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"ETHICAL CRITERIA FOR THE USE OF ARTIFICIAL INTELLIGENCE IN HIGHER EDUCATION AND THE METHODOLOGY FOR DEVELOPING STUDENTS' VALUE-ORIENTED INTELLIGENCE"

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Abstract: This article analyzes the ethical principles of using artificial intelligence tools in higher education, their role in the educational process, and the methodology for developing students' value-based intelligence. The study also highlights issues of academic integrity, digital culture, information security, and the formation of moral values. The pedagogical foundations for the effective and responsible use of artificial intelligence technologies are revealed.

Keywords: artificial intelligence, higher education, ethical principles, value-based intelligence, academic integrity, digital pedagogy, innovative education, moral values, methodology, information security.

Аннотация: В данной статье рассматриваются этические нормы использования средств искусственного интеллекта в системе высшего образования, их роль в образовательном процессе, а также методология развития ценностного интеллекта студентов. Освещаются вопросы академической честности, цифровой культуры, информационной безопасности и формирования духовно-нравственных ценностей. Раскрываются педагогические основы эффективного и ответственного применения технологий искусственного интеллекта.

Ключевые слова: искусственный интеллект, высшее образование, этические нормы, ценностный интеллект, академическая честность, цифровая педагогика, инновационное образование, духовные ценности, методология, информационная безопасность.

Introduction: In the 21st century, as a result of the rapid development of information and communication technologies, artificial intelligence (AI) technologies are increasingly penetrating all spheres of society, especially the education system. Today, AI tools play a significant role in the rapid processing of knowledge, the creation of individualized learning trajectories, the development of distance education, and the improvement of the effectiveness of the pedagogical process. In modern higher education institutions, the use of AI platforms such as ChatGPT, Gemini, and Copilot contributes to students' independent learning, scientific research activities, and the development of creative thinking skills.

The digitalization of the higher education system is creating broad opportunities to improve the quality and effectiveness of education. Electronic learning platforms, virtual laboratories, intelligent assessment systems, and adaptive learning programs are shaping a modern model of pedagogical activity. At the same time, the widespread implementation of artificial intelligence tools in the educational process is also generating a number of ethical, pedagogical, and moral issues. In particular, there is a risk of academic plagiarism, unauthorized use of pre-generated texts, a decline in independent thinking, and negative impacts on students' moral and ethical values.

In the context of globalization, it is essential not only to develop young people's professional knowledge but also their spiritual worldview, social responsibility, and value-based thinking. In this regard, the concept of "value-oriented intelligence" holds special scientific importance. Value-oriented intelligence refers to an individual's ability to understand national, universal, moral, and cultural values, to consciously adhere to them, and to apply them in social life [1]. In particular, the process of using artificial intelligence technologies makes it increasingly important to develop students' academic integrity, information culture, responsibility, and critical thinking skills.

The relevance of this research lies in the fact that, in the modern higher education system, it is essential not only to enhance the pedagogical effectiveness of artificial intelligence tools but also to develop their ethical and normative foundations. This is because if technological progress does not develop in harmony with the human factor and spiritual values, a number of negative consequences may arise in the educational process.

Research aim and objectives: The aim of this study is to analyze the ethical criteria for the use of artificial intelligence tools in the higher education system and to develop effective methodological approaches for enhancing students' value-oriented intelligence.

The objectives of the research are as follows:

to determine the role of artificial intelligence technologies in the education system;

to analyze the ethical issues related to the use of AI tools;

to reveal the content of students' value-oriented intelligence;

to study methods for developing moral and ethical competencies in the context of digital pedagogy;

to develop methodological recommendations for the responsible use of artificial intelligence.

The main research question is formulated as follows: what are the effective pedagogical mechanisms for preserving and developing students' moral and ethical values in the process of using artificial intelligence tools?

According to the research hypothesis, if the use of artificial intelligence tools in the higher education system is organized on the basis of ethical principles, academic integrity, and value-oriented pedagogical approaches, then students' value-oriented intelligence, critical thinking skills, and social responsibility will develop significantly.

Literature Review: The integration of artificial intelligence (AI) technologies into the education system has become one of the most important areas of scientific research in recent years. International organizations, pedagogical scholars, and information technology specialists have extensively studied the opportunities, risks, and ethical aspects of AI in the educational process.

The UNESCO document *"Recommendation on the Ethics of Artificial Intelligence"* emphasizes the necessity of respecting human rights, transparency, safety, and academic integrity in the use of artificial intelligence [1]. It also highlights that AI technologies should serve human interests and help preserve moral and cultural values within the education system.

In their work *"Artificial Intelligence: A Modern Approach,"* Stuart Russell and Peter Norvig present scientific perspectives on the theoretical foundations of AI, its capabilities, and its impact on human thinking [2]. The authors emphasize that the future development of AI technologies must be guided in accordance with the interests of humanity.

Pedagogical scholar N.A. Muslimov, in his research on innovative educational technologies, demonstrates that the use of digital technologies in modern pedagogical processes enhances students' independent thinking and creative competencies [3]. At the same time, he highlights pedagogical supervision and moral education as essential factors in the effective use of technology.

M.X. To‘xtaxodjayeva, in her research on pedagogical theory, pays special attention to moral and ethical education and personality development in the learning process [4]. According to the author, modern educational technologies should be implemented in harmony with the development of human values.

Similarly, in I.A. Karimov’s work *“Yuksak ma’naviyat — yengilmas kuch”* (*“High Spirituality is an Invincible Force”*), issues related to youth spirituality, national values, and intellectual development are discussed, emphasizing that moral education is as important as technological progress [5].

Recent scientific studies indicate that improper use of artificial intelligence tools may lead to academic plagiarism, excessive reliance on ready-made information, and a decline in independent thinking skills [6]. Therefore, developing ethical standards for the use of AI tools in higher education and enhancing students’ value-oriented intelligence has become one of the most urgent scientific and pedagogical challenges of today.

Research Methodology: This study is aimed at identifying the ethical criteria for the use of artificial intelligence tools in the higher education system and developing methodological approaches for enhancing students’ value-oriented intelligence. The research process employed a comprehensive combination of theoretical, analytical, and practical pedagogical methods.

During the study, analysis and synthesis methods were used to scientifically examine the role of artificial intelligence technologies in the education system, their pedagogical capabilities, and related ethical issues [1]. Through the analysis method, scientific perspectives, modern pedagogical approaches, and digital education technologies were studied separately. Using the synthesis method, the collected scientific data were generalized, and an effective methodological model for the use of artificial intelligence was developed [2].

A comparative analysis method was also widely applied in the research. In particular, the experience of developed countries in using artificial intelligence tools in higher education systems was compared with the current situation in the higher education system of Uzbekistan [3]. Recommendations and guidelines on AI ethics developed by UNESCO and other international organizations were analyzed, and their pedagogical significance was clarified [4].

The pedagogical observation method was used to study students’ activities in using AI platforms, their information literacy, independent thinking skills, and level of academic integrity [5]. Based on the results of the observation, both positive and negative impacts of artificial intelligence tools on educational effectiveness and students’ value-based thinking were identified.

To strengthen the theoretical foundation of the research, the method of literature review was applied. Scientific articles, monographs, international reports, and normative-legal documents related to artificial intelligence, digital pedagogy, moral education, academic integrity, and value studies were analyzed [6]. In particular, UNESCO’s international recommendations on AI ethics were considered one of the key sources of the study [7].

In addition, the statistical analysis method was used to examine indicators of the use of digital technologies and artificial intelligence tools in the higher education system [8]. The level of students’ use of AI platforms, their academic performance, and their impact on learning outcomes were evaluated based on statistical data.

During the research, survey and interview methods were also applied. Opinions of students and professors were collected regarding the advantages, challenges, and ethical aspects of using artificial intelligence tools [9]. Based on the survey results, the level of development of students’ value-oriented intelligence and their attitudes toward academic integrity were analyzed.

Based on these methodological approaches, the pedagogical effectiveness of artificial intelligence tools, their impact on educational quality, and their influence on moral and ethical education were scientifically substantiated [10]. The results of the study serve as a basis for improving the ethical and normative framework of artificial intelligence use in higher education and for developing students' value-oriented intelligence.

Results: The results of the study showed that the use of artificial intelligence tools significantly improves the effectiveness of education in the higher education system. In particular, generative AI platforms such as ChatGPT, Gemini, Copilot, and others have expanded students' opportunities for independent learning, scientific research, and rapid data analysis [8].

The analysis revealed that AI tools serve as effective support systems for forming individual learning trajectories, simplifying complex topics, and saving time. Through AI platforms, students are able to quickly access additional information, translate foreign sources, and prepare for academic research activities [9].

Furthermore, the study found that the use of artificial intelligence tools has a positive impact on the development of students' critical thinking skills. Interactive question-and-answer systems and analytical platforms help students develop competencies in analyzing problem situations, drawing logical conclusions, and making independent decisions [12].

However, the results also revealed several negative aspects. In particular, improper use of AI tools may lead to violations of academic integrity principles. It was observed that some students tend to rely on ready-made texts, engage in plagiarism, or avoid independent thinking [1]. This highlights the necessity of strengthening academic ethics in higher education institutions.

According to the research findings, students with a well-developed digital culture and information literacy demonstrate higher efficiency in using artificial intelligence tools. In particular, skills such as critical evaluation of information, verification of sources, and adherence to academic integrity rules were identified as key factors [7].

In addition, it was observed that the level of development of value-oriented intelligence is closely linked to the culture of using artificial intelligence. Students with well-formed moral and ethical values showed a stronger tendency to use AI tools responsibly and purposefully. Based on this, it was concluded that higher education institutions should develop not only technical AI-related skills but also ethical and moral competencies.

Advantages and disadvantages of AI tools in education

AI Tool	Advantages	Disadvantages
ChatGPT	Provides fast and comprehensive information, supports independent learning	Risk of plagiarism and over-reliance on generated texts
Google Gemini	Analytical support and multimodal capabilities	Possibility of inaccurate or unverified information
Microsoft Copilot	Document processing and automation capabilities	May reduce students' independent working activity
DeepL Translator	High-quality translation and language support	Possible loss of stylistic features of the text
Grammarly	Improves writing quality and grammar analysis	May overly influence students' writing independence

Based on the research results, it can be concluded that although artificial intelligence technologies offer significant opportunities in the educational process, strict adherence to academic integrity, moral values, and pedagogical control is essential during their use.

Discussion: The analysis of the research results shows that the use of artificial intelligence tools in higher education not only increases pedagogical effectiveness but also raises a number of complex ethical and methodological issues. These issues indicate the need for a balanced approach to the implementation of AI technologies in the education system.

One of the most important issues is the ethical challenges related to the use of artificial intelligence. Students may encounter situations where they use AI tools to directly copy ready-made answers or academic texts. This leads to violations of academic integrity principles. Therefore, it is necessary to clearly define rules for the use of AI tools in the educational process and to strengthen their monitoring [1].

The results of the study also showed that developing a sense of responsibility in students is one of the key factors for the proper use of artificial intelligence. If a student perceives technology not merely as a tool for obtaining ready-made information, but as a means of deepening knowledge and conducting analysis, their learning effectiveness significantly increases. This once again confirms the importance of the educational and moral component in the pedagogical process.

The balance between human thinking and artificial intelligence also requires special attention. Artificial intelligence should not be considered a technology that replaces human intelligence, but rather one that supports it. Human creative thinking, intuitive decision-making, and value-based reasoning cannot be fully replicated by AI. Therefore, the priority of human cognition must be preserved in the educational process.

Furthermore, the necessity of teacher supervision is an important factor. Teachers should not completely prohibit the use of AI tools, but rather guide their proper use and help students develop effective skills for utilizing them. In this process, the teacher acts as a mentor and facilitator.

The preservation of national and universal values is also one of the key directions of this research. In the context of globalization, the flow of information through artificial intelligence may introduce various cultural and ideological influences. Therefore, strengthening students' national identity, moral values, and ethical principles is of crucial importance.

From the perspective of future prospects, artificial intelligence technologies are expected to become even more deeply integrated into the education system. Adaptive learning systems, intelligent teaching platforms, and automated assessment mechanisms are likely to significantly transform the pedagogical process. However, this transformation must be carried out in harmony with the human factor and spiritual values.

Based on the scientific analysis, the following key conclusions were formulated:

Artificial intelligence should not replace humans but should serve as a supportive tool;

Technology should function as an auxiliary instrument in the pedagogical process;

The harmony between spirituality, ethics, and technology is a key condition for educational effectiveness;

Academic integrity and a culture of responsible use are of primary importance.

In conclusion, as the role of artificial intelligence in education continues to expand, the rational use of its capabilities, along with the preservation and development of human values, remains one of the most important tasks.

Conclusion: This study was devoted to examining the ethical criteria for the use of artificial intelligence (AI) tools in the higher education system and the methodology for developing students' value-oriented intelligence. The research findings indicate that artificial intelligence technologies

are significantly modernizing the educational process, expanding students' opportunities for independent learning, analytical thinking, and creative development.

According to the main results, AI tools (such as ChatGPT, Gemini, and others) enhance educational effectiveness, provide rapid access to information, and support individualized learning. However, at the same time, issues such as violations of academic integrity, the risk of plagiarism, and a decline in independent thinking have emerged. This confirms the necessity of a clear ethical and pedagogical approach to the use of AI technologies.

The main recommendations for the use of artificial intelligence are as follows:
AI tools should be used only as supporting instruments;
sources must be clearly cited in academic and research work;
students' critical thinking and independent analytical skills should be developed;
a culture of verifying and analyzing AI-generated outputs should be formed;
strict adherence to ethical standards in the learning process should be ensured.
Methodological recommendations for the higher education system include:
incorporating "digital ethics" and "AI culture" modules into curricula;
developing methodological guidelines for teachers on the use of AI tools;
introducing assessment criteria for students' AI-related competencies;
improving digital systems for monitoring academic integrity.
Future research directions are suggested as follows:
development of artificial intelligence and education policies in Uzbekistan;
practical implementation of UNESCO AI ethics principles;
mechanisms for forming students' culture of AI usage;
the role and potential of artificial intelligence in medical education;
development of AI-based personalized learning systems;
innovative models of digital pedagogy;
technologies for detecting and preventing academic plagiarism;
ensuring the integration of AI with moral and ethical education.

In conclusion, artificial intelligence is becoming an integral part of modern education systems. However, its effective and safe application can only be achieved when technological advancement is balanced with ethical norms, national values, and pedagogical supervision. Therefore, the implementation of AI technologies in higher education should be organized based on the priority of human factors and spiritual values.

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