



The Role of Artificial Intelligence (AI) in Decision-Making Among Students

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Abstract: AI tells us what we want to hear, while our loved ones tell us what we need to hear. We are living in an era where AI is everywhere. While AI offers countless advantages that make our lives easier, there is also a darker side to its rapid rise. One major concern is the gradual replacement of real human interactions with AI chatbots. Nowadays, people tend to consult AI for almost everything even for the smallest doubts or deeply personal matters. AI models like ChatGPT are trained to mirror the user's language and tone, validate their beliefs, generate prompts to sustain conversation, and prioritize continuity, engagement, and user satisfaction. Since it is designed to respond in a personalized manner, it often aligns with the individual's thoughts or emotions, even when the response may not actually help the person. This constant validation can create a false sense of emotional support, leading individuals to depend more on technology than on genuine human connections. As a result, the line between human interaction and artificial interaction is becoming increasingly blurred. While AI continues to revolutionize the way we live and connect, it is important to remember that ethical judgment, emotional empathy, and real human connection can never truly be replicated by machines. The purpose of the current study was to examine the relationship between artificial intelligence dependency and decision-making. The study sampled 67 students aged 18 to 25 years. Standardized psychological scales were administered to measure the influence of AI on decision-making. The results revealed that the relationship between artificial intelligence dependency and decision making was significantly positive. As AI dependency increases, reliance on AI for making decisions also increases. People are more likely to rely on AI for decision-making when decisions are complex or unfamiliar since AI systems are framed as highly accurate or authoritative. Therefore, people do develop dependency on AI for decision-making.

Keywords: *Artificial Intelligence, Decision-Making, AI Dependency*

1. Introduction

“Artificial intelligence is not a substitute for human decision-making, but a tool to augment it”
- Fei-Fei Li

The term “Artificial Intelligence” was first coined at the Dartmouth Conference by John McCarthy in 1955. AI was mostly theoretical: simple programs that could play chess or solve puzzles. By the 2000s, AI began integrating into daily life through search engines, spam filters, and recommendation systems. Around 2011, virtual assistants like Siri and Alexa made AI more visible and accessible. However, it was after 2016 that AI became deeply embedded in daily routines through social media algorithms and smart devices. The real turning point came in 2022 with the rise of generative AI tools like ChatGPT, which brought AI into creativity, education, and work. Since then, reliance on AI has grown so rapidly that many people today find it difficult to make decisions without it.

Due to the rise of Artificial Intelligence (AI), students today face several new challenges. Many have become overdependent on AI tools for assignments and writing which weakens their critical and abstract thinking. The easy access to AI-generated content also raises ethical issues such as plagiarism. Additionally, it is important to remember that if a product is free, you are the product, meaning students often pay with their personal data and privacy when using AI platforms. Students often deal with confusion and misinformation, as AI can provide wrong answers that they may accept without verification. Moreover, constant reliance on AI reduces decision-making skills, making learners less independent. Overall, while AI offers great convenience, it also challenges students to maintain originality, honesty, responsibility, and a balanced approach to learning.

AI Chatbots, designed to be agreeable and non-judgmental, been linked to cases of teenage suicide, that can reinforce harmful thoughts or delusions, provide inadequate advice, and intensify social isolation. Developing emotional attachments to AI chatbots and perceiving them as therapists, best friends, or even romantic partners has become increasingly common among today’s youth, raising significant concerns. Several reports on this issue have revealed troubling conversations between teenagers and AI chatbots, in which young users discussed thoughts of

ending their lives with the AI. OpenAI recently reported that over one million weekly users of its generative AI chatbot had shown signs of suicidal ideation (Presse, 2025). AI psychosis, though not a clinical diagnosis, refers to the situation where people perceive AI chatbots as romantic partners or view AI as the ultimate truth or a divine entity, reflecting delusions of grandeur, spirituality, or attachment (Wei, 2025).

Melumad and Yun (2025) conducted a study on the effects of large language models (LLMs) versus web search on depth of learning. Four online and laboratory experiments were conducted with a total of 4,591 participants. The study revealed that individuals who learn from LLMs tend to develop shallower knowledge compared to when they learn through standard web searches, even though both methods deliver the same information. Since web searching requires active engagement and critical evaluation, it eventually leads to deeper learning.

According to a study by Kosmyna et al. (2025), people who do not use AI for writing show higher neural connectivity than those who do. The study was conducted over four sessions, with 18 participants per group, totaling 54 participants from sessions one to three. Electroencephalography (EEG) was used to record the participants' brain activity. The participants were instructed to write an essay. The study revealed that participants in the "brain-only" group reported greater satisfaction and higher levels of brain connectivity. Relying on AI for creative writing was found to reduce active brain function and emotional engagement with the respective work.

Joi AI, an AI chatbot company, suggests that a growing number of Gen Z individuals are open to forming emotional connections with artificial intelligence. According to the survey, 80% of Gen Z respondents said they would consider marrying an AI, and 83% believe they can form deep emotional bonds with one. Joi AI refers to such connections as "AI-lationships," describing them as a new form of emotional support. The study's credibility may be limited, as the company itself benefits from promoting AI companionship. Still, the finding that 75% of participants believe AI could fully replace human companionship raises concern about the future of human connection (Forbes, 2025).

Artificial Intelligence Dependency

Minsky (1968) defined AI as the "science of making machines do things that would require intelligence if done by men."

“Artificial Intelligence is the next, logical step in computing: a program that can figure out things for itself. It’s a program that can reprogram itself” (Sterne, 2017).

Huang (2024) conducted a study to determine the prevalence of AI dependence and its effects on mental health problems. The study used a two-wave cohort design with 3,843 adolescents, of whom 17.14% experienced AI dependence at Time 1 (T1). Subsequent AI dependence was positively predicted by mental health problems, while escape motivation and social motivation mediated the relationship between mental health problems and AI dependence through AI use motivation.

Castro et al. (2025) did a study on AI dependence in academic tasks. The study sampled 370 students through the construction and validation of the SAID questionnaire. A mixed-methods approach with a sequential design was employed. The questionnaire dealt with three key dimensions: “informative exclusivity with AI,” “trust in AI,” and “AI literacy.” The study revealed that AI dependence is an emerging construct in academic settings, highlighting the need for conscious integration of AI to ensure it serves as a supportive tool rather than a substitute for independent learning.

Large Language Models (LLMs) like ChatGPT are transformative tools that enhance productivity, time management, and communication. However, there are growing concerns about their addictive potential. Since LLMs offer instant gratification, humans tend to rely on them even though they recognize that the connection is not real. ChatGPT fosters dependency through key features such as personalized responses, emotional validation, and continuous engagement. Overdependence on AI has been shown to decrease critical-thinking abilities (Yankouskaya, 2025).

Lai et al. (2021) conducted a study examining how humans and AI systems collaborate in decision-making, particularly in areas like healthcare and criminal justice. They reviewed over 100 empirical studies to analyze decision tasks, AI models, and evaluation metrics used in human-AI decision-making research. Their findings emphasized the importance of developing standardized methodologies to enhance collaboration, ensure ethical AI use, and promote generalizable scientific knowledge across the field.

Decision-Making

“Decision-making is defined as the selection of a count of action among alternatives: it is the care of planning” (Weihrich & Koontz, 1988).

According to Terry (1960), “Decision-making is the selection based on certain criteria from two or more alternatives.”

Decision-making can be regarded as “a problem-solving activity yielding a solution deemed to be optimal, or at least satisfactory. It is therefore a process which can be more or less rational or irrational and can be based on explicit or tacit knowledge and beliefs. Tacit knowledge is often used to fill the gaps in complex decision-making processes” (Brockmann & Anthony, 2016).

A Study by Araujo et al. (2020) investigated how personal characteristics influence people's perceptions of AI-driven automated decision-making across media, public health, and judicial contexts. The study was done by using data from a national survey of 958 participants. The researchers found that while individuals generally express concern about the risks of AI, their views on its fairness and usefulness are mixed. AI-made decisions were sometimes rated as equal to or better than those made by human experts. The study highlights important theoretical and societal implications regarding public trust and acceptance of AI in decision-making.

Artificial Intelligence (AI) involves cognitive processes related to reasoning. People increasingly rely on AI for solutions before making decisions, making it important to explore the connection between AI and decision-making. The paper distinguishes between two key aspects of decision-making: diagnosis and look-ahead. AI has strong ties to diagnostic processes through expert systems, case-based reasoning, and fuzzy and rough set theories. However, it has given comparatively less attention to look-ahead reasoning, which involves managing uncertainty and preferences (Pomerol, 1997).

In a study, Steyvers and Kumar (2023) discussed three challenges for AI-Assisted Decision-Making. First, it is essential to understand the conditions that enable complementarity, where humans working with AI outperform either humans or AI alone. This requires humans to recognize when to rely on AI. Second, accurate assessment of human mental models of AI, including their expectations and reliance strategies is important. Third, research must address how the timing and amount of AI-provided information, influence decision quality and prevent

cognitive overload. An interdisciplinary approach to these challenges and future directions for advancing effective human-AI interaction is essential.

1.1 Purpose

The purpose of the research is to study The Influence of Artificial Intelligence on Decision-Making Among the Students.

1.2 Hypothesis

There will be a significant relationship between artificial intelligence dependency and decision-making among students.

2. Method

2.1 Sample

A total sample of 67 students in the age range of 18 to 25 was collected from Chandigarh, India.

2.2 Measures

Generative AI Dependency Scale (GAIDS): The scale was designed by Adalia Yin Hui GOH, with co-authors Andree Hartanto and Nadyanna M. Majeed to measure individuals' reliance on generative artificial intelligence tools in their daily tasks and decision-making processes. The scale assesses the extent to which users depend on AI for information retrieval, problem-solving, emotional support, and creativity. It consists of 11 items, each rated on a five-point Likert scale ranging from Strongly Disagree (1), Disagree (2), N to Strongly Agree (5). Higher scores indicate a greater level of dependency on generative AI. The items are grouped under dimensions such as informational dependency (e.g., using AI for learning), emotional dependency (e.g., seeking validation from AI), and functional dependency.

General Decision-Making Style Questionnaire (GDMS): The Questionnaire was developed by Scott and Bruce (1995) to assess an individual's typical approach to making decisions across various situations. The scale identifies five distinct decision-making styles: rational, intuitive, dependent, avoidant, and spontaneous. It reflects a unique cognitive pattern in how people gather information and make choices. It consists of 20 items. Responses are rated on a three-point Likert scale with options False (1), Sometimes True (2), and True (3). The scale does not have subdimensions in its scoring.

2.3 Procedures

Participants were informed about the study's purpose and objectives and assured of confidentiality and voluntary participation. Informed consent was obtained before data collection. The online survey, administered via Google Forms was taken for convenience. The questionnaire included standardized measures of Artificial Intelligence Dependency and Decision-Making. Participants were asked to respond to the questions as truthfully as possible. After completion, they were thanked for their participation, and any queries were addressed.

3. Analysis of Data

Results

Table 1: *N, Mean and Standard Deviation*

	AI Dependency	Decision Making
N	67	67
Mean	26.9	41.5
Standard deviation	8.56	4.18

Table 2: *Correlation between Artificial Intelligence Dependency and Decision-Making*

	AI Dependency	Decision Making
AI Dependency	—	
Decision Making	0.282*	—
Note. * $p < .05$, ** $p < .01$, *** $p < .001$		

4. Discussion of Results

The objective of the study was to understand the relationship between artificial intelligence dependency and decision-making among students. The findings indicated that the relationship between artificial intelligence dependency and decision-making is significantly positive ($r=0.282$, $p<0.05$). It suggests that as students rely more on AI tools, their dependency on AI for decision-making increases. Students depend on AI because it helps them complete tasks more efficiently by providing quick access to information, guidance, and solutions. This can help them to evaluate

options and make informed decisions.

Increased AI dependency does not necessarily cause improved decision-making; it is possible that students with stronger decision-making skills are more inclined to use AI tools effectively. Future research helps us to better understand the direction and nature of this relationship. Overall, the findings highlight the potential of artificial intelligence as a valuable aid in students' decision-making, while emphasizing the need for balanced use.

According to a study by Alla et al. (2025) artificial intelligence (AI) affects students' ability to make decisions in a university setting that uses digital technology. AI can help students by making it easier to find useful information, compare different choices, and decide more effectively. To explore this, they carried out an experiment at Mohammed Premier University in Oujda using an AI tool. Students of different ages were asked to complete several tasks with the help of this tool. The results, collected through questionnaires and interviews, showed that AI helps by summarizing complex information, giving different solutions, identifying possible causes of problems, and predicting the outcomes. This allowed students to receive recommendations suited to their needs. Overall, the findings suggest that AI has a positive effect on students' decision-making skills in a digital learning environment. AI could improve learning outcomes by strengthening problem-solving skills. The originality of this research lies in linking how people think and make decisions with the use of artificial intelligence. The way people use AI differs from person to person. Therefore, being responsible for making our own decisions is essential.

5. Conclusion

The present study examined the relationship between artificial intelligence dependency and decision-making among students. AI has the ability to influence the quality of information available to individuals by highlighting data that aligns with specific preferences. This limited exposure to diverse information can result in skewed decisions, restraining the human brain's natural ability to question biases. The information presented on social media feeds shapes perceptions of the evidence individuals gather. These feeds are designed to reflect users' opinions, even when those opinions are incorrect, as AI systems tend to reinforce existing beliefs. This can lead individuals to trust misinformation, particularly through the production of hyper-realistic content such as deepfake videos and simulated voices (Lardi, 2025).

Gocen and Aydemir (2020) conducted a study exploring how the rise of artificial intelligence may transform the roles of teachers, schools, and educational innovators. Using a phenomenological qualitative approach, they gathered insights from participants across various sectors. The findings indicate that AI's integration into education will bring both advantages and challenges. While most participants view AI positively, teachers and academics express concerns about its potential impact on teaching practices. Legal professionals emphasize the need to address ethical issues, whereas engineers see AI as a tool to enhance quality and efficiency of the education system.

A study by Brynjolfsson et al. (2025) found that U.S. employment for early-career employees in the most AI-exposed fields, such as software development and customer service, has fallen substantially in recent years. Research at the World Economic Forum suggests that 50% to 60% of typical junior tasks (report drafting, research synthesis, coding fixes etc.) can already be executed by AI. Therefore, even though you haven't realized it, AI is reshaping how we work, how we think, how we behave, and how we live. It has the potential to transform our society on a global scale. Is this change for the better or worse? For the worse.

AI has significantly influenced students' decision-making processes by providing quick access to information. Overreliance on AI can weaken students' critical thinking and creativity, leading to superficial understanding and reduced problem-solving ability. To prevent such drawbacks, students should limit AI use, especially for personal life decisions, and instead engage in reflective and analytical thinking. Educational institutions can encourage this by promoting classroom discussions, and problem-based learning activities that nurture originality. Having face-to-face interactions can also help students reconnect with natural decision-making processes. Ultimately, AI should be used as a supportive tool, not as a substitute for human connections, ensuring that students remain thoughtful and responsible decision-makers in the digital age.

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