

Artificial Intelligence (AI) in Education: The case For or Against

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Abstract: The prevalence of Artificial Intelligence (AI) in today's educational and corporate landscapes can no longer be ignored. From Wallstreet to the classroom, to other aspects of society, AI has significantly influenced all aspects of life and human experiences. Despite the perceived benefits of AI, opinion is largely divided on its implementation in the education sector. Proponents of AI argue its many benefits to education and student learning, while its opponents contend that AI could severely impact students' academic skills and enhance academic dishonesty. Although this paper presents both perspectives, it however argues for the adoption, appropriation, and utilization of AI tools and technologies in education if schools are going to train graduates who would be competitive in the AI-driven global competitive world market. The need to balance AI in education so students understand its appropriate use is both critical and timely given that today's education cannot thrive without AI.

Key Words: Artificial intelligence, Technology, Academic integrity, AI literacy, Digital literacy, Education, Proponents, Opponents.

Introduction

Artificial intelligence (AI) has dramatically reshaped many aspects of human experience, especially in Western countries, where access to and affordability of technology put tools within reach of citizens regardless of socio-economic status. From healthcare and business to entertainment and communication, AI continues to transform the way people work and interact with information. Education is no exception. Tools such as ChatGPT, Grammarly, and other generative AI programs are becoming increasingly common in classrooms and are changing how students research, write, and solve problems. However, the rise of AI in education has sparked significant debate among educators, researchers, and policymakers. Some argue that artificial intelligence threatens academic integrity and may weaken students' critical-thinking abilities, while others believe these technologies offer valuable opportunities for innovation and future career preparation. AI's scope is far-reaching; as such, understanding it and engaging with its opportunities, possibilities, and pitfalls are critical to its effective use and implementation across society's broad spectrum. A quick review of the literature on AI will be pivotal in our sense-making of this contemporary wonder and reality.

Artificial Intelligence: A Review of Literature

In *The Demand for AI Skills in the Labor Market*, Liudmila Alekseeva, José Azar, Mireia Giné, Sampsa Samila, and Bledi Taska (2021) conducted a quantitative analysis of online job vacancies and found that demand for AI skills significantly increased in the U.S. between 2010 and 2019 across many industries and sectors. Demand was particularly strong in IT, architecture/engineering, scientific, and management occupations. The study did not forecast a doom-and-gloom future caused by AI, nor did the authors predict job eliminations; rather, they observed that AI is creating significant demand for specialized skills that can generate advantages in non-AI occupations and increase the economic value of workers who possess them.

Edward Felten, Manav Raj, & Robert Seamans (2021) developed and utilized the AI Occupational Exposure (AIOE) measure and related industry and geographic measures to identify how different occupations and regions are exposed to AI in an ever-increasing job market. They argued that labor-market consequences of AI should not be limited to discourse solely on job loss, given that exposure varies substantially by occupation, industry, firm, and geography. The authors also provided a tool for studying these differences empirically.

In a related study, Sarah Bankins, Xinyu Hu, & Yunyun Yuan (2024) examined AI's ability to automate, augment, and create human work. After exploring the three critical influences AI can have on the workforce and

acknowledging the difficulty of answering whether AI will replace humans in the labor market, they argued that AI literacy and human-centered skills will become increasingly important and complementary. The authors cautioned that the future of work should not be framed simply as humans versus machines, given that AI may complement human workers while also changing the skills required to perform several jobs. They affirmed that while AI technology is as important as human capabilities, outcomes for workers depend partly on how AI is implemented and the support organizations provide during technological transitions.

Similarly, Shan Wang, Fang Wang, Zhen Zhu, Jingxuan Wang, Tam Tran, and Zhao Du (2024) conducted a systematic literature review of *Artificial Intelligence in Education*. Their study reviewed the major applications and research directions in AI in education, examining applications, research topics, methodologies, theories, and educational contexts. They argued that AI in education includes multiple functions rather than a single technology because the literature on AI characterizes applications in teaching, learning, assessment, and educational management. Despite the broad scope of the literature and discourse on AI in education, the researchers reiterated that the field remains diverse and fragmented, as opinions differ and approaches vary in terms of standardization and unification.

In *A Systematic Literature Review of Empirical Research on ChatGPT in Education*, Shima Albadarin, Mohammed Saqr, Nicolas Pope, et al. (2024) reviewed 14 empirical studies examining ChatGPT in educational settings. The review identifies potential benefits while also highlighting concerns surrounding academic integrity, accuracy, assessment, and appropriate educational use. The researchers agreed that ChatGPT represents a significant development in educational AI; however, they emphasized that educators need evidence-based approaches to determine when and how to incorporate ChatGPT into teaching and learning.

Additionally, Yufeng Qian (2025) examined the initial two years of research following ChatGPT's emergence and identified how generative AI is being incorporated into higher-education pedagogy. The real question is the “how” of that incorporation, and that is pivotal to Qian’s article because the author affirmed that GenAI has implications beyond simply helping students write. It can affect several factors in the education process, including tutoring, feedback, content creation, assessment, learning activities, and instructional design. To that end, the author argued that the challenge is developing pedagogically meaningful, rather than merely convenient, uses of AI—and that this is the crux of the matter and the starting point for any robust debate on AI in education.

Furthermore, a recent study by Michael Reicho, Kathrin Otrell-Cass, Martin Ebner, Benedikt Br  nner, Dominik Freinhofer, et al. (2026) reviewed 206 studies selected from 538 identified publications. The authors conceptualized GenAI literacy as multidimensional, including technical competencies, adaptability, collaboration, ethical awareness, critical thinking, and awareness of bias. The review highlighted the need for today’s educational systems to move beyond teaching students how to operate AI tools to a holistic, literacy-based approach that includes understanding AI, evaluating its outputs, recognizing bias, understanding ethical implications, considering academic integrity, and using AI responsibly.

Taken together, this literature review is not exhaustive, but only a scratch on the surface of a much more complex technological, educational, and social reality. The literature review makes it clear that AI has come to stay, with far-reaching effects and influences on organizations, educational institutions, and the broader human social-existential experience. Given AI's prevalence, educational institutions have a responsibility to determine how to integrate these tools responsibly to ensure supportive teaching and student learning while safeguarding against academic dishonesty.

The Case for Artificial Intelligence in Education

Educators and policymakers hold differing perspectives on implementing and incorporating AI in our schools, and the conversation is still gaining momentum. Schools critically need balanced artificial intelligence policies that could enhance learning opportunities, promote digital literacy, and preserve critical-thinking skills while preparing students for a technology-driven society.

A major reason schools should be open to incorporating artificial intelligence is that AI has become a critical and unavoidable part of both education and the workforce. While there are legitimate concerns about AI use in education, Bushweller (2025) argued that banning AI entirely would prevent students from developing important technological skills they will likely need in college and future careers. As the workforce continues to adopt artificial intelligence to improve efficiency and productivity, employers are beginning to expect workers to understand and use these technologies effectively. Students who receive little exposure to AI in educational settings may therefore be disadvantaged when entering higher education or professional environments. Similarly, Wang and Zhang (2026) explain that artificial intelligence is becoming an essential component of modern learning environments and can reshape educational experiences through collaborative interactions between students and technology. They suggest that students should learn how to work alongside AI rather than avoid it entirely. Furthermore, Hamamra et al. (2026) found that students who developed stronger AI literacy

skills were better able to use AI tools productively while maintaining independence in their learning processes. Together, these sources demonstrate that AI literacy has become an important educational skill and, as such, schools have a responsibility to prepare students for a future in which artificial intelligence will play a major role.

Beyond preparing students for future careers, responsible AI integration can also provide meaningful educational benefits. Bushweller (2025) highlights teachers who use AI as a brainstorming tool and encourage students to critically examine AI-generated information rather than accept it without question. For example, some teachers provide students with AI-generated tasks containing grammatical and other errors and ask students to identify them. Such activities encourage intentional reading and analytical thinking while teaching students that AI is not always reliable. Similarly, Wang and Zhang (2026) argued that generative AI can contribute to transformative learning experiences by creating "pedagogical partnerships" between students and technology. Rather than replacing human thinking, AI can support creativity, reflection, and self-directed learning when students actively engage with the information provided.

Furthermore, research suggests that artificial intelligence (AI) can increase student engagement and improve learning outcomes when used appropriately. Hamamra et al. (2026) argued that students with greater AI literacy are more likely to use AI as a supportive educational resource rather than becoming dependent on it. Their findings indicate that students who understand AI limitations can better critically evaluate AI-generated information and apply it meaningfully in their own learning. As society continues to rely more heavily on digital technologies, developing these skills may provide students with important academic and professional advantages. Therefore, AI should be viewed as a tool that enhances learning experiences rather than a replacement for traditional educational practices and processes.

A Critique of Artificial Intelligence

Despite the obvious benefits, significant concerns remain about excessive reliance on artificial intelligence. Many educators worry that students may become overly dependent on AI and fail to develop essential critical-thinking skills. Bushweller (2025) acknowledges concerns regarding cheating, misinformation, and reduced intellectual engagement among students who rely heavily on AI technologies. Roy and Jony (2026) further support these concerns by examining "cognitive offloading," or the tendency to rely on technology for intellectual tasks that would normally require independent thought and problem-solving. Their research suggests that excessive dependence on generative AI may reduce students' mental effort, engagement, and ability to develop original ideas.

Similarly, Farrokhnia et al. (2026) found that although AI-generated feedback often provides students with more suggestions than teacher feedback, students tend to make fewer meaningful revisions when relying solely on AI responses. Their findings indicate that human guidance remains essential in promoting deeper learning and sustained engagement. Students who become overly dependent on artificial intelligence may be less likely to analyze information independently, challenge ideas, or develop creative solutions to complex problems. Consequently, unrestricted AI use could unintentionally hinder important aspects of students' cognitive development.

Another important concern surrounding artificial intelligence in education involves academic integrity and ethical decision-making. According to Dilinika (2026), many educators remain uncertain about how AI should be used in educational settings because of concerns of plagiarism, fairness, and institutional policies. Faculty members often hold differing opinions about the appropriate role of AI in student learning, making it difficult to establish consistent guidelines for implementation. Some educators worry that students may use AI to complete assignments dishonestly, while others recognize that prohibiting AI entirely may be unrealistic in today's educational landscape.

The above concerns are understandable and should not be ignored without a critical thought and process review to determine best practice on AI. Notwithstanding the debate for and against AI, completely banning AI may create additional problems by preventing students from learning how to use these technologies responsibly. Instead, educators need to develop and adopt clear policies that define acceptable AI use while continuing to emphasize originality, critical thinking, and ethical decision-making. Teaching students how to properly integrate AI into their learning experiences may ultimately prove more beneficial than attempting to eliminate these technologies altogether.

While some scholars and educators advocate strict limitations or complete bans on artificial intelligence in schools, one must realize that such approaches may fail to account for the realities of today's society and the critical influence of AI in our world. Opponents of AI integration argue that these technologies encourage academic dishonesty and weaken students' intellectual abilities. The concerns raised by Roy and Jony (2026) regarding cognitive offloading provide legitimate evidence supporting this perspective. Likewise, Farrokhnia et

al. (2026) demonstrate that excessive reliance on AI-generated feedback may reduce meaningful engagement with learning tasks.

Notwithstanding, completely rejecting AI is unlikely to prevent students from encountering these technologies outside educational environments. Instead, schools should focus on teaching students how to use AI responsibly, purposefully, and effectively. Bushweller (2025) advocates for a "skeptically optimistic" approach that recognizes both the opportunities and risks associated with artificial intelligence. Similarly, Xu et al. (2026) found that teachers with higher levels of AI literacy and confidence were better able to create positive educational experiences for students than those who did not possess such competency. Their study suggested that teacher preparation and training significantly influence how effectively AI can be integrated into classrooms. Therefore, rather than banning AI, educational institutions should prioritize AI literacy programs and professional development opportunities that help both students and teachers navigate through AI's evolving ecological landscape.

Ultimately, artificial intelligence possesses both significant opportunities and considerable risks. The research consistently demonstrates that AI can enhance creativity, support personalized learning, and prepare students for future careers when implemented responsibly. At the same time, concerns regarding cognitive dependence, academic dishonesty, and reduced critical-thinking skills highlight the importance of maintaining meaningful human involvement in educational processes. Schools must therefore adopt balanced policies that encourage responsible AI use while preserving essential educational values.

Conclusion

From extant studies and literature to students' contemporary classroom experiences, artificial intelligence has become a mainstay of our educational system, and its influence and impact are expected to grow in versatility, utility, and application. While concerns regarding academic dishonesty, cognitive offloading, and overreliance on technology are valid, completely rejecting AI would fail to prepare students for the realities of a technology-driven world. The research presented by Bushweller (2025), Roy and Jony (2026), Wang and Zhang (2026), Hamamra et al. (2026), Dilinika (2026), Farrokhnia et al. (2026), and Xu et al. (2026) suggests that artificial intelligence should neither be fully embraced nor entirely prohibited. Instead, schools should adopt balanced approaches that promote responsible use, critical thinking, ethical decision-making, and digital literacy. To that end, AI should be approached as a tool that enhances learning rather than replacing human judgment, creativity, logic, critical thinking, and intellectual excellence. As such, school leaders, educators, and policymakers must work to encourage and improve responsible AI use in our schools.

References

- [1]. Albadarin, Y., Saqr, M., Pope, N., & Tukiainen, M. (2024). A systematic literature review of empirical research on ChatGPT in education. *Discover Education*, 3, Article 60. <https://doi.org/10.1007/s44217-024-00138-2>
- [2]. Alekseeva, L., Azar, J. A., Giné, M., Samila, S., & Taska, B. (2021). The demand for AI skills in the labor market. *Labour Economics*, 71, Article 102002. <https://doi.org/10.1016/j.labeco.2021.102002>
- [3]. Bankins, S., Hu, X., & Yuan, Y. (2024). Artificial intelligence, workers, and future of work skills. *Current Opinion in Psychology*, 58, Article 101828. <https://doi.org/10.1016/j.copsyc.2024.101828>
- [4]. Bushweller, K. (2025, September 8). Is there a healthy middle ground on AI in schools? Triskeptical optimism: How to balance AI skill-building against reasonable misgivings. *Education Week*, 45(4), 11–12.
- [5]. Dilinika, J. M. S. (2026). Factors influencing faculty decision-making on student use of generative AI in higher education. *Journal of Interdisciplinary Studies in Education*, 15(4), 107–134. <https://doi.org/10.32674/ksb6gv95>
- [6]. Farrokhnia, M., Latifi, S., Papadopoulos, P. M., Hogenkamp, L., Gijlers, H., Khosravi, H., & Noroozi, O. (2026). Generative AI offers more, but students revise less: Comparing the effects of teacher and AI feedback on student essay revisions. *International Journal of Educational Technology in Higher Education*, 23, Article 6. <https://doi.org/10.1186/s41239-026-00579-9>
- [7]. Felten, E., Raj, M., & Seamans, R. (2021). Occupational, industry, and geographic exposure to artificial intelligence: A novel dataset and its potential uses. *Strategic Management Journal*, 42(12), 2195–2217. <https://doi.org/10.1002/smj.3286>
- [8]. Hamamra, B., Khlaif, Z. N., & Mahamid, N. (2026). AI literacy and mediated learner autonomy in ChatGPT-supported EFL writing: A qualitative study at a Palestinian university. *International Journal of Educational Technology in Higher Education*, 23, Article 19. <https://doi.org/10.1186/s41239-026-00597-7>

- [9]. Qian, Y. (2025). Pedagogical applications of generative AI in higher education: A systematic review of the field. *TechTrends*, 69, 1105–1120. <https://doi.org/10.1007/s11528-02501100-1>
- [10]. Roy, B. K., & Jony, M. S. (2026). Generative AI and critical thinking in higher education: Students' narratives of cognitive offloading. *Journal of Interdisciplinary Studies in Education*, 15(3), 263–282. <https://doi.org/10.32674/jey59q25>
- [11]. Wang, S., & Zhang, H. (2026). Pedagogical partnerships with generative AI in higher education: How dual cognitive pathways paradoxically enable transformative learning. *International Journal of Educational Technology in Higher Education*, 23, Article <https://doi.org/10.1186/s41239-026-00585-x>
- [12]. Wang, S., Wang, F., Zhu, Z., Wang, J., Tran, T., & Du, Z. (2024). Artificial intelligence in education: A systematic literature review. *Expert Systems with Applications*, 252, Article 124167. <https://doi.org/10.1016/j.eswa.2024.124167>
- [13]. Xu, J., Tian, M., Peng, F., Hu, D., & Liu, M. (2026). The relationship between teachers' GAI use and students' social-emotional competence: The chain-mediating roles of teachers' Ailliteracy and AI self-efficacy. *BMC Psychology*, 14, Article 689. <https://doi.org/10.1186/s40359-026-04484-8>