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Bridging the Gap: How Students Perceive AI Tools in Management Education

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Abstract

The use of AI tools particularly ChatGPT, has significantly altered management education by enhancing accessibility, customizing instruction, and raising student interest. This study shows how management students view and using AI tools, emphasizing their benefits, drawbacks, and implications for academic performance. Even while ChatGPT and other AI technologies facilitate self directed learning, goal setting and problem solving, concerns about academic integrity, technological dependence, data privacy, and fragmented learning experiences still exist. The study examines usage patterns, satisfaction levels, ethical concerns, and how AI competency affects boosting benefits by analyzing inputs from students. The findings emphasize how crucial it is to integrate AI tools in education in a balanced way to address ethical concerns and foster critical thinking and all encompassing learning outcomes. In order to prepare students for professions in a technologically advanced world, recommendations are made to educators and legislators for creating curricula that successfully use AI tools.

Keywords: *Artificial Intelligence (AI), ChatGPT, Management Education, Students Perception, Ethical AI Usage, Personalized Learning, Technology Integration*

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1. Introduction

Due to the scarcity of educational materials in the past, learning was a difficult task for kids (Bozkurt et al., 2020). Ancient methods relied heavily on books, manuscripts, and knowledge passed down through oral traditions. Gaining knowledge was often a time-intensive process, accessible only to a privileged few with access to these scarce resources (Muthukrishnan and Datta, 2023). The reliance on physical materials such as books, newspapers, magazines, and posters further constrained the speed and efficiency of learning (Mayembe and Nsabata, 2020). As technology began to advance, particularly in the mid-20th century, this scenario started to change dramatically. The advent of artificial intelligence (AI) in the 1950s marked a transformative moment in education (Nelson, 2024). By enabling machines to mimic human behavior and cognitive processes, AI laid the foundation for innovative learning tools that could bridge the gap between students and their educational needs. Today, AI tools like ChatGPT have revolutionized management education by making knowledge more accessible and learning more efficient (Dahake et al., 2024). From assisting with assignments to providing personalized tutoring, these tools empower students to learn flexibly and explore topics in depth. This development highlights how technology has evolved to address the gaps of the past, offering new opportunities for students to engage in education in ways that were once unimaginable (Milner, 2021). Various domains including machine learning, natural language processing, computer vision, and robotics have emerged as a result of this quest, all of which improve AI's capacity to assist management education by simulating human thinking, learning, and decision-making, thereby closing the gap in student involvement and comprehension. (Vashista et al., 2023). ChatGPT has emerged as the most widely used interactive generative AI model in management education, leveraging Natural Language Processing (NLP) to facilitate student learning (Alqahtani et al., 2023). By utilizing large language models (LLMs) advanced algorithms trained on extensive text data it enhances students' engagement, comprehension, and problem-solving abilities by generating human-like responses and assisting with diverse language-based tasks (Ma et al., 2024).

ChatGPT, created by the internationally renowned AI research group OpenAI, was initially made available on November 30, 2022, with the main goal of improving communication between humans and AI (Roumeliotis and Tselikas, 2023). It is a search engine resource and a potent tool for bridging the gap between theoretical knowledge and real-world application in management education. It allows students to interact with AI-driven insights and supports their learning process. A useful tool in management education, ChatGPT

is a refined GPT model created for conversational activities that is publicly available on several platforms (Atlas, 2023). It enables students to engage in interactive learning, receive instant feedback, and generate content in diverse styles and languages, thereby bridging the gap between traditional teaching methods and AI-driven learning experiences. Due to ChatGPT's vast potential, both teachers and students in management education began integrating it into their learning and teaching processes soon after its release (Yu, 2024). Researchers have since explored its capabilities and limitations, investigating how students leverage AI tools for enhanced learning outcomes and how educators incorporate it into their teaching methodologies. This ongoing exploration helps bridge the gap between AI-assisted education and traditional learning approaches. In the research focusing on the perspectives of management students, significant insights emerged about AI tools like ChatGPT. By providing ongoing, on-demand support, individualized help, improved learning materials, and accessible choices, these solutions show great promise in management education. They are particularly helpful for children who want individualized explanations, flexible learning strategies, or linguistic assistance (Wanner and Palmer, 2015).

Additionally, ChatGPT's ability to create practice materials, summarize information, and help with academic writing enables students to successfully participate in self-directed learning. However, students believe that these advantages come with significant drawbacks. The possible abuse of AI technologies in assignments and tests raises questions regarding academic integrity (Mohammad karimi, 2023). Overuse of these tools has the danger of impeding the growth of critical thinking abilities. Furthermore, pupils who lack solid underlying knowledge may be misled by sporadic errors in AI-generated replies. Students' uncertainty regarding the handling of their data is exacerbated by privacy and data security concerns. Furthermore, the effectiveness of AI technologies in meeting the different requirements of students is limited by their lack of emotional intelligence and complex contextual awareness (Xiao et al., 2024). Another key challenge identified is that the compartmentalized, quick answers provided by ChatGPT may encourage fragmented learning instead of promoting a deeper conceptual understanding (Masalaci, 2024). These results highlight the necessity of integrating AI technologies in management education in a fair and moral manner in order to uphold academic integrity, promote comprehensive learning outcomes, and allay student worries. Students' management education learning experiences might be both improved and challenged via ChatGPT. By helping with difficult analytical tasks, it can be a useful tool for lowering cognitive load and freeing up students to concentrate

on critical thinking and strategic decision-making (Kitsantas et al., 2019). Over-reliance on AI, however, can also result in dependency and impede the growth of critical problem-solving abilities, which will ultimately limit students' capacity for in-depth, reflective learning.

For instance, ChatGPT's many writing and learning support features may be used by management education students to improve self-regulated learning (SRL) (Ng et al., 2024). In the forethought phase, the tool can help with goal-setting and preparation; in the performance phase, it can help with active engagement through note-taking, question formulation, and practice; and in the self-reflection phase, it can help with comprehension through peer discussions and self-assessment (Çakiroglu and Öztürk, 2021). On the other hand, some students may depend on ChatGPT to do their schoolwork without exercising critical thinking skills or gaining a thorough comprehension of the material. Their capacity to apply information in practical management situations may be limited as a result of this surface-level learning (Van den Beemt et al., 2020). The effectiveness of learning to use ChatGPT, therefore, relies heavily on students' AI competency. Students with a higher level of familiarity and skill in using AI tools will likely maximize their benefits, integrating them into their learning in a more meaningful and effective way (Adiguzel et al., 2023). Strong AI-competent students have the self-assurance, know-how, and abilities needed to use ChatGPT sensibly and successfully. They may use the technology to improve their learning by getting feedback and seeing things from different angles (Rasul et al., 2023). In order to assure significant learning results, this skill entails not only comprehending ChatGPT's potential but also identifying its limits, using it responsibly, and critically assessing AI-generated material. Furthermore, instructional design and assessment strategies have a significant impact on students' learning experiences (Jung et al., 2019).

Teachers have two roles: they help students utilize AI technologies like ChatGPT responsibly, effectively, and ethically, and they build evaluation procedures that leverage these tools for instructional reasons. Students' learning experiences are greatly influenced by instructors' capacity to design AI-supported exams and impart best practices in AI usage (Alam and Mohanty, 2023). Gaining proficiency and confidence in utilizing AI is essential for students' professional development since they will probably deal with ChatGPT and other AI tools in their future employment. Being knowledgeable with AI technology not only improves their proficiency with these tools but also equips people to adjust to the changing needs of the workforce, as AI integration is becoming more and more prevalent (Morandini et al., 2023). By equipping students with the necessary skills to navigate and apply AI tools,

educational institutions can better prepare them for success in a technology-driven professional environment (Tomaskinova and Tomaskin, 2024).

2. Research objectives

The main aim of this analysis is to highlight the gap in comprehensive global studies on the usage of AI tools in education and how students perceive and utilize these tools to support their learning. The study explores students' perceptions of various AI tools, such as ChatGPT, Gemini, Copilot, and others, and how these tools are integrated into educational resources. It also examines how these tools contribute to students' career development and help them address challenges within educational institutions. The aim of this study is to investigate how students throughout the world see ChatGPT, with particular attention to its use, features, regulations, ethical issues, contentment, attitudes, learning results, skill development, implications for the job market, and emotional reactions associated with its use.

The study analyze data from 162 student responses collected from a private institution . Our research fills the existing gap by offering a comprehensive viewpoint on how students perceive AI. Thus, the following research question was developed.

The objective of the study seems to be:

- To explore the usage, preferences, and challenges faced by management students regarding AI-powered tools in education.
- To understand how these tools influence learning styles, study routines, and academic performance.
- To identify the level of comfort, effectiveness, and satisfaction students experience while using AI tools.
- To examine concerns like accuracy, ethical implications, and dependency on technology associated with AI integration in education.
- To gather insights for improving AI tools tailored for management education.

3. Literature review

Contemporary educational systems grapple with multiple challenges, including excessive student-teacher ratios, limited capacity for individualized instruction, diverse learning needs among students, and difficulties adapting to rapid technological advancements. In this evolving academic environment, AI-driven conversational agents have surfaced as a

potential remedy for many of these systemic problems. While some learning institutions actively implement these intelligent systems, acknowledging their educational value, others maintain a more reserved stance regarding their integration into teaching methodologies. This divergence in adoption has spurred significant scholarly attention, with numerous studies examining the implications, advantages, and potential drawbacks of incorporating AI chatbots in educational contexts.

AI-powered chatbots simulate human conversation through text or voice interactions, delivering information in a natural, dialogue-based format. Chatbots have been around since the 1960s, and their growth has continued due to advances in technology and the growing need for automated communication solutions. ELIZA, developed by Joseph Weizenbaum at MIT in 1966, was among the first instances (Weizenbaum, 1966). By rewording user inputs as questions, this innovative program mimicked human answers. Another significant development was PARRY, which was created in 1972 at Stanford University by psychiatrist Kenneth Colby (Colby, 1981). PARRY, which was created to mimic a patient with paranoid schizophrenia, showed early natural language processing (NLP) abilities by having text-based discussions with delusional behavior patterns. Early NLP-based chatbot ALICE (Artificial Linguistic Internet Computer Entity), developed by Richard Wallace in 1995, was the winner of the Loebner Prize Turing Test in 2000–2001 (Wallace, 1995). ALICE demonstrated enhanced conversational skills while participating in a task intended to assess how well robots could mimic human speech. The early 2000s saw the rise of SmarterChild, developed by ActiveBuddy, Inc. (Hoffer et al., 2001). Operating on instant messaging platforms like AOL and MSN, this chatbot could discuss diverse topics and refine its responses through continuous user interactions.

A significant leap occurred in 2011 with two breakthroughs: Apple's Siri, a voice-activated assistant for iPhones (Aron, 2011), and IBM's Watson, which defeated human contestants on Jeopardy (Lally & Fodor, 2011). While Siri popularized voice-based AI interactions, Watson highlighted the potential of machine learning in comprehending and answering complex queries. The chatbot landscape expanded further in 2016 when Facebook Messenger opened its platform for AI-driven bots, enabling businesses to automate customer service, news distribution, and online shopping (Holotescu, 2016). In 2018, Google Duplex demonstrated advanced real-time conversational abilities by making phone calls and completing tasks on behalf of users (Dinh & Thai, 2018; Kietzmann et al., 2018).

3.1. Modern Advancements: ChatGPT and Google Bard

Recent years have witnessed the emergence of highly sophisticated chatbots, with ChatGPT (OpenAI, 2022) and Google Bard (2023) standing out as groundbreaking innovations. Both are LLMs trained on vast datasets, capable of generating text, creative content, and informative responses though with occasional inaccuracies. ChatGPT excels in producing well-structured, detailed answers based on its training from books and articles. Google Bard, trained on web-sourced data, offers more current information but may sacrifice some factual precision (AlZubi et al., 2022; Rahaman et al., 2023; Rudolph et al., 2023). These advancements underscore the transformative potential of AI chatbots in reshaping human-computer interaction, education, and business automation.

4. Methodology:

The study aimed to investigate students enrolled in management education programs at various levels, all of whom are over the age of 18 and legally capable of providing free and voluntary consent to participate in the collection of online survey data. The private institution was the site of this investigation. Since there hasn't been much systematic research on how students view AI tools like ChatGPT in the context of management education, the survey was first created in English. The content of the questionnaire was created from an investigative standpoint, emphasizing important topics like the use of AI, ethical issues, and how it affects learning in management courses, among other things. This strategy made sure that the survey included a range of viewpoints and gave a thorough grasp of how students felt about AI technologies in management school. To achieve the research goal and ensure broader representation, the questions were developed in English. This allowed the survey to capture insights among students from the university, shedding light on how students from different cultural backgrounds perceive AI tools in management education.

The survey was carried on the Google form filling by the students in that private institute and the survey was conducted at different time intervals for students in the same departments of the institute, including both Bachelor of Business Administration (B.B.A) and Master of Business Administration (M.B.A) students among the 162 participants. The survey was carried out based on the students' potential, depending on when ethical approval was obtained from the institution. The poll followed the first permission given in February in circumstances where ethical approval was not necessary. Data gathering for the poll continued until March

2025. The survey's ethical integrity was upheld in all participating regions because to this well-coordinated methodology.

By the end of February, 162 undergraduate (UG) and postgraduate (PG) students from the Business Administration department of the same university participated in the survey. Since participants were required to complete all questions in the Google Form, responses varied among students based on the questions. Participation was equally distributed across the department as follows:

1. A total of 162 responses were collected from both B.B.A and M.B.A students at a Private Institution.
2. The participants belonged to the B.B.A and M.B.A programs. The majority of students resided in urban areas.

5. Measures

Data for the study were collected through an online questionnaire with help of the Google form consisting of 40 predominantly closed-ended questions designed to capture management students' perspectives on their early experiences with AI tools, particularly ChatGPT. The questionnaire was thoughtfully divided into 9 sections to comprehensively assess the Demographic Information profile of participants (4 questions, Q1–Q4). Learning Preferences & Study Habits (Q5 and Q6), Awareness & Usage of AI in Education (Q7-Q12), Experience with AI-powered Tools (Q13–Q19), Effectiveness & Impact of AI in Education (Q20–Q23), Benefits & Concerns of AI in Education (Q24–Q33), Future of AI in Education (Q34–Q37), Challenges & Support Needed (Q38 and Q39) and Additional Feedback (Q40).

Notably, in order to complete the entire questionnaire, individuals had to have previously used ChatGPT. Simple demographic inquiries and general study information were given to individuals without such experience.

6. Results

An initial exploration of students' early interactions with ChatGPT showed that a large majority - 95.7% of students and 85.8% of Gemini AI users were already aware of ChatGPT. Among these, 95.7% had tried ChatGPT, while 74.1% had experience with Gemini AI. Although Table 2 only includes data from students who have used these AI tools, information about those who have never used any AI tools can still be analyzed. A significant portion of students from the dominant group expressed satisfaction (68.1%), whereas 30.7% remained

neutral, and a small percentage were dissatisfied with AI tools overall. The primary uses of these tools included completing homework/assignments, conducting research, brainstorming ideas, and resolving doubts while learning, highlighting key traits of this subgroup. From a socio-demographic and geographic perspective, only 20.4% of the 162 surveyed students reported never having used AI tools.

7. Overview of the survey results

The survey's findings focused on how students felt about using AI tools (Fig. 1). Regarding attitude and pleasure, the majority of students (79.4%) thought utilizing various AI tools was fascinating. Most expressed interest in using ChatGPT, followed by Gemini AI. Regarding study habits and outcomes, 46.9% of students reported using ChatGPT daily to improve their general knowledge and learn new things, whereas only 17.8% expressed interest in using Gemini AI. In terms of AI capabilities, most students (95.7%) showed interest in using AI tools, while 4.3% acknowledged their support for traditional classroom learning. Regarding preferred learning styles, most students ranked their preferences as follows: Visual (seeing, reading) as the first preference, Reading/Writing as the second, Auditory (listening, speaking) as the third, and Kinesthetic (hands-on, doing) as the least preferred. The study was conducted among students in the B.B.A and M.B.A programs, with participant distribution as follows: 63.6% first-year students, 27.8% second-year students, and 8.6% third-year students. Regarding daily AI tool usage, the time spent by students was distributed as follows: 39.5% used AI tools for less than 1 hour, 37.7% for 1-2 hours, 11.7% for 3-4 hours, and 11.1% for more than 4 hours. The integration of AI in education is transforming traditional teaching methods, influencing the delivery of education and impacting both students and educators. This study investigates the impact of AI on education, analyzing both its advantages and possible drawbacks. It is hypothesized that AI-driven tools significantly enhance personalized learning and improve educational outcomes. To gain insights into students' perceptions of AI tools, their written responses were analyzed, and key themes were visualized using a word cloud (Fig. 1). The findings highlight that students generally perceive AI as a valuable resource in their academic journey. Prominent words such as *"good," "helpful," "tool,"* and *"student"* indicate a positive outlook on AI applications. Additionally, terms like *"work," "task," "assignment,"* and *"homework"* emphasize AI's role in assisting with coursework management.

Furthermore, recurring themes such as *"learning," "knowledge,"* and *"understand"* suggest that students recognize AI's potential in enhancing comprehension and facilitating research. Specific applications, including *idea generation, research assistance, and doubt clarification,* further reinforce AI's importance in management education. These insights underscore AI's growing integration into students' academic routines, bridging the gap between traditional learning methods and technology-driven education.

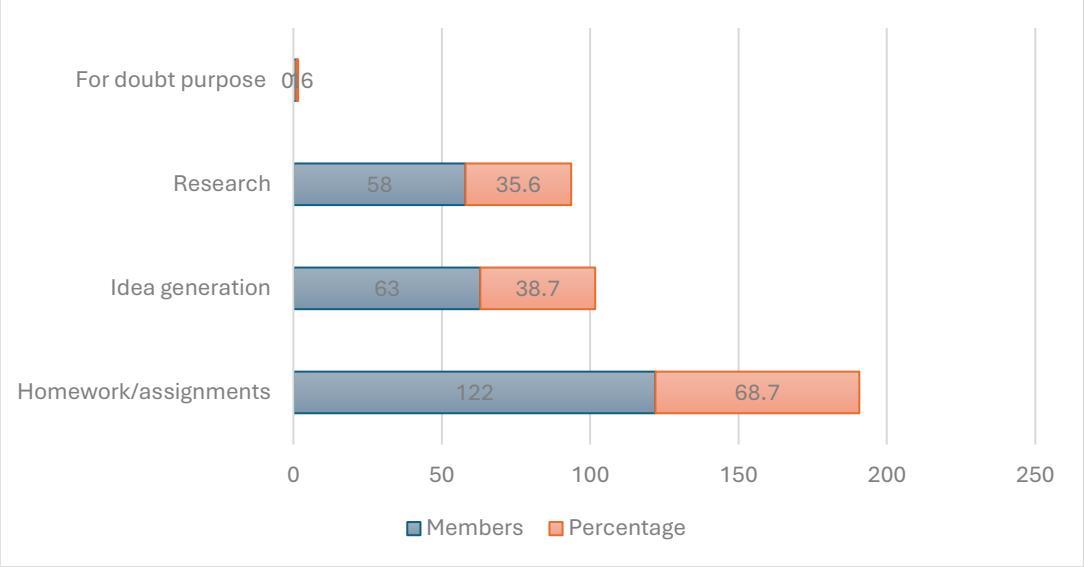

Figure. 1 Students Perceptions of AI Tools – Word Cloud Analysis

The possibilities and applications of AI tools in students' learning processes are vast. **However, the way students take advantage of emerging technologies differs according to their competencies, passions, level of engagement, and honesty.** In order to examine their preferred learning techniques and the amount of time they usually spend studying each day, students were questioned about their study habits and learning preferences in the first portion of the questionnaire. Figure 2 depicts general learning styles, including kinesthetic (hands-on, doing), auditory (hearing, speaking), visual (seeing, reading), and reading/writing. On average, students' responses indicate the number of hours they spend studying each day using AI applications or tools discussed above.

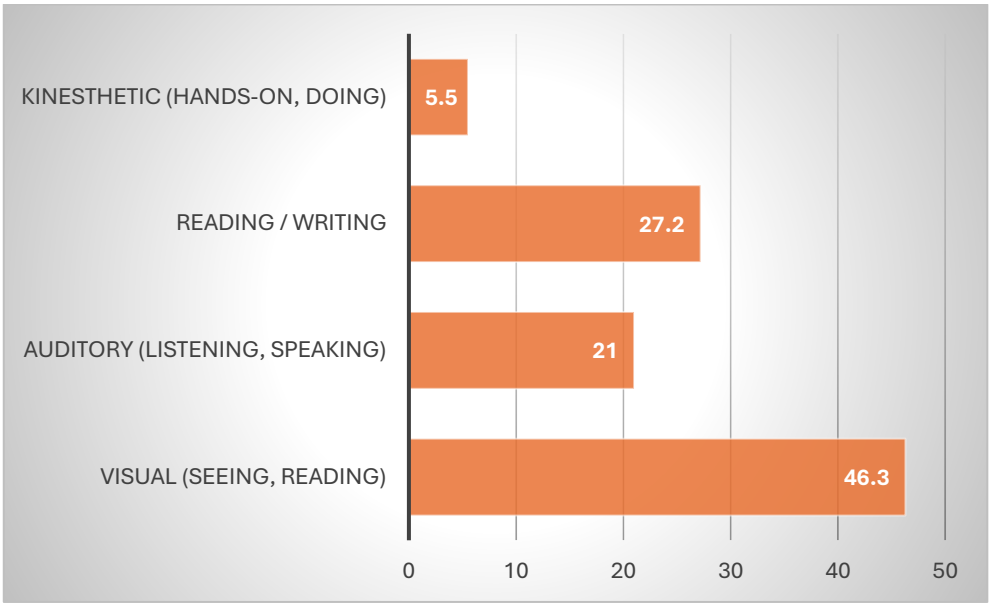

Figure. 2 Learning Styles Preferences of Students Utilizing AI Tools

Awareness & Usage of AI in Education:

There are six number of set questions are asked among the students to know about the awareness and usage of the AI in the education for the students. The questions were asked to the students

OpenAI's ChatGPT is a Transformer-based conversational AI model that was trained using pre-training on large amounts of text data and refined through reinforcement learning. It can be used for customer service, content creation, and education, but it also faces obstacles like bias, false information, and contextual constraints, which raise ethical questions about the responsible deployment and transparency of AI. Based on the research data, the overwhelming majority of respondents (approximately 95%) have heard of ChatGPT, indicating a maximum high level of awareness and familiarity with the technology. The survey asked 162 respondents if they had heard of ChatGPT. An overwhelming 95.7% answered "Yes," while a small percentage responded "No."

The multimodal AI model Gemini AI, created by Google DeepMind, is intended for sophisticated reasoning, natural language comprehension, and problem-solving. It uses transformer architectures and deep learning to process text, images, and audio while tackling issues like bias, disinformation, and the ethical application of AI. The survey asked 162 respondents if they had heard of Gemini AI. A majority, 85.8%, answered "Yes," while 14.2% responded "No."

Based on the survey data, a significant majority (90.7%) of respondents believe that AI is already influencing the way education is delivered. This suggests a strong consensus on the impact of AI in education, with only 9.3% of participants expressing skepticism. The findings indicate a widespread recognition of AI's role in transforming educational methodologies, potentially through personalized learning, automation, and data-driven insights.

Based on the survey responses, a significant portion of respondents have used AI-powered educational tools. However, a notable percentage have not yet engaged with such tools, suggesting both widespread adoption and room for further growth in AI-driven education. This data highlights the increasing role of AI in learning environments while also indicating the need for greater accessibility and awareness. The survey asked 162 respondents if they believe AI is already influencing the way education is delivered. A significant majority, 90.7%, answered "Yes," while 9.3% responded "No."

From a research perspective, the pie chart visualizes the distribution of self-reported frequency of technology usage for educational purposes among 162 respondents. The data suggests a bimodal distribution, with the highest percentage (34%) of respondents indicating frequent technology use, followed by a significant proportion (29%) reporting occasional use. A notable 22.2% reported always using technology for educational purposes, while 14.8% indicated rare usage. This distribution highlights a potential polarization in technology integration within the educational practices of the surveyed group, with a larger segment actively incorporating technology, but a non-negligible portion still showing limited engagement. Further qualitative or quantitative analysis could explore the factors influencing these usage patterns, such as access, perceived benefits, digital literacy, or specific educational contexts.

The investigation indicates broad but not universal approval of educational AI applications, with notable concerns persisting among respondents. This underscores the importance of developing better understanding through awareness campaigns, providing proper training, and establishing governance structures to manage ethical considerations, personal data protection, and accessibility issues - all crucial for achieving more complete acceptance and optimal utilization of AI in education.

8. Experience with AI-powered Tools

Extracted the text and analyzed the data, which shows that chatbots for student support are the most commonly used AI-powered tools in education (46.3%), followed by presentation

tools (38.3%), grammar and writing tools (34%), and tools for creating study materials (33.3%), indicating a strong preference for AI assistance in student support and content creation, the collected data from the survey was shown in the Fig 3.

Analysis of the 162 survey responses shows that while 95.7% of participants have employed ChatGPT, a negligible 4.3% remain non-users.

Among 162 respondents, 95.7% have used ChatGPT while 4.3% have not, whereas 74.1% have used Gemini AI while 25.9% have not, indicating that ChatGPT has a higher adoption rate than Gemini AI among the surveyed individuals.

From a survey of 162 responses, 95.7% have used ChatGPT, 74.1% have used Gemini AI, and among ChatGPT users, 46.9% use it daily, 39.5% weekly, 7.4% rarely, a small percentage monthly, and an even smaller percentage never.

Based on the survey results, ChatGPT is used more frequently than Gemini AI, with 46.9% of respondents using it daily compared to only 17.8% for Gemini AI, while a significant portion of Gemini AI users (46%) reported using it rarely or never. A flowchart was created based on survey responses to questions about the usage and frequency of ChatGPT and Gemini AI was shown in the Fig 4.

The data in the image classifies AI tool usage into four categories: Homework/Assignments, Research, Idea Generation, and For Doubt Purpose, with Homework/Assignments being the most common use case, followed by Research and Idea Generation, while For Doubt Purpose has the least responses. Most users (68.7%) use AI tools for homework/assignments. Other common uses are research (38.7%) and idea generation (35.6%). A few people use them for doubt clarification (5.5%).

The responses classify familiarity with AI tools into several categories. Popular conversational AI tools include ChatGPT, Meta AI, Gemini, Claude, and Perplexity, while AI writing and grammar tools mentioned are Grammarly, Quillbot, and Clevertype. AI code assistants such as Copilot, Blackbox AI, and DeepSeek were also noted. Additionally, AI image and design tools like MidJourney, DALL-E, and Gamma AI were recognized. General AI and search assistants include Google AI, Bing AI, and IBM AI, along with mentions of other AI tools like Stealth AI, Kiwi AI, and Manus AI. However, a significant number of respondents indicated that they were not familiar with any AI tools beyond the commonly known ones.

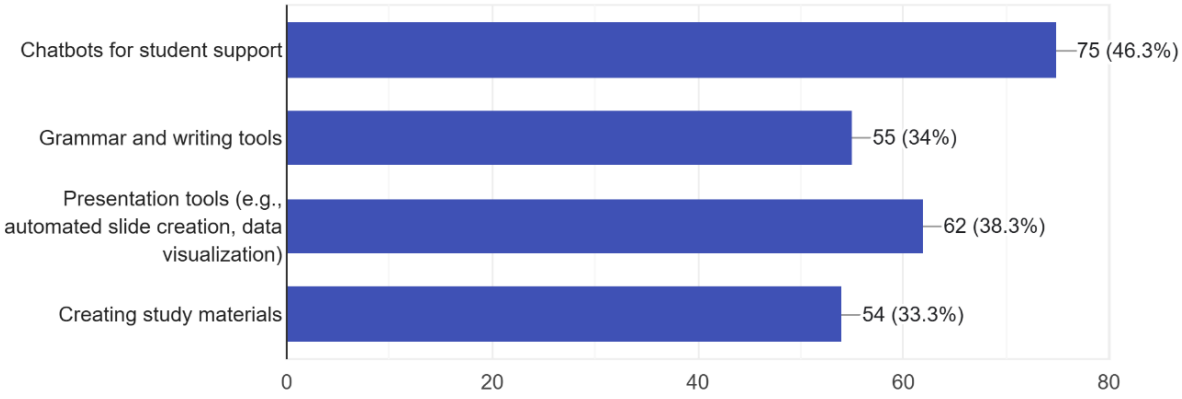

Figure. 3 Student Preference for AI-Assisted Learning Tools

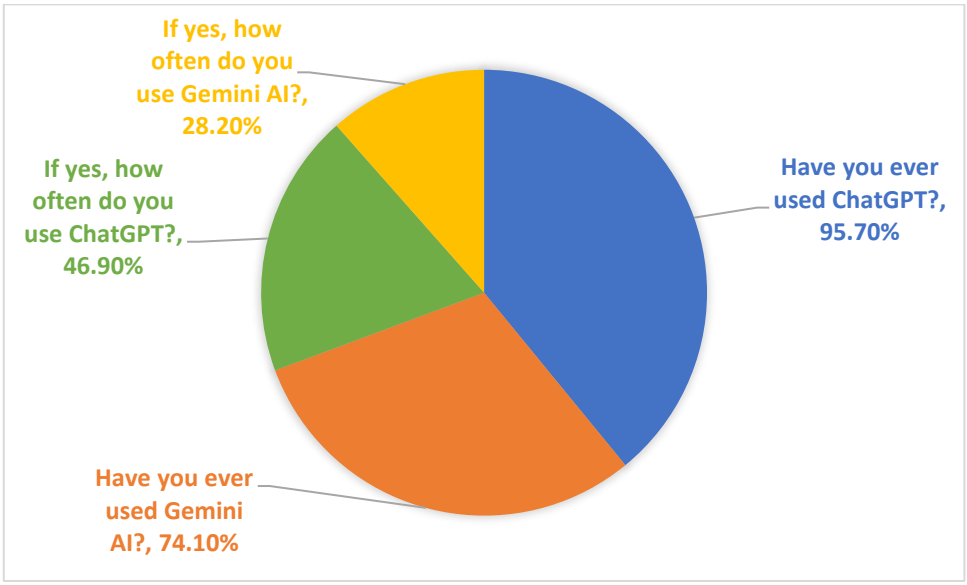

Figure. 4 Comparative Usage and Frequency of ChatGPT and Gemini AI

9. Effectiveness & Impact of AI in Education

AI has revolutionized the education industry by improving learning outcomes, customizing study guides, and offering immediate academic assistance. Language models, adaptive learning platforms, and virtual instructors are just a few examples of AI-powered solutions that have made difficult subjects more approachable and interesting. These tools help students understand difficult material, increase productivity, and promote independent learning. Considerations including user happiness, ability to comprehend difficult subjects,

usage frequency, and gains in academic achievement are crucial when assessing the effects of AI in education. By examining these facets, we can ascertain if AI technologies live up to students' expectations and how they enhance the learning process overall. The results indicate that 68.1% of students are satisfied with AI tools in their learning process, while 30.7% remain neutral, and a small percentage are dissatisfied. This suggests that AI tools are generally well-received, though some students may not have explored them fully. Regarding AI's effectiveness in understanding complex topics, 60.1% of students find them helpful, while 38% are neutral, indicating that while AI is beneficial, its impact may vary by subject. When it comes to the frequency of AI usage in study routines, 46.6% of students use AI tools sometimes, 21.5% use them often, and 9.2% always rely on them, while the rest use them rarely or never. This shows that although AI is a valuable learning tool, it has not yet become a daily habit for most students.

The most significant finding is that 85.9% of students reported an improvement in their academic performance after using AI, while 14.1% did not notice any improvement. This highlights the positive academic impact of AI, though it may not be equally beneficial for all learning styles which are shown on the Fig 5. From a research perspective, these findings suggest that while AI enhances learning and academic performance, its integration into daily study routines is still developing. Future studies should focus on identifying the factors that contribute to student satisfaction, exploring the specific benefits of AI for different subjects, and addressing any barriers to more frequent usage.

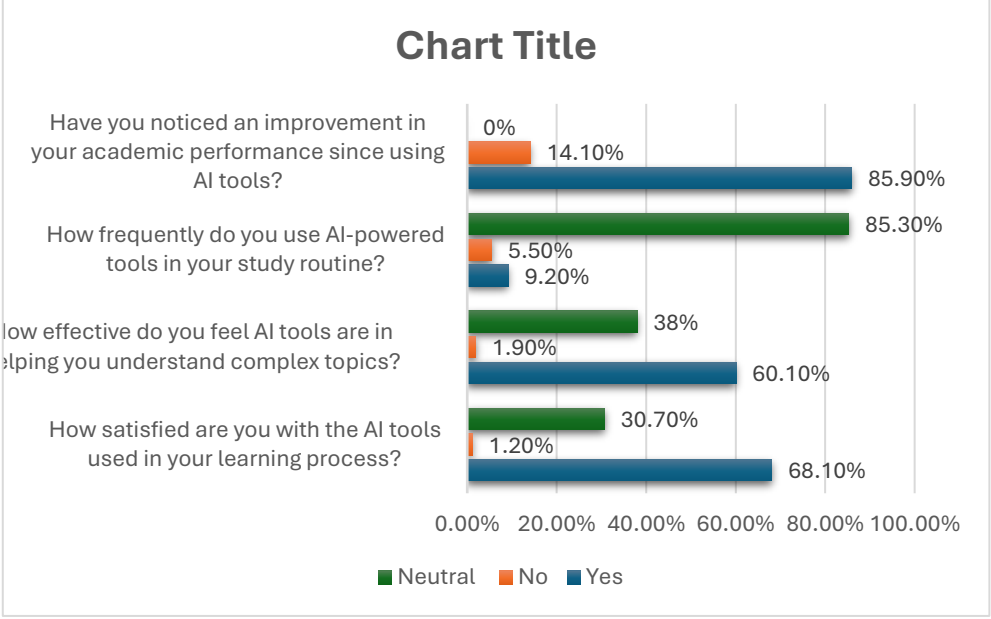

Figure. 5 Student Feedback on AI Tools Usage and Effectiveness

10. Benefits & Concerns of AI in Education

From a research perspective, AI in education offers several benefits, including personalized learning, where AI tailors content to individual students' needs, improving comprehension and retention. Studies have shown that AI-powered tutors and chatbots provide 24/7 support, reducing student dependency on traditional tutoring. Additionally, AI enhances engagement by making complex subjects more interactive, especially in STEM education. Automation of administrative tasks allows teachers to focus more on student interactions, However, by offering resources for students with impairments and those living in remote places, AI-driven solutions aid in closing educational gaps.

However, there are concerns associated with AI in education. Over-reliance on AI may reduce teacher-student engagement, as human interaction remains essential for critical thinking and social skills. Since AI may reinforce biases in educational content while gathering enormous quantities of student data, prejudice in AI algorithms and data privacy concerns are equally important challenges. Moreover, excessive dependence on AI could hinder students' problem-solving abilities and independent thinking. Accessibility challenges also arise, as AI tools can be costly, limiting access for students from lower socio-economic backgrounds. Additionally, there are still issues with the accuracy and quality of AI-generated information, which emphasizes the necessity of human monitoring in AI-driven education.

In conclusion, AI has the power to completely transform education by increasing accessibility, personalization, and engagement. To guarantee that AI is a helpful tool rather than a substitute for conventional teaching techniques, it is crucial to solve issues with accessibility, data protection, and human engagement. In order to develop a more effective and balanced educational system, future research should concentrate on maximizing AI's benefits while lowering its hazards.

The survey's findings draw attention to both the advantages and drawbacks of using AI in the classroom.

Most Beneficial Features of AI in Education: The majority of respondents (54.6%) found personalization of learning content to be the most beneficial feature of AI in education. Ease of use and accessibility was the second most valued feature, appreciated by 39.9% of respondents. Real-time feedback on performance was selected by 22.1% of respondents, while enhanced engagement through interactive content and data privacy and security were each recognized by 12.3% of respondents.

Time-Saving Benefits: A large proportion of participants (46%) rated AI tools at the highest level (5) for saving time, while another 31.9% rated them at level 4. This suggests that AI tools significantly help students manage their study time more efficiently.

Improved Understanding of Topics: Around 36.2% of students rated AI tools at level 4, while 29.4% gave them the highest rating (5) for improving their understanding of topics. This indicates that AI effectively supports learning and comprehension.

Enhanced Creativity: AI tools were perceived to enhance creativity, with 31.9% of respondents rating them at level 4 and 25.2% at level 5. However, a notable percentage (27.6%) rated AI at level 3, suggesting room for improvement in fostering creativity.

Lack of Accuracy: The concern of lack of accuracy received mixed responses, with 34.4% rating it at level 3. Meanwhile, 16% rated accuracy concerns at level 5 (highest), while 12.9% found it to be a minimal issue (rating of 1). This suggests that while AI is generally reliable, some students experience challenges with inaccurate information.

Difficulty in Using AI Tools: The responses regarding difficulty in using AI tools were spread across different levels. While 27% of respondents found AI tools easy to use (rating of 1), 22.7% found them challenging (rating of 5). This indicates that while many students find AI tools user-friendly, a significant portion still struggles with usability.

Ethical Concerns: The majority of respondents (36.8%) expressed moderate ethical concerns, indicating a balanced perspective on ethical issues. A significant portion (23.3%) rated their concerns higher, suggesting that ethical dilemmas remain a key issue. While 15.3% showed strong ethical concerns, 14.7% and 9.8% rated it lower, reflecting a varied stance on the subject.

Dependency on Technology: A large percentage (33.1%) of respondents acknowledged a high dependency on technology, with many others (22.7%) also expressing significant reliance. A notable proportion (28.8%) rated their dependency at a moderate level, indicating a widespread integration of technology in daily life. Only a small fraction (8% and 7.4%) reported minimal dependence, showing that technology plays a crucial role for most individuals.

According to studies, these results imply that AI is improving learning efficiency, accessibility, and customisation in education. The notion that AI is a useful learning tool is supported by the high scores for time savings and enhanced comprehension of subjects. However, issues with accessibility and accuracy draw attention to the necessity of ongoing

advancements in AI-based teaching resources. To ensure wider accessibility and efficacy, future research should concentrate on increasing AI accuracy, boosting creativity stimulation, and streamlining user interfaces. Ethical concerns in technology are moderate to high, highlighting the need for responsible development and regulations. The high level of technology dependency raises concerns about sustainability, digital security, and the potential social consequences of over-reliance. Further research is essential to address ethical challenges and find a balance between technological benefits and its risks.

11. Research Findings on Career Perceptions of AI Tools

The study reveals that 39.3% of respondents regard AI tools as critically important for their professional futures, with an additional 32.5% assigning them high importance (level 4). While 14.7% maintain a neutral stance (level 3), only marginal groups of 7.4% and 6.1% consider these tools minimally or unimportant. These patterns demonstrate a clear movement toward AI integration in professional spheres, highlighting the increasing demand for AI competencies in workforce preparation.

The study reveals several key concerns regarding the growing use of AI tools in education:

1. ***Accuracy and Reliability of AI-Generated Content***– The reliability of AI-generated content is the biggest worry among respondents, underscoring the possibility of inaccurate or misleading instructional materials.
2. ***Potential for Reduced Critical Thinking***– Many responders are concerned that relying too much on AI may impair pupils' capacity for autonomous problem-solving and critical thought.
3. ***Ethical Implications***– Concerns regarding justice in AI-driven educational systems, data privacy, and prejudice in AI algorithms are among the ethical difficulties raised by several responders.
4. ***Over-Reliance on Technology***– A smaller percentage of respondents are concerned about excessive dependence on AI, which could reduce traditional learning skills and human engagement in education.

The Fig. 6 shows the result of this study. The results indicate that although AI may improve education, it also raises critical challenges related to accuracy, ethical considerations, and cognitive development. Addressing these concerns will be crucial to ensuring that AI supports rather than hinders learning.

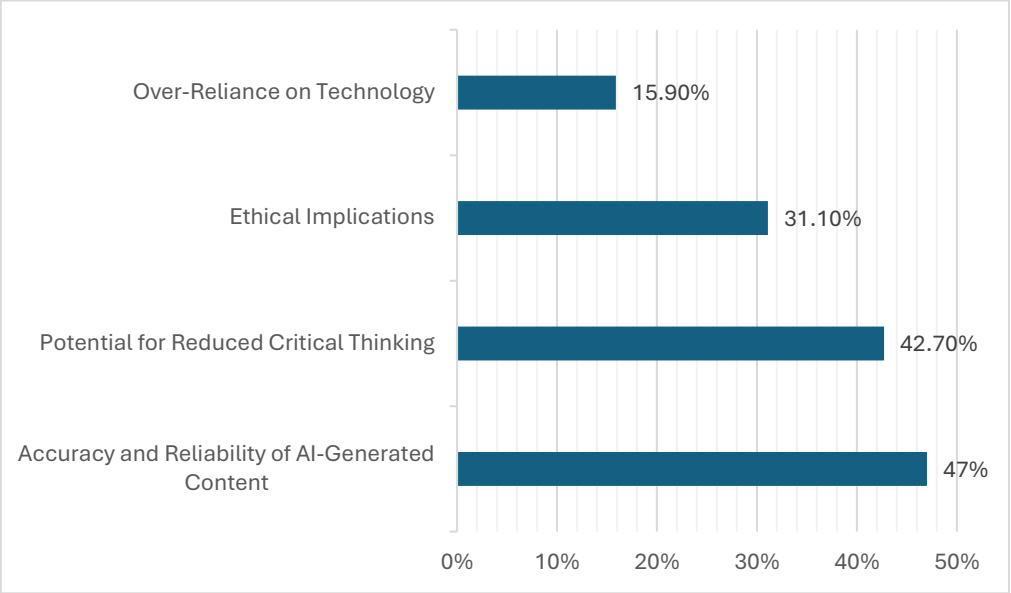

Figure. 6 Potential Drawbacks of AI Use in Educational Settings

12. Future of AI in Education

This research perspective, AI in education is a rapidly evolving field with significant implications for pedagogy, ethics, and accessibility. Studies focus on AI-driven personalization to enhance adaptive learning, while researchers explore its impact on critical thinking and cognitive development. AI-powered tutoring systems are being examined for their ability to complement traditional teaching, ensuring accuracy and reliability in automated feedback. Ethical concerns, including bias, data privacy, and fairness in AI-driven assessments, remain key areas of investigation. Furthermore, studies show how teachers' roles in AI-augmented learning settings are changing, with a focus on cooperation rather than replacement. Scholars are also addressing the digital divide by developing inclusive AI-driven tools that ensure equitable access to education. In order to increase productivity while upholding academic integrity, research is also being done on AI's potential to automate administrative and evaluation chores. To guarantee responsible implementation, ethical concerns, and successful learning results, further study is necessary to secure the future of AI in education.

From the survey results, 57.9% of respondents learned about AI tools through social media, 30.5% through word of mouth, and 11.6% from university resources. This highlights that informal and digital platforms play a significant role in introducing AI tools to students, emphasizing the importance of integrating AI awareness into formal education systems. Students reported various ways AI tools assisted them, with 43.3% using them for concept

explanations, 37.2% for generating reports, 32.3% for research assistance, and 29.3% for brainstorming ideas. This suggests AI tools are valuable for knowledge enhancement and academic support, reinforcing the argument for their structured inclusion in education. The most sought-after features include improved natural language processing (43.9%), integration with educational platforms (43.3%), personalized learning paths (33.5%), and enhanced data analysis capabilities (28.7%). These preferences indicate that students value AI-driven personalized learning experiences and deeper analytical functionalities.

Half of the respondents (50.6%) believe AI will become a primary tool in learning and research, while 47.6% think it will assist but not replace traditional methods, and 20.1% foresee minimal impact. These insights highlight a consensus that AI will be a transformative force in education, though it will likely complement rather than replace existing teaching methodologies. From a research perspective, these findings suggest a growing reliance on AI in education, particularly for personalized learning and academic support. However, the gap in university-driven AI awareness and the need for better integration into formal education indicate areas for future research. Further exploration can focus on optimizing AI tools for education while addressing ethical concerns such as data privacy and accuracy.

13. Challenges and Support Needed

The study highlights that the most significant challenge for college students is difficulty in understanding course material (46.3%), followed by limited access to resources (40.9%), which can impact their academic success. Additionally, 25.6% of students struggle with time management, while 23.2% find it difficult to stay motivated, indicating that both external and internal factors play a role in students' educational challenges. Addressing these issues through improved teaching strategies, accessible resources, and better time management support could enhance students' academic experiences. The findings of the survey show that study skills training (55.5%) is the most requested academic help, underscoring the necessity of organized learning strategies. The fact that time management help (35.4%) comes in second indicates that many students have trouble juggling their academic obligations. Another important demand is extra tutoring (26.2%), indicating that some pupils need more instruction than just their normal schoolwork. The least chosen but still noteworthy is emotional or mental health support (19.5%), which highlights the significance of psychological health for academic achievement. From a research standpoint, these results emphasize the need to incorporate

mental health programs into academic frameworks and the move away from merely material mastery toward skills-based learning.

14. Additional Feedback

AI technologies may significantly improve management research by enhancing decision-making, data analysis, and individualized learning. They give students access to AI-driven simulations for real-world use and allow them to deal with big datasets, see patterns, and make wise business decisions. AI may also be used to automate administrative activities, which increases research efficiency and productivity. However, in order to guarantee equity in AI-driven decision-making, ethical issues including prejudice, data privacy, and responsible AI use must be resolved. Management education should include AI literacy classes to optimize the advantages of AI by giving students the tools they need to evaluate and implement AI discoveries critically. To guarantee that every student has equal access to AI technologies, it is also crucial to close the digital gap. All things considered, AI has the ability to completely transform management studies; yet, long-term success depends on its ethical and responsible application.

15. Conclusion

This study provides insights into students' awareness, usage, and perceptions of AI-powered educational tools, highlighting their growing reliance on AI and its transformative impact on learning. A significant number of students are aware of AI tools like ChatGPT and Gemini AI, with many integrating them into their study routines, recognizing their potential to enhance learning outcomes. AI tools are widely appreciated for their ability to save time, improve understanding, and enhance creativity, with many students reporting improvements in academic performance and viewing AI as an effective aid for grasping complex concepts. However, challenges such as accuracy, ethical concerns, and dependency on technology remain prevalent, along with difficulties in usability that indicate a need for better design and training. AI is expected to play a crucial role in management education by enabling personalized learning, automating tasks, and enhancing decision-making, with a growing demand for advanced features such as better data-driven insights and interactive learning methods. To maximize the benefits of AI while mitigating risks, institutions should focus on training students and educators, establishing clear policies on ethical AI use, data privacy, and academic integrity. Ultimately, while AI continues to reshape education, balancing innovation

with ethical considerations is essential to creating engaging, efficient, and personalized learning environments.

References

[1] Bozkurt, A., Jung, I., Xiao, J., Vladimirschi, V., Schuwer, R., Egorov, G., Lambert, S., Al-Freih, M., Pete, J., Olcott Jr, D. and Rodes, V., 2020. A global outlook to the interruption of education due to COVID-19 pandemic: Navigating in a time of uncertainty and crisis. *Asian journal of distanceeducation*, *15*(1),pp.1-126. https://www.asianjde.com/ojs/index.php/AsianJDE/article/view/462

[2] Muthukrishnan, R. and Datta, R., 2023. *Indigenous practice and community-led climate change solutions: The relevance of traditional cosmic knowledge systems*. Taylor & Francis. DOI: 10.4324/9781003389064

[3] Mayembe, E. and Nsabata, S., 2020. Print-based learning media. *Journal Educational Verkenning*, *1*(1), pp.1-7. https://doi.org/10.48173/jev.v1i1.23

[4] Nelson, R., 2024. *Academic Identity in the Age of AI: Higher Education and the Digital Revolution*. Emerald Group Publishing.

[5] Dahake, P.S., Mohare, R.V. and Dahake, N.S., 2024. Enhancing Management Education Through ChatGPT: A Novel Method for Ease and Efficacy. In *Entrepreneurship and Creativity in the Metaverse* (pp. 161-178). IGI Global.

[6] Milner, H.R., 2021. *Start where you are, but don't stay there: Understanding diversity, opportunity gaps, and teaching in today's classroom*

[7] Vashista, N., Gugnani, P., Bala, M. and Kumar, A., 2023. The Educator's Lens: Understanding the Impact of AI on Management Education. *International Journal of Education and Development using Information and Communication Technology*, *19*(3), pp.9-27.

[8] Alqahtani, T., Badreldin, H.A., Alrashed, M., Alshaya, A.I., Alghamdi, S.S., Bin Saleh, K., Alowais, S.A., Alshaya, O.A., Rahman, I., Al Yami, M.S. and Albekairy, A.M., 2023. The emergent role of artificial intelligence, natural learning processing, and large language models in higher education and research. *Research in social and administrative pharmacy*, *19*(8), pp.1236-1242. https://doi.org/10.1016/j.sapharm.2023.05.016

[9] Ma, Y., Hu, S., Li, X., Wang, Y., Liu, S. and Cheong, K.H., 2024. Students rather than experts: A new ai for education pipeline to model more human-like and personalised early adolescences. *arXiv preprint arXiv:2410.15701*. https://doi.org/10.48550/arXiv.2410.15701

[10] Roumeliotis, K.I. and Tselikas, N.D., 2023. Chatgpt and open-ai models: A preliminary review. *Future Internet*, *15*(6), p.192. https://doi.org/10.3390/fi15060192

[11] Atlas, S., 2023. ChatGPT for higher education and professional development: A guide to conversational AI. https://digitalcommons.uri.edu/cba_facpubs/548

[12] Yu, H., 2024. The application and challenges of ChatGPT in educational transformation: New demands for teachers' roles. *Heliyon*, *10*(2). https://doi.org/10.1016/j.heliyon.2024.e24289

[13] Wanner, T. and Palmer, E., 2015. Personalising learning: Exploring student and teacher perceptions about flexible learning and assessment in a flipped university course. *Computers & Education*, *88*, pp.354-369. https://doi.org/10.1016/j.compedu.2015.07.008

[14] Mohammadkarimi, E., 2023. Teachers' reflections on academic dishonesty in EFL students' writings in the era of artificial intelligence. *Journal of Applied Learning and Teaching*, *6*(2), pp.105-113. DOI: https://doi.org/10.37074/jalt.2023.6.2.10

[15] Xiao, Y., Zhang, T. and He, J., 2024. A review of promises and challenges of AI-based chatbots in language education through the lens of learner emotions. *Heliyon*. https://doi.org/10.1016/j.heliyon.2024.e37238

[16] Masalaci, Z.S., 2024. *Exploring the Impact of Large Language Models on Conceptual Learning in Higher Education: An Analysis of AI-Driven C* https://hdl.handle.net/11250/3178094

[17] Kitsantas, A., Baylor, A.L. and Hiller, S.E., 2019. Intelligent technologies to optimize performance: Augmenting cognitive capacity and supporting self-regulation of critical thinking skills in decision-making. *Cognitive Systems Research*, *58*, pp.387-397. https://doi.org/10.1016/j.cogsys.2019.09.003

[18] Ng, D.T.K., Tan, C.W. and Leung, J.K.L., 2024. Empowering student self-regulated learning and science education through ChatGPT: A pioneering pilot study. *British Journal of Educational Technology*, *55*(4), pp.1328-1353. https://doi.org/10.1111/bjet.13454

[19] Çakiroglu, Ü. and Öztürk, M., 2021. Cultivating Self-Regulated Learning in Flipped EFL Courses: A Model for Course Design. *European Journal of Open, Distance and E-Learning*, *23*(2), pp.20-36. DOI: 10.2478/eurodl-2020-0008

[20] Van den Beemt, A., MacLeod, M., Van der Veen, J., Van de Ven, A., Van Baalen, S., Klaassen, R. and Boon, M., 2020. Interdisciplinary engineering education: A review of vision, teaching, and support. *Journal of engineering education*, *109*(3), pp.508-555. https://doi.org/10.1002/jee.20347

[21] Adiguzel, T., Kaya, M.H. and Cansu, F.K., 2023. Revolutionizing education with AI: Exploring the transformative potential of ChatGPT. *Contemporary Educational Technology*, *15*(3). https://doi.org/10.30935/cedtech/13152

[22] Rasul, T., Nair, S., Kalendra, D., Robin, M., de Oliveira Santini, F., Ladeira, W.J., Sun, M., Day, I., Rather, R.A. and Heathcote, L., 2023. The role of ChatGPT in higher education: Benefits, challenges, and future research directions. *Journal of Applied Learning and Teaching*, *6*(1), pp.41-56. https://doi.org/10.37074/jalt.2023.6.1.29

[23] Jung, E., Kim, D., Yoon, M., Park, S. and Oakley, B., 2019. The influence of instructional design on learner control, sense of achievement, and perceived effectiveness in a supersize MOOC course. *Computers & Education*, *128*, pp.377-388. https://doi.org/10.1016/j.compedu.2018.10.001

[24] Alam, A. and Mohanty, A., 2023. Educational technology: Exploring the convergence of technology and pedagogy through mobility, interactivity, AI, and learning tools. *Cogent Engineering*, *10*(2), p.2283282. https://doi.org/10.1080/23311916.2023.2283282

[25] Morandini, S., Fraboni, F., De Angelis, M., Puzzo, G., Giusino, D. and Pietrantoni, L., 2023. The impact of artificial intelligence on workers' skills: Upskilling and reskilling in organisations. *Informing Science*, *26*, pp.39-68. https://dx.doi.org/10.28945/5078

[26] Tomaskinova, J. and Tomaskin, J., 2024. UNLOCKING THE FUTURE OF EDUCATION: EMPOWERING EDUCATORS WITH AI BY OVERCOMING PROFESSIONAL DEVELOPMENT CHALLENGES. In *ICERI2024 Proceedings* (pp. 10633-10642). IATED. https://doi.org/10.21125/iceri.2024.2759

[27] Weizenbaum, J. (1966). ELIZA—A computer program for the study of natural language communication between man and machine. *Communications of the ACM, 9*(1), 36–45.

[28] Colby, K. M. (1981). PARRYing. *Behavioral and Brain Sciences, 4*(4), 550–560. doi:10.1017/S0140525X00000224

[29] Wallace, R. (1995). Artificial linguistic internet computer entity (alice). *City*.

[30] Hoffer, R., Kay, T., Levitan, P., & Klein, S. (2001). *Smarterchild*. ActiveBuddy.

[31] Aron, J. (2011). How innovative is Apple's new voice assistant. Siri, *NewScientist*, *212*(2836), 24

[32] Lally, A., & Fodor, P. (2011). Natural language processing with prolog in the ibm watson system. *The Association for Logic Programming (ALP) Newsletter*, *9*, 2011.

[33] Holotescu, C. (2016). MOOCBuddy: A Chatbot for personalized learning with MOOCs. *RoCHI*, 91–94.

[34] Dinh, T. N., & Thai, M. T. (2018). AI and blockchain: A disruptive integration. *Computer, 51*(9), 48–53. https://doi.org/10.1109/MC.2018.3620971

[35] Kietzmann, J., Paschen, J., & Treen, E. (2018). Artificial intelligence in advertising: How marketers can leverage artificial intelligence along the consumer journey. *Journal of Advertising Research, 58*(3), 263–267. https://doi.org/10.2501/JAR-2018-035

[36] AlZubi, S., Mughaid, A., Quiam, F., & Hendawi, S. (2022). Exploring the Capabilities and Limitations of ChatGPT and Alternative Big Language Models. *Artificial Intelligence and Applications*. https://doi.org/10.47852/bonviewAIA3202820

[37] Rahaman, M. S., Ahsan, M. M., Anjum, N., Rahman, M. M., & Rahman, M. N. (2023). The AI race is on! Google's Bard and OpenAI's ChatGPT head to head: An opinion article. *Mizanur and Rahman, Md Nafizur, The AI Race Is On*. https://dx.doi.org/10.2139/ssrn.4351785

[38] Rudolph, J., Tan, S., & Tan, S. (2023). War of the chatbots: Bard, Bing Chat, ChatGPT, Ernie and beyond. The new AI gold rush and its impact on higher education. *Journal of Applied Learning and Teaching, 6*(1). https://doi.org/10.37074/jalt.2023.6.1.23