



LEGAL PROTECTION OF AI-ASSISTED SCIENTIFIC WORK ORIGINALITY IN THE DIGITAL SOCIETY

Muhammad Fachri^{1*}, Fahmi Afham Fuady², Marlin³, Ahmad Syahird⁴

¹ Universitas Tamalatea Makassar

² Hasanuddin University, Makassar, Indonesia

³ Sulawesi Tenggara University, Indonesia

⁴ Universitas Megarezky, Indonesia

E-mail: mfachri164@gmail.com, fuadyfa24b@student.unhas.ac.id, marlinadvokat@gmail.com,
ahmadsyahird@unimerz.ac.id.

Received: 02/06/2026 | Revised: 15/06/2026 | Accepted: 05/07/2026 | Published: 25/07/2026

Abstract

The rapid development of artificial intelligence (AI) technology presents new challenges for the legal system, particularly in the enforcement of copyright over scientific works produced with the assistance of Chat Generative Pre-Trained Transformer (ChatGPT). This study aims to analyze the aspects of originality and legal protection of AI-assisted scientific works by employing a normative legal research method with statutory and conceptual approaches. The findings show that, under Law No. 28 of 2014 on Copyright, only natural persons or legal entities may be recognized as authors. ChatGPT cannot be regarded as a legal subject because it lacks consciousness and juridical responsibility, and functions merely as a technical tool under human control. Legal protection for scientific works generated with AI assistance can only be granted where there is a demonstrable human contribution in the form of creative input, supervision, and meaningful intervention in the process of creation. In the context of community service, this research highlights the importance of enhancing digital legal literacy among academics so that AI can be utilized ethically, lawfully, and responsibly. Thus, law functions not only as a regulatory instrument, but also as an educational and protective tool in shaping a just digital society that upholds academic integrity.

Keywords: Copyright; Originality; ChatGPT; Artificial Intelligence; Digital Legal Literacy.

INTRODUCTION

The development of artificial intelligence (AI) technology has reached an extraordinary level, transforming the way humans interact with information and even create content. One of the most significant innovations in recent years is the Chat Generative Pre-Trained Transformer (ChatGPT), a generative language model developed by OpenAI.¹ ChatGPT is one of the most widely used forms of artificial intelligence among university students and even lecturers. The writing of scientific papers, which is often perceived as a long and complex process, has now become easier with the assistance of ChatGPT.² This is because ChatGPT employs machine learning algorithms and natural language processing (NLP) techniques to understand and process information based on user-generated text prompts. Through these algorithmic capabilities, ChatGPT can answer questions, help users locate information, translate languages, and generate text that resembles human writing. ChatGPT is capable of generating text that closely resembles human writing, with the ability to construct sentences, develop arguments, and even produce

¹ Partha Pratim Ray, "ChatGPT: A Comprehensive Review on Background, Applications, Key Challenges, Bias, Ethics, Limitations and Future Scope," *Internet of Things and Cyber-Physical Systems* 3 (2023): 121-54, <https://doi.org/https://doi.org/10.1016/j.iotcps.2023.04.003>.

² Manisha Gupta, "ChatGPT-A Generative Pre-Trained Transformer," *International Journal of Advanced Research in Science, Communication and Technology*, 2024, 590-95, <https://doi.org/10.48175/IJARSCT-15087>.

creative works.³ Its presence has revolutionized various fields, including the academic sphere. The use of ChatGPT in the process of preparing scientific papers has therefore become increasingly efficient, as it can assist in designing and developing ideas, structuring arguments, and even providing suggestions regarding the organization and style of writing. With these advantages, the process of producing scientific works becomes more efficient, as ChatGPT can automatically identify and filter relevant materials in response to a given query and present the answer in the form of coherent text.⁴ This greatly facilitates and saves time for students, lecturers, and researchers who use ChatGPT to prepare essays, papers, and even more substantial academic works such as undergraduate theses, master's theses, and dissertations. It is therefore not surprising that the emergence of artificial intelligence tools such as ChatGPT has increasingly become a functional necessity in the field of education.⁵ However, behind the convenience offered by ChatGPT in the process of writing scientific works, there arises a legal problem related to the originality of the works it helps to produce. In many cases, the substantive contribution in the creation of the work comes predominantly from ChatGPT rather than from direct human authorship. This raises questions regarding the copyright ownership status of such works. This uncertainty has the potential to create legal issues, such as competing claims of authorship and the risk of misuse or exploitation without adequate legal protection.

A work in the fields of art, literature, or science can be regarded as giving rise to copyright only if it meets the criterion of originality. Originality in this context refers to the authorship of a work or the legitimacy of the claim over the work's creation. It indicates that a work has genuinely been made by its author. Originality does not require novelty in the sense of something entirely new, but it does require that the work is the result of the author's own intellectual effort and creativity.⁶ Thus, originality means that the work is not merely a copy or imitation of another person's creation. The concept of originality in the common law system is satisfied if a work originates from the author independently, regardless of the degree of inventiveness ("to be sufficient if the work originates from the author independently of the degree of inventiveness"). By contrast, the civil law system requires a certain mark of the author's personality in the work, or an imprint of personality. This conceptual difference is bridged by the TRIPS Agreement, which requires member states to apply the Berne Convention as a minimum standard for copyright protection.⁷ The requirement of originality is closely related to copyright as a form of property; a work must truly derive from the author's own intellectual existence. What can be protected as copyright is private property, whereas what cannot be protected belongs to the public domain. The concept of originality in copyright law serves as the "boundary line" between private and public property, and as a basis for delineating the scope of private ownership in a work. The determination of originality thus functions as a guide to define the scope of the author's proprietary rights in the content of their creation. Originality is, in this sense, a legal prerequisite for certainty of protection.⁸

The fundamental element in copyright is originality, which implies that the copyright holder or the party claiming authorship is indeed the creator of the work. Unlike in patent law, originality in copyright does not require novelty. An author may claim copyright over a work as long as they have created it themselves, even if a thousand others have previously created similar works. Originality does not imply that the work must be new, but rather that it is not copied from others.⁹ Originality means that the expression of ideas truly derives from the author's own mind and personality. In the Indonesian Copyright Law currently in force, there is no explicit provision defining originality. However, this concept is implicitly reflected in Article 1 point 3 of Law No. 28 of 2014 on Copyright, as follows: "A Creation is any work in the fields of science, art, and literature that is produced based on inspiration, ability, thought, imagination, dexterity, skill, or expertise, and is expressed in a tangible form."

³ Edisa Lozi, "Fluent but Not Factual : A Comparative Analysis of ChatGPT and Other AI Chatbots ' Proficiency and Originality in Scientific Writing for Humanities," 2023.

⁴ Jianlong Zhou, Heimo Müller, and Andreas Holzinger, "Ethical ChatGPT : Concerns , Challenges , and Commandments," 2024, 1-13.

⁵ Atsushi Mizumoto, Sachiko Yasuda, and Yu Tamura, "Identifying ChatGPT-Generated Texts in EFL Students' Writing: Through Comparative Analysis of Linguistic Fingerprints," *Applied Corpus Linguistics* 4, no. 3 (2024): 100106, <https://doi.org/https://doi.org/10.1016/j.acorp.2024.100106>.

⁶ Nurul Hulwanita Sharfina et al., "Copyright Issues on the Prank Video on the Youtube" 583, no. Iceep (2021): 90-97.

⁷ Muhammad Abid Malik, "Global Insights : ChatGPT ' s Influence on Academic and Research Writing , Creativity , and Plagiarism Policies," no. November (2024).

⁸ Ahmad Fahri Faqi, Nanda Yuniza Eviani, Maskun, "Legal Challenges of AI-Induced Copyright Infringement : Evaluating Liability and Dispute Resolution Mechanisms in Digital Era" 6, no. 02 (2024): 403-28.

⁹ Queen O Agulefo and Igbariam Campus, "Original ' under the Law of Copyright Is Distinct from the Ordinary Meaning of ' Original ' : A Discourse" 7, no. 6 (2021): 5-11.

Based on this provision, the phrases “inspiration, ability, thought, imagination, dexterity, skill, or expertise” can collectively be understood as referring to “creativity.” Under the Copyright Law, legal protection may only be granted to works created by human beings that embody elements of creativity and originality. The requirement of originality is closely linked to the creative process in the making of a work, because the core of originality lies in the author’s ability to make and exercise creative choices in expressing their ideas in a tangible form. A work may be said to involve *creative choice* when those choices are made independently by the author, thereby imprinting the author’s personality on the work. When this concept is related to the use of ChatGPT in the writing of scientific works, a problem arises: can a text generated by ChatGPT be regarded as eligible for copyright protection? A person who produces a scientific work with the assistance of ChatGPT receives output that is generated on the basis of the system’s datasets and algorithms, rather than through the author’s direct and continuous creative thinking.¹⁰ This raises a legal dilemma regarding who should be recognized as the author and whether such AI-assisted output can meet the threshold of human creativity and originality required for copyright protection.

METHOD

This study employs a normative legal research method, which focuses on literature study and the examination of secondary legal materials. The approaches used include the statute approach, by reviewing various regulations relevant to the legal issues of originality in AI-assisted scientific works, particularly those involving ChatGPT, and the conceptual approach, by examining legal doctrines and scholarly views in order to construct a conceptual analytical framework. The sources of legal materials consist of primary legal materials, such as legislation, court decisions, and legal doctrines, as well as secondary legal materials, including academic literature, law journals, and relevant symposium papers.¹¹

Data collection is carried out through library research, namely the systematic collection and examination of written and visual legal materials from official and academic sources. The legal materials are analyzed qualitatively and descriptively by interpreting legal norms and constructing arguments based on relevant legal theories and principles.¹² The results of this analysis are directed toward providing a normative prescription regarding the status of originality in scientific works produced with the assistance of ChatGPT, as well as assessing their conformity with the applicable legal framework.

Finding and Discussion

The Question of Originality in ChatGPT Outputs

Creativity is a determining factor that gives a work its distinctive character and reflects the personality of its author. In other words, the author’s character is embodied in the work they produce. The definition of “author” can be found in Article 1 paragraph (2) of Law No. 28 of 2014 on Copyright, which provides that: “*An Author is a person or several persons who individually or jointly produce a creation that is distinctive and personal in nature.*”

When this definition is linked to scientific works produced with the assistance of ChatGPT, doubts arise regarding the “distinctive and personal” element of authorship. This is because the nature and functioning of ChatGPT rely on input data that is then processed and generated by the system. The user first enters a text prompt, after which ChatGPT selects and formulates a response that the user may subsequently use in drafting a scientific work.¹³ The question, therefore, is whether the mere act of providing prompts and selecting AI-generated text is sufficient to confer the author’s personality or personal imprint on the resulting work.

When a scientific work is produced with the assistance of ChatGPT, the boundary between a “personal work” and “machine contribution” becomes blurred. ChatGPT is not merely a spelling or grammar tool; it can answer questions, help users locate information, translate languages, and generate text that resembles human writing. It operates using a GPT architecture trained on billions of words and documents from various sources, creating a model

¹⁰ Adil S Al-Busaidi et al., “Redefining Boundaries in Innovation and Knowledge Domains: Investigating the Impact of Generative Artificial Intelligence on Copyright and Intellectual Property Rights,” *Journal of Innovation & Knowledge* 9, no. 4 (2024): 100630, <https://doi.org/https://doi.org/10.1016/j.jik.2024.100630>.

¹¹ Irwansyah, “Penelitian Hukum: Pilihan Metode & Praktik Penulisan Artikel,” *Yogyakarta: Mirra Buana Media* 8 (2020): 100.

¹² Nurul Qamar and Farah Syah Rezah, *Metode Penelitian Hukum: Doktrinal Dan Non-Doktrinal* (CV. Social Politic Genius (SiGn), 2020).

¹³ Suntoro Suntoro et al., “Using ChatGPT To Write Scientific Papers In Indonesia: A Systematic Review,” *Ianna Journal of Interdisciplinary Studies* 6, no. 3 SE-Articles (August 21, 2024): 1–16, <https://iannajournalofinterdisciplinarystudies.com/index.php/1/article/view/208>.

that understands linguistic context, syntax, and semantics. The model has been trained on data in multiple languages, such as English and Indonesian, enabling it to comprehend and generate text in those languages.¹⁴

In generating responses, ChatGPT employs a technique known as autoregressive language modelling. The model predicts the next word in a sequence based on the preceding words, repeatedly doing so until it forms a coherent sentence or paragraph.¹⁵ It also takes into account the context of the user's input so that the output remains relevant to the user's request. Behind these benefits, however, lies a fundamental question: can a work produced with AI assistance still be regarded as original? If a scientific work such as a thesis or dissertation is produced from the writer's prompts and instructions, but the text itself is generated by ChatGPT, can it still be said that the author's "personality" as required by copyright law is truly present in the work.

The Role of the Author's Creative Contribution

In 1956, John McCarthy defined artificial intelligence (AI) as the ability to successfully solve specific problems.¹⁶ Humans are considered intelligent because they are able to resolve problems through learning processes and accumulated experience. Artificial intelligence is a branch of computer science that focuses on developing computer systems capable of performing tasks in a human-like manner, and in some cases even surpassing human capabilities.¹⁷ Initially, computers were used merely as calculating tools. However, as technology advanced, their functions expanded and computers became an essential part of various aspects of life, with the expectation that they could replace human roles in carrying out certain tasks.

Through the application of algorithms and mathematical models, AI enables computers to learn from data, recognize patterns, and make decisions autonomously and adaptively. Over time, AI has come to encompass several key concepts such as machine learning, neural networks, and natural language processing. These technologies have made significant contributions in various sectors, ranging from voice and facial recognition, autonomous vehicles, and financial technology to the healthcare sector. This development has strengthened AI's position not only as a supporting tool, but also as a technology with the potential to replace certain human functions in performing work, including the preparation of complex and structured scientific writings.

There are two main categories that influence the use of artificial intelligence (AI) in the creation of scientific works, namely external factors and internal factors. In terms of external factors:¹⁸

1. Rapid Development of AI Technology

Technologies such as GPT-3 and GPT-4 demonstrate capabilities that are increasingly comparable to human performance in understanding and generating text, translating languages, and even writing code. In the field of education, AI opens up significant opportunities for transformation by enabling personalized learning, automated guidance, and faster and more efficient access to information for academic writing. Advances in computing power and the availability of large datasets support efficiency and drive a technology-based academic revolution.

2. Data-Driven Decision Making

The use of data in education facilitates the evaluation of academic progress, the identification of individual students' needs, and the assessment of curriculum effectiveness. AI enables rapid and accurate data analysis, thereby supporting the formulation of educational policies that are more targeted, responsive, and adaptive to contemporary demands.

3. Potential for Continuous Innovation

AI enhances productivity and fosters new approaches in learning, data processing, and the writing of scientific works. Educational institutions that are able to strategically integrate AI will gain a competitive advantage, both

¹⁴ Alpan Alpan, Fokky Fuad, and Anis Rifai, "The Use of Artificial Intelligence Chat GPT in Scientific Papers According to the Perspective of Intellectual Property Rights," *Law Development Journal* 6 (November 28, 2024): 457, <https://doi.org/10.30659/ldj.6.4.457-477>.

¹⁵ Willie Golden, "ChatGPT: A Trusted Source?," *Irish Journal of Technology Enhanced Learning* 7 (December 7, 2023): 113–25, <https://doi.org/10.22554/ijtel.v7i2.129>.

¹⁶ S L Andresen, "John McCarthy: Father of AI," *Intelligent Systems, IEEE* 17 (October 1, 2002): 84–85, <https://doi.org/10.1109/MIS.2002.1039837>.

¹⁷ Christopher Collins et al., "Artificial Intelligence in Information Systems Research: A Systematic Literature Review and Research Agenda," *International Journal of Information Management* 60 (2021): 102383, <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2021.102383>.

¹⁸ Konstantinos Roumeliotis and Nikolaos Tselikas, "ChatGPT and Open-AI Models: A Preliminary Review," *Future Internet* 15 (May 26, 2023): 192, <https://doi.org/10.3390/fi15060192>.

in terms of the quality of teaching and the efficiency of academic operations. Overall, AI serves as a key driver of positive change in education when utilized carefully and strategically.

In addition to external factors, the utilization of AI is also influenced by several internal factors, namely:¹⁹

1. High Efficiency
AI significantly accelerates individual learning processes, large-scale data analysis, and the development of simulations and predictive models, thereby saving time and human effort.
2. High Level of Accuracy
AI systems can achieve a high degree of accuracy due to advanced algorithms and high-quality data, which supports the validity of research. Nevertheless, human supervision remains necessary to ensure that the results are correct and accountable.
3. Contextual Understanding
Through natural language processing and computer vision, AI is able to understand complex meanings and relationships between concepts, enabling it to generate scientific content that is relevant and logically structured.

Since its emergence, artificial intelligence has developed rapidly. Initially, it was mainly used to automate human tasks that were administrative, repetitive, and routine in nature. Today, however, AI is increasingly capable of independently producing various forms of content. With just a command or instruction, generative artificial intelligence can generate a wide range of outputs, including answering questions, composing essays, and even creating original works of art. In the current era of advanced technology, AI has become an important tool in many areas, including in the process of learning and writing scientific papers.²⁰

Artificial intelligence can provide substantial assistance and convenience for authors in producing scientific works. The use of AI technology has become a valuable alternative to enhance and develop writing skills. In the field of education, many researchers now use AI in the preparation of academic writings. There are at least three main benefits of artificial intelligence for scientific work: first, it increases productivity in academic writing; second, it improves accuracy; and third, it enhances creativity. AI can help authors boost their creativity by making the drafting and editing processes more efficient, thereby allowing more time and energy to be devoted to conceptual and substantive aspects of the work.

In the context of writing scientific works, the use of ChatGPT offers clear benefits in enhancing learning motivation and developing contemporary skills among academic authors. At the drafting stage, ChatGPT can assist in organizing the structure of a scientific work and elaborating arguments in a more systematic manner.²¹ It also provides users with the opportunity to learn in a more personalized and effective way. ChatGPT may offer significant advantages by supporting the processes of research, data analysis, and the writing of scientific papers on relevant topics. Nevertheless, any scientific work must still comply with prevailing academic standards, including the accurate and proper use of references to support the claims and findings presented.

Intellectual property protection is implemented through several statutory instruments, one of which is copyright. Copyright, as a branch of intellectual property rights, is regulated under Law No. 28 of 2014 on Copyright. Copyright is an exclusive right granted to the creator over their work, arising automatically once the work is expressed in a tangible form. It entitles the creator to publish or reproduce their work, or to authorize others to do so, subject to the limitations set by the applicable legislation.

A work in the fields of art, literature, or science can be said to give rise to copyright protection if it meets certain criteria, particularly originality and fixation. Originality refers to the authorship of a work or the legitimacy of the claim over its creation, indicating that the work has genuinely been produced by its creator. Originality does not require novelty in the sense of being entirely new, but it does require that the work is the result of the author's own intellectual effort and creativity, and not merely a copy of another person's work or a work already in the public domain.

¹⁹ Mohammad Hirzallah and Muhammad Alshurideh, "The Effects of the Internal and the External Factors Affecting Artificial Intelligence (AI) Adoption in e-Innovation Technology Projects in the UAE? Applying Both Innovation and Technology Acceptance Theories," *International Journal of Data and Network Science* 7 (April 8, 2023), <https://doi.org/10.5267/j.ijdns.2023.4.006>.

²⁰ Giulia Maragno et al., "Exploring the Factors, Affordances and Constraints Outlining the Implementation of Artificial Intelligence in Public Sector Organizations," *International Journal of Information Management* 73 (2023): 102686, <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2023.102686>.

²¹ Hyesun Choung, Prabu David, and Arun Ross, *Trust in AI and Its Role in the Acceptance of AI Technologies*, *International Journal of Human-Computer Interaction*, vol. 39, 2022, <https://doi.org/10.1080/10447318.2022.2050543>.

This raises a key question: can a scientific work generated with the assistance of ChatGPT be categorized as a copyrighted work? To answer this, it must be understood that, under copyright theory, there are at least two essential requirements for a work to be regarded as a “creation,” namely originality and fixation. In civil law countries such as Indonesia, the definition of a protected work also often emphasizes the personal character or personality of the author reflected in the work. Originality in this context refers to the uniqueness of the work as an expression of the author’s creative choices, rather than a mere imitation of existing works. In the field of copyright, a written work must therefore reflect the author’s own creative expression and originality.²²

The principles of originality and creativity form the foundation of copyright protection. In general, Merriam-Webster defines *originality* through three elements:²³

1. The quality or state of being original;
2. Freshness of aspect, design or style;
3. The power of independent thought or constructive imagination.

In essence, originality refers to a condition in which a work possesses uniqueness or newness in terms of its aspect, style, or design, or reflects the power of independent human thought and productive imagination. In copyright law, originality means that a work must arise from the author’s personal expression and not merely from the adoption or duplication of someone else’s work. Creativity, at a minimum, requires the existence of an intellectual contribution in the process of creation. In this regard, artificial intelligence becomes a problematic entity because it does not possess human creative capacity in the legal or philosophical sense.

The requirement of originality is also embedded in the definition of “author” under Article 1 point 2 of Law No. 28 of 2014 on Copyright, which provides that:

“An Author is a person or several persons who individually or jointly produce a creation that is distinctive and personal in nature.”

This aspect of personality or individuality implies that, in order to be recognized as the author of a work, a person must have a personal quality that is inherently human. Based on this definition, works produced by ChatGPT do not fully satisfy the legal concept of originality, because they are not created by a human author and are in substance a recombination and transformation of pre-existing works by a machine. As a result, such outputs do not reflect the distinctive and personal characteristics of an individual author. Moreover, the phrase “distinctive and personal” in the Copyright Law is not elaborated in detail, creating further ambiguity in assessing whether AI-generated outputs can ever meet this threshold of personal authorship.

Article 1 points 1 and 2 of the Copyright Law do not expressly define the concept of originality. However, based on the definitions of “author” and “creation,” one can identify an implicit standard, namely *independent creation*. This means that a person will not obtain copyright protection if they copy a work from another source. At the same time, it is possible for an author to obtain copyright over a work that is identical to a pre-existing one, as long as the author did not copy it. Thus, a work does not need to display a high degree of creativity to be regarded as original; what is crucial is that it originates from the author themselves and is not a reproduction of someone else’s work. In other words, the emphasis of originality lies in the creative and independent character of the work.

The question of whether ChatGPT generated outputs can be recognized as “creations” under copyright law must be examined in light of Article 1 point 2, which requires that a work be “distinctive and personal” in nature. Although the Copyright Law does not explicitly define originality, the definitions of “author” and “creation” indicate that a work contains originality when it is a tangible result of human intellectual activity that is distinctive and personal, and whose creation process can be explained by the author.

When scientific works produced with the assistance of ChatGPT are examined against this requirement of distinctiveness and personality, doubts arise.²⁴ ChatGPT operates by processing input data and generating outputs based on its training, thereby producing scientific text in accordance with the user’s prompts. The user first provides a text prompt, and ChatGPT then generates a response that the user may adopt in a scientific work. The key question is whether such a work genuinely embodies human personality and authorship so that it may be regarded as original.

²² Saeed Badghish and Yasir Ali Soomro, “Artificial Intelligence Adoption by SMEs to Achieve Sustainable Business Performance : Application of Technology – Organization – Environment Framework,” 2024.

²³ Agulefo and Campus, “Original’ under the Law of Copyright Is Distinct from the Ordinary Meaning of ‘Original’: A Discourse.”

²⁴ Biqi Li and Yanyuan Cheng, “ChatGPT in Human Resource Management: A Systematic Review of Influential Factors, Processes, and Outcomes,” *Heliyon* 11, no. 15 (2025): e44048, <https://doi.org/https://doi.org/10.1016/j.heliyon.2025.e44048>.

Referring to the definition of “creation” in Article 1 point 3 of the Copyright Law, a creation is a work that arises from inspiration, talent, ideas, imagination, ability, expertise, or skill, and is expressed in a tangible form. This implies the necessity of a human subject or author who controls and directs the process. In the context of AI-assisted scientific writing, if the creation of a work relies entirely on ChatGPT without meaningful human intellectual contribution, the resulting text risks falling outside the scope of copyright protection. Accordingly, a scientific work must contain elements of originality that derive from human authorship.

The Copyright Law requires not only originality in the form of the work, but also originality in the creative process. If a scientific work produced with the assistance of ChatGPT lacks human creativity, thought, and skill, it does not satisfy the conditions for copyright protection. Text generated solely through algorithms may therefore be considered devoid of originality in the legal sense. As a consequence, a work must bear the imprint of human creativity and imagination in order to be deemed original and eligible for copyright protection.

Although national law does not explicitly elaborate the concept of originality, its elements can be inferred from Article 1 point 3 of Law No. 28 of 2014 on Copyright particularly the phrase “produced based on inspiration, ability, thought, imagination, dexterity, skill, or expertise” and from Article 1 point 2, which refers to a creation that is “distinctive and personal” in nature. Taken together, these provisions support the understanding that originality is fundamentally tied to creative and independent human contribution.

Text output generated by ChatGPT that does not originate from pre-existing copyrighted works may, from a legal perspective, be categorized as part of the public domain.²⁵ This is because the element of “author” in the legal sense is not fulfilled, given that the work is produced by an algorithmic system without dominant human involvement as a legal subject. Article 31 of Law No. 28 of 2014 on Copyright stipulates that an author is a person whose name is stated in connection with a work, declared as the author, recorded in the copyright register, and/or listed in the general register of works as the author. Accordingly, only human beings or certain legal entities may hold copyright over a work.

The definition of “author” in the Copyright Law refers to “a person” or “several persons,” which is understood as an individual or individuals who create a work that is distinctive and personal. Article 1 point 27 of Law No. 28 of 2014 further provides that “a person is a natural person or a legal entity.” Thus, the author or copyright holder of a scientific work can only be a human being in the biological sense or a legal entity, and not any other form of entity such as ChatGPT. ChatGPT is not a legal subject capable of meeting these criteria, because a machine has neither legal consciousness nor the capacity to bear responsibility for its outputs. ChatGPT operates on the basis of data patterns and algorithms and therefore does not “create” in the true legal sense, but merely processes and recombines pre-existing information.

In Indonesia, legal subjects are generally divided into two categories: natural persons and legal entities (*rechtspersoon*). The classification of artificial intelligence (AI) as a legal subject remains a matter of debate. Although AI such as ChatGPT may exhibit capabilities that resemble or even exceed those of humans in performing certain tasks, it remains fundamentally different in nature, as it is not a living being.

In legal discourse, if ChatGPT is analogized to a worker, liability for its acts or resulting harm may be linked to Article 1367 paragraphs (1) and (3) of the Civil Code, which state that a person (including an employer) is responsible for damage caused by persons or things under their supervision. This implies that, even though ChatGPT is not explicitly recognized as a legal subject, responsibility for its actions may be attributed to those who control it, such as its owners or developers. This illustrates that the legal position of ChatGPT presents both a challenge and an opportunity for legal reform in response to technological developments.

ChatGPT may be analogized to a worker because of its ability to perform tasks similar to those carried out by humans, and in some respects even more efficiently. However, there remain fundamental limits to this analogy. Within such a framework, the creator or developer of ChatGPT would be regarded as the employer and thus should bear legal responsibility for ChatGPT’s actions.

Although this analogy might initially suggest classifying ChatGPT as a type of legal subject, in reality ChatGPT has neither will nor autonomous responsibility; it is ultimately a human-made tool. Therefore, despite its significant role in human life and in legal systems, it would be inaccurate to categorize ChatGPT as a legal subject. It is more appropriate to regard ChatGPT as an object of law whose regulation must be adapted to technological progress and to the responsibility of its creators and controllers.

²⁵ Yogesh K Dwivedi et al., “Opinion Paper: ‘So What If ChatGPT Wrote It?’ Multidisciplinary Perspectives on Opportunities, Challenges and Implications of Generative Conversational AI for Research, Practice and Policy,” *International Journal of Information Management* 71 (2023): 102642, <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2023.102642>.

Under the current regulations in Indonesia, legal discourse on artificial intelligence can also be analyzed through the Indonesian Civil Code (*KUH Perdata*). The Civil Code indirectly opens the possibility of analogizing ChatGPT to a worker, as reflected in the provisions governing the relationship between employer and employee in Article 1367 paragraphs (1) and (3). These provisions stipulate that a person is not only liable for damage caused by their own acts, but also for damage caused by persons or things under their responsibility. An employer is likewise liable for losses caused by their workers in the performance of assigned duties.

On this basis, ChatGPT may be positioned as a “worker” by analogy, given its ability to perform tasks that are ordinarily carried out by humans. If ChatGPT is viewed in this way, then legal responsibility for its errors or negligence should be borne by the party that owns or operates ChatGPT as the “employer.” It is important to recognize, however, that such an analogy implies the existence of a legal relationship between ChatGPT and the employer. In theory, ChatGPT, when positioned as a worker, could be considered independently responsible. In practice, this is difficult to sustain because ChatGPT remains dependent on human creators and operators. As a result, legal responsibility ultimately rests with human actors.

Article 41 letter (c) of Law No. 28 of 2014 on Copyright provides that works not protected by copyright include tools, objects, or products created solely to solve technical problems or whose form is intended only for functional needs. From this, it can be understood that artificial intelligence is not categorized as an “author,” but rather as in the case of ChatGPT as technology designed to simulate human systems. Thus, its role is narrowed to that of a tool used to assist humans in creating scientific works.

ChatGPT serves to emulate certain aspects of human intellectual capabilities and to generate outputs based on pre-existing information. Accordingly, it may be concluded that ChatGPT is not an author, but merely a tool operated by humans, and it is the human user who may be regarded as the author. ChatGPT therefore does not receive copyright; instead, copyright is granted to the human who creates and uses it in the creative process.

This view is supported by Article 33 paragraph (1) of Law No. 28 of 2014, which states that where a creation consists of several separate parts produced by two or more persons, the person who leads and supervises the completion of the entire work shall be deemed the author. Thus, copyright is conferred on the person who has overall control and oversight. The same reasoning applies to ChatGPT: while ChatGPT provides assistance such as generating ideas, suggesting references, and drafting text the person who reviews, corrects, and finalizes the work remains the author.

Indonesian copyright law grants copyright only to legal subjects, namely natural persons and legal entities, and requires elements of originality and independent authorship. AI-generated works cannot be categorized as the creations of a legal subject. However, Article 34 of the Copyright Law provides a legal basis for recognizing a person as the author even when the technical execution of the work is carried out by another party, as long as there is supervision, direction, and creative planning by that person.

In the context of creations involving artificial intelligence such as ChatGPT, if a human actively provides instructions, determines the concept, performs editing, and adds creative input to ChatGPT’s output, then their authorship can be constructed under Article 34. In such cases, the user of ChatGPT may be recognized as the author. In other words, ChatGPT is positioned as a technical aid, while the human remains the legal subject responsible for the ideas, supervision, and creative process. This analogy positions ChatGPT as a facilitative tool that supports, but does not replace, the role of the human author.

In relation to copyright protection for AI-related works such as those involving ChatGPT in Indonesia, Djumhana notes the development of a doctrine known as *work made for hire* in the Indonesian copyright system.

This doctrine has in fact been adopted in Indonesian Copyright Law through the provisions of Article 33 paragraph (1), which states that where a creation consists of several separate parts produced by two or more persons, the person who leads and supervises the completion of the entire work shall be deemed the author. Paragraph (2) further provides that if there is no person who leads and supervises the completion of the work as referred to in paragraph (1), the person who compiles the work shall be deemed the author, without prejudice to the copyright of each creator over their respective parts.

Article 34 reinforces this doctrine by stipulating that, where a creation is designed by one person and is realized and executed by another person under the direction and supervision of the designer, the person who designs the creation shall be regarded as the author.

The philosophical basis of this doctrine is to provide legal and economic incentives to the party commissioning the work, who typically undertakes careful planning, bears commercial risks, and manages the overall project. It also grants the commissioning party full control over the commercial exploitation of the resulting work.

The core idea of the *work made for hire* doctrine is that the employer bears primary responsibility and accountability for the acts of the employee, including any potential legal violations or damage arising from the employee's work. However, these default rules may be modified by contract between the parties.

The application of the *work made for hire* doctrine to AI-related copyright in Indonesia is considered appropriate in light of the way AI systems operate.²⁶ Even though AI may appear to be the direct "producer" of a work, it is ultimately the user who is entitled to copyright protection because they input data, design prompts, and direct the processing carried out by the AI system.

The question of who should be treated as the "employer" of AI can be answered, in current practice, by viewing the user as the commissioning party, since they provide instructions and guidance to the AI system.

Indonesian Copyright Law does not specifically regulate computer-generated works or works produced with the assistance of tools such as ChatGPT. Nevertheless, it contains provisions that can accommodate assistance from third parties or the use of tools in the creation process.

Article 34 of Law No. 28 of 2014 on Copyright provides that: "*In the event that a creation is designed by a person and realized and executed by another person under the direction and supervision of the person who designed it, the person who designed the creation shall be deemed the author.*" The phrase "under the direction and supervision" is understood as involving guidance, instruction, or correction from the person who has conceived the design of the work.

Referring again to the definition of a "creation" in Article 1 point 3, a creation is a work that arises from inspiration, talent, ideas, imagination, ability, expertise, or skill, expressed in tangible form. This implies that there must be an active role played by a human subject or author in controlling ChatGPT. In the context of scientific writing, if a work relies solely on ChatGPT without human intervention from the author, it may potentially fall outside the scope of copyright protection.

Therefore, a scientific work produced with the assistance of ChatGPT must still contain elements of originality derived from human contribution. The Copyright Law requires not only originality of form, but also originality in the creative process. If a scientific work generated with ChatGPT lacks human creativity, thought, and skill, it does not meet the requirements for copyright protection.

The use of ChatGPT in the production of scientific works should be understood merely as the use of a technical tool, similar to a microphone, sound system, or other auxiliary instruments. In the process of drafting a scientific work with ChatGPT, the user provides commands or prompts which can be regarded as the user's own creative process, as they reflect "inspiration, ability, thought, and imagination."

Under the Copyright Law, the output generated by ChatGPT cannot, by itself, be regarded as a work eligible for protection, because Indonesian copyright law recognizes only humans as authors.²⁷ Consequently, a work that is produced without human intervention in the creative process lacks the legal validity required for copyright protection.

Authors should be able to document the process by which ChatGPT's output is modified into a text that bears their own linguistic style. The purpose of this is to ensure that the resulting work still contains elements of originality or authorship as contemplated in Article 1 point 3 of Law No. 28 of 2014 on Copyright.

Authors should also incorporate new concepts derived from their own research and may rewrite AI-generated text in their own words (paraphrasing).²⁸ Such documentation can serve as authentic evidence to support the claim that the scientific work is genuinely the product of the author's creativity, thought, skill, and imagination.

The collaboration between an author and ChatGPT can produce scientific works that are engaging, unique, and efficient by combining human and technological elements into a distinctive whole. This illustrates how technological development can enrich the research landscape without replacing human creativity; instead, it expands the range of possibilities available to authors in creating scientific works.

The use of artificial intelligence must also take ethical considerations into account. Ethical guidelines for the use of AI in Indonesia are specifically addressed in Circular Letter of the Minister of Communication and Informatics No. 9 of 2023 on Ethical Guidelines for Artificial Intelligence.

Although it is "only" a circular, it represents a positive signal of Indonesia's response to AI usage. The circular explicitly states that "the implementation of artificial intelligence is subject to the principle of intellectual property protection in accordance with statutory regulations."

²⁶ Nicola Lucchi, "ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems," *European Journal of Risk Regulation* 15 (August 29, 2023): 1–23, <https://doi.org/10.1017/err.2023.59>.

²⁷ I Ketut Gede et al., "Legality of Copyright Protection on Artificial Intelligence Works," 2025.

²⁸ Analyn Clarin et al., "The Challenges in Paraphrasing Among English Language Students," *EduLine: Journal of Education and Learning Innovation* 3 (October 18, 2023): 493–503, <https://doi.org/10.35877/454RI.eduline2052>.

Through this circular, it is clear that current AI developments are closely linked to the principles of intellectual property protection, and that the deployment of AI is subject to these principles in practice.

CONCLUSION

Based on a normative legal analysis of Law No. 28 of 2014 on Copyright and relevant legal doctrines, it can be concluded that scientific works produced with the assistance of artificial intelligence, such as ChatGPT, cannot independently obtain copyright protection, because AI is not a legal subject. Copyright may only be granted to natural persons or legal entities that make a creative and intellectual intervention in the process of creation. ChatGPT is therefore positioned as a technical tool that facilitates, rather than replaces, the role of the human author. In the context of community service and academic practice, this study underscores the importance of strengthening digital legal literacy among academics and the wider public so that the use of AI-based technologies remains aligned with the principles of originality, academic ethics, and social responsibility. Law functions as a guardian of intellectual morality, ensuring that technological development does not erode human values in creative processes. Thus, the role of law is not only to regulate, but also to empower the digital society to innovate ethically and responsibly.

REFERENCES

- Agulefo, Queen O, and Igbariam Campus. "Original ' under the Law of Copyright Is Distinct from the Ordinary Meaning of ' Original ': A Discourse" 7, no. 6 (2021): 5–11.
- Al-Busaidi, Adil S, Raghu Raman, Laurie Hughes, Mousa Ahmed Albashrawi, Tegwen Malik, Yogesh K Dwivedi, Thuraiya Al- Alawi, et al. "Redefining Boundaries in Innovation and Knowledge Domains: Investigating the Impact of Generative Artificial Intelligence on Copyright and Intellectual Property Rights." *Journal of Innovation & Knowledge* 9, no. 4 (2024): 100630. <https://doi.org/https://doi.org/10.1016/j.jik.2024.100630>.
- Alpian, Alpian, Fokky Fuad, and Anis Rifai. "The Use of Artificial Intelligence Chat GPT in Scientific Papers According to the Perspective of Intellectual Property Rights." *Law Development Journal* 6 (November 28, 2024): 457. <https://doi.org/10.30659/ldj.6.4.457-477>.
- Andresen, S L. "John McCarthy: Father of AI." *Intelligent Systems, IEEE* 17 (October 1, 2002): 84–85. <https://doi.org/10.1109/MIS.2002.1039837>.
- Badghish, Saeed, and Yasir Ali Soomro. "Artificial Intelligence Adoption by SMEs to Achieve Sustainable Business Performance : Application of Technology – Organization – Environment Framework," 2024.
- Choung, Hyesun, Prabu David, and Arun Ross. "Trust in AI and Its Role in the Acceptance of AI Technologies." *International Journal of Human-Computer Interaction*. Vol. 39, 2022. <https://doi.org/10.1080/10447318.2022.2050543>.
- Clarín, Analyn, Sheen Serohijos, Larry Sumaylo, and Genelyn Baluyos. "The Challenges in Paraphrasing Among English Language Students." *EduLine: Journal of Education and Learning Innovation* 3 (October 18, 2023): 493–503. <https://doi.org/10.35877/454RI.eduline2052>.
- Collins, Christopher, Denis Dennehy, Kieran Conboy, and Patrick Mikalef. "Artificial Intelligence in Information Systems Research: A Systematic Literature Review and Research Agenda." *International Journal of Information Management* 60 (2021): 102383. <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2021.102383>.
- Dwivedi, Yogesh K, Nir Kshetri, Laurie Hughes, Emma Louise Slade, Anand Jeyaraj, Arpan Kumar Kar, Abdullah M Baabdullah, et al. "Opinion Paper: 'So What If ChatGPT Wrote It?' Multidisciplinary Perspectives on Opportunities, Challenges and Implications of Generative Conversational AI for Research, Practice and Policy." *International Journal of Information Management* 71 (2023): 102642. <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2023.102642>.
- Faqi, Nanda Yuniza Eviani, Maskun, Ahmad Fahri. "Legal Challenges of AI-Induced Copyright Infringement : Evaluating Liability and Dispute Resolution Mechanisms in Digital Era" 6, no. 02 (2024): 403–28.
- Gede, I Ketut, Adi Ramadika, I Ketut Kasta, and Arya Wijaya. "Legality of Copyright Protection on Artificial Intelligence Works," 2025.
- Golden, Willie. "ChatGPT: A Trusted Source?" *Irish Journal of Technology Enhanced Learning* 7 (December 7, 2023): 113–25. <https://doi.org/10.22554/ijtel.v7i2.129>.
- Gupta, Manisha. "ChatGPT-A Generative Pre-Trained Transformer." *International Journal of Advanced Research in Science, Communication and Technology*, 2024, 590–95. <https://doi.org/10.48175/IJARST-15087>.

- Hirzallah, Mohammad, and Muhammad Alshurideh. "The Effects of the Internal and the External Factors Affecting Artificial Intelligence (AI) Adoption in e-Innovation Technology Projects in the UAE? Applying Both Innovation and Technology Acceptance Theories." *International Journal of Data and Network Science* 7 (April 8, 2023). <https://doi.org/10.5267/j.ijdns.2023.4.006>.
- Irwansyah. "Penelitian Hukum: Pilihan Metode & Praktik Penulisan Artikel." Yogyakarta: Mirra Buana Media 8 (2020): 100.
- Li, Biqu, and Yanyuan Cheng. "ChatGPT in Human Resource Management: A Systematic Review of Influential Factors, Processes, and Outcomes." *Heliyon* 11, no. 15 (2025): e44048. <https://doi.org/https://doi.org/10.1016/j.heliyon.2025.e44048>.
- Lozi, Edisa. "Fluent but Not Factual : A Comparative Analysis of ChatGPT and Other AI Chatbots ' Proficiency and Originality in Scientific Writing for Humanities," 2023.
- Lucchi, Nicola. "ChatGPT: A Case Study on Copyright Challenges for Generative Artificial Intelligence Systems." *European Journal of Risk Regulation* 15 (August 29, 2023): 1–23. <https://doi.org/10.1017/err.2023.59>.
- Malik, Muhammad Abid. "Global Insights : ChatGPT ' s Influence on Academic and Research Writing , Creativity , and Plagiarism Policies," no. November (2024).
- Maragno, Giulia, Luca Tangi, Luca Gastaldi, and Michele Benedetti. "Exploring the Factors, Affordances and Constraints Outlining the Implementation of Artificial Intelligence in Public Sector Organizations." *International Journal of Information Management* 73 (2023): 102686. <https://doi.org/https://doi.org/10.1016/j.ijinfomgt.2023.102686>.
- Mizumoto, Atsushi, Sachiko Yasuda, and Yu Tamura. "Identifying ChatGPT-Generated Texts in EFL Students' Writing: Through Comparative Analysis of Linguistic Fingerprints." *Applied Corpus Linguistics* 4, no. 3 (2024): 100106. <https://doi.org/https://doi.org/10.1016/j.acorp.2024.100106>.
- Qamar, Nurul, and Farah Syah Rezah. *Metode Penelitian Hukum: Doktrinal Dan Non-Doktrinal*. CV. Social Politic Genius (SIGn), 2020.
- Ray, Partha Pratim. "ChatGPT: A Comprehensive Review on Background, Applications, Key Challenges, Bias, Ethics, Limitations and Future Scope." *Internet of Things and Cyber-Physical Systems* 3 (2023): 121–54. <https://doi.org/https://doi.org/10.1016/j.iotcps.2023.04.003>.
- Roumeliotis, Konstantinos, and Nikolaos Tselikas. "ChatGPT and Open-AI Models: A Preliminary Review." *Future Internet* 15 (May 26, 2023): 192. <https://doi.org/10.3390/fi15060192>.
- Sharfina, Nurul Hulwanita, Hasbir Paserangi, Fitri Pratiwi Rasyid, Muhammad Ikram, and Nur Fuady. "Copyright Issues on the Prank Video on the Youtube" 583, no. Iceep (2021): 90–97.
- Suntoro, Suntoro, Ida Zulaeha, Hari Bakti Mardikantoro, and Tommi Yuniawan. "Using ChatGPT To Write Scientific Papers In Indonesia: A Systematic Review." *Ianna Journal of Interdisciplinary Studies* 6, no. 3 SE-Articles (August 21, 2024): 1–16. <https://iannajournalofinterdisciplinarystudies.com/index.php/1/article/view/208>.
- Zhou, Jianlong, Heimo Müller, and Andreas Holzinger. "Ethical ChatGPT : Concerns , Challenges , and Commandments," 2024, 1–13.