2024) notes that the use of AI in university administration has resulted in an average cost savings of 25 percent—resources that can potentially be redirected toward improving instructional quality and innovation.

Data Analysis and Interpretation

Table 2: Gender Distribution of Respondents

Gender	Frequency	Percentage
Male	28	56
Female	22	44
Total	**50**	**100**

Source-Field Survey

The study included 50 MBA students, of whom 28 (56%) were male and 22 (44%) were female. This near-balanced gender distribution ensures a fair representation of perspectives across both genders, which is important when assessing awareness, usage patterns, and attitudes toward Artificial Intelligence in business education.

Table 3: Age Group of Respondents

Age Group	Frequency	Percentage
20–22 years	12	24
23–25 years	26	52
26–28 years	10	20
Above 28	2	4
Total	**50**	**100**

Source-Field Survey

The majority of respondents (52%) fell within the age group of 23–25 years, followed by 24% in the 20–22 age group. Around 20% were aged 26–28, while only 4% were above 28. This indicates that most respondents are within the traditional age range for postgraduate studies, which may influence both their openness to adopting new technologies and their exposure to digital learning environments.

Table 4: Awareness About AI in Education

Awareness Level	Frequency	Percentage
Aware	42	84
Not Aware	8	16
Total	**50**	**100**

Source-Field Survey

A significant majority—84% of respondents—reported being aware of AI in the context of education. Only 16% were unaware of AI applications in learning. This high awareness level suggests that AI is becoming a common part of academic conversations and that students are increasingly exposed to digital tools in their academic routines.

Table 5: AI Tools Used by Students

AI Tool Used	Frequency	Percentage
ChatGPT	32	64
Grammarly	18	36
Turnitin/Plagiarism AI	12	24
Quillbot	14	28
Google Bard	6	12

Source-Field Survey

When asked about the specific AI tools used, 64% of students reported using ChatGPT, followed by Grammarly (36%), Quillbot (28%), and Turnitin or other plagiarism detection tools (24%). Only 12% mentioned using Google Bard. This shows that generative and writing-support tools are gaining popularity in business education, especially for tasks involving content creation and editing.

Table 6: Perceived Benefits of AI in Learning

Benefit	Frequency	Percentage
Improved understanding of topics	30	60
Saves time	35	70
Enhances research skills	25	50
Supports assignment completion	40	80
Total	**50**	**100**

Source-Field Survey

Among the perceived benefits, 80% of respondents said AI tools help with assignment completion, 70% said they save time, 60% felt AI improves topic understanding, and 50% believed AI enhances research skills. These results indicate that students find practical, academic value in AI tools, particularly in task execution and comprehension.

Table 7: Frequency of AI Tool Usage

Frequency of Use	Frequency	Percentage
Daily	18	36
Weekly	20	40
Occasionally	10	20
Never	2	4
Total	**50**	**100**

Source-Field Survey

A combined 76% of students reported using AI tools on a daily or weekly basis—36% daily and 40% weekly. About 20% used AI occasionally, while only 4% never used it. This high frequency of usage demonstrates that AI tools are increasingly embedded in students' learning habits, especially for managing academic workloads.

Table 8: Preferred Areas for AI Support

Application Area	Frequency	Percentage
Assignment writing	38	76
Data analysis	12	24
Presentation preparation	16	32
Case study analysis	10	20
Total	**50**	**100**

Source-Field Survey

The most preferred area of AI support was assignment writing (76%), followed by presentation preparation (32%), data analysis (24%), and case study analysis (20%). This suggests students primarily rely on AI for writing-intensive tasks and that they are still exploring its potential in more analytical or application-based aspects of their coursework.

Table 9: Challenges Faced While Using AI Tools

Challenge Faced	Frequency	Percentage
Difficulty in understanding output	15	30
Ethical concerns	20	40
Inaccurate information	22	44
Over-dependence	18	36
Total	**50**	**100**

Source-Field Survey

Despite the benefits, students reported several challenges. Inaccurate information (44%) and ethical concerns (40%) were the top issues, followed by over-dependence (36%) and difficulty interpreting AI outputs (30%). These findings highlight the limitations of current AI tools and emphasize the need for digital literacy training alongside AI integration in education.

Table 10: Student Opinion on AI Replacing Traditional Learning

Opinion	Frequency	Percentage
Strongly Agree	6	12
Agree	12	24
Neutral	20	40
Disagree	10	20
Strongly Disagree	2	4
Total	**50**	**100**

Source-Field Survey

Opinions were mixed on whether AI can replace traditional learning. While 36% agreed or strongly agreed, a majority (40%) remained neutral, and 24% disagreed or strongly disagreed. This indicates cautious optimism among students. Many value AI tools, but also recognize the irreplaceable role of human teaching, interaction, and judgment in business education.

Table 11: Overall Satisfaction with AI in Business Education

Satisfaction Level	Frequency	Percentage
Very Satisfied	10	20
Satisfied	26	52
Neutral	10	20
Dissatisfied	3	6
Very Dissatisfied	1	2
Total	**50**	**100**

Source-Field Survey

Overall satisfaction with AI was positive, with 52% of students stating they were satisfied, and 20% very satisfied. Only 8% reported dissatisfaction, while 20% were neutral. This suggests that AI tools are generally well-received by business students, although there is still room for improvement in terms of accessibility, accuracy, and ethical clarity.

Hypothesis 1: There is no significant relationship between the frequency of AI tool usage and the perceived benefit in assignment completion among MBA students.

Table 12: Chi-Square Test

Chi-Square Value (χ^2)	Degrees of Freedom (df)	p-value	Decision
17.23	3	0.00063	Reject the Null Hypothesis

Interpretation

There is a statistically significant relationship between frequency of AI tool usage and its use in assignment completion. Students who frequently use AI tools are more likely to report academic benefits, especially in completing assignments.

Hypothesis 1: **Gender has no significant effect on the level of awareness about AI in education.**

Table 12: Chi-Square Test

Chi-Square Value (χ^2)	Degrees of Freedom (df)	p-value	Decision
0.58	1	0.446	Fail to Reject the Null Hypothesis

Interpretation

There is no statistically significant relationship between gender and AI awareness. This suggests that both male and female MBA students at Tumkur University have relatively similar levels of awareness regarding the use of AI in education.

Conclusion

The study concludes that Artificial Intelligence (AI) has a notable and growing impact on business education, particularly among MBA students at Tumkur University. The findings clearly indicate that students are not only aware of AI tools but actively use them to enhance their academic performance—especially for assignment writing, time management, and research support. The high usage of tools like ChatGPT and Grammarly confirms the practical utility of AI in day-to-day academic activities. Importantly, the hypothesis testing established a statistically significant relationship between the frequency of AI usage and its effectiveness in assignment completion, which justifies the growing reliance on such tools. However, the lack of significant association between gender and AI awareness demonstrates that access and familiarity with AI tools are relatively uniform across student demographics. Despite these benefits, the study also reveals critical concerns such as misinformation, over-dependence, and ethical ambiguity—indicating that while AI can support learning, it cannot replace human judgment, critical thinking, and academic integrity. These insights justify the need for business schools to formally integrate AI into the curriculum with proper training and ethical guidelines, ensuring that students develop not only technical proficiency but also responsible and reflective learning habits. Overall, the study validates that AI, when used mindfully, can be a powerful enabler of business education in the 21st century.

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