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The Advantages and Risks of AI in Sustainable Societal Development: Perspectives of Future Psychologists

By Olesia Stoliarchuk[1], Nataliia Klishevych[2], Roman Pavliuk[3], Lin Tian[4], Kristina Binkivska[5], Oksana Serhieienkova[6], Artur Strunhar[7], Tetiana Divchuk[8]

ABSTRACT:
In the context of widespread psychological trauma among Ukrainian citizens, the education of future psychologists requires careful development of their professional competence and responsibility. Consequently, the nature and outcomes of artificial intelligence (AI) applications in the professional education of future psychologists pose a significant challenge for the national educational system due to the risks of academic integrity violations.
A study involving 184 first- to fourth-year students highlighted the controversial role of AI in the professional education of future psychologists. Additionally, this study examines the role of AI in inventive activities**,** grounded in the theory and practice of inventive problem solving (TRIZ), exploring how AI fosters creative problem-solving and supports the development of innovative approaches in psychological practice.
It was found that AI implementation in psychology students' professional education is currently spontaneous and unregulated. The majority of surveyed students have repeatedly used AI for independent and qualification-related work, as well as for test assessments, without recognizing their actions as violations of academic integrity. Future psychologists identify several benefits of AI in their studies, including idea generation, information supplementation, systematization and structuring, and the rapid collection of relevant and useful data. However, common drawbacks include unreliable, misleading, or politically biased information, the absence of source citations, inaccurate data or procedural algorithms, and the occurrence of informational or visual hallucinations.
The majority of respondents firmly believe that AI cannot fully replace psychologists, viewing it solely as an auxiliary tool. A positive finding is the students' multifaceted understanding of AI's applications in professional psychological practice.

[1] Doctor of Psychology, Associate Professor of Psychology of Personality and Social Practices Department, Faculty of Psychology, Social Work and Special Education, Borys Grinchenko Kyiv Metropolitan University. ORCID: http://orcid.org/0000-0003-4252-2352

[2] PhD in education, Associate Professor, Dean of Faculty of Psychology, Social Work and Special Education, Borys Grinchenko Kyiv Metropolitan University, ORCID: http://orcid.org/0000-0002-5611-6454 .

[3] PhD in Education, Associate Professor, Deputy Dean on Academic Affairs, Faculty of Psychology, Social Work and Special Education, Borys Grinchenko Kyiv Metropolitan University, ORCID: http://orcid.org/0000-0002-8957-6158.

[4] Doctor of Philosophy in Musical Art, Teacher at the faculty of Early Education, Guangdong Baiyun University, (Guangzhou, China). ORCID: orcid.org/0009-0009-3661-4569

[5] Employee of the Vernadsky National Library of Ukraine, Researcher of philosophical issues at the Faculty of Social Sciences and Humanities, Borys Grinchenko Kyiv Metropolitan University. ORCID: https://orcid.org/0009-0006-3444-2570

[6] Doctor of Psychology, Professor, Head of Psychology of Personality and Social Practices Department, Faculty of Psychology, Social Work and Special Education, Borys Grinchenko Kyiv Metropolitan University, ORCID: https://orcid.org/0000-0002-1380-7773

[7] PhD in Social Communication, Doctoral Candidate, Interregional Academy of Personnel Management, ORCID: http://orcid.org/0000-0001-8702-9911.

[8] Candidate of Technical Sciences, Associate Professor of the Department of Electrical Machines, *National University* "Zaporizhzhia *Polytechnic*", ORCID: https://orcid.org/0000-0002-9947-8527

The majority of educators exhibit skepticism toward AI use in psychology education, while some avoid addressing the issue altogether. These findings indicate the need for educators to actively engage in discussions on the ethical and responsible use of AI by psychology students in their professional training.

Given the spontaneous and unregulated integration of AI in Ukrainian higher education, a structured framework is necessary to ensure ethical implementation. Universities must develop clear guidelines and oversight mechanisms to balance innovation with academic integrity, preventing potential misuse while maximizing AI's benefits in students' professional development. In psychology education, where ethical considerations and human-centered approaches are paramount, it is essential to establish policies that regulate AI use, ensuring that it complements rather than compromises the development of essential professional competencies. This includes defining acceptable AI applications in academic work, implementing transparency measures, fostering critical AI literacy among both students and faculty, and encouraging AI-driven inventive activities — based on the theory and practice of inventive problem solving — that enhance students' creative and analytical skills.

Keywords: professional education, future psychologists, sustainable societal development, artificial intelligence (AI), academic integrity, inventive activities

1. Introduction

Amid Ukraine's prolonged war with the Russian Federation, the implementation of the national strategy for sustainable societal development faces systemic threats. The challenges of this strategy span all vectors of sustainable development, including the social dimension, which focuses on maintaining the population's mental and physical well-being, overcoming poverty and discrimination, and improving the quality of education.

Information and computer technologies are rapidly spreading across all spheres of society, including the higher education system. The integration of artificial intelligence (AI) — a complex and multifaceted product of human intellect — brings both advantages and disadvantages to professional education. Currently, Ukrainian universities are experiencing a largely unregulated and spontaneous adoption of AI tools, posing risks related to unpredictability and weak oversight of its consequences.

The academic and scientific communities are increasingly concerned about the ethical implications of AI use in higher education. As the Canadian Psychological Association aptly notes, as AI continues to evolve, ethical considerations, privacy issues, and the need for human oversight remain critically important for maximizing its potential while minimizing harm — ensuring adherence to the values and ethical standards of the psychological profession (Androshchuk & Maliuha, 2024).

The aim of the study is to explore the attitudes of future psychologists regarding the advantages and risks of artificial intelligence in ensuring the sustainable development of society and to analyze the experience of students using AI technologies in their professional training.

2. Materials and Methods

The study, conducted in December 2024, involved first- to fourth-year students of the psychology program at the Borys Grinchenko Kyiv Metropolitan University. The

total number of participants in the study was 184. All participants were informed about the purpose of the research, the principle of anonymity of their responses, and voluntarily consented to participate in the survey. During the diagnostic phase of the study, a written survey method using a Google form (author's content development) was employed. The data were processed using quantitative and qualitative analysis methods, including averages, percentages, and ranking, with the help of IBM SPSS Statistics software (version 29). At the final stage of the research, the diagnostic data were interpreted and summarized.

3. Literature review

The increasing integration of artificial intelligence (AI) into education and professional education has sparked both enthusiasm and concern among researchers. While AI offers significant benefits, including personalized learning and enhanced efficiency, scholars also highlight the ethical dilemmas, misinformation risks, and limitations of AI-driven learning environments.

A key aspect of AI's influence on education is its impact on student perceptions. Cengiz and Peker examine how AI literacy and attitudes toward AI shape university students' acceptance of generative AI, as well as the anxiety associated with its use. Their findings indicate that students with higher AI literacy are more likely to embrace AI as a learning tool, whereas those with limited understanding tend to view it with skepticism and fear (Cengiz & Peker, 2025).

The perspective of Ukrainian scholars is highly relevant, as they emphasize that AI's ability to analyze learning needs enables it to provide personalized tasks and materials tailored to each student's level and learning style. It serves as a powerful tool for creating a modern educational environment based on unique and individualized teaching methodologies, aligning with students' preferences and meeting the demands of contemporary education (Sandford, Mulligan, Gittens, Norris & Fernandes, 2024).

However, concerns about AI's reliability persist. Hwang and Jeong explore AI-generated misinformation, demonstrating how students exposed to "hallucinations" — fabricated content produced by AI — are prone to accepting false information unless forewarned about AI's limitations (Hwang & Jeong, 2025). This issue is particularly relevant in psychology education, where the accuracy of information is critical for ethical practice.

To address this challenge, integrating AI literacy into psychology curricula is essential. Educators should equip students with the skills to critically evaluate AI-generated outputs, recognize potential misinformation, and verify sources before applying AI-assisted insights in their academic and professional work. By fostering responsible AI use, universities can mitigate risks associated with inaccurate data and reinforce ethical decision-making in future psychologists.

Beyond misinformation, ethical considerations surrounding AI remain a dominant concern. Norton discusses the governance and ethical implications of AI in professional settings, emphasizing the need for transparency, accountability, and human oversight (Norton, 2025). These concerns are echoed by N. Bazelyuk, O. Bazelyuk, O. Borodienko, I. Drach, O. Petroie, I. Regeilo, and O. Slobodyaniuk, who outline ethical

principles for AI implementation based on human-centered governance, proportionality, privacy, and inclusivity (Drach et al., 2023). Given AI's increasing role in education, these principles serve as a foundation for ensuring responsible AI integration in psychology training.

AI's impact extends beyond education and into broader fields, including art and organizational strategies. Van Hees, Grootswagers, Quek, and Varlet examine human perception of AI-generated art, highlighting debates over authenticity and creativity in the digital age (Van Hees, Grootswagers, Quek & Varlet, 2025). Meanwhile, Liu, Dong, and Zeng discuss AI's role in fostering sustainability within the sports economy (Liu, Dong & Zeng, 2022), while Streich explore how AI and exascale computing contribute to the United Nations' Sustainable Development Goals (SDGs) (Streich et al., 2020). These studies highlight AI's capacity to support complex analytical processes and drive innovation, yet they also underscore the need for responsible implementation — particularly in psychology education, where ethical considerations are paramount.

Despite AI's capabilities, many educators argue that it should remain a supplementary tool rather than a substitute for human instruction. A. Androshchuk and O. Malyuha emphasize that while AI can enhance the learning process, it cannot replace the role of educators, mentors, and academic supervisors, as education extends beyond the transmission of information to include interpersonal guidance and ethical development (Romanyshyn, Chukhno & Fyisa, 2023).

In the context of Ukraine's ongoing war, the preparation of future psychologists requires heightened attention to professional competence and ethical responsibility. While AI presents opportunities for personalized learning and efficiency, its implementation in psychology education remains largely unregulated, leading to concerns about its ethical use and impact on academic integrity. Given these challenges, it is imperative to establish clear guidelines to ensure AI serves as a tool for enhancing, rather than undermining, the education and training of future psychologists.

4. Results

The survey began by examining students' attitudes towards the benefits of using artificial intelligence technologies for the sustainable development of society. The analysis of respondents' answers to this open-ended question allowed for the identification of certain thematic trends. Most often, students mentioned the positive contribution of AI to technological innovations in the fields of education, healthcare, culture, defense, specifying them as follows:

- The possibility of creating individualized educational tasks for learners (students or pupils) with different intellectual abilities;
- Expanding access to educational resources for people with disabilities;
- More accurate diagnosis of diseases, disorders, or mental states, and accordingly, the development and implementation of personalized treatment or psychological support;
- Generalization of information, formulation of hypotheses, processing, and interpretation of statistical data in scientific research;
- Visualization of information in the fields of fashion, printing, and advertising;

- Improvement of the process of manufacturing and applying weapons and military logistics for the defense of the country against external aggression.

Students also mentioned favorable opportunities for the sustainable development of society through the application of AI in the environmental and social management sectors:

- Improving the consumption of natural resources;
- Forecasting the consequences of technogenic factors and climate change on the ecological situation;
- Improving the interaction between government authorities and citizens through automated feedback systems and request processing.

At the same time, the responses from the participants did not reflect a view of the positive role of AI technologies in industries such as manufacturing, agriculture, the financial system, etc. The analysis of the answers from future psychologists revealed that they mostly perceive the benefits of artificial intelligence applications in areas related to their interests and aspects of daily life.

- The study was also aimed at determining what risks associated with the use of artificial intelligence (AI) in the context of sustainable societal development future psychologists identify. The content analysis of their responses revealed the following potential risks:
- The reduction of jobs due to the replacement of specialists with AI resources, and consequently, an increase in unemployment;
- Failures in AI systems due to cyberattacks, power outages, and so on;
- AI operating beyond human control, leading to the uncertainty of sustainable societal development;
- The invasion of private data of citizens through the use of large amounts of data collected and analyzed by AI systems, which could violate the confidentiality of personal information.

Additionally, as a risk of using artificial intelligence, students mentioned the likelihood of increased procrastination, the decline of creativity, and intellectual activity among people. One respondent pointed out the harm to the ecosystem caused by the increase in carbon emissions due to the high energy consumption of the servers that run AI.

Notably, students' concerns about AI-driven job displacement reflect broader societal anxieties regarding automation. However, rather than viewing AI as a direct replacement for human professionals, education should focus on preparing future psychologists to integrate AI as a complementary tool. Universities should emphasize training in AI oversight, ethical AI application, and human-AI collaboration, ensuring that graduates are equipped to navigate evolving professional landscapes where AI enhances rather than replaces psychological expertise. Based on the analysis of students' responses, it can be stated that they show considerable criticality in their evaluation of the risks posed by the use of artificial intelligence for sustainable societal development.

The further survey investigated students' experiences with the use of AI technologies in their professional education. The next question concerned the frequency

with which the surveyed students used artificial intelligence during their education at the university. The aggregated statistical data are presented in Fig. 1.

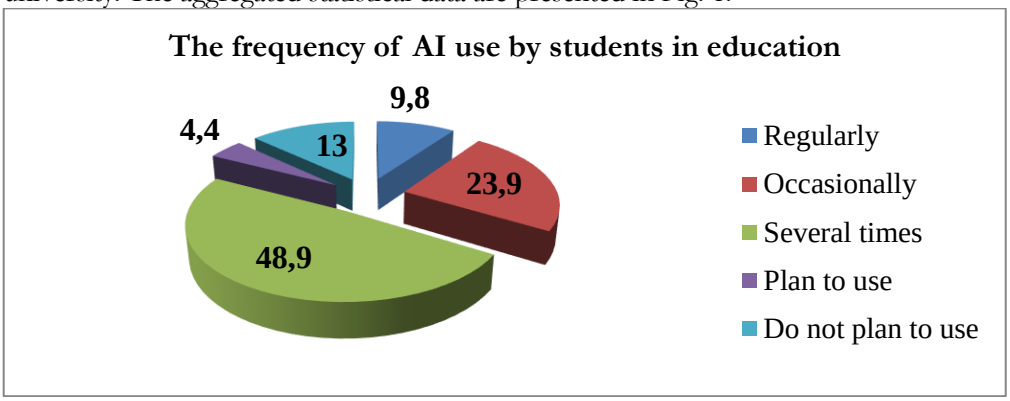

Figure. 1. The frequency of AI use by future psychologists in their education (% of responses)

As we can see, most of the future psychologists we surveyed have already used artificial intelligence technologies during their professional education. Nearly 10% of students use it regularly, while about half of the respondents have used AI at least a several times. Eight students plan to use it in the future, whereas 13% of respondents do not plan to use AI in their pursuit of a psychology degree, evidently relying on their own abilities and efforts.

When determining the purpose of AI use during university education, it was found that 14.1% of respondents deny using artificial intelligence in their educational activities. Similar responses and corresponding statistics appeared in the next four questions of the survey.

More than half (57.6%) of the respondents acknowledged that AI helps them generate ideas, while half of the respondents use it for initial information gathering. About a third (30.4%) of future psychologists use artificial intelligence to improve the text they have written, and 19.6% of respondents use AI to create high-quality visual content (presentations, videos, illustrations).

During the research, we clarified in which forms of educational tasks students used AI. In their responses to this question, which allowed them to choose several options, the most common forms mentioned were essays, presentations, videos, and independent assignments (Fig. 2).

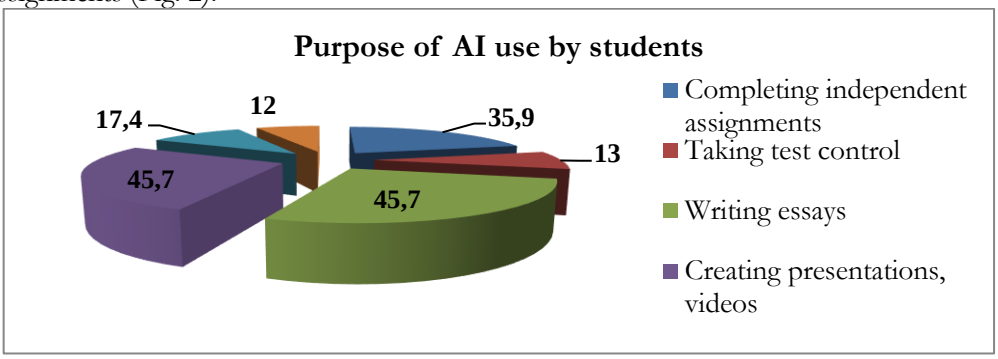

Figure 2. Forms of educational tasks with AI use by students (% of responses)

Future psychologists use artificial intelligence significantly less frequently when taking test controls, writing scientific articles and abstracts, or completing term papers or bachelor's theses. The last two forms received fewer selections, likely because they are primarily dealt with by senior-year students.

It was also determined what advantages future psychologists saw in using artificial intelligence in their education. This question, which allowed respondents to choose several options, was answered by 158 students from the sample, excluding those who claimed not to have used AI resources. The majority of respondents (67.43%) were attracted to the wide possibilities of AI for generating interesting ideas (Fig. 3).

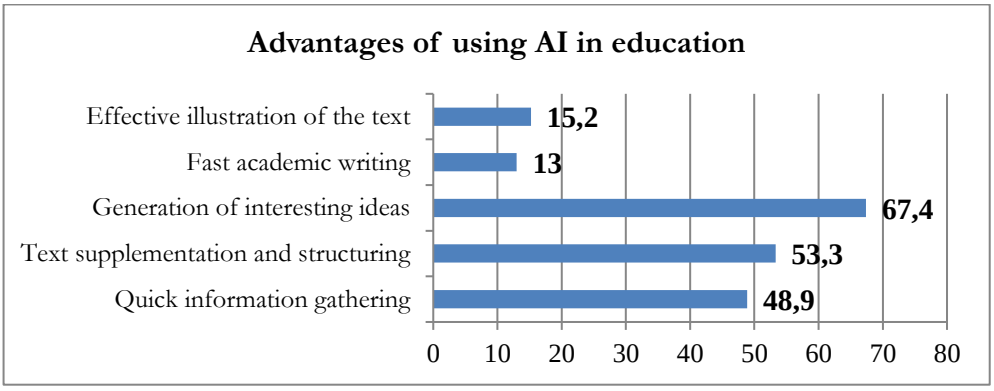

Figure 3. Advantages of using AI by students in education (% of responses)

Many respondents (53.3%) also favored AI for supplementing, systematizing, and structuring information, while 48.3% of future psychologists positively evaluated the quick gathering of necessary/useful information through its resources. As for 14.6% of respondents, there is a concern about academic integrity, as they acknowledged using AI for quickly writing independent assignments, articles, or term papers (bachelor's theses).

The next question, which allowed respondents to choose several options, concerned the difficulties in using artificial intelligence. The most common difficulty for students who use AI is unreliable, false, or politically biased information as a product of this technology's work (Fig. 4).

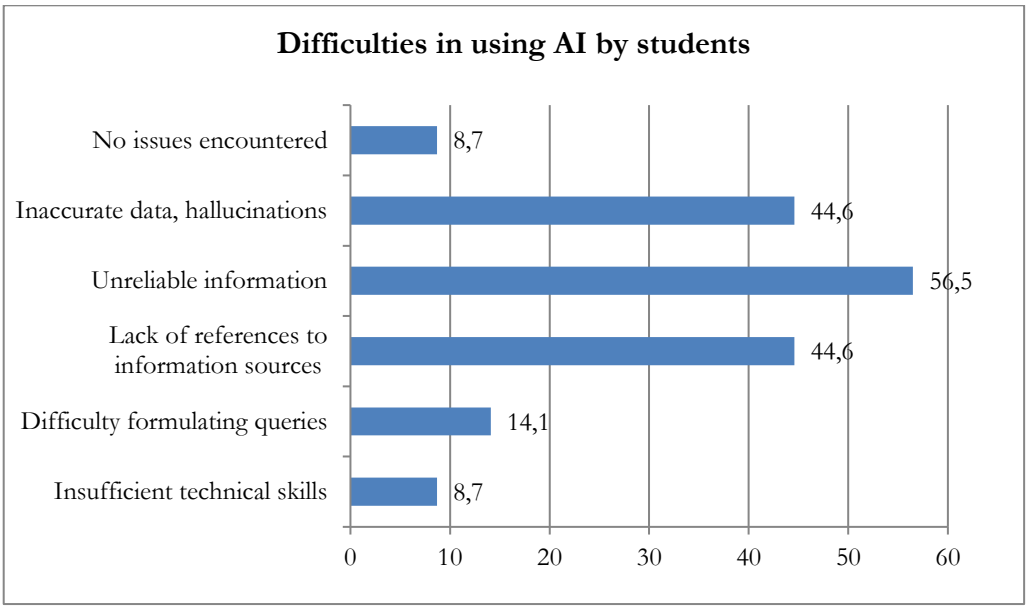

Figure 4. Difficulties in using AI by students in education (% of responses)

Future psychologists frequently encountered the lack of references to information sources, as well as inaccurate data or algorithms, and informational or visual hallucinations (44.6% of responses, respectively). At the same time, about 9% of the respondents emphasized that they did not experience any difficulties. In this context, the conclusion of one respondent, that AI should be used as an assistant rather than a "do it for me" service, is entirely reasonable.

Considering the recognized risks in the academic space regarding the use of artificial intelligence by higher education students, we asked whether the future psychologists surveyed associate the use of artificial intelligence in education with violations of academic integrity (Fig. 5). It was found that for 14.1%, this issue is not relevant, as they insist they do not use AI technologies in their studies.

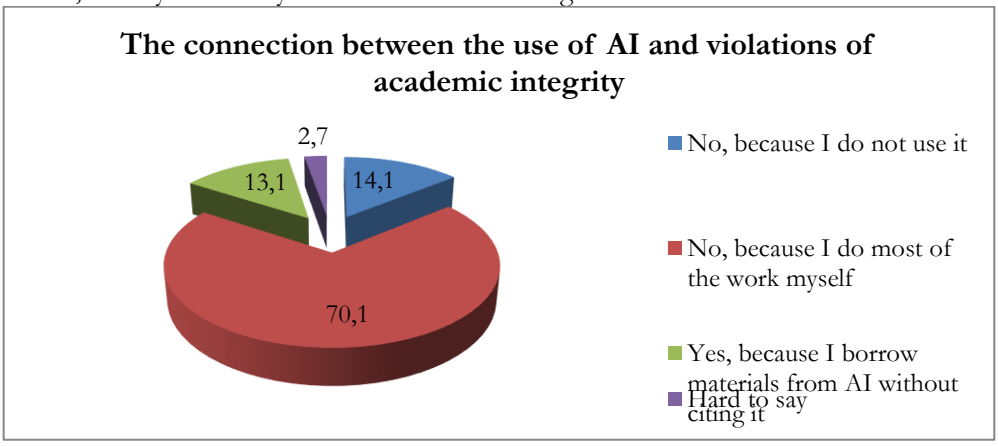

Figure 5. Use of AI by students as a factor in violating academic integrity (% of responses)

The majority of respondents (70.1%) do not consider the use of artificial intelligence a violation of academic integrity, as they " do most of the work myself". This argument either reflects a misunderstanding of the essence of academic integrity or suggests the use of rationalization as a psychological defense mechanism. It is noteworthy that only 13.1% of future psychologists openly acknowledged the use of AI in their education as a factor in violating academic integrity.

Considering the results presented earlier, it was appropriate in the course of the study to explore the attitudes of educators regarding the use of AI during students' education. The consolidated statistical data for this question, which allowed respondents to choose several options, are presented in Fig. 6.

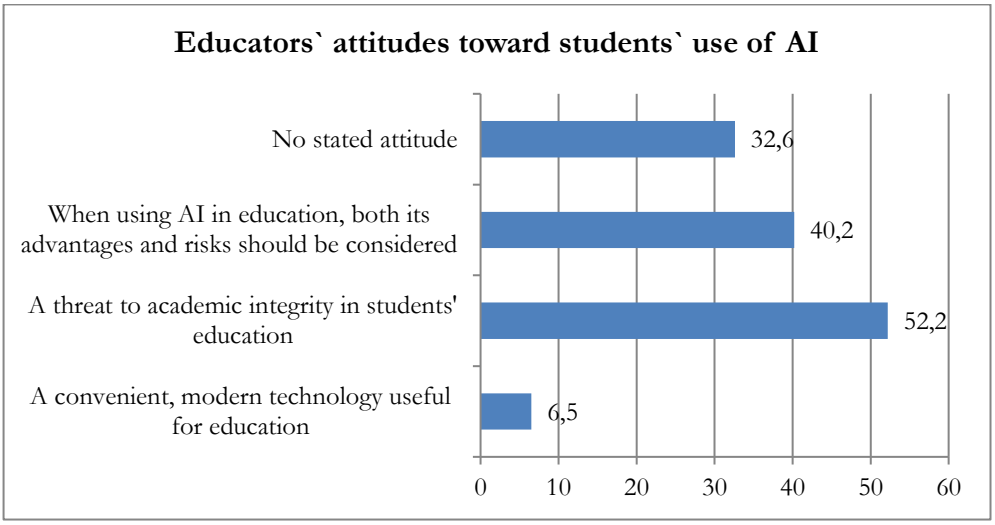

Figure 6. Educators' attitudes toward students' use of AI during their education (% of responses)

As we can see, more than half of the educators (52.8%), according to the students surveyed, are skeptical of AI, seeing it as a threat to academic integrity, critical thinking, and creativity. In contrast, only 5.6% of educators insist that it is a convenient, modern technology useful for education.

Many educators (40.2%) expressed a critical view to students, stating that when using AI in education, both its advantages and risks should be taken into account. According to the respondents, nearly a third of educators (32.6%) do not provide any guidelines regarding students' use of artificial intelligence in their education.

Considering the future profession of our respondents, it was important to understand their views on the ways AI could be applied in the professional activities of a psychologist. It was recorded that the majority of respondents associate the use of AI by psychologists with the field of education, as well as providing primary psychological assistance (Tab. 1). Additionally, the top three applications include psychologists using AI to search for diagnostic methods.

Table 1
Purpose of AI Application in the Professional Activity of a Psychologist*

Purpose of Application	Choice Statistics (%)	Ranking Position
Organizing the text and visual content of psychological education	60,9	1
Creating and distributing chatbots for providing primary psychological assistance (primary psychoeducation, explaining action algorithms, providing links to helpful resources, etc.)	52,2	2
Searching for diagnostic methods	48,9	3
Creating and using computer games for intellectual development and correcting specific psychological issues (e.g., attention deficit)	41,3	4
Searching for standardized protocols for providing psychological assistance	34,8	5
Systematic enrichment of psychological competence through self-education and self-development	22,8	6
Monitoring the emotional state of clients and developing their self-control skills (e.g., using a "Mood Diary" tool)	21,7	7
Generating probable causes of the client's psychological problem	20,7	8
Supervising one's own mental state and controlling personal resources	9,8	9
Identifying the nature of the client's psychological problem based on the analysis and explanation of symptoms	8,7	10

* The question allowed respondents to select multiple answers

At the same time, only a small number of respondents consider it useful for psychologists to search for the causes of a client's psychological problem and identify them using artificial intelligence. For most respondents, the supervision of one's mental state and the control of personal resources through AI is also deemed inappropriate.

Students express cautious views regarding the prospects of using AI in psychological theory and practice. Specifically, 89.1% of respondents believe that artificial intelligence will not replace psychologists due to the deeply individual nature of providing psychological help, the need to adhere to principles of confidentiality, ethics, and responsibility. On the other hand, 1.1% of future psychologists hold the opposite view, believing that AI will be able to fully replace a psychologist in providing quality psychological assistance. An interesting viewpoint was expressed by one student, who formulated the risk of applying AI in psychology as follows: "...if psychologists do not get lazy and avoid involving AI in everything that is possible and impossible (the risk of incompetence from using it not as an aid tool)".

Over a third (37.0%) of respondents believe that AI will become a useful and convenient tool in the work of a qualified psychologist. Another 13% of those surveyed

rightly suggest that a new specialization in psychology will emerge — working with the verification, organization, and updating of psychological resources in AI.

When formulating their ideas on the use of AI in professional education, students proposed using it as a training tool in psycho-consulting by creating a client bot and assigning it tasks such as providing consultation or diagnosing. They also suggested using AI to build tables, diagrams, and mental maps to enhance information retention, as well as incorporating it as an assistant in research for additional search systems for methodologies, tests, similar symptoms, etc.

The emergence of AI-integrated roles within psychology suggests a growing need for specialized training programs. Future psychologists may take on responsibilities in AI verification, ethical oversight, and resource management within mental health settings. Developing targeted educational pathways that equip students with competencies in AI literacy, bias detection, and algorithmic transparency could align psychology curricula with evolving labor market demands. Further research is needed to explore the specific skill sets required for these new professional roles and how universities can effectively incorporate them into psychology education.

5. Discussion.

We acknowledge that conducting a similar study with students from other fields would likely show different attitudes towards the use of AI technologies in professional education. However, we considered it important to involve psychology students in the research, as their future professional activities will take place in the realm of personal interaction. Therefore, social communication skills, including speech proficiency, are more significant and prioritized compared to IT competencies.

At the same time, understanding and considering the advantages and risks of using AI for the implementation of sustainable societal development in educational practice is a universal task that students from any field should address. It is important to take into account the results of our study, which show that most educators express skepticism about the use of AI in professional education, with some educators completely avoiding the topic.

We are fully aware that, despite potential resistance from certain members of the academic community (educators, methodologists, university administration) due to a reasonable awareness of the risks of academic integrity violations and decreased motivation for independent completion of assignments, the intensity of AI technology use by students in the educational process will continue to grow. To some extent, AI appears to us as a competitive technology in relation to the educational influence of the educators themselves.

This is part of a new cycle of introducing alternative teaching tools into the higher education system, just as it historically occurred with the introduction of textbooks or online resources. At the same time, the historical lesson of this introduction is that books or online resources became convenient tools for activating the educational interaction between educators and students, without devaluing or replacing the role of this interaction in the professional development of students.

In this context, a constructive approach is that educators should apply AI technologies to address the variability and practical orientation of student learning, support their adaptability, and enhance feedback, especially in the context of intensified distance learning, while demonstrating high levels of informational-professional and methodological competence. At the same time, there is a significant demand for educators to actively engage in discussions on the ethics and integrity of students' use of AI in professional training.

6. Conclusions

The conducted study highlighted students' substantial awareness of both the advantages and risks of AI technologies in fostering sustainable societal development. At the same time, the findings revealed contradictions in the use of AI in the professional education of future psychologists, as its implementation in psychology education remains largely unstructured and spontaneous.

Most surveyed psychology students have frequently relied on AI for independent and qualification-related assignments, as well as for test-taking, yet they do not perceive these actions as violations of academic integrity. Future psychologists identify several advantages of AI in professional education, including idea generation, information supplementation, systematization, structuring, and rapid data collection.

However, common drawbacks of AI include unreliable, inaccurate, or politically biased information, the absence of references to sources, erroneous data or procedural algorithms, and instances of informational or visual hallucinations. The majority of respondents believe that AI cannot fully replace a psychologist, viewing it merely as an auxiliary tool. This duality — valuing AI's support while underestimating its ethical risks — underscores the need for enhanced ethical training in psychology education. While students recognize AI's functional benefits, their limited awareness of its implications for academic integrity suggests gaps in critical AI literacy.

To address these challenges, universities should integrate structured discussions on AI ethics, academic honesty and responsible AI usage into psychology curricula. This would ensure that future psychologists develop not only technical competence in AI-assisted tools but also a strong ethical foundation for their professional practice. By fostering a deeper understanding of AI's potential pitfalls and ethical considerations, psychology education can better prepare students for responsible and informed engagement with AI technologies in their careers.

A positive aspect of the study is that students demonstrated a multifaceted understanding of AI's applications in the professional practice of psychologists. However, bridging the gap between AI's perceived utility and its ethical challenges remains a crucial step in ensuring that AI serves as a tool for enhancing, rather than compromising, professional integrity in psychology.

References

Androshchuk, A. H., & Maliuha, O. S. (2024). The use of artificial intelligence in higher education: Status and trends [Vykorystannia shtuchnoho intelektu u vyshchii osviti: stan i tendentsii]. *International Science Journal of Education and Linguistics*, 3(2), 27-35.

Cengiz, S., & Peker, A. (2025). Generative artificial intelligence acceptance and artificial intelligence anxiety among university students: The sequential mediating role of attitudes toward artificial intelligence and literacy. *Current Psychology*. DOI: https://doi.org/10.1007/s12144-025-07433-7

Drach, I., Petroye, O., Borodiyenko, O., Reheilo, I., Bazeliuk, O., Bazeliuk, N., & Slobodianiuk, O. (2023). The use of artificial intelligence in higher education [Vykorystannia shtuchnoho intelektu u vyshchii osviti]. *International Scientific Journal of Universities and Leadership*, 15, 66-82.

Hwang, Y., & Jeong, S.-H. (2025). Generative artificial intelligence and misinformation acceptance: An experimental test of the effect of forewarning about artificial intelligence hallucination. *Cyberpsychology, Behavior, and Social Networking*. DOI: https://doi.org/10.1089/cyber.2024.0407

Liu, Y., Dong, B., & Zeng, X. (2022). Healthy and sustainable development of sports economy based on artificial intelligence and mental model. *Frontiers in Psychology*. DOI: https://doi.org/10.3389/fpsyg.2022.956682

Norton, L. (2025). Artificial intelligence and organizational strategy: Ethical and governance implications. *Consulting Psychology Journal*. DOI: https://dx.doi.org/10.1037/cpb0000280

Romanyshyn, I. M., Chukhno, T. V., & Fyisa, N. V. (2023). Transformation of learning and teaching English methods in higher school: Use of artificial intelligence, impact analysis, perspectives [Transformatsiia metodiv navchannia i vykladannia anhliiskoi movy u vyshchii shkoli: vykorystannia shtuchnoho intelektu, analiz vplyvu, perspektyvy]. *Akademichni Vizii*, 24. URL: https://academy-vision.org/index.php/av/article/view/645

Sandford, A., Mulligan, B., Gittens, E., Norris, M. & Fernandes M. (2024, January). Artificial intelligence and psychology: A briefing paper of the Canadian Psychological Association (CPA). URL: https://cpa.ca/docs/File/CPD/Artificial%20Intelligence%20and%20Psychology%20EN%202024.pdf

Streich, J., Romero, J., Gazolla, J. G. F. M., Kainer, D., Cliff, A., Prates, E. T., Brown, J. B., Khoury, S., Tuskan, G. A., Garvin, M., Jacobson, D., & Harfouche, A. L. (2020). Can exascale computing and explainable artificial intelligence applied to plant biology deliver on the United Nations sustainable development goals? *Current Opinion in Biotechnology*. DOI: https://doi.org/10.1016/j.copbio.2020.01.010

van Hees, J., Grootswagers, T., Quek, G. L., & Varlet, M. (2025). Examining sustainable hospitality practices and employee turnover in Pakistan: The interplay of robotics awareness, mutual trust, and technical skills development in the age of artificial intelligence. *Journal of Environmental Management*. DOI: https://doi.org/10.1016/j.jenvman.2024.123922