

EDUCATION IN THE ERA OF ARTIFICIAL INTELLIGENCE: AXIOLOGICAL STUDY

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ABSTRACT

Education in the era of Artificial Intelligence (AI) presents new challenges in the axiological aspect, namely the moral and ethical values related to the use of AI technology in the learning process. This article aims to conduct an axiological study of education in the era of artificial intelligence with a focus on understanding the values that emerge along with the development of AI technology and their implications in the educational context. The research approach used is literature analysis to explore understanding of the use of AI in education and its implications for moral and ethical values. The results of the study show that the use of AI technology can provide significant benefits in increasing the effectiveness and efficiency of learning, but also raises several axiological problems. This research is qualitative research involving literature analysis, the data obtained will be processed thematically. In its conclusion, this article emphasizes the need to develop axiological awareness in education in the era of artificial intelligence. By paying attention to moral and ethical values, education can be an effective forum for developing a generation that is technologically intelligent and has a strong axiological awareness. This effort needs to be supported by critical thinking, reflection, and collaboration between educators, stakeholders and related parties to ensure that the application of AI technology in education runs ethically and responsibly.

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1. INTRODUCTION

Artificial intelligence (AI) has become an important part in various aspects of life, including education. The use of artificial intelligence in education offers great potential, such as personalization of learning, development of cognitive skills, and efficiency in evaluation. However, there needs to be an in-depth axiological study of the application of artificial intelligence in educational contexts to ensure that ethical and humane values are maintained.

Artificial intelligence can be used to trigger creativity (Komarudin et al., 2018). By using this technology, humans can explore the potential for new ideas that have never been thought of before. Machine learning algorithms and models can efficiently analyze big data and identify patterns and trends that humans cannot easily detect. In art and design, artificial intelligence can produce surprising and unique works by incorporating unconventional elements. In music, generative algorithms can create innovative melodies and unexpected harmonies. Even in the world of literature, artificial intelligence can provide new inspiration by producing interesting stories and poetry. This phenomenon opens the door to wider creativity and provides opportunities to present fresh and inspiring ideas.

There are several articles that discuss the relationship between education and artificial intelligence, such as the article on the relationship between education and machines (Liu, 2021) which discusses education reform which depends on the artificial intelligence technological revolution, there is also Ido Roll and Ruth Wylie (2016) who discusses the long-term influence of artificial intelligence on education, and (Sakharchuk et al., 2023) discusses axiological studies and their relationship to education, but no one has discussed axiological studies of education in the era of artificial intelligence, which will be examined in the article This.

In the context of education in the era of artificial intelligence, there are several issues that need to be researched axiologically, including how human and ethical values can be applied in the use of artificial intelligence in education? What impact will the use of artificial intelligence have on interactions between teachers and students? how to overcome the challenges in integrating axiological values in artificial intelligence-based curriculum development?

The aim of this research is to conduct an axiological study of the application of artificial intelligence in education with a focus on understanding the ethical and human values involved in the learning process. This research also aims to analyze the impact of the use of artificial intelligence on teacher-student interactions and formulate recommendations for the development of ethical education in the era of artificial intelligence.

2. RESEARCH METHODS

This research will use a qualitative approach that focuses on an in-depth understanding of axiology in education in the era of artificial intelligence. This approach will involve analyzing relevant literature to obtain a strong theoretical basis. In addition, case studies will be conducted to gain direct experience of the implementation of artificial intelligence in educational contexts. This case study will be conducted to gain diverse and in-depth perspectives on the impact of the use of artificial intelligence on educational axiology.

The data obtained will be analyzed thematically. This approach allows researchers to identify and analyze emerging patterns and themes regarding ethical and human values in the use of artificial intelligence in education. The results of the analysis will be presented in a comprehensive descriptive form, providing a clear and in-depth picture of the axiological study of education in the era of artificial intelligence. Thus, it is hoped that this research can provide a valuable contribution to the understanding and development of ethics education in the era of artificial intelligence.

3. RESULTS AND DISCUSSION

Artificial intelligence has disrupted various sectors and fields of science, and its design principles have been planned for decades (Barredo Arrieta et al., 2020) . Artificial intelligence (AI) refers to the ability of machines to imitate and perform tasks that normally require human intelligence. In an academic context, artificial intelligence can be defined as a branch of computer science that focuses on developing computer systems capable of performing tasks that typically require understanding, problem solving, and intelligent decision making. Artificial intelligence can include techniques such as machine learning, logic, and natural language processing, which give machines the ability to learn from data, recognize patterns, and make decisions autonomously.

3.1. Axiological Concepts of Education in the Era of Artificial Intelligence

AI looks very tempting, but on the other hand it is also very threatening, the achievements of AI will threaten many jobs carried out by humans (Huang & Rust, 2018) . The application of artificial intelligence in the field of education also carries potential dangers that need serious attention. One of the dangers that arises is the risk of depersonalization of learning, where the use of artificial intelligence that is too dominant can ignore the needs of individual students and reduce social interactions that are important in the teaching and learning process. In addition, over-reliance on artificial intelligence technology can reduce the role of teachers as primary educators, replacing human interaction which is crucial in shaping students' social and emotional skills. Additionally, concerns about privacy and security of personal data also arise with the use of artificial intelligence in collecting and analyzing student information. Therefore, it is important for education stakeholders to maintain a balance between the use of artificial intelligence and the needs of holistic education, maintaining the integrity of human interactions and maintaining the privacy and security of student data.

The education system must provide space for reflection, assessment and meaning (Biesta, 2015) . The importance of axiological values in the educational context has deep implications. Axiology as a branch of ethical philosophy, emphasizes the study of moral and aesthetic values related to humans and society. In the educational context, axiological values play an important role in shaping individual character, attitudes and behavior. Education that is oriented towards axiological values encourages the development of morality, integrity, empathy, justice, and appreciation of beauty and art. Through an axiological approach, individuals are encouraged to understand and apply universal values in everyday life, both in interpersonal relationships

and in social contexts. Axiological values help create an inclusive, ethical and cultural educational environment, where individuals can grow and develop holistically. By strengthening teaching and learning based on axiological values, education has the potential to become a powerful tool in forming future generations who are responsible, caring and have high moral awareness.

3.2. Axiological Implications for Education in the Era of Artificial Intelligence

Today's knowledge-based society is very concerned with significant structural changes in the education system, in line with the needs of the state and society (Воевода & Белогуров, 2018). In the era of artificial intelligence, there are educational values that need special attention. First, it is important to prioritize humanistic values that emphasize human uniqueness and dignity. Facing the rapid advancement of AI technology, it is important to ensure that education does not only focus on technical aspects, but also strengthens critical, creative abilities and a deep understanding of human values. Second, ethics and responsibility in the use of AI technology need to be widely introduced in the educational curriculum. Developing awareness of the ethical implications of artificial intelligence and maintaining social sustainability and fairness in its use are important aspects that future generations must understand. Third, the value of collaboration and adaptability also needs to be emphasized. The era of artificial intelligence demands the ability to collaborate with AI technology and adapt to rapid changes. In this regard, education must equip individuals with the social, collaborative and flexibility skills to face the challenges that arise as AI technology develops. By paying attention to these educational values, education in the era of artificial intelligence can be an effective means of forming a generation that is technologically intelligent, but also has integrity, ethics and is able to adapt well.

The ethical use of artificial intelligence involves moral considerations and values related to the development, application, and impact of AI in various areas of life. Concerns identified are specific to AI in educational contexts, for example concerns over the loss of valuable skills such as: introspection, resilience, and the ability to think for oneself due to misuse of AI (Adams et al., 2021). The ethics of using artificial intelligence in education is a topic that attracts attention in the academic realm. In this context, attention is paid to moral considerations and values related to the development, implementation and use of artificial intelligence in education. These ethics involve issues such as privacy, fairness, transparency, security, and the social impacts that arise from the use of artificial intelligence in learning and teaching experiences. The ethics of the use of artificial intelligence in education plays an important role in guiding responsible decision making, considering long-term implications, and ensuring that the use of artificial intelligence is based on widely recognized ethical principles. Apart from that, this ethic also discusses inclusivity, fairness and responsibility in managing aspects such as evaluation, assessment and accessibility related to the implementation of artificial intelligence in education. In the face of technological developments that continue to move forward, it is important for practitioners, wisdom and researchers in the field of education to continue to analyze and consider ethical aspects in the use of artificial intelligence to achieve meaningful and sustainable educational goals.

The full consequences of developments in artificial intelligence cannot be predicted at this time, but it seems highly likely that artificial intelligence applications will become a major educational technology issue in the next 20 years (Roll et al., 2021). The impact of artificial intelligence on learning has become an important topic in the current educational context. Artificial intelligence has shown great potential in enhancing the learning experience through an approach that is adaptive, personalized, and responsive to individual needs. In the context of evaluation, artificial intelligence also has a significant impact. Through sophisticated data analysis and complex algorithms, artificial intelligence can provide a more objective and accurate assessment of student performance. However, this impact also creates challenges and ethical questions that need to be addressed. For example, how is the privacy and security of student data maintained in the use of artificial intelligence? What is fairness and harmony with social and cultural aspects in the development and application of artificial intelligence in learning? In this case, it is necessary to carry out further research and development to understand in depth the impact of artificial intelligence on learning and evaluate this impact, as well as ensure that its application is carried out with adequate ethical considerations and produces results that benefit all students.

3.3. Challenges and Opportunities

It may be time to question the validity of the metaphor of a human tutor in an educational context. While human tutors typically work on a one-on-one scale, for limited time durations, and in limited spaces, interactive learning environments (ILEs) in which artificial intelligence plays a role have the potential to be collaborative, ubiquitous, and portable. -bring. In simple terms, ILE has unique advantages that human tutors do not have, and in the development of subsequent systems, these advantages should be utilized to support learning that can be done anytime, anywhere, by anyone (Roll & Wylie, 2016).

Philosophically, ethics is concerned with the justification of human activity, according to some norms that can be based on principles that may have a universal form. This text shows that ethics involves considerations of truth and justice in human actions, where these norms can be based on principles that can be widely applied. These principles aim to provide a universally acceptable moral basis for assessing and justifying human actions (Gonzalez, 2015).

In the context of artificial intelligence (AI), there is a significant opportunity for the development of ethics and values that are compatible with these rapid technological advances. The development of AI has presented new challenges involving complex ethical implications, including questions of privacy, fairness, and social impact. Therefore, it becomes important to develop a comprehensive ethical framework to inform and guide the use of AI by considering the underlying values. In addition, the development of values such as emotional intelligence, empathy, and social justice becomes relevant in dealing with the social, cultural, and psychological consequences that arise from the use of AI. Thus, opportunities for developing ethics and values in the context of artificial intelligence offer an important foundation for responsible decision making and positive impact in realizing the potential of AI technology for human well-being and society at large.

3.4. Recommendation

Axiological awareness of education can be realized by testing and integrating all educational values in human life (Ilham, 2020). Building axiological awareness in education is an important aspect that strengthens moral and ethical values in the learning process. In an academic context, axiological awareness refers to a deep understanding of the values that form the basis of decisions and actions. The main goal of developing axiological awareness is to produce individuals who have high moral awareness and are able to behave ethically in various situations.

The process of building axiological awareness in education involves recognizing, reflecting, and internalizing values that are considered important. Teachers act as facilitators in presenting value content to students, providing a deep understanding of the meaning and implications of these values in everyday life. In addition, critical discussion and reflection on moral dilemmas is also an integral part of developing axiological awareness. Through this process, students are taught to consider different perspectives, appreciate diversity, and make ethical decisions.

Artificial intelligence has succeeded in attracting the interest of policy makers in the early stages of its development, so there is still hope that we can direct it towards the public interest (Calo, 2017).

The development of policies that support the ethical use of artificial intelligence (AI) is an urgent demand in the modern era which is characterized by rapid technological progress. To ensure that AI is used responsibly and respects ethical principles, appropriate policy measures must be implemented. First, it is important to develop a clear and comprehensive regulatory framework governing the use, collection and storage of data involving AI. The policy should emphasize protecting individual privacy and transparency in data use, as well as giving users control over their personal information. Additionally, ethical thinking must be at the heart of AI development, paying attention to fairness, non-discrimination and the social impact it can have. Policies should also encourage responsible research and development of AI technologies, including rigorous testing, validation, and certification policies to minimize risks and increase the reliability of AI. In this regard, international cooperation and dialogue between governments, research institutions, companies and civil society are very important to ensure the production of sustainable and inclusive policies. Thus, developing policies that support the ethical use of artificial intelligence is an important step to optimize the benefits of this technology while protecting society's moral and social values.

artificial intelligence (AI) can enhance the role of teachers as catalysts in designing, visualizing, and organizing AI-powered teaching and learning. This in turn will aid the implementation of AI systems that generate computational representations based on meaningful data inferences about pedagogical models, domains, and learners. In this context, AI can be used as a tool that assists teachers in optimizing students' learning experiences by applying technology capable of analyzing data and providing valuable insights into how learning can be tailored to individual students' needs. Thus, the role of teachers becomes more important in directing the effective use of AI and utilizing it to improve the learning process (Lameras & Arnab, 2021).

Training and professional development provide significant benefits for teachers and educators. Teachers who take part in this program can improve their teaching skills, broaden their understanding of various learning approaches, and update their knowledge of the latest developments in the field of education. In this way, the quality of learning in the classroom can be improved, student motivation and participation can also be increased, and their learning outcomes will be better.

However, there are challenges in implementing training and professional development that need attention. Support and commitment from schools, school principals and the education system are needed to ensure the availability of adequate resources, sufficient time and an environment that supports the implementation of training activities. Evaluation and monitoring of the effectiveness of training programs is also important to meet teacher development goals and needs.

4. CONCLUSION

In the era of Artificial Intelligence, axiology or moral and ethical values play a very important role in the educational context. The use of artificial intelligence in education provides new challenges and opportunities in building axiological awareness among educators and students. In axiological studies, there needs to be a deep understanding and reflection on the implications of values related to the use of AI technology in the learning process.

Overall, understanding and applying axiology in education in the era of artificial intelligence needs to be a major concern. This involves critical and reflective thinking about the value implications that emerge as AI technology develops. Teachers and teaching staff need to be equipped with a strong understanding of ethics in the use of AI, as well as considering aspects of equity, justice and social impacts that may arise. Education must be a vehicle for developing a strong axiological awareness, where values such as integrity, responsibility, and empathy become the foundation for ethically integrating AI technology in the learning process. Thus, education in the era of artificial intelligence can be a means of forming a generation that is technologically intelligent and also has a strong axiological awareness to create a just, inclusive and responsible society.

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