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Article

Philosophical Approach to Understanding Artificial Intelligence in Pedagogical Practice

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Abstract

The article provides a philosophical evaluation of the AI positioning within the educational process. The intensity of integrating innovative technologies into the education sector necessitates immediate theoretical and methodological organization. Philosophical discourse offers a critical understanding of the AI prospects in the pedagogical system in the context of various contemporary socio-cultural paradigms. This scholarly inquiry aims to systematize and compare methods of using AI in education based on value-based and goal-oriented criteria. The research methodology is focused on: general scientific methods of analytical clustering, which facilitate the study of practical mechanisms for the AI application in pedagogical activities; and philosophical methods, based on the dialectical and synergistic principles of educational innovation. The study's findings highlight problematic niches in the philosophical understanding of AI: existential, axiological, epistemological, methodological, and ethical. Interpreting the phenomenon of AI through the lens of contemporary philosophical-anthropological trends defines innovative tools as elements supporting human potential, which is shaped and realized during the educational process. The research prospects lie in developing theoretical and methodological guidelines for AI usage in the educational sphere. AI requires algorithmic coherence in its application, as it activates fundamental dimensions of philosophical-anthropological potential in the education participants. Cognitive, value-ethical, spiritual-emotional, and existential-worldview activities shape a comprehensive understanding of the individual. Therefore, society faces a dilemma regarding the influence of AI, where this innovative tool can serve to improve the quality of education in two ways: either by enhancing the pedagogical system or by being a factor in the enhancement of the individual.

Keywords: *anthropocentrism, digital epistemology, ethical dilemmas, innovative education, pedagogical technologies*

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Introduction

In the context of the large-scale development of innovative technologies in cultural and historical understanding, the question regarding the potential of humans is once again raised. The scientific-philosophical discourse on this issue is divided into several currents, which determine the status of humans in the world order system and the dominant component in shaping their possibilities.

Artificial intelligence (AI), due to the accessibility and clarity of its functionality, is rapidly gaining favor in both individual and societal consciousness. When combined with the high efficiency of its practical implementation in solving intellectual tasks (Maphosa and Maphosa, 2023), the prospects of artificial intelligence appear relatively positive.

Education is positioned as a sphere of social activity that focuses on the format and specificity of processes for developing human potential through learning, activation of cognitive activity, acquiring experience, etc. (Fedoryshyn et al., 2024). Integrating such a tool as AI into the educational process is characterized by radical changes in the institutional and functional dimensions.

Potentially, the ideal format for using AI as one of the tools for improving the pedagogical activity of all participants in the educational process is a desirable slogan (Nemorin et al., 2022). At the same time, the specifics of this technology's impact on humans point to the impossibility of setting limits or boundaries for it.

Such realities provoke active discussions in the scientific, philosophical, educational, religious, and technological communities, forming various formats of positioning AI (Tan, 2020) in the educational sphere and its potential practical application in the pedagogical field.

When structuring the human-centered component of AI usage in pedagogical practice, two philosophical and worldview concepts become particularly relevant: humanistic (Benedikter, 2023) and technocratic. Their interpretation of the role and impact of innovative technologies is quite varied: from fundamental contradictions regarding the positioning of artificial intelligence (Nikolsky and Yuhan, 2019) in the paradigm of human existence to synergistic interactions in the idea of shaping the human of the future.

This scientific research aims to determine artificial intelligence's practical impact and worldview status in the practical sphere of pedagogical activity (Tsekhmister, 2024). The tasks of the article focus on addressing the problem of balancing the positive characteristics of AI with the threats that arise when it is introduced into the educational process.

The research objectives formulate the main research question, which is framed in the dilemma of the practical significance of AI in education (see Fig. 1). At the same time, anthropological-ethical contexts of the essence of AI are highlighted, along with the attempt to replace the natural qualities of humans with technological analogs.

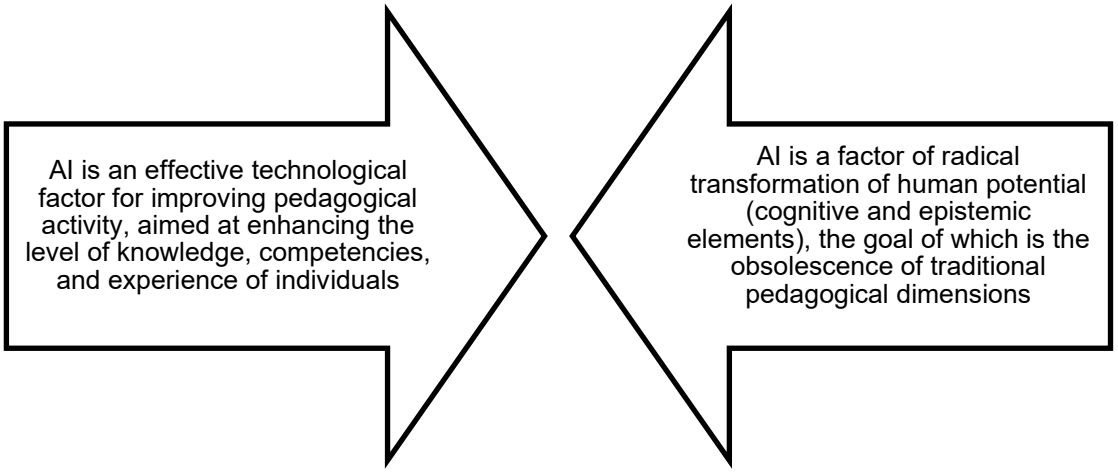

Figure 1. Philosophical dilemma regarding the purpose of AI in the educational sphere
Source: Authors' development

The scientific hypothesis of the current research assumes the accumulation of problematic issues related to the targeted and value-based dimensions of integrating AI into the educational sphere (Bashynska et al., 2021). This will inevitably lead to a situation where society will face a choice: to leave AI as a technological tool or to define its role as a factor in the evolution of humanity at the existential level.

Pedagogical activity in this process is an important marker, as it traces humans' cognitive and intellectual potential during the learning process and suggests the need for its radical transformation.

Methodology

Literature Review

The literature review in the current article is significant as it involves a systematic and comparative analysis of philosophical ideas regarding the integration of artificial intelligence. This analysis is based on studying the views of contemporary philosophers, scholars, educators, and technologists. A particularly relevant examination of the scientific works of the past five years is presented, during which the introduction of AI became widespread in pedagogical practice, mainly due to the surge in remote and e-learning during the pandemic period.

For a philosophical understanding of the role and prospects of AI in education, it is essential to generate ideas within an interdisciplinary discourse (Skakun, 2023). Consequently, among the relevant scientific studies, the following ideas are highlighted

- the pedagogical segment, which determines the level of influence AI has on the participants in the educational process (Ng et al., 2023);
- the scientific and practical dimension (Saffarizadeh et al., 2024), which correlates the potential of AI with the classical biological intellectual capabilities of humans;
- the technological cluster, which defines the characteristics of AI through the lens of educational and methodological queries (Moffatt and Hall, 2024);
- The philosophical and worldview segment defines the acceptable transformation level for traditional educational tools for acquiring knowledge and competencies (Van Berkel et al., 2020).
- Works dedicated to AI in pedagogical practice overwhelmingly indicate the irreversibility of the process of innovative technological renewal of the educational paradigm. However, it is the philosophical concepts that develop the value-oriented aspects of implementing innovative technologies in education (Vakratsas and Wang, 2020).
- Opinions regarding the advantages and disadvantages of using AI in pedagogical practice are divided (Wang et al., 2021), depending on the positions of philosophical and worldview concepts concerning the anthropological perspectives of humanity in the modern information and technological space. The philosophical discourse highlights the phenomenon of AI in pedagogical activity from the standpoint of various philosophical directions and currents, particularly:
- in the anthropocentric interpretation of AI as a human achievement (Dorobantu, 2021) and the undeniable benefits it brings when used in the educational process (Blackwell, 2021);
- in the humanistic presentation of AI as a driver for personal development, enabled by new educational strategies (Cope et al., 2020);
- in the post-human reinterpretation of human potential (Irwin, 2025) and attempts to use AI as an analog or even an alternative to cognitive and intellectual qualities traditionally activated in the learning process (Al-Amoudi, 2022);

- in the technocratic understanding of AI (Ma and Lei, 2024) as a potential replacement for classical knowledge, skills, and experience acquired in the learning environment (Hallsby, 2024);
- in the existential positioning of AI in radically opposing missions, as a factor in the formation of a new human being (Walker et al., 2021), with an updated understanding of knowledge and the system of existence, or as a factor in the degradation or destruction of humanity on a civilizational level (North et al., 2023).

At the same time, it should be noted that the approach of characterizing AI from the perspective of a single philosophical direction is limited. The problem of using AI in pedagogical practice cannot be reduced to just humanistic or technological aspects. Thus, analyzing the innovative element within a comprehensive philosophical and worldview study is necessary.

Many publications on AI in the educational sphere provide exhaustive answers to theoretical and methodological justification questions for this tool in practical pedagogy (Malang, 2025). However, open questions remain concerning the positioning of AI as a factor in transforming human potential in general and in the pedagogical process specifically.

Some attempts to present innovative educational tools have been made in the scientific and academic space, but are positioned as prototypes or beta versions. A holistic understanding of the status of AI can only be achieved by balancing technological capabilities and the demands of pedagogical activity.

Research Design and Methods

The research design follows the structure of a review article, concentrating on the issue of AI implementation in pedagogical practice through the lens of contemporary philosophical and worldview paradigms and within the context of scientific-pedagogical and educational-technological discourse.

A methodologically interdisciplinary approach has been adopted, as the selection criteria for analyzed scholarly works encompass studies from philosophical, scientific-practical, pedagogical, and technological domains. This approach facilitates a dialectical and synergistic interpretation of AI in the philosophical-anthropological framework of educational activities. The study incorporates elements of correlation between scientific and philosophical concepts, forming coherent algorithms for presenting the philosophical schools of thought and the perspectives of the scientific-pedagogical community regarding AI's role in educational practice.

To achieve the study's objectives, interdisciplinary principles guide applying systematic and comparative analysis methods. Specifically, factors influencing AI's impact on educational process participants are structured, and the framework for utilizing this innovative tool in practical pedagogy is generalized.

Subsequently, a comparative characterization of humanistic and technocratic perspectives is conducted, focusing on AI's role in shaping knowledge and competencies as the core objective of the educational process.

Predictive analysis methods are employed to determine the trajectory of AI's development in the educational sector. A conceptual representation of teaching and learning activities is constructed through modeling principles, identifying AI's designated role as an innovative tool, and assessing the potential scale of its integration within the pedagogical system.

For the present study, specific limitations were applied in analyzing philosophical ideas and scholarly works based on the following criteria:

- studies published within the last five years reflecting the period of active AI implementation in practical pedagogy;
- key terms, pedagogical activity, innovative education, and AI.

At the same time, a distinction was made between scientific-technological and philosophical-scientific concepts of AI development to clarify the target-oriented and value-driven dimensions of innovative transformations in pedagogy.

Results

The actualization of the philosophical-methodological dimension is focused on identifying the priority framework for positioning artificial intelligence within the contemporary scientific-anthropological paradigm. The philosophical interpretation of AI in pedagogical practice necessitates synthesizing existential-teleological and value-functional elements.

To characterize the dynamic phenomena of the modern socio-cultural space (Logan and Waymer, 2024), among which AI is undoubtedly a defining factor, philosophy offers two opposing methodologies that, despite their differences, are result-oriented in process or phenomenon development.

The dialectical model conceptualizes AI as a counterbalance to human intelligence's natural cognitive potential, proposing that societal advancement will emerge from this competitive dynamic. In this framework, the pedagogical activity effectively determines the optimal mode of knowledge acquisition, skill development, and experiential learning by balancing traditional human cognitive abilities with innovative technological analogs.

The synergistic model, in contrast, advocates for integrating AI's potential into existing educational and methodological frameworks as a technological tool for support and facilitation. This approach does not recognize AI as a competitor to human intelligence, even in cases where AI demonstrates superior performance in specific cognitive parameters. From dialectical and synergistic philosophical perspectives, AI's role remains constructive, as it is fundamentally directed toward the algorithmic achievement of core educational objectives (Fig. 2).

Despite the explicit structuring of AI in the existential-target framework, the philosophical understanding of its essence shifts part of the discussion to the value dimension. Ethical challenges are concentrated on the subjectivity of the participants in the educational process (Loftus and Madden, 2020).

Education and its pedagogical activity have traditionally been based on fundamental value constants, experience, authority, and leadership. The educator, in varying degrees and different manifestations, has embodied these components of the subject in the educational paradigm. Philosophers ask, *"Can AI express these value constants inherent in humans?"* (Du et al., 2024).

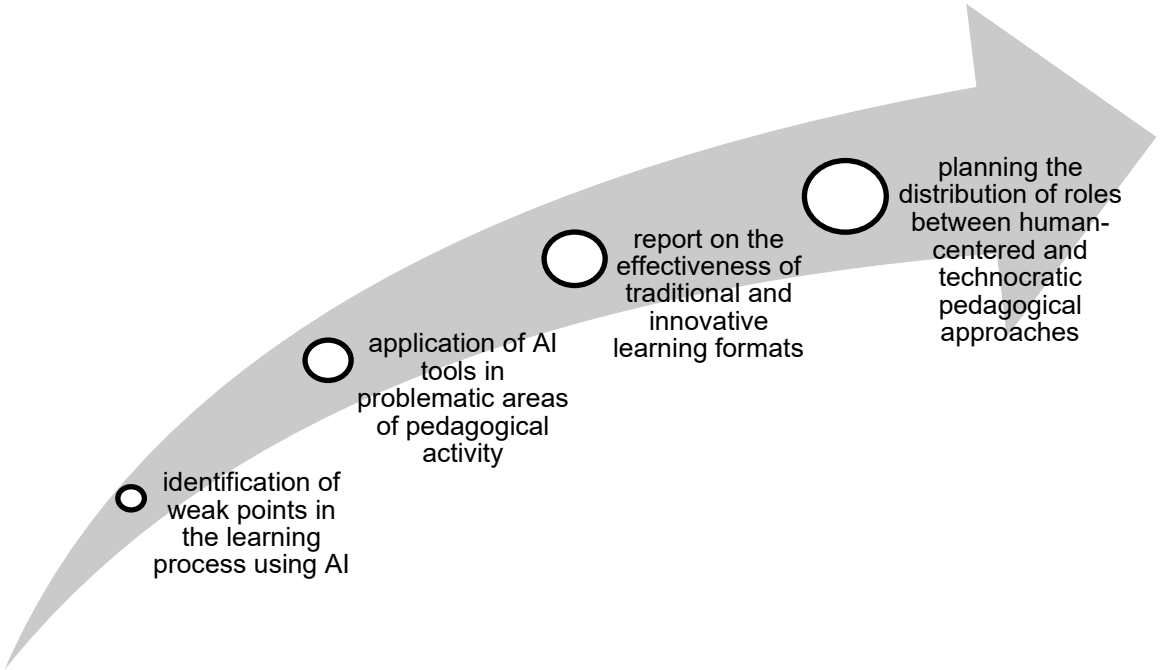

Figure 2. Evolution of the interaction between human and technological factors in pedagogical activity using AI as an example
Source: Authors' development

Society faces an apparent dilemma regarding using AI in the educational system. On the one hand, the characteristics of AI surpass the potential of human natural qualities as an organizer and leader of the educational process in all quantitative indicators (Williams and Ingleby, 2024).

The demand for such an instrument is positive for a modern, pragmatically oriented society, focusing on results and efficiency. On the other hand, there are risks (McLean et al., 2021) of losing the transmission of personal experience, qualities, and the ability to emulate, among others.

Adding to this is the loss of the spiritual-emotional component of educational activity (Shen et al., 2024), which disappears with the arrival of AI and the elimination of interpersonal relationships.

However, the educational community still turns to philosophical worldview guidelines when planning strategies for its future development.

Philosophical directions that justify AI positions can be categorized into anthropological and technocratic. The characteristics of AI from the philosophical perspective can be used when positioning this tool in pedagogical activity in the context of its target and value orientations (Table 1).

Table 1. Philosophical Justification for the Status of AI in Pedagogical Activity

Philosophical direction	**Positioning of AI in the educational paradigm**	**Specific application of AI in pedagogical practice**
Humanism	Use of AI as a stimulus for developing personal potential through acquiring knowledge and competencies	AI considers standards of virtue and ethical principles regarding all participants in the educational process.
Post (Trans)humanism	Attempts to achieve goals related to transforming human intellectual potential with the help of AI	AI shapes the pedagogical format where cognitive and learning activities are reduced to algorithmic processes.
Anthropocentrism	Recognition of AI as a remarkable human achievement, emphasizing human capabilities in the context of the development of the educational-scientific paradigm	AI is considered a tool that ensures human uniqueness in its ability to acquire and multiply rational dimensions during learning.
Technocratism	Positioning AI as one of the fundamental innovative solutions determining the new development format of education, based on the achievements of science and technology	AI acts as a mechanism for replacing humans (partially or even fully) in the educational process, eliminating individuality, creativity, leadership, authority, experience, etc.

Source: Compiled by the authors based on the analysis of contemporary philosophical directions

Ultimately, philosophical approaches to evaluating AI in pedagogical practice can be comprehensive when examining the direct impact of this tool on the learning

process. The modern educational space is characterized by the integration of a significant number of AI elements into the academic and methodological arsenal:

- Generative AI dimension (Yang et al., 2024) enables the creation of educational content by educators (Rice et al., 2024) and facilitates the search for answers for learners (Jabar et al., 2024);
- analytical AI dimension (Ilgun Dibek et al., 2024) forms the structure of the educational program and identifies problematic moments in the learning process (Wang et al., 2024);
- functional AI dimension (Naudé, 2020) involves creating a convenient model of pedagogical activity in clustered or personalized (Iskakova, 2023) or inclusive (Meda et al., 2024) learning formats;
- Organizational AI dimension (Smuha, 2021) offers practical solutions for improving learning through electronic educational platforms, chatbots, and automated evaluation and control systems (Karahan, 2023).

Discussions

Artificial intelligence is recognized as a factor of radical change in pedagogical activity. However, opinions regarding the content and format of AI implementation differ. The lack of a unified idea for developing AI's potential stems from the diversity of philosophical and worldview approaches to positioning new formats of human possibilities (Yuryk et al., 2023). First and foremost, a debated issue remains the potential transformation of the concept of education in general and pedagogical activity in particular. Key contradictions arise regarding the practical application of AI:

- new opportunities for learners through expanded possibilities of knowledge and skill acquisition, with the realization of modern principles of educational quality – mobility, flexibility, dynamism, and diversity;
- the new status of material and pedagogical equipment with the redistribution of practical demand, considering the effectiveness and accessibility of offered educational services.

The key differences in the philosophical interpretation of AI in pedagogical practice are formed along a dichotomous axis: human-centricity vs. technocracy. The status of AI concerning the fundamental constants of human potential generates interdisciplinary discussions. The scientific, technological, and pedagogical communities present arguments for AI in the educational sphere or define the risks associated with implementing this tool. The philosophical approach, in turn, uses two methods to evaluate the phenomenon of AI in pedagogical activity: the dialectical

approach, which is based on contrasting positive and negative assessments of this tool, and the synergistic approach, which aims to create a holistic view of the integration of AI into the pedagogical process.

The findings of the current article concerning the alignment of human potential with technologies correlate with the assertion that modern information society has chosen a pragmatic path of development and requires tools to ensure it (Collins, 2021). Since the learning process remains a fundamental dimension of knowledge formation and the activation of cognitive and intellectual activity, the integration of technological components into the organization of education indicates the implementation of a strategy to actualize alternative manifestations of human potential. On the other hand, while the scientific-philosophical and pedagogical communities positively perceive the general format of AI as technological support and improvement of education (Cinar, 2024), the essence of AI raises concerns in terms of values and worldview (McAlister et al., 2023). The main philosophical concerns are not related to the functional characteristics of AI but rather to humanity's ability to control this technological tool (Liu et al., 2020) in pedagogical practice. The scale at which AI is gaining popularity and the intensity of proposals to improve traditional activities in the field of education may pose problems in two aspects:

- dependency on algorithmic activity in the educational and cognitive process, gradually eliminating creative (Tao, 2022), initiative-driven leadership positions;
- ethical challenges (Matei et al., 2024) arise from blurring the lines between human and technological (natural and artificial) elements in developing cognitive potential and acquiring knowledge.

The research hypothesis regarding the need to assign a new status to AI in the short-term perspective is refuted by representatives of the humanistic wing of the philosophical discourse, who insist on the critical need to rethink the role of human potential both in general and in the learning process in particular (Mpinga et al., 2022). Representatives of the scientific-technological cluster also consider it inappropriate to question the potential of AI, believing that its effectiveness and demand are factors that will automatically determine its status in the pedagogical paradigm without human intervention. The phenomenon of AI in the socio-cultural context has laid the foundation for its development in all spheres of societal activity (Matiash et al., 2025). The educational sector is no exception, actively integrating AI into learning.

Despite the absence of a holistic approach to implementing AI in pedagogical practice, the dynamics of integrating this innovative tool indicate the inevitability of its popularization (Rahiman and Kodikal, 2023). Therefore, the philosophical task is

not to determine the pathways for integrating AI into the pedagogical process (this stage has essentially already occurred) but rather to form AI's alignment with the humanistic value-oriented constants of the educational paradigm.

Conclusions

The philosophical approach traditionally examines current socio-cultural issues through the lens of modern realities and developmental perspectives. In the case of implementing artificial intelligence into pedagogical practice, the functional and goal-oriented demand for this tool in the educational field is recognized. At the same time, the value-based and ethical argumentation of AI's status in pedagogical activity leans toward the fixation of potential risks associated with its use (dependence on technology, depersonalization of the learning process). The primary worldview leitmotif of the philosophical interpretation of AI's status in pedagogical practice boils down to determining the limits of technology's influence on the learning and cognitive activity of the participants in the educational process. Suppose the impact is limited to enhancing the pedagogical arsenal aimed at improving the quality of education. In that case, this format aligns with the constructive principles of humanistic and technocratic societal development. However, when technological intervention in the learning process alters the essential characteristics of human intellectual potential (particularly critical and creative thinking), it affirms post-(trans)humanist trends that raise doubts and concerns in society due to the potentially destructive effects on human existence.

Future research directions are seen in further balancing the philosophical discourse on integrating AI into pedagogical practice between the dialectical and synergistic approaches. Contrasting the potential of human and technological factors will ensure the fundamental stability of the educational paradigm, avoiding abrupt or drastic changes to the status of either factor.

The organization of learning-methodical interaction at an intellectual level between natural and artificial potential should be guided by pragmatic goal-oriented characteristics while excluding existential manifestations of eliminating human-centricity as a constant for the sustainable development of individuals, society, and civilization. Many aspects of AI use go beyond the scope of the current study due to the dynamic growth of events related to the rapid expansion of this innovative tool's potential. Therefore, the philosophical and worldview dimension of applying AI in pedagogical practice highlights the instability of the creative transformation of the educational space, emphasizing the uncertainty and volatility of these processes.

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