



# Juridical Review of the Use of Artificial Intelligence in Education: Data Protection, Copyright, and Legal Responsibility Issues

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Article	Abstract
<p><b>Keywords:</b>            Artificial Intelligence;            Education;            Data Protection;            Copyright;            Legal Responsibility.</p> <p><b>Article History</b>            Received: August 23, 2024;            Reviewed: August 29, 2024;            Accepted: Sept 16, 2024;            Published: Sept 30, 2024.</p>	<p>The development of artificial intelligence technology has brought significant transformations in the education sector, ranging from learning personalization, administrative automation, to data-based evaluation systems. However, the implementation of Artificial Intelligence (AI) in education raises various juridical issues, especially related to personal data protection, content copyright, and legal responsibility in the event of losses due to the use of Artificial Intelligence (AI). This article aims to analyze the legal framework that prevails in Indonesia in regulating the use of Artificial Intelligence (AI) in the field of education, focusing on three main issues: data protection, copyright, and legal responsibility. The research method used is normative juridical research with legislative, conceptual, and comparative approaches. The results of the study show that existing regulations, such as Law Number 27 of 2022 concerning Personal Data Protection (PDP Law), the Copyright Law, and the principle of civil liability, can be used as a legal basis to regulate Artificial Intelligence (AI) in education, although more specific regulations are still needed through derivative regulations and Artificial Intelligence ethics guidelines (AI). Thus, the urgency of establishing comprehensive regulations regarding Artificial Intelligence (AI) in education is an urgent need in Indonesia.</p>

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## INTRODUCTION

The development of the digital era has brought fundamental changes in almost all aspects of human life, including in the education sector. One of the most influential technological innovations is artificial intelligence (AI). Artificial Intelligence (AI) in the world of education plays a role not only as a learning tool, but also as an intelligent system that is able to analyze data, provide personalized learning recommendations, and adjust the curriculum to individual needs of students. Various studies show that the application of Artificial Intelligence (AI) can increase the effectiveness of the learning process, the efficiency of academic administration, and expand access to education for the wider community.

While it provides many benefits, the use of Artificial Intelligence (AI) also presents new challenges, especially from a legal perspective. First, the issue of personal data protection is the

main highlight because Artificial Intelligence (AI) systems require very large data, including academic, psychological, and learning preferences of students. The data is vulnerable to misuse, leakage, and even exploitation by irresponsible parties. Second, copyright issues arise when Artificial Intelligence (AI) is able to produce digital works, learning materials, exam questions, or even scientific papers. This raises legal questions about who is entitled to the ownership of the work, whether it is the Artificial Intelligence (AI) developer, the user, or the educational institution. Third, the issue of legal responsibility arises when Artificial Intelligence (AI) provides adverse decisions or recommendations, such as errors in assessment, algorithmic discrimination, or academic decisions that impact students' rights. This has led to a debate about which party should be held accountable: developers, educational institutions, or even the state as a regulator. From a legal perspective in Indonesia, this challenge is increasingly complex because although there are already regulations such as Law No. 27 of 2022 on Personal Data Protection (PDP Law) and Law No. 28 of 2014 on Copyright, these regulations have not specifically regulated the use of Artificial Intelligence (AI) in the education sector. Meanwhile, globally, several jurisdictions such as the European Union have formulated special regulations on Artificial Intelligence (AI) through the Artificial Intelligence Act which is an important reference in building a modern legal framework related to this technology.

Based on this, the juridical study of the use of Artificial Intelligence (AI) in education is an academic and practical urgency. This study is expected to provide a deeper understanding of how Indonesian law responds to technological developments, as well as provide recommendations for the preparation of more comprehensive regulations. Thus, this research is not only academically relevant, but also contributes to the protection of students' rights, legal certainty for educational institutions, and strengthening national policies in the face of the digital transformation era.

## RESEARCH

Some previous research relevant to the juridical study of the use of Artificial Intelligence (AI) in education, especially related to the issues of data protection, copyright, and legal responsibility, include the following:

1. Rahardjo (2022) in his article "Personal Data Protection in the Implementation of Digital Education Technology" emphasizes the importance of national regulations in securing student personal data used by Artificial Intelligence (AI)-based education platforms. This research found that there are still many educational institutions that have not fully complied with the principle of explicit consent as mandated in the Personal Data Protection Law (Law Number 27 of 2022).
2. Prasetyo & Anindya (2021) through the research "Copyright on Digital Works Generated by Artificial Intelligence" discusses the problem of ownership of works that are fully generated by Artificial Intelligence (AI). In conclusion, according to Indonesia's positive law, Artificial Intelligence (AI) works cannot be categorized as copyright-protected works, so a new legal model is needed that regulates "hybrid works" (the result of human collaboration and Artificial Intelligence (AI)).
3. Utami (2023) in his study "Legal Responsibility for Losses Caused by Digital Technology in the World of Education" identified that losses due to the use of Artificial Intelligence (AI)-based technology are still difficult to account for because there are no specific regulations. However, the principle of civil liability can be used as a basis, both through fault liability and strict liability.
4. Suryana & Wijaya (2023) in the journal "Artificial Intelligence in Education: Ethical and Legal Challenges in Indonesia" highlight the ethical and legal challenges faced by educational institutions in Indonesia. They stated that the application of Artificial Intelligence (AI) must be accompanied by comprehensive legal protection policies, including government supervision mechanisms.

5. The European Commission (2021) in the document "Proposal for a Regulation on Artificial Intelligence (AI Act)" is one of the widely used international references. This regulation provides a clear legal basis regarding the classification of Artificial Intelligence (AI) risks, the obligations of developers, and legal liability in the event of losses. This can be an important comparison for Indonesia in building similar regulations.

The issue of personal data protection in the use of Artificial Intelligence (AI) in education has been discussed, but the research still focuses on the technical security aspect, not yet delving into the aspect of the legal responsibility of educational institutions. Studies on copyright for Artificial Intelligence (AI) works have emerged, but they are still limited to theoretical discussions and there are no specific regulations governing the ownership of Artificial Intelligence (AI) works in Indonesia. Legal liability related to losses due to Artificial Intelligence (AI) in the education sector is still a debate. There has been no research that comprehensively links the aspects of data protection, copyright, and legal responsibility in one study framework. From previous research, it can be seen that there is a research gap, namely the absence of a juridical study that comprehensively unites the three main issues (data protection, copyright, and legal responsibility) in the context of the use of Artificial Intelligence (AI) in the Indonesian education world. Therefore, this research is here to fill this gap by providing a more integrated normative analysis.

## **Theoretical Foundations**

### **1. Artificial Intelligence (AI) in Education**

Artificial Intelligence (AI) is a branch of computer science that focuses on developing systems that are able to mimic human intelligence, such as learning, reasoning, and decision-making skills. In the context of education, AI is used for various purposes, including: personalized learning, intelligent tutoring systems, academic administration automation, and data-based evaluation systems. The presence of Artificial Intelligence (AI) is expected to increase the effectiveness of learning, speed up the administrative process, and provide wider access to education. However, the use of Artificial Intelligence (AI) based on big data raises legal issues, especially related to privacy, copyright, and legal accountability.

### **2. Personal Data Protection Theory**

Personal data is any data about an identified or identifiable person, either directly or indirectly. Data protection theory is rooted in the principle of the right to privacy as a human right, as recognized in Article 28G paragraph (1) of the 1945 Constitution. In the context of Artificial Intelligence (AI) in education, personal data protection includes: (a) lawful collection of student data, (b) data processing according to the purpose, and (c) security assurance from misuse. In Indonesia, the main regulation is Law Number 27 of 2022 concerning Personal Data Protection (PDP Law) which regulates the rights of data subjects, data controller obligations, and administrative and criminal sanctions.

### **3. Copyright Theory in Digital Works**

Copyright is the exclusive right of the creator that arises automatically based on the declarative principle, namely from the moment a work is realized in real form. Based on Law No. 28 of 2014 concerning Copyright, creators are humans, not machines. Therefore, works that are fully generated by Artificial Intelligence (AI) cannot yet be recognized as copyright-protected works. However, in modern intellectual property law theory, the concept of hybrid authorship has emerged, which is work produced from human collaboration and Artificial Intelligence (AI). In the context of education, problems arise related to the ownership of digital works such as exam questions, learning materials, and scientific papers produced or assisted by Artificial Intelligence (AI).

### **4. Legal Liability Theory**

In Indonesian civil law, there are two main principles of legal liability: Liability based on fault liability of the negligent party or who commits a mistake must bear losses. Strict

liability is imposed without the need to prove error, for example in the case of high-risk technology use. In the context of Artificial Intelligence (AI) in education, legal responsibility can be imposed on:

- a. Artificial Intelligence (AI) developers, if losses occur due to system defects.
- b. Educational institutions, if they are negligent in the supervision or application of Artificial Intelligence (AI).
- c. The government, if it fails to provide adequate regulations and supervision.

## **5. International Legal Framework**

In comparison, the European Union has drafted the Artificial Intelligence Act (2021) which regulates the classification of Artificial Intelligence (AI) risks, the obligations of providers, and legal liability for losses. This model can be an important reference for Indonesia in formulating a more comprehensive Artificial Intelligence (AI) policy, especially in the field of Education

## **RESEARCH METHODS**

This research uses a normative juridical method, which is legal research that focuses on written norms, doctrines, and applicable legal principles. The approach used is: A legislative approach, to review regulations related to Artificial Intelligence (AI), personal data, and copyright. Conceptual approach, by examining the concept of legal responsibility in the context of the use of technology. A comparative approach, by reviewing the legal practice of Artificial Intelligence (AI) in several countries as a comparison.

## **DISCUSSION**

### **1. Data Protection Issues in the Use of AI in Education**

The use of Artificial Intelligence (AI) in education requires student data for the purpose of learning analysis and personalization. The data includes identity, academic grades, and learning preferences. In Indonesia, data protection is regulated in Law Number 27 of 2022 concerning Personal Data Protection (PDP Law), which regulates the principles of data collection, processing, storage, and deletion. In the context of education, educational institutions are positioned as data controllers, while Artificial Intelligence (AI) system providers can be data processors. Challenges arise related to:

- a. Security of students' personal data so that it is not leaked or misused.
- b. The obligation to obtain explicit consent from the data subject.
- c. Determination of sanctions in the event of a data breach due to an AI system.

### **2. Copyright Issues in Artificial Intelligence (AI) Content**

AI can produce teaching materials, exam questions, and scientific papers. This raises juridical questions about the status of copyright. Based on Law No. 28 of 2014 concerning Copyright, creators are humans, not machines. Thus, works that are fully generated by Artificial Intelligence (AI) are difficult to obtain copyright protection. The problems that arise include:

- a. Copyright ownership of the Artificial Intelligence (AI)-generated work (whether it belongs to the Artificial Intelligence (AI) developer, educational institution, or user).
- b. Potential copyright infringement if Artificial Intelligence (AI) produces works that resemble other people's works.
- c. The need for a new arrangement for hybrid work (the result of Artificial Intelligence (AI) and human collaboration).

### **3. Legal Liability for Losses Due to Artificial Intelligence (AI)**

The main question in the issue of legal responsibility is: who is responsible if AI makes the wrong decision? For example, AI systems misjudge student performance, resulting in an impact

on academic rights. In Indonesian civil law, the principles of fault liability and strict liability can be applied. Parties who can be held accountable include:

- a. Artificial Intelligence (AI) developers, when losses are caused by system defects.
- b. Educational institutions, if they default in supervising the use of Artificial Intelligence (AI).
- c. The government, if there is negligence in the supervision of Artificial Intelligence (AI) regulations and certification.

To provide legal certainty, Indonesia needs to draft a special regulation regarding the legal responsibility for the use of Artificial Intelligence (AI) in the education sector, as has been implemented in the European Union through the EU Artificial Intelligence Act.

## CONCLUSION

The use of Artificial Intelligence (AI) in the world of education brings great benefits in the form of increasing learning effectiveness, administrative efficiency, and expanding access to education. However, the use of Artificial Intelligence (AI) also poses significant juridical challenges, especially related to personal data protection, copyright, and legal liability. First, the issue of personal data protection requires legal certainty regarding the collection, processing, and security of student data so that misuse does not occur. Second, copyright issues arise because works that are fully generated by Artificial Intelligence (AI) have not been recognized as creations in Indonesian positive law, so a new regulation is needed regarding the concept of hybrid authorship. Third, legal liability for losses due to the use of AI is still unclear, although the principles of fault liability and strict liability can be used as a basis for suing developers, educational institutions, and the government. Existing regulations such as Law Number 27 of 2022 concerning Personal Data Protection and Law Number 28 of 2014 concerning Copyright can be used as a starting foothold. However, these rules are not sufficient to answer the complexity of Artificial Intelligence (AI) legal problems in education. Therefore, Indonesia needs to immediately formulate special regulations regarding the use of Artificial Intelligence (AI) in the education sector that regulate ethical standards, legal protection mechanisms, and clarity of the responsibilities of the parties. Thus, the implementation of Artificial Intelligence (AI) can take place safely, fairly, and in accordance with the principles of legal certainty.

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