

ARTIFICIAL INTELLIGENCE IN SCHOOL PSYCHOLOGY- PERSPECTIVES AND CHALLENGES

Venelina Stoeva Stoeva

“Paisii Hilendarski” Plovdiv University, Faculty of Pedagogy, Plovdiv, Bulgaria, venelina.stoeva@uni-plovdiv.bg

Abstract: The primary aim of this paper is to outline the main challenges and benefits of using artificial intelligence in the work of the school psychologist. A review has been made of the essence of artificial intelligence technology, as well as its specific application in school psychology. Artificial Intelligence (AI) is rapidly reshaping the field of school psychology, offering innovative tools that enhance the efficiency and effectiveness of psychological services in educational settings. By streamlining processes such as report writing and assessment, AI empowers school psychologists to focus more on direct interactions with students and timely interventions. Notable applications include AI-powered Early Warning Systems (EWS) that predict student risks and recommend tailored support, along with chatbots that provide immediate mental health resources. These advancements highlight AI's potential to transform traditional practices in school psychology and improve student mental health outcomes. Despite the promising benefits, the integration of AI in school psychology raises significant ethical concerns, particularly regarding algorithmic bias and data privacy. School psychologists play a vital role in advocating for equitable practices and ensuring cultural responsiveness in AI-assisted evaluations. This includes the need for thorough oversight to mitigate unintended consequences and maintain the integrity of psychological assessments. As AI continues to evolve, the profession must grapple with these ethical dilemmas while harnessing technology's potential to address the growing demand for mental health support among students. In addition to enhancing administrative efficiency and intervention strategies, AI tools are poised to expand the reach of mental health services, particularly in under-resourced areas where access to trained professionals is limited. The ability of AI to analyze large datasets enables school psychologists to identify trends and prioritize interventions effectively, thereby addressing the unique needs of diverse student populations. However, the reliance on AI also presents challenges, such as the risk of diminishing critical thinking skills among students and the potential for over-reliance on technology in therapeutic settings.

Keywords: artificial intelligence, education, school transformation, technology

1. INTRODUCTION

In the era of digitalization and technological advancement, it is of utmost importance to pay attention to the advantages and disadvantages of artificial intelligence. This article attempts to describe the main challenges faced by the school psychologist related to the use of AI assistants and bots.

In recent years, there has been increasing discussion about the possibility of some routine activities being replaced by artificial intelligence. However, in the school environment, there are a number of prerequisites due to which the implementation of these technologies can be a real challenge. Artificial intelligence has also changed the daily life of students. This powerful tool has added new dimensions to communication, learning, and even ways of thinking.

2. THE ESSENCE OF AI (ARTIFICIAL INTELLIGENCE)

Artificial intelligence represents a set of computer systems capable of performing tasks previously done by humans. These computer systems are advanced enough to imitate an individual's cognitive activity as well as to process enormous amounts of data in a short time. On the official website of the Bulgarian Inspectorate of Education, information is published on four types of artificial intelligence (Mar, 2024, <https://nio.government.bg/>):

- Reactive AI – this is a basic form of AI that can respond to a specific situation without requiring prior experience or memory. This type of AI has no memory. Such a machine would react in the same way in similar situations every time it is used.
- Limited Memory AI – this is a more complex AI model that has memory and can make decisions based on this experience. This makes it more adaptive compared to reactive AI.
- Theory of Mind AI – this type of AI can understand emotions, thoughts, and intentions of human beings. This is a huge challenge and requires continuous improvement.
- Self-aware AI – this is specialized AI that can perform specific tasks, such as voice assistants. The limitation of this type of AI is that it cannot perform tasks outside its specification.

Currently, artificial intelligence can be applied in certain areas of school psychology. These are described on the Teachflow.ai platform, which supports specialists engaged in the education system (problems: <https://teachflow.ai/ai-in-education-impact/>, 2023):

- AI chatbots – they are used to provide mental health support and counseling services to students. These chatbots can conduct conversations, offer guidance, and even detect signs of stress or mental health issues.
- Data analysis and predictive modeling – such AI algorithms can analyze large volumes of student data, such as academic achievements, attendance, and behavioral patterns. By identifying patterns and trends, AI systems can predict outcomes like the likelihood of dropout or academic success, enabling early intervention and targeted support.
- Virtual reality therapy – virtual reality (VR) technology combined with AI can create immersive therapeutic experiences for students with phobias, anxiety disorders, or other psychological challenges. VR therapy provides a controlled environment for exposure therapy, helping students gradually overcome their fears or anxieties.
- Automated assessment tools – these AI-powered assessment tools can assist psychologists in evaluating and diagnosing various conditions, such as learning difficulties or emotional disorders. They can analyze test results, behavioral observations, and other relevant data to provide more accurate and objective assessments.

There are two main types of technologies in contemporary literature (Abukmeil et al., 2021; Hu, 2023; Gui et al., 2023):

- Artificial Intelligence – Generative Adversarial Network (GAN);
- Generative Pre-trained Transformer (GPT).

Jovanović and Campbell (2022) indicate that both are learning models that integrate human-created digital artifacts using statistics and probabilities. These models can be used to generate human speech, create and edit text, and can even engage in conversations (Ali et al., 2024). Zhuang et al. systematize the use of AI in the educational process by describing the framework of Martin et al. (2019). It includes four main phases for effective online learning:

- Design - includes design strategies, learning objectives, and learning materials;
- Facilitation - covers feedback, communication and interaction, support, and intervention;-
- Assessment - includes testing and evaluation methods;
- Evaluation - refers to learner satisfaction, teaching quality, and course quality.

Mouta et al., 2023 note that, despite similar models described in the literature, there is a lack of explicit justification for the necessity of AI interventions given their associated risks. The use of AI in the educational process can also be linked to the theory of moral hazard. According to this theory, individuals are more likely to take risks (such as misusing AI) because they know they do not bear direct blame and responsibility for their behavior (Becchetti et al., 2020; San-Jose et al., 2022a). In the context of learning, moral hazard is seen as being related to the numerous AI tools, the use of which can lead to a lack of critical thinking, reduced motivation for learning, and a misunderstanding of basic notions and concepts (Akgun and Greenhow, 2022; Memarian and Doleck, 2023; Moser et al., 2022). The absence of clear rules and policies for AI use increases moral hazard among learners.

Some studies indicate that the integration of AI in education has the potential to have a rather positive effect on students' academic outcomes, as well as to align with their needs in the digital age (Ng et al., 2023; Park & Kwon, 2023). Attention should also be paid to its negative impact, namely cognitive overload, reduction of critical thinking, attentional biases, and excessive dependence on technology (Martin et al., 2024).

3. FUTURE DIRECTIONS FOR THE USE OF ARTIFICIAL INTELLIGENCE IN SCHOOLS

Traditional standardized tests applied in schools use norm-referenced assessment, where one's test result is compared with the results of all others who took the test. Besides the benefits of this model, some limitations can be noted:

- Some tasks may be elementary for a given student, which could affect their motivation to work;
- In the technology era with easy access to information, students may solve tasks not purely by personal effort but with external help.

So, how can artificial intelligence be used so that its benefits outweigh its harms? AI can analyze the performance of individual students in real time, adapt the content of exam materials according to the learner's level, and provide additional explanations when necessary. Some researchers point out that AI has long been applied in adaptive testing (Chen et al., 2022), although it is not yet a common practice in student assessment.

Artificial intelligence can also support the work of school psychologists to personalize recommendations and goals by using all available data (not just the information most significant to the school psychologist at a given moment).

The more specific the recommendations are to a particular student, the more useful they could be (Mallin et al., 2012).

Arguments Regarding Privacy and Confidentiality in the Use of AI in Schools

Jordan Wright (Wright, 2021), a certified clinical and assessment psychologist (American Board of Professional Psychology, American Board of Assessment Psychology) and a leading researcher and practitioner in assessment and tele-assessment, points out that when data are entered for AI use, there is a risk that this information could be compromised, for example, by the software secretly collecting information about users.

Another aspect is informed consent, which is mandatory when working with people. When using AI, some individuals may not fully understand the nature and purpose of the work. To summarize:

- Student data must be protected from malicious access and cyber threats.
- Obtaining informed consent becomes more complex with AI use and requires detailed explanation to students and their families.
- AI carries the risk of abuse and deepening inequalities if introduced without clear ethical and professional standards.

A recent study conducted by the Ohio Association of School Psychologists at the end of 2024 and the beginning of 2025, involving the opinions of 152 practicing specialists, shows that 70% of respondents have used AI in their work to optimize it (Farmer et al., 2025). Most often, AI assists school psychologists in creating recommendations, summarizing materials, drafting reports, providing simplified explanations, answering work-related questions, and writing emails.

4. LIMITATIONS OF THE THEORETICAL REVIEW

The main limitation of the present article is its theoretical nature. There are still many unanswered questions regarding the use of AI in education. It is necessary to conduct an empirical study that, on the one hand, focuses on the outcomes of the use and implementation of AI in education, and on the other hand, examines its impact on the personality of learners (cognitions, emotions, and perceptions of themselves and the world around them).

5. CONCLUSION

Several authors point out that despite the rapid progress of AI, its impact on the educational process has not yet been fully explored (Holmes et al., 2022). In order to create clear and unambiguous rules, some researchers (Bogdanova et al., 2024; Johnston et al., 2024; Vallis et al., 2024) propose including the perspectives not only of instructors but also of learners. This approach would limit not only moral hazard but also create clearer expectations and requirements for both parties.

Looking ahead, the future of AI in school psychology promises continued innovation, emphasizing the importance of ethical guidelines and professional development for practitioners. As school psychologists navigate this evolving landscape, ongoing training and awareness of ethical implications will be crucial in ensuring that AI serves to enhance, rather than replace, the human elements essential to effective psychological practice. The intersection of AI technology and school psychology underscores the need for a balanced approach that prioritizes student well-being while embracing the advantages of technological advancements. The extent of AI's influence on school psychology is yet to be determined. There remain more questions than answers, with current concerns including whether AI can provide adequate consultative and therapeutic support to students and teachers. The issue of accountability in interactions with AI also remains unclear.

The present article attempts a synthesis of the existing data regarding the goals for using AI in education and the outcomes of its application. It outlines key and leading ideas concerning the development of AI and its influence on the formulation and design of tasks. However, AI affects not only the educational process itself but also the personal perceptions and evaluations of learners. This is the subject of another systematic and in-depth study.

REFERENCES

- Abukmeil, A., Ferrari, S., Genovese, A., Piuri, V., & Scotti, F. (2021). A survey of unsupervised generative models for exploratory data analysis and representation learning. *ACM Comput. Surv.* 54 (5), 1–40.
- Akgun, S., & Greenhow, C. (2022). Artificial intelligence in education: addressing ethical challenges in K-12 settings. *AI Ethics* 2 (3), 431–440. <https://doi.org/10.1007/s43681-021-00096-7>.
- Ali, O., Murray, P., Momin, M., Dwivedi, Y., & Malik, T. (2024). The effects of artificial intelligence applications in educational settings: Challenges and strategies. *Technological Forecasting & Social Change*, Vol. 199. <https://doi.org/10.1016/j.techfore.2023.123076>.
- Becchetti, L., Bruni, L., & Zamagni, S. (2020). New theories of the firm. In: *The Microeconomics of Wellbeing and Sustainability*, first ed., vol. 1. Academic Press, pp. 199–226. <https://doi.org/10.1016/C2017-0-04428-2>.

- Bogdanova, S., Stepanova, M., Matytcina, M., Plastinina, N., Plekhanova, Y., & Kudritskaya, M. (2024). AI technologies in training PhD students. *Proceedings - 2024 4th International Conference on Technology Enhanced Learning in Higher Education, TELE 2024*, pp. 153–156. <https://doi.org/10.1109/TELE62556.2024.10605642>.
- Chen, X., Zou, D., Xie, H., Cheng, G., & Liu, C. (2022). Two decades of artificial intelligence in education. *Educational Technology & Society*, 25(1), 28–47.
- Farmer, R. L., Lockwood, A., Floyd, R. G., & Sisco, A. (2025, March 18). How Are School Psychologists Using Artificial Intelligence in 2024? A Descriptive Study. https://doi.org/10.31234/osf.io/cf2m3_v1.
- Holmes, W., Porayska-Pomsta, K., Holstein, K., Sutherland, E., Baker, T., Shum, S. B., & Koedinger, K. R. (2022). Ethics of AI in education: Towards a community-wide framework. *International Journal of Artificial Intelligence in Education*, 1–23. <https://doi.org/10.1007/s40593-021-00239-1>.
- Hu, K. (2023). ChatGPT Sets Record for Fastest-Growing User Base. Reuters. Available at: <https://www.reuters.com/technology/chatgpt-sets-record-fastest-growinguser-base-analyst-note-2023-02-01/>.
- Gui, J., Sun, Z., Wen, Y., Tao, D., & Ye, J. (2023). A review on generative adversarial networks: algorithms, theory, and applications. *IEEE Trans. Knowl. Data Eng.* 35 (4), 3313–3332.
- Johnston, H., Wells, R.F., Shanks, E.M., Boey, T., & Parsons, B.N. (2024). Student perspectives on the use of generative artificial intelligence technologies in higher education. *Int. J. Edu. Integr.* 20 (1). <https://doi.org/10.1007/s40979-024-00149-4>.
- Jovanovic, M., & Campbell, M. (2022). Generative artificial intelligence: trends and prospects. *Computer* 55 (10), 107–112.
- Kwon, S., & Park, A. (2023) Examining Thematic and Emotional Differences across Twitter, Reddit, and YouTube: The Case of COVID-19 Vaccine Side Effects. *Computers in Human Behavior*, 144, Article ID: 107734. <https://doi.org/10.1016/j.chb.2023.107734>
- Mallin, B., Beimcik, J., & Hopfner, L. (2012). Teacher ratings of three school psychology report recommendation styles. *Canadian Journal of School Psychology*, 27(3), 258–273.
- Martin, F., Zhuang, M., & Schaefer, D. (2024). Systematic review of research on artificial intelligence in K-12 education (2017–2022). *Computers and Education: Artificial Intelligence*, 6, 100195. <https://doi.org/10.1016/j.caeai.2023.100195>.
- Martin, F., Ritzhaupt, A., Kumar, S., & Budhrani, K. (2019). Award-winning faculty online teaching practices: Course design, assessment and evaluation, and facilitation. *The Internet and Higher Education*, 42, 34–43. <https://doi.org/10.1016/j.iheduc.2019.04.001>.
- Memarian, B., & Doleck, T. (2023). Fairness, Accountability, Transparency, and Ethics (FATE) in Artificial Intelligence (AI) and higher education: a systematic review. *Comput. Educ. Artif. Intell.* 5, 100152. <https://doi.org/10.1016/j.caeai.2023.100152>.
- Moser, C., den Hond, F., & Lindebaum, D. (2022). Morality in the age of artificially intelligent algorithms. *Acad. Manag. Learn. Educ.* 21 (1), 139–155. <https://doi.org/10.5465/amle.2020.0287>.
- Mouta, A., Pinto-Llorente, A. M., & Torrecilla-Sánchez, E. M. (2023). Uncovering blind spots in education ethics: Insights from a systematic literature review on artificial intelligence in education. *International Journal of Artificial Intelligence in Education*, 1–40. <https://doi.org/10.1007/s40593-023-00384-9>.
- Ng, D. T. K., Leung, J. K. L., Su, J., Ng, R. C. W., & Chu, S. K. W. (2023). Teachers' AI digital competencies and twenty first century skills in the post-pandemic world. *Educational Technology Research and Development*, 71(1), 137–161. <https://doi.org/10.1007/s11423-023-10203-6>.
- San-Jose, L., Gonzalo, J.F., & Ruiz-Roqueñi, M. (2022). The management of moral hazard through the implementation of a Moral Compliance Model (MCM). *Eur Res. Manag. Business Econ.* 28 (1). <https://doi.org/10.1016/j.iiedeen.2021.100182>.
- Vallis, C., Wilson, S., Gozman, D., & Buchanan, J. (2024). Student perceptions of AI- Generated avatars in teaching business ethics: we might not be impressed. *Postdigital Sci. Edu.* 6 (2), 537–555. <https://doi.org/10.1007/s42438-023-00407-7>.
- Wright, J. (2021). Applications of Artificial Intelligence (AI) in School Psychology.
- Zhuang, M., Long S., Martin, F., & Castellanos-Reyes, D. (2025). The affordances of Artificial Intelligence (AI) and ethical considerations across the instruction cycle: A systematic review of AI in online higher education. *The Internet and Higher Education*. <https://doi.org/10.1016/j.iheduc.2025.101039>. <https://teachflow.ai/ai-in-education-impact/>.
- Map, B. (2024). <https://nio.government.bg/>.