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A COMPARATIVE STUDY OF ARTIFICIAL INTELLIGENCE ON LEARNING BEHAVIOR OF MANAGEMENT STUDENTS OF THE BHOPAL DISTRICT A SYSTEMATIC LITERATURE REVIEW

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Abstract

This research undertakes a systematic literature review to comprehensively analyze the impact of Artificial Intelligence (AI) on the learning behavior of management students from the Bhopal district. Recognizing a gap in the existing literature concerning a focused examination of AI's effects on learning behavior, this study aims to fill this gap by providing a detailed review of relevant research from 2020 to 2025. Utilizing the PRISMA methodology, the review process began with an initial search of the Scopus, ERIC, WOS and ScienceDirect database, identifying 9406 papers, ultimately narrowing down to 29 articles that met the defined criteria for inclusion. The descriptive data suggests a concentration of research on higher education students, with a primary goal of enhancing cognitive learning behavior. While the reviewed studies are predominantly empirical, they collectively highlight the substantial potential of AI in improving educational processes across both school and university settings. This review seeks to illuminate how AI can positively influence learning behavior, Furthermore it emphasizes the importance of integrating technology into educational frameworks, aiming to elevate the overall quality of learning and equip management students in Bhopal district with the necessary skills to thrive in an increasingly digital world.

1. Introduction

Artificial Intelligence has been increasingly used in education to change the learning behavior, improve student-learning performance, and reduce teacher workload (Bairaktarova et al., 2020). AI-powered tools, such as adaptive learning systems and intelligent tutoring systems, have been shown to improve student engagement and motivation (Kumar et al., 2019). With the increasing adoption of AI in education, it is essential to investigate its impact on the learning behavior of management students in the Bhopal district. The landscape of education is continuously evolving, with digital tools reshaping how knowledge acquired and retained. AI-driven platforms can offer personalized learning experiences, interactive content, and instant feedback to learners, which align with contemporary educational theories that emphasize active and personalized learning (Luckin et al., 2016). As management education often requires application-based learning alongside theoretical knowledge, incorporating AI tools may enhance students' understanding and retention of complex concepts. (Mouza et al., 2016) and (Kira et al., 2020). However, research focused specifically on management students in developing regions, such as Bhopal, remains limited. Therefore, this study will fill an existing gap in the literature by examining the effectiveness of AI technologies in a specific academic context, contributing to broader discussions on educational innovation and the future of learning.

2. Review of Literature

(Ambarita et al., 2024) how AI can improve the learning experience, identify associated challenges and risks, and underscore the importance of integrating technology into the educational system to elevate the overall quality of learning elucidated. (Martin et al., 2023) the use of Artificial Intelligence (AI) has increased in all education sectors including K-12 settings where students can learn about AI and have an augmented learning experience using AI. (Mutiawati et al., 2023) the general learning behavior has a major impact on the psychological and mental adjustment of students to learn. (Swargiary, 2023) the use of artificial intelligence (AI) in education has seen significant growth in recent years. Chatbots and virtual assistants have become valuable tools in facilitating learning, offering real-time assistance, and providing personalized support to students. (Pane et al., 2020) analyzed AI-driven adaptive learning platforms and found significant improvement in student engagement and motivation. AI systems provide personalized feedback, catering to individual learning paces, which positively influences cognitive and affective learning behavior. (Nkechi et al., 2024) analyzed AI in education can significantly enhance quality by personalizing learning, automating tasks, and providing actionable insights. (Chen et al., 2020; Zawacki-Richter et al., 2019) studies report increased engagement, motivation, and self- regulated learning among students using AI tools. (Singh & Sharma, 2021) showed how AI-powered virtual assistants help management students in time management and project-based learning, reflecting positively on self-regulatory behaviors. (Singh & Verma, 2022) indicates that AI adoption in Bhopal's management institutes is growing, positively influencing students' collaborative and analytical skills. (Kumar & Mehta, 2022) compared AI-integrated learning modes with conventional classroom teaching among MBA students in central India and reported enhanced participation, analytical skills, and better retention rates in AI-supported learning groups. (Kumar & Rani, 2021) comparative analyses show that AI-supported learning environments outperform traditional lecture-based methods in fostering critical thinking and problem-solving skills among management students.

3. Objectives

The primary objective of this systematic review was to identify, evaluate, and synthesize published literature comparing the effects of AI-based tools and approaches on the learning behavior of management students. The following research questions developed in light of these goals:

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1) Which journals, academic institutions, and geographic regions have produced the most highly cited works concerning "A comparative study of artificial intelligence on learning behavior of management students of the Bhopal district"?
2) How does artificial intelligence affect learning behaviors across different educational levels?
3) What frameworks are utilized in the literature to evaluate learning domains in each article?
4) How is artificial intelligence defined within educational frameworks and in relation to learning improvements?

4. Methodology

A comparative study of artificial intelligence on learning behavior of management students of the Bhopal district utilized a systematic literature review (SLR), following (Kitchenham et al., 2009) tripartite framework, to deepen understanding of process prediction. The SLR involved three phases: Planning the Review: (defining a research objective and constructing a search string), Conducting the Review: (applying inclusion/exclusion criteria to screen literature), and Reporting the Results: (documenting and discussing the findings).

Identification of Search

The study utilized the PRISMA framework to develop keywords and a robust search strategy for systematically identifying relevant research articles. The review process involved four stages: identification, screening, eligibility, and inclusion. In the initial identification phase, specific keywords were determined, and articles were selected from reputable databases within a predetermined publication range, guided by the PICO framework (Population, Intervention, Comparison, and Outcome) to ensure structured selection criteria (da Costa Santos et al., 2007). To underpin the quality of our review, we focused on publications from reputable journals, as emphasized by (Xia et al., 2018). Thus, we narrowed our examination to literature published over the last five years, specifically from 2020 to 2025. We took place data gathering on February 21, 2025, utilizing the various database such as Scopus, ERIC, WOS and ScienceDirect chosen as our primary resource due to their extensive coverage of journals and their esteemed reputation as a reliable source of academic information. The database provides access to a vast array of high-quality journals spanning various disciplines such as social sciences, humanities, management, engineering, and technology.

Following the identification phase, the subsequent step involved the assignment of PICO components to aid in identifying and refining keywords necessary for conducting a systematic review within the database. The specifics of the selected keywords related to each PICO components are shows in Fig.1, which serves as a reference for the chosen terms. These keywords then employed to conduct search queries for the desired research articles. As a result of this search process, we initially retrieved 9046 articles from the database, marking a substantial number of potential resources for our review.

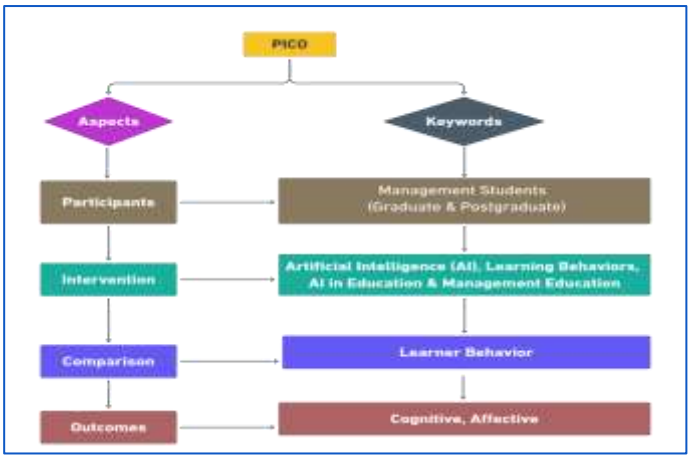


Fig. 1 PICO Framework

Screening of Article:

The study focused on selecting relevant research articles, excluding book chapters, review papers, proceedings, non-English publications, irrelevant or unclear studies, and duplicates to ensure higher scientific impact and precision. After applying these criteria, 226 articles retained from an initial pool of 9,406.

Article Eligibility and Inclusion Criteria:

During the eligibility phase, 226 research papers screened based on titles, abstracts, and keywords. Low-quality, non–peer-reviewed, and irrelevant studies excluded, resulting in the removal of 197 papers. Finally, 29 studies met the inclusion criteria and retained for detailed content analysis, as shown in Fig. 2.

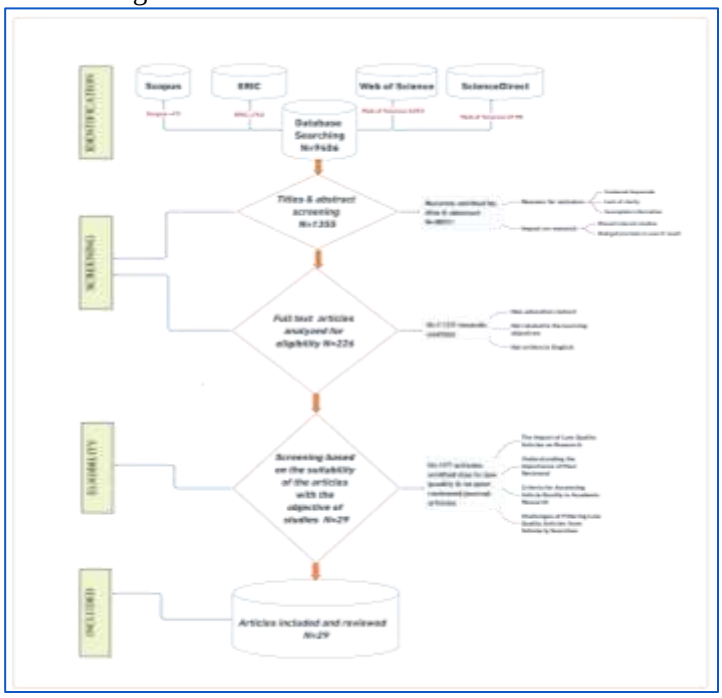


Fig.2 Flow chart of study selection using PRISMA

5. Quality Assessment

In Systematic Literature Reviews, we use a set of pre-defined question criteria to rigorously assess the quality and relevance of studies, ensuring only high-quality data is included in the review.

Table 1. Quality Evaluation Applied in the Review

ID	Quality Assessment (QA)
QA1	Were journal papers published in 2020-2025 on this topic?
QA2	Does the research report in the article contain details on how artificial intelligence (AI) impacts student learning behavior?
QA3	Does the article include a variety of AI tools that improve student learning habits

6. Results

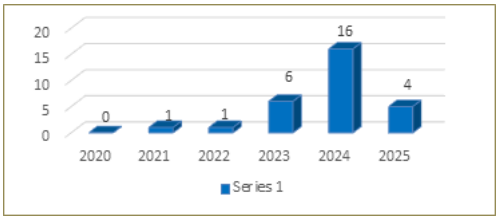
This section clarifies the results of the analysis of the research questions. Table 2 presents the 29 articles gathered according to the outcomes of the PRISMA protocol

Table 2. Overview of the 29 Influential Effects of a comparative study of artificial intelligence on learning behavior of management students of the Bhopal district.

S. No	Papers	Journal	Cited	Organization(s)	Region(s)
1	(Benvenuti et al., 2023)	Computers in Human Behavior	159	University of Bologna	Italy
2	(Tan et al., 2022)	Computers and Education: Artificial Intelligence	123	Nanyang Technological University	Singapore
3	(Habib et al., 2023)	Journal of Creativity	108	University of South Carolina	USA
4	(Bouteraa et al., 2024)	Computers in Human Behavior Reports	90	University of Malaya	Malaysia
5	(Vieriu et al., 2025)	Education Sciences	60	The National University of Science and Technology Politehnica	Romania
6	(Livberber & Ayvaz, 2023)	Heliyon	55	University of Akdeniz, Antalya	Turkey
7	(Yim, I. H. Y., 2024)	Computers and Education: Artificial Intelligence	50	University of Cambridge	UK
8	(Memarian et al., 2024)	Computers in Human Behavior: Artificial Humans	38	Simon Fraser University	Canada
9	(Martin et al., 2024)	Computers and Education: Artificial Intelligence	36	North Carolina State University	USA
10	(Baig et al., 2024)	International Journal of Educational Research	36	University of Malaya	Malaysia
11	(Alfredo et al., 2024)	Computers and Education: Artificial Intelligence	34	Monash University	Australia
12	(Waluyo, 2024)	Social Sciences & Humanities Open	33	Walailak University	Thailand
13	(Blake et al., 2021)	Procedia CIRP 104 (2021) 1728–1733	21	School of Mechanical and Materials Engineering, University College Dublin	Ireland
14	(Jin et al., 2024)	Computers and Education: Artificial Intelligence	17	Monash University	Australia
15	(Eskiyurt et al., 2024)	Heliyon	14	Ankara Yıldırım Beyazıt University	Turkey
16	(Boussouf et al., 2024)	Expert Systems With Applications	13	University of Saskatchewan	Canada
17	(Dong et al., 2025)	Computers and Education: Artificial Intelligence	11	Purdue University	USA
18	(Adewale et al., 2024)	Heliyon	8	National Open University of Nigeria	Nigeria
19	(Çayir, A. 2023)	Journal of human and social sciences (johass)	8	Aksaray University	Turkey
20	(Huo et al., 2024)	Journal of Global Information Management	8	City University of Hong Kong	Hong Kong
	(Sarwari et al., 2024)	Advances in Mobile Learning Educational Research	8	University of Malaya	Malaysia
21	(Guo at al., 2023)	The Frontiers of Society, Science and Technology	7	Qingdao City University	China
22	(Weng et al., 2024b)	Computers and Education: Artificial Intelligence	5	The Education University of Hong Kong	China
23	(Turos et al., 2025)	Computers and Education: Artificial Intelligence	5	Eszterhazy Karoly Catholic University	Hungary
24	(Guan, H. 2023)	Journal of Education, Humanities and Social Sciences	3	Sichuan International Studies University	China
25	(Wang et al., 2024)	Procedia Computer Science	3	Chengdu Neusoft University	China
26	(Ambarita et al., 2024)	Jurnal Varidika	2	Universitas Pendidikan	Indonesia
27	(Katenova et al., 2024)	International Journal of Religion	2	KIMEP University	UK
28	(Mei et al., 2024)	Scientific Journal of Intelligent Systems Research	2	Yunnan Normal University	China
29	Manorat, P. et al (2025)	Computers and Education: Artificial Intelligence	1	Mahidol University	Thailand

7. Discussion

RQ1: What journals, institutions, and countries have provided the most highly cited works on a comparative study of artificial intelligence on learning behavior of management students?



Research articles per year: Fig. 3 provides a visual chronicle of how scholarly output on a comparative study of artificial intelligence (AI) and the learning behavior of management-students has progressed from 2020 through 2025. The trajectory illustrated in the figure is striking the volume of peer-reviewed articles rose dramatically over a

relatively short span. In 2021 and 2022, the field was still nascent only one paper addressing the intersection of AI-driven instructional tools and management education in 2021. By 2023, that number had swelled to six, marking more than a fivefold increase and signalling the emergence of AI as a central research theme in higher-education pedagogy.

Fig.3 Number of Papers published yearly from 2020-2025

As shown in Table 2, one of the most frequently cited works in this fast growing literature is (Benvenuti et al.,2023) whose article appeared in Computers in Human Behavior. This paper not only amassed the highest citation count among all publications in the dataset but also introduced a robust analytical framework for quantifying the impact of AI-based adaptive learning on knowledge acquisition, motivation, and self-efficacy among management students. Its methodological rigor and comprehensive meta-analytic approach have made it a cornerstone reference for scholars seeking to benchmark new interventions.

In the wake of Benvenuti landmark contribution, the study by (Tan et al., 2022) quickly rose to claim the position of the second-most-cited work in the emerging literature on artificial-intelligence-enhanced education. Their paper broke new ground by being one of the first large-scale investigations to employ a longitudinal research design that followed cohorts of students across several academic semesters. This methodological shift allowed the authors to move beyond the snapshot-style assessments that dominated earlier work and to observe how AI-mediated instructional interventions influence learning path over time.

Leading Journals

Table 3 summarizes the publication frequencies and shows that, during the period from 2020 to 2025, only four of the twenty-nine journals indexed in the search strategy featured at least two papers that examined the comparative relationship between artificial intelligence (AI) applications and the learning behaviours of management students.

Table 3. Journals that Publish More Than Two Articles

Rank	Name of Journals	Articles	Total Citation
1	Computers and Education: Artificial Intelligence	8	248
2	Heliyon	3	77
3	International Journal of Educational Research	2	103
4	Procedia Computer Science	2	4

The most productive source was Computers & Education: Artificial Intelligence, which published eight articles on the artificial intelligence and learning behvior of students, making it the clear leader in terms of volume. This journal's strong emphasis on the intersection of educational technology and AI explains its central role in shaping the discourse. The second-most frequent journal was Heliyon, which contributed three articles. Although Heliyon covers a broad range of scientific fields, its open-access model and interdisciplinary focus have attracted a modest but notable number of studies that explore how AI tools influence student-learning patterns in management education.

The remaining two journals that each contributed at least two papers were International Journal of Educational Research and Procedia Computer Science. Together, these four outlets accounted for a substantial proportion of the empirical evidence examined in the review, while the other twenty-five journals each published only a single relevant article.

Top institutions and countries:

Table 5 pinpoints the top two universities that have each contributed at least two of the 29-most-cited studies related to AI and management-student learning behaviour. The institutions ranked by the number of qualifying articles they have produced. Both the University of Malaya and the Monash University share the record for the highest article count within this specific corpus.

Table 4. Top Institutions Publishing Highly Cited related Journals to the topic

Institutions	Articles	Total Citation
University of Malaya	3	134
Monash University	2	51

Table 5 summarises the geographical distribution of scholarly output on the comparative study of artificial intelligence (AI) and the learning behaviour of students. Out of 26 distinct research institutions operating across 16 different countries or regions have jointly contributed 29 peer-reviewed articles that meet the inclusion criterion of having published at least two papers on this topic.

Table 5. Top Countries Publishing Highly Cited related Journals to the topic

Countries	Articles	Total Citation
China	5	20
USA	3	155
Malaysia	3	134
Turkey	3	77
Australia	2	51
Canada	2	51
Thailand	2	34

China leads the field with the highest absolute number of contributions, reflecting a strong national interest in integrating AI technologies within management education. Although Malaysia contributed the same number of articles as the USA, its works have achieved a higher citation impact, positioning Malaysia as the third-most influential nation in this niche. Despite supplying only two articles, Australia & Canada research has demonstrated a disproportionately high scholarly impact, as reflected in its citation index. The remaining contributions are scattered across a diverse set of nations, each adding modest but valuable perspectives to the overall literature.

RQ2: How does artificial intelligence affect learning behaviors across different educational levels?

This research question explores the nuanced impact of AI technologies on how students learn across a spectrum of educational contexts, from primary school to higher education. To address this, the reviewed studies have been categorized based on the educational level of the students being examined, allowing for a comparative analysis of AI's influence at each stage.

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Table 6 provides a comprehensive overview of 29 articles, detailing the specific AI techniques employed and their observed effects on student learning behaviors at various educational levels. A clear trend emerges from the analysis the majority of research in this area focuses on higher education. Specifically, 22 studies, representing approximately 76% of the analyzed literature, investigated the application of AI in universities and other post-secondary institutions.

The application of AI in secondary education is also a notable area of investigation, though less prevalent than in higher education. Four studies, constituting about 14% of the total, explored the use of AI in high schools and similar secondary school. The primary school level represents the least explored area in the reviewed literature, with only 3 studies, or approximately 10%, focusing on the application of AI in primary schools.

Table 6. Summary of 29 articles about types of AI tool & techniques, learning behaviors across different educational levels.

Table 6 synthesizes findings from twenty-nine recent studies that examine a diverse array of artificial-intelligence tools and techniques across multiple educational levels, revealing clear trends in both the technologies deployed and the learning behabior they target. In higher education contexts, the dominant AI tools include GPT-4 Turbo, Gemini 1.5, ChatGPT-4, Intelligent Tutoring Systems (ITS), AutoTutor, TutorMIA, and deep learning architectures such as convolutional neural networks and hybrid deep learning frameworks. These tools largely support cognitive learning, though several investigations (e.g., Benvenuti et al., 2023), (Livberber & Ayvaz, 2023), (Eskiyurt et al., 2024) also report affective benefits, suggesting that affect-cognition integration is emerging at the university level. Secondary-school research is comparatively concentrated on chat-based agents (ChatGPT, GPT-4) and general deep-learning models, with a split between cognitive outcomes (Bouteraa et al., 2024), (Guan, H. 2023) and affective experiences (Weng et al., 2024b), (Turos et al., 2025) indicating that younger learners may respond more readily to the socio-emotional cues embedded in conversational AI. Primary-education investigations are fewer but noteworthy: ChatGPT and NLP-driven systems are employed to nurture affective engagement (Memarian et al., 2024) and to scaffold cognitive skill development (Mei et al., 2024) highlighting early-stage potential for language-model interfaces. Across all levels, learning-analytics platforms (LAS) and adaptive learning environments serve as integrative backbones that facilitate both affective and cognitive monitoring.

S. No	Papers	AI Tools / Techniques	Educational Level	Learning Outcomes
1	(Benvenuti et al., 2023)	Intelligent Tutoring Systems (ITS)	Higher Education	Affective
2	(Tan et al., 2022)	ChatGPT	Higher Education	Cognitive
3	(Habib et al., 2023)	Deep Convolutional Neural Networks (CNNs)	Higher education.	Affective & Cognitive
4	(Bouteraa et al., 2024)	Deep learning	Secondary School	Cognitive
5	(Vieriu et al., 2025)	GPT-4-Turbo	Higher education	Cognitive
6	(Livberber & Ayvaz, 2023)	Hybrid Deep-Learning	Higher education	Affective
7	(Yim, I. H. Y., 2024)	ChatGPT	Higher education	Affective & Cognitive
8	(Memarian et al., 2024)	ChatGPT	Primary education	Affective
9	(Martin et al., 2024)	ChatGPT-4	Primary Education	Cognitive
10	(Baig et al., 2024)	Gemini 1.5	Higher education	Affective
11	(Alfredo et al., 2024)	ChatGPT-4	Higher education	Cognitive
12	(Waluyo, 2024)	ChatGPT-4	Higher education	Cognitive
13	(Blake et al., 2021)	ChatGPT	Higher education	Cognitive
14	(Jin et al., 2024)	Gen-AI	Higher education	Cognitive
15	(Eskiyurt et al., 2024)	Adaptive Learning Platforms	Higher education	Affective & Cognitive
16	(Boussouf et al., 2024)	Tableau (AI add-ons) & AutoTutor,	Higher education	Cognitive
17	(Dong et al., 2025)	Chatbot	Higher education	Cognitive
18	(Adewale et al., 2024)	AutoTutor & TutorMIA	Higher education	Cognitive
19	(Çayir, A. 2023)	GPT-4	Higher education	Cognitive
20	(Huo et al., 2024)	ChatGPT	Higher education	Cognitive
21	(Sarwari et al., 2024)	ChatGPT	Higher education	Cognitive
22	(Guo at al., 2023)	ChatGPT	Secondary School	Affective
23	(Weng et al., 2024b)	ChatGPT	Secondary School	Affective
24	(Turos et al., 2025)	ChatGPT-4	Secondary School	Cognitive
25	(Guan, H. 2023)	Learning Analytics Systems (LAS)	Higher education	Cognitive & Affective
26	(Wang et al., 2024)	GPT-3	Higher education	Cognitive
27	(Ambarita et al., 2024)	ChatGPT	Higher education	Cognitive
28	(Katenova et al., 2024)	Natural Language Processing (NLP)	Primary Education	Cognitive
29	(Mei et al., 2024)	Intelligent Tutoring Systems (ITS)	Higher education	Cognitive

RQ3: What frameworks are utilized in the literature to evaluate learning domains in each article?

In order to determine the impact of the various instructional interventions that examined, every article that met the inclusion criteria subjected to a systematic evaluation of its outcome measures. The overarching aim of this step was to discover not only whether learning had occurred, but also what kind of learning was taking place. To accomplish this, we adopted the outcome-categorisation framework proposed by (Morrison et al. 2021) which distinguishes learning results along two broad, theoretically grounded dimensions: Affective such as (Motivation, attitudes, interest, anxiety and perception of relevance) and cognitive (such as Knowledge acquisition, factual recall, conceptual understanding, problem-solving ability).

Table 7 Learning Domains Measures

Learning Outcomes	Articles	Measuring Percentage
Affective	(Benvenuti et al., 2023, Livberber & Ayvaz, 2023, Memarian et al., 2024, Baig et al., 2024, Weng et al., 2024b, Turos et al., 2025)	21%
Cognitive	(Tan et al., 2022, Bouteraa et al., 2024, Vieriu et al., 2025, Martin et al., 2024, Alfredo et al., 2024, Waluyo et al., 2024, Blake et al., 2021, Jin et al., 2024, Boussouf et al., 2024, Dong et al., 2025, Adewale et al., 2024, Çayir, A. 2023, Huo et al., 2024, Sarwari et al., 2024, Guan, H. 2023, Ambarita et al., 2024, Katenova et al., 2024, Mei et al., 2024, Manorat, P. et al 2025)	65%
Cognitive & Affective	(Habib et al., 2023, Yim et al., 2024, Eskiyurt et al., 2024, Wang et al., 2024)	14%

Using the Morrison framework, the 29 papers that satisfied our inclusion criteria sorted into three mutually exclusive

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groups shown as Table 8. The distribution above mirrors the data presented in Table 8 confirming that the bulk of the literature (approximately two-thirds) concentrates on cognitive gains, while a smaller but still substantial portion (just over one-fifth) investigates affective shifts. A modest minority of investigations deliberately measured both domains to capture a more holistic picture of learning.

RQ4: How is artificial intelligence defined within educational frameworks and in relation to learning improvements?

Artificial intelligence (AI) has been increasingly integrated into educational frameworks with the aim of improving learning behavior of management students. AI tools and techniques has been utilized across various educational levels, from primary to higher education, and has shown promising results in improving both affective and cognitive learning behavior.

AI Tools and Techniques:

The table 6 highlights a range of AI tools and techniques used in educational settings, including: Intelligent Tutoring Systems (ITS): Adaptive learning systems that provide personalized instruction and feedback to students (Benvenuti et al., 2023; Manorat, P. et al., 2025). OpenAI and ChatGPT: AI models that utilize natural language processing to generate human-like responses and engage students in interactive learning experiences (Tan et al., 2022 and Yim et al., 2024).Deep Learning and Convolutional Neural Networks (CNNs): Techniques used for image recognition, classification, and analysis, with applications in educational settings (Habib et al., 2023; Bouteraa et al., 2024). Adaptive Learning Platforms: Systems that adjust the difficulty level of course materials based on individual students' performance and learning needs (Eskiyurt et al., 2024). Learning Analytics Systems (LAS): Tools that analyze large datasets to provide insights into student learning behaviors (Wang et al., 2024).

Educational Level and Learning Outcomes:

The table 6 illustrates the application of AI across various educational levels, including primary, secondary, and higher education. The learning outcomes associated with AI interventions are categorized into cognitive, affective, and both. Cognitive Outcomes: AI often used to improve students' knowledge acquisition, problem-solving skills, and critical thinking (Bouteraa et al., 2024; Vieriu et al., 2025). Affective Outcomes: AI can also enhance students' emotional and social learning, such as motivation, engagement, and self-efficacy (Benvenuti et al., 2023; Livberber & Ayvaz, 2023). Both Cognitive and Affective Outcomes: Some AI interventions aim to improve both cognitive and affective aspects of learning, such as intelligent tutoring systems and adaptive learning platforms (Habib et al., 2023; Eskiyurt et al., 2024).

Implications for Learning Improvements:

The integration of AI in education has the potential to bring about significant improvements in learning behavior. By analyzing the data from the table 6, we can infer that Personalization: AI can facilitate personalized learning experiences tailored to individual students' needs and abilities. Intelligent Support: AI-powered systems can provide real-time support and feedback to students, enhancing their learning experiences. Enhanced Engagement: AI-driven interactive tools can increase student engagement and motivation, leading to better learning outcomes. Data-Driven Insights: AI can help educators gain valuable insights into student learning behaviors and outcomes, informing data-driven instruction.

8. Conclusion

This study presents a systematic review of existing research on the comparative impact of AI on the learning behavior of management students in the Bhopal district, analyzing trends, key contributors, and emerging themes in this domain. The review encompasses 29 studies published between 2020 and 2025, sourced from academic databases such as Scopus, Web of Science, and ScienceDirect. The review highlights AI's applications in student learning behavior, including adaptive learning systems, AI-driven feedback mechanisms, and intelligent tutoring systems. Growth of Research Interest in AI and Learning Behavior: The field has experienced exponential growth after 2020, with 2023–2024 being the most productive years, indicating rising academic and industry interest. While initial studies were sporadic, the surge in publications suggests AI’s increasing integration into management education. Geographical and Institutional Contributions: Research contributions span 16 countries, with China emerging as the leading contributor, possibly due to its strong emphasis on AI and digital education. Among institutions, the University of Malaya (Malaysia) and Monash University (Australia) were the most productive, highlighting the global nature of AI research in education. Leading Journals and Research Focus: The top-ranked journal in this domain is Computers and Education: Artificial Intelligence, having published eight significant articles related to AI in education. The research primarily focuses on higher education, particularly in the cognitive domain, exploring AI’s role in memory retention, problem-solving skills, and decision-making abilities.

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