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Introduction

Welcome to the Indian Journal of Legal Affairs and Research (IJLAR), a distinguished platform dedicated to the dissemination of comprehensive legal scholarship and academic research. Our mission is to foster an environment where legal professionals, academics, and students can collaborate and contribute to the evolving discourse in the field of law. We strive to publish high-quality, peer-reviewed articles that provide insightful analysis, innovative perspectives, and practical solutions to contemporary legal challenges. The IJAR is committed to advancing legal knowledge and practice by bridging the gap between theory and practice.

Preface

The Indian Journal of Legal Affairs and Research is a testament to our unwavering commitment to excellence in legal scholarship. This volume presents a curated selection of articles that reflect the diverse and dynamic nature of legal studies today. Our contributors, ranging from esteemed legal scholars to emerging academics, bring forward a rich tapestry of insights that address critical legal issues and offer novel contributions to the field. We are grateful to our editorial board, reviewers, and authors for their dedication and hard work, which have made this publication possible. It is our hope that this journal will serve as a valuable resource for researchers, practitioners, and policymakers, and will inspire further inquiry and debate within the legal community.

Description

The Indian Journal of Legal Affairs and Research is an academic journal that publishes peer-reviewed articles on a wide range of legal topics. Each issue is designed to provide a platform for legal scholars, practitioners, and students to share their research findings, theoretical explorations, and practical insights. Our journal covers various branches of law, including but not limited to constitutional law, international law, criminal law, commercial law, human rights, and environmental law. We are dedicated to ensuring that the articles published in our journal adhere to the highest standards of academic rigor and contribute meaningfully to the understanding and development of legal theories and practices.

ETHICAL AND LEGAL CHALLENGES OF USING AI-GENERATED CONTENT IN ACADEMIC RESEARCH: COPYRIGHT, PLAGIARISM, AND ACCOUNTABILITY IN THE AGE OF GENERATIVE ARTIFICIAL INTELLIGENCE

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ABSTRACT

The rapid incorporation of generative artificial intelligence (AI) technologies into academic research has revolutionized conventional approaches to knowledge production, composition, and distribution. Although AI-assisted technologies provide substantial advantages in efficiency, accessibility, and analytical help, their growing utilization has concurrently elicited intricate ethical and legal dilemmas. This work rigorously analyzes the problems related to AI-generated material in academic research, focusing specifically on copyright, plagiarism, and responsibility. This examination investigates whether AI-generated academic works fulfill the legal criteria of originality and authorship under current copyright frameworks and assesses the degree to which the utilization of such material may amount to plagiarism or academic misconduct. The research further examines the issue of responsibility by exploring who has legal and ethical accountability when AI-generated material leads to copyright infringement, misrepresentation, or academic dishonesty. This article utilizes a doctrinal and comparative research technique to examine legislative frameworks and policy responses in India, the United States, and the European Union, as well as evolving international ethical norms. The report contends that current legal and academic governance frameworks are not prepared to tackle the unique difficulties presented by generative AI in research settings. The conclusion advocates for specific legal reforms, enhanced institutional policies, and ethical best practices, including obligatory disclosure of AI utilization and a human-in-the-loop methodology, to maintain a balance between innovation in academic

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research and the safeguarding of academic integrity, transparency, and accountability in the era of generative artificial intelligence.

Keywords: *Artificial Intelligence; Academic Research; Copyright; Plagiarism; Accountability*

1. INTRODUCTION

1.1 Background of the Study

The rapid development of artificial intelligence, especially generative AI systems like huge language models, has profoundly altered the realm of academic study and writing.³ Researchers are progressively using these technologies for tasks like literature evaluation, paper preparation, sophisticated text summarization, data analysis, and language editing.⁴ In contrast to previous digital tools that just aided academics with spell-checking or reference management, generative AI systems may generate cohesive, human-like prose. Consequently, AI has transitioned from a passive tool to an active contributor in the research and writing process.

This transformation signifies a significant change from conventional research help to content creation. Although these tools provide efficiency, accessibility, and inclusivity—particularly for non-native English speakers and early-career researchers—they also undermine established academic conventions of originality, authorship, and intellectual contribution.⁵ The growing dependence on AI-generated information has thus prompted significant ethical and legal inquiries over the integrity of academic research and the viability of current regulatory systems.

1.2 Statement of the Problem

The extensive use of generative AI in academic research has generated considerable ethical ambiguity around originality and authorship. Academic scholarship has historically been based on the premise that research products embody the intellectual effort, creativity, and critical analysis of human writers. When AI systems produce significant chunks of academic writing, it becomes

³ Santos, A. E. D., *Generative Artificial Intelligence and Its Impact on Writing* (2024).

⁴ Zhao D., *The Impact of AI-Enhanced Natural Language Processing Tools on Writing Proficiency: An Analysis of Language Precision, Content Summarization, and Creative Writing Facilitation*, (2025) 30(6) *Education and Information Technologies* 8055–8086.

⁵ Pellerin M. & Ogandaga M., *Rethinking Academic Integrity and Plagiarism for a New AI Era* (2024).

challenging to ascertain the degree of human involvement and if the work can still be deemed original.⁶ This undermines the fundamental principles of academic integrity and prompts apprehensions about deception and inequitable academic advantage.

Besides ethical considerations, the use of AI-generated material introduces significant legal uncertainties. Current copyright legislation primarily relies on human creativity and originality, providing less certainty on the ownership of AI-generated academic works.⁷ Moreover, AI systems are educated on extensive datasets that may include protected information, increasing the danger of inadvertent infringement. The lack of explicit legislative direction engenders ambiguity for scholars, institutions, and publications.⁸

1.3 Research Questions

This project aims to answer the following research issues in response to these challenges:

1. Can AI-generated academic output be safeguarded under current copyright law frameworks?
2. Does the use of AI-generated language in academic research constitute plagiarism or academic misconduct?
3. Who has ethical and legal responsibility for AI-assisted academic research outcomes?

1.4 Objectives of the Study

The main aims of this investigation are threefold. The primary objective is to analyze the legal ramifications of AI-generated material in academic research, specifically with copyright ownership and infringement. Secondly, it aims to examine the ethical dilemmas associated with the use of generative AI, including concerns related to plagiarism, transparency, and academic integrity. The study aims to propose legislative, institutional, and regulatory changes that promote the responsible and ethical use of AI in academic research, while upholding fundamental scholarly principles.

⁶ Hsu H.Y., Hakouz A. & Fotouhi G., *Towards Responsible Generative AI in Academia: A Synthesis of AI Policies on Academic Writing in the Field of Educational Research*, (2025) 5(5) *AI and Ethics* 5467–5484.

⁷ Gaffar H. & Albarashdi S., *Copyright Protection for AI-Generated Works: Exploring Originality and Ownership in a Digital Landscape*, (2025) 15(1) *Asian Journal of International Law* 23–46.

⁸ Da Mota M., *Toward an AI Policy Framework for Research Institutions*, (2024) *Artificial Intelligence*.

1.5 Research Methodology

This article employs a doctrinal legal research technique, concentrating on the examination of legislation, court rulings, policy documents, and scholarly literature. A comparative legal analysis is used to assess and differentiate the regulatory stances of India, the United States, and the European Union. The study employs an analytical and descriptive approach to critically assess ethical issues and provide normative suggestions appropriate for modern academic research settings.

2. CONCEPTUAL FRAMEWORK: AI-GENERATED CONTENT IN ACADEMIC RESEARCH

2.1 Meaning and Scope of Generative Artificial Intelligence

Generative Artificial Intelligence denotes a category of AI systems proficient at generating seemingly unique content, including text, graphics, code, and data outputs, by discerning patterns from extensive datasets.⁹ In academia, generative AI mostly functions via massive language models trained on vast collections of books, journals, and online texts.¹⁰ These systems operate by forecasting and producing sequences of words based on probabilistic models instead of using independent thinking or creativity. Thus, although the output of generative AI may seem original and logical, it is really based on statistical patterns seen in previously generated human material.¹¹ A vital conceptual distinction must be established between AI as an auxiliary instrument and AI as a creator. When AI serves as an assistive tool, it augments human researchers by improving clarity, structure, or efficiency, yet the intellectual guidance, analysis, and accountability rest with the human author. Conversely, AI authorship denotes that the system autonomously produces significant academic material devoid of substantial human intellectual input. This difference is essential for legal and ethical assessment, since current academic standards and copyright

⁹ Sengar S.S., Hasan A.B., Kumar S. & Carroll F., *Generative Artificial Intelligence: A Systematic Review and Applications*, (2025) 84(21) *Multimedia Tools and Applications* 23661–23700.

¹⁰ Lund B.D., Wang T., Mannuru N.R., Nie B., Shimray S. & Wang Z., *ChatGPT and a New Academic Reality: Artificial Intelligence-Written Research Papers and the Ethics of the Large Language Models in Scholarly Publishing*, (2023) 74(5) *Journal of the Association for Information Science and Technology* 570–581.

¹¹ Liu Y. *et al.*, *Generative Artificial Intelligence and Its Applications in Materials Science: Current Situation and Future Perspectives*, (2023) 9(4) *Journal of Materiomics* 798–816.

regulations acknowledge alone human beings as writers and creators. Regard for AI as an author jeopardizes essential tenets of accountability, originality, and academic integrity.¹²

2.2 Applications of AI in Academic Research

Generative AI methods are progressively used across several phases of academic study. A prevalent use is in literature review and summarization, where AI aids scholars in synthesizing extensive scholarly content and pinpointing essential topics. AI technologies are extensively used in the composition and revision of academic works, including the generation of first drafts, enhancement of language, augmentation of coherence, and rectification of grammatical inaccuracies. Such applications are especially advantageous for researchers facing time restrictions or for whom academic English is a second language.

Moreover, AI systems are used for data analysis and interpretation, particularly in multidisciplinary research that involves extensive datasets. Artificial intelligence may aid in trend identification, hypothesis generation, and the presentation of data in comprehensible ways. Nonetheless, these applications need meticulous human supervision to guarantee precision and scientific integrity.¹³

2.3 Advantages and Limitations

The principal benefits of AI-generated material in academic research include increased efficiency, augmented accessibility, and expanded engagement in scholarly dialogue. AI solutions may diminish the time needed for normal research activities and alleviate language obstacles, thereby fostering inclusion. However, these advantages are coupled with considerable constraints. Excessive dependence on AI may result in intellectual dependency, less critical thinking, and a decline in research abilities. Furthermore, generative AI systems are susceptible to generating

¹² Guesseir A., *The Ethics of Academic Legal Writing in the Age of Artificial Intelligence*, (2025) 22(1) *Majallat al-Buḥūth wa al-Dirāsāt* 125–142.

¹³ Mishra D., Mishra R.K. & Agarwal R., *Recent Trends in Artificial Intelligence and Its Applications*, (2024) 1 *Artificial Intelligence–Trends and Applications* 73–106.

erroneous information, spurious citations, and biased results, hence threatening research credibility and academic integrity.¹⁴

3. COPYRIGHT LAW AND AI-GENERATED ACADEMIC CONTENT

3.1 Concept of Authorship and Originality

Copyright law is largely based on safeguarding human creation. Traditionally, the notion of authorship presupposes the existence of a natural person who employs intellectual competence, judgment, and creative decision-making in the creation of an original work. Human creativity is therefore considered essential for copyright protection, since copyright seeks to reward individual intellectual effort rather than mechanical or automatic creation. This concept emphasizes that scholarly publications should demonstrate the independent thinking and analytical contributions of the researcher.¹⁵

Originality is a fundamental need for copyright protection. The threshold of originality, although differing across countries, often necessitates that a work be created by the author and have a basic level of ingenuity.¹⁶ Copyright law protects only the original representation of ideas, facts, or data, not the ideas, facts, or data themselves. In academic research, originality is often linked to innovative ideas, analyses, and interpretations rather than simple aggregation. The emergence of generative AI complicates this comprehension, since AI-generated art is created using computational processes that mimic patterns from pre-existing works, casting question on whether such content can authentically be regarded as a product of human creativity.¹⁷

¹⁴ Sharma P., *Chatbots in Medical Research: Advantages and Limitations of Artificial Intelligence-Enabled Writing with a Focus on ChatGPT as an Author*, (2023) 48(9) *Clinical Nuclear Medicine* 838–839.

¹⁵ Mazzi F., *Authorship in Artificial Intelligence-Generated Works: Exploring Originality in Text Prompts and Artificial Intelligence Outputs through Philosophical Foundations of Copyright and Collage Protection*, (2024) 27(3) *The Journal of World Intellectual Property* 410–427.

¹⁶ Dragan A.M., *Originality, Fundamental Condition for Copyright Protection*, (2019) 17 *Romanian Journal of Intellectual Property Law*.

¹⁷ Uddin M., Arfeen S.U., Alanazi F., Hussain S., Mazhar T. & Arafatur Rahman M., *A Critical Analysis of Generative AI: Challenges, Opportunities, and Future Research Directions*, (2025) *Archives of Computational Methods in Engineering* 1–31.

3.2 Copyrightability of AI-Generated Works

A major concern in the discourse on AI-generated academic literature is the eligibility of such works for copyright protection. This significantly relies on whether AI is seen as a simple instrument or as an autonomous creator. When AI operates as a tool, such to a word processor or statistical software, the human researcher retains authorship, contingent upon their exercise of creative control over the product. In such instances, the work may still fulfill the originality criterion since the AI just aids in articulating the author's intellectual concepts.¹⁸

If AI is seen as an author that autonomously produces significant academic work without major human contribution, the issue of copyrightability becomes very contentious. Most legal frameworks do not acknowledge non-human entities as authors, and AI systems do not possess legal personhood. Consequently, works made solely by AI often lie outside the purview of copyright protection. This engenders ambiguity around ownership in AI-assisted research. Questions emerge over whether copyright is attributed to the researcher using the AI, the inventor of the AI system, or whether the work resides in the public domain. This discrepancy presents considerable difficulties in academic contexts about publishing, credit, and copyright enforcement.

3.3 Comparative Legal Position

3.3.1 India

In India, copyright protection is regulated by the Copyright Act of 1957, which is primarily based on human authorship. The Act designates a “author” as the person responsible for the creation of a work, contingent upon the kind of work.¹⁹ Although this concept seems broad, Indian copyright law has constantly emphasized the need of human creative endeavor. Judicial interpretation has bolstered this perspective by linking authorship to the creativity, ability, and judgment shown by an individual.

The Act²⁰ fails to specifically address works created by AI, resulting in a statutory void. Without explicit safeguards, AI-generated academic material is improbable to get copyright protection

¹⁸ *Supra* note 7

¹⁹ Bhagyamma G., *Protecting Creative Works: Exploring Copyright Protection Under Indian Copyright Law*, (2023) 1(1) *ILE International Law Review* 56–70.

²⁰ The Copyright Act, 1957 (India), as amended by the Copyright (Amendment) Act, 2012.

unless a human author can show enough creative input.²¹ Therefore, researchers using AI techniques must engage intellectually to assert authorship and mitigate legal ambiguities around ownership and protection.

3.3.2 United States

The United States has established a distinctly defined position on AI-generated creations. The US Copyright Office has repeatedly asserted that copyright protection is limited to works produced by human authors.²² Official standards stipulate that works generated solely by AI without human creative contribution are ineligible for copyright registration. This role emphasizes that innovation must originate from human intellectual endeavor.

Judicial precedents in the United States have also dismissed copyright claims lacking human authorship. Judicial bodies have underscored that copyright legislation safeguards "the outcomes of intellectual endeavor" rooted in creative human effort. In academia, this indicates that academics must exert significant control and discernment over AI-generated material to get copyright protection, hence emphasizing the human-centric essence of authorship.

3.3.3 European Union

European copyright law is founded on the principle of "human intellectual creation," necessitating that a work embodies the author's identity via autonomous and creative decisions.²³ This criterion explicitly prohibits works autonomously created by AI systems. The Court of Justice of the European Union has regularly endorsed this human-centric perspective on originality and authorship.²⁴

The European Union is formulating a comprehensive legislative framework for artificial intelligence, which includes the proposed AI Act. The AI Act, although not explicitly addressing copyright ownership, signifies an increasing legislative focus on transparency, responsibility, and

²¹ Seshadri N., *The Dilemma of Artificial Intelligence Generated Works and Indian Copyright Law*, (2021) 3 *Indian Journal of Law and Legal Research* 1.

²² Halwachi I., *The Dilemma of Authorship for AI-Generated Work in the EU and US: A Comparative Study of the Notions of 'Human Input' and 'Author's Own Intellectual Creation' in the Assessment of Authorship for Copyright Protection of AI-Generated Work*, (2024).

²³ Makarowski F., *AI and Creative Machines: Copyright Protection for AI-Generated Works under EU and Swedish Law*, (2018).

²⁴ Gaidartzi A. & Stamatoudi I., *Authorship and Ownership Issues Raised by AI-Generated Works: A Comparative Analysis*, (2025) 14(4) *Laws* 57.

risk management within AI systems.²⁵ This developing approach may indirectly affect future interpretations of copyright law for AI-generated academic output.

3.4 Copyright Infringement and Training Data

A significant issue associated with AI-generated academic work is copyright infringement stemming from AI training data. Generative AI systems are trained on extensive datasets that may include copyrighted books, papers, and academic publications, sometimes without express authorization. This prompts legal inquiries over whether such training constitutes infringement or is included by exceptions such fair use or fair dealing.²⁶

Furthermore, there exists a possibility that AI-generated outputs may closely mimic existing protected works, leading to derivative or substantially identical material. This poses a risk of inadvertent violation and diminishes intellectual integrity in academic research. Consequently, researchers must exercise prudence, authenticate originality, and ascertain that AI-generated output does not violate existing intellectual property rights.

4. PLAGIARISM AND ACADEMIC MISCONDUCT IN THE AI ERA

4.1 Concept and Types of Plagiarism

Plagiarism is conventionally defined as the act of presenting another individual's ideas, words, or creative expressions as one's own without appropriate attribution. In scholarly research, plagiarism compromises the fundamental principles of originality, honesty, and intellectual integrity. It encompasses not just literal replication but also close paraphrase, appropriation of concepts, and the reuse of previously published material without acknowledgment. Academic institutions in several countries see plagiarism as a grave type of misconduct, often resulting in significant academic and professional repercussions.²⁷

²⁵ Regulation (EU) 2024/1689 of the European Parliament and of the Council of 13 June 2024 Laying Down Harmonised Rules on Artificial Intelligence (Artificial Intelligence Act), OJ L, July 2024 (European Union).

²⁶ Abdulwahhab Ismail I., *Artificial Intelligence and the Development of Academic Authorship: Analyzing AI-Generated Content, Ethical Issues, and Intellectual Property Challenges*, (2025).

²⁷ Helgesson G. & Eriksson S., *Plagiarism in Research*, (2015) 18(1) *Medicine, Health Care and Philosophy* 91–101.

Plagiarism may be categorized into deliberate and unintentional types. Intentional plagiarism transpires when a researcher deliberately replicates or distorts another's work, often to get academic or professional benefits. Unintentional plagiarism, conversely, results from carelessness, insufficient citation methods, or a lack of comprehension of academic norms. While intent may affect the severity of penalties, both instances are considered breaches of academic ethics.²⁸ The advent of AI-generated content confuses this difference, as researchers may unintentionally submit AI-produced material that resembles prior works without any deliberate intention to mislead.

4.2 AI-Generated Content and Plagiarism Concerns

The use of AI-generated material presents distinct plagiarism issues, especially regarding credit and originality. Generative AI systems generate content by analyzing patterns from extensive collections of existing literature, but often fail to provide citations or reveal source material. Consequently, AI-generated academic writing may inadvertently replicate concepts, frameworks, or expressions sourced from copyrighted or scholarly materials without proper citation.²⁹ When researchers offer such information as their own, it raises problems about whether this constitutes plagiarism, even if the researcher did not directly replicate any recognizable source.

Paraphrasing poses an extra difficulty. AI techniques are often used to paraphrase existing content, creating an illusion of uniqueness while preserving the core concepts of the original work. Overdependence on AI-generated paraphrase may conceal plagiarism instead of mitigating it. In academic research, uniqueness encompasses not just language diversity but also intellectual contribution and critical interaction. Consequently, AI-generated paraphrase devoid of substantial human evaluation may not satisfy established criteria for academic originality.³⁰

²⁸ Shah J.N., Shah J., Baral G., Baral R. & Shah J., *Types of Plagiarism and How to Avoid Misconduct: Pros and Cons of Plagiarism Detection Tools in Research Writing and Publication*, (2021) 16(2) *Nepal Journal of Obstetrics and Gynaecology* 3–18.

²⁹ Alawad E.A., Ayadi H.H. & Alhinai A.A., *Guarding Integrity: A Case Study on Tackling AI-Generated Content and Plagiarism in Academia*, (2025) 15(6) *Theory & Practice in Language Studies (TPLS)*.

³⁰ Selvakumar P. & Manjunath T.C., *AI in Text Paraphrasing*, in *Using AI Tools in Text Analysis, Simplification, Classification, and Synthesis* 351–376 (IGI Global Scientific Publishing, 2025).

4.3 Institutional and Regulatory Challenges

Universities and research institutes have always depended on plagiarism regulations and detection tools to uphold academic integrity. Nonetheless, current plagiarism frameworks often lack the capability to effectively handle AI-generated material. Many institutional norms characterize plagiarism as the act of replicating identified sources, but AI-generated content may not correspond to any specific existing work. This engenders regulatory voids and ambiguity in enforcement.³¹

Moreover, AI-detection methods now encounter considerable constraints. These methods often provide inconsistent outcomes, exhibit elevated rates of false positives and false negatives, and lack methodological clarity. Dependence on inaccurate detection methods jeopardizes the equitable treatment of researchers and may result in the oversight of genuine wrongdoing. Journals and colleges have the difficulty of revising their academic integrity rules to include AI-assisted research while maintaining fairness, due process, and clarity.³²

4.4 Ethical Evaluation

The ethical implications of using AI-generated material in academic research need an assessment based on the ideals of academic integrity and openness. Academic integrity necessitates that scholars authentically depict the magnitude of their intellectual contributions and refrain from misrepresenting authorship. Submitting AI-generated work without disclosure may deceive evaluators, reviewers, and readers about the researcher's original contribution.

Transparency in research methodologies is equally vital. Ethical research necessitates explicit disclosure of methodology, instruments, and support used in the study process, including the application of AI technology. Disclosure does not inherently exclude the employment of AI but rather fosters responsibility and trust in academic discourse. Ultimately, the ethical use of AI in academia necessitates that researchers maintain intellectual accountability for their work,

³¹ Jabeen F., Tariq S. & Khan M., *Challenges of Using Artificial Intelligence (AI) Paraphrasing Tools at University Level: A Survey Research*, (2025) 3(5) *Dialogue Social Science Review (DSSR)* 698–712.

³² Chen Z., Chen C., Yang G., He X., Chi X., Zeng Z. & Chen X., *Research Integrity in the Era of Artificial Intelligence: Challenges and Responses*, (2024) 103(27) *Medicine* e38811.

rigorously evaluate AI outputs, and guarantee that generative technologies augment rather than undermine academic integrity.³³

5. ETHICAL CHALLENGES OF USING AI IN ACADEMIC RESEARCH

5.1 Principles of Research Ethics

Research ethics are based on essential principles that protect the integrity and dependability of academic work. Integrity, openness, and accountability have a pivotal role among these elements. Integrity necessitates that research be performed with honesty and that results accurately represent genuine intellectual endeavor rather than distortion or deceit.³⁴ In AI-assisted research, integrity is compromised when AI-generated work is misrepresented as entirely original human scholarship without sufficient disclosure of the technical instruments used.

Transparency is a fundamental ethical value that necessitates openness about research methodologies, sources, and instruments used in the creation of academic work.³⁵ The use of generative AI systems creates an additional layer of obscurity, since the core mechanisms of these models are often private and unattainable. Omission of AI participation in research procedures compromises openness and may diminish confidence in academic results. Responsibility, the third tenet of research ethics, mandates that researchers maintain accountability for the precision, originality, and ramifications of their work, irrespective of the methodologies used. Ethical responsibility cannot be delegated to AI systems, which possess no moral agency.³⁶

5.2 Impact of AI on Scholarly Values

The growing dependence on generative AI presents substantial threats to fundamental academic principles. A potential concern is the diluting of authorship. Academic authorship conventionally denotes intellectual ownership, responsibility, and academic contribution. The generation of

³³ Balasubramaniam N., Kauppinen M., Rannisto A., Hiekkänen K. & Kujala S., *Transparency and Explainability of AI Systems: From Ethical Guidelines to Requirements*, (2023) 159 *Information and Software Technology* 107197.

³⁴ Barrow J.M., Brannan G.D. & Khandhar P.B., *Research Ethics*, (2017).

³⁵ Baron H. & Young L.E., *From Principles to Practice: Methods to Increase the Transparency of Research Ethics in Violent Contexts*, (2022) 10(4) *Political Science Research and Methods* 840–847.

³⁶ McKee K.R., *Human Participants in AI Research: Ethics and Transparency in Practice*, (2024) *IEEE Transactions on Technology and Society*.

significant academic material by AI systems obscures the notion of authorship, prompting issues over misattribution and the dilution of academic credit. This dilution compromises the normative role of authorship as an indicator of accountability and proficiency.³⁷

Moreover, an overreliance on AI technologies may result in a decline in critical thinking and analytical abilities. Academic research include not just the generation of text but also the assessment of sources, the formulation of arguments, and critical engagement with existing literature. An excessive dependence on AI-generated outputs may inhibit autonomous thinking and hinder the cultivation of vital research skills, especially among early-career academics and students.³⁸

5.3 Bias, Hallucination, and Reliability Issues

Generative AI systems are susceptible to generating biased and incorrect outputs according to the characteristics of their training data and algorithmic architecture. Algorithmic bias occurs when AI models mirror or exacerbate existing social, cultural, or epistemological biases found in their training datasets. In academic research, such biases may skew interpretation, marginalize certain viewpoints, and undermine the impartiality of scholarly work.³⁹

A significant ethical issue is the occurrence of hallucination, in which AI systems provide credible but factually inaccurate information. This include spurious citations, fictitious legal cases, and erroneous data references. In academic research, dependence on such outputs without validation may result in the propagation of misinformation and compromise the integrity of scientific publications. The incapacity of AI systems to autonomously verify facts intensifies these threats.

5.4 Moral Responsibility of Researchers

In light of these ethical dilemmas, the moral obligation for AI-assisted academic research lies firmly with human researchers. Researchers must diligently examine and validate all AI-generated

³⁷ Ekundayo T., Khan Z. & Nuzhat S., *Evaluating the Influence of Artificial Intelligence on Scholarly Research: A Study Focused on Academics*, (2024) 2024(1) *Human Behavior and Emerging Technologies* 8713718.

³⁸ R. Yavich, 'Will the Use of AI Undermine Students' Independent Thinking?' (2025) 15(6) *Education Sciences* 669.

³⁹ J Afreen, M Mohaghegh and M Daborjeh, 'Systematic Literature Review on Bias Mitigation in Generative AI' (2025) *AI and Ethics* 1–53.

outputs to guarantee precision, originality, and adherence to academic norms. Human verification is crucial to avert the dissemination of inaccuracies, disinformation, and immoral material.

The ethical use of AI necessitates its designation as an auxiliary instrument rather than a replacement for human intelligence.⁴⁰ Researchers must use critical judgment, retain intellectual authority over their work, and acknowledge the degree of AI aid when applicable. By using a human-in-the-loop methodology, researchers may use the advantages of AI while upholding the ethical principles of academic inquiry.

6. ACCOUNTABILITY AND LIABILITY IN AI-ASSISTED RESEARCH

6.1 Determining Responsibility

Accountability in AI-assisted academic research poses intricate issues owing to the participation of several stakeholders, including researchers, academic institutions, and AI developers. Notwithstanding the technical complexity of generative AI systems, accountability for research findings cannot be ascribed to AI itself, since these systems lack legal identity and moral agency. Consequently, the main obligation is with human stakeholders.⁴¹

The researcher plays a vital role in establishing accountability. Researchers are the creators and submitters of scholarly work and are anticipated to maintain intellectual oversight of the research process. Researchers retain responsibility for validating the correctness, originality, and ethical adherence of information generated by AI techniques. The use of AI does not exempt researchers from accountability for inaccuracies, misrepresentations, or violations contained in their work. Academic institutions also possess a level of institutional responsibility. Universities and research institutions must formulate explicit criteria for the use of AI in research, provide training on ethical research methodologies, and uphold standards of academic integrity. Neglecting to revise institutional rules on AI-assisted research might lead to uneven enforcement and heightened risk of misbehavior.

⁴⁰ GH Kasap, 'Can Artificial Intelligence ("AI") Replace Human Arbitrators? Technological Concerns and Legal Implications' (2021) *Journal of Dispute Resolution* 209.

⁴¹ D Mezzadri, 'The Paradox of Ethical AI-Assisted Research' (2025) *Journal of Academic Ethics* 1–15.

AI developers represent the third group of participants in AI-assisted research. Although developers often absolve themselves of liability via terms of service, ethical issues emerge about the design, training, and implementation of AI systems. Developers may have indirect accountability, especially when AI systems are taught on unauthorized copyrighted content or lack protections against misrepresentation.⁴²

6.2 Legal Implications

The use of AI-generated information in academic research has considerable legal ramifications, especially with copyright violation. If AI-generated outputs replicate protected phrases from copyrighted materials, researchers may incur liability for infringement, regardless of intent. Copyright law often functions on a strict liability principle, indicating that lack of intent does not automatically absolve one of obligation.⁴³ Therefore, researchers must be vigilant and guarantee that AI-generated material does not violate current intellectual property rights.

Besides copyright issues, AI-assisted research may lead to academic fraud and misrepresentation. Presenting AI-generated work as original human research without notice may constitute misleading and might be deemed academic misconduct.⁴⁴ Such activities may result in disciplinary measures, withdrawal of publications, and harm to professional reputation. The legal ramifications may be more grave when research funding, employment, or academic credentials are acquired by deceit.

6.3 Need for Disclosure and Transparency

Due to the responsibility and liability issues linked to AI-assisted research, openness and transparency are crucial precautions. AI-use statements enable researchers to reveal the kind and degree of AI aid in their work, therefore fostering transparency and confidence in academic communication. Numerous academic journals and publishers have initiated mandates for such disclosures to protect research integrity.

⁴² *ibid*

⁴³ S Wu, 'Research on the Liability for Copyright Infringement of Generative Artificial Intelligence' (2025) 1(2) *Law and Humanities* 42–54.

⁴⁴ F Kurniawan, 'AI-Assisted Final Paper Writing: An Ethical Perspective on Academic Dishonesty' (2024) *ACADEMIC* 187

Ethical authoring standards necessitate that human writers assume complete accountability for AI-assisted results. Authorship should be restricted to those who have made significant intellectual contributions and are prepared to accept responsibility for the work. Transparent disclosure of AI utilization does not compromise academic integrity; instead, it bolsters ethical norms by elucidating the function of technology in the study process.⁴⁵ By implementing transparent disclosure standards and accountability mechanisms, academic institutions may promote responsible AI use while maintaining the integrity of scholarly research.⁴⁶

7. REGULATORY AND POLICY FRAMEWORK

7.1 Existing Academic and Publishing Guidelines

In light of the increasing use of generative AI in academic research, journals and academic institutions have begun the development of rules to govern its ethical and responsible application. Prominent academic publishers have implemented publishing rules concerning AI-generated work.⁴⁷ Numerous publications allow the utilization of AI tools for restricted functions, such as language editing or formatting, but forbid their employment as writers or as replacements for original scientific study. Authors must declare the use of AI technologies and retain complete accountability for the correctness, originality, and integrity of their submitted work. These regulations indicate an agreement that AI can serve as an assisting tool but cannot take on authorship or responsibility.

Universities and research institutes have also revised their research ethical requirements to accommodate AI-assisted scholarship.⁴⁸ Institutional policies increasingly prioritize openness, academic integrity, and the proper use of new technology. Nonetheless, significant discrepancies persist in institutions' definitions of acceptable AI use, resulting in enforcement inconsistencies.

⁴⁵ IC Nnorom, 'Ethical Considerations in Artificial Intelligence and Academic Integrity: Balancing Technology and Human Values' (2025) *AI and Ethics, Academic Integrity and the Future of Quality Assurance in Higher Education* 15.

⁴⁶ OA Ilie, 'The Ethics of AI-Assisted Academic Writing: Authenticity Criteria in the Evaluation of Students' Assignments' (2025) 31(2) *International Conference Knowledge-Based Organization* 155–158.

⁴⁷ C Ganjavi *et al*, 'Publishers' and Journals' Instructions to Authors on Use of Generative Artificial Intelligence in Academic and Scientific Publishing: Bibliometric Analysis' (2024) 384 *BMJ*.

⁴⁸ IJ Thompson, *AI-Assisted Tools for Research Development: An Assessment of Current Policies, Best Practices, and Potential Use Cases* (Doctoral dissertation, 2025).

The absence of universal criteria generates ambiguity for researchers and highlights the need for standardized institutional norms that explicitly define permissible and impermissible use of generative AI in academic research.⁴⁹

7.2 International Initiatives

Numerous organizations have established ethical frameworks to direct the governance of artificial intelligence at the worldwide level. The United Nations Educational, Scientific and Cultural Organization (UNESCO) has endorsed proposals regarding the ethics of artificial intelligence, highlighting the need of human supervision, transparency, accountability, and the protection of intellectual property rights.⁵⁰ These principles promote a human-centered approach to AI implementation and emphasize the need of protecting academic freedom and integrity in research environments.

The Organisation for Economic Co-operation and Development (OECD) has established AI principles that advocate for responsible innovation, equity, and accountability. The OECD guidelines emphasize the need for openness and explainability in AI systems, together with procedures to guarantee that human agents remain responsible for AI-generated results. Although these efforts lack legal enforceability, they provide significant normative direction for governments, organizations, and researchers aiming to govern AI use in academia.⁵¹

7.3 Indian Regulatory Perspective

The legal framework for AI use in academic research in India is still nascent.⁵² The University Grants Commission (UGC) is crucial in upholding academic standards and research integrity inside higher education institutions. Although the UGC has promulgated policies concerning

⁴⁹ JE Duah and P McGivern, 'How Generative Artificial Intelligence Has Blurred Notions of Authorial Identity and Academic Norms in Higher Education, Necessitating Clear University Usage Policies' (2024) 41(2) *The International Journal of Information and Learning Technology* 180–193.

⁵⁰ UNESCO, *Recommendation on the Ethics of Artificial Intelligence* (adopted 23 Nov 2021, UNESCO Doc No SHS/2023/PI/H/1, published 2023, United Nations Educational, Scientific and Cultural Organization, Paris)

⁵¹ Organisation for Economic Co-operation and Development (OECD), *Recommendation of the Council on Artificial Intelligence* (adopted 22 May 2019, OECD/LEGAL/0449, revised 3 May 2024)

⁵² P Dixit and SK Singh, 'Navigating the Development and Governance of AI Ecosystems in India: Challenges, Opportunities, and Policy Recommendations' (2024) 12(4) *International Journal of All Research Education and Scientific Methods (IJARESM)* 5243–5255.

academic misconduct and plagiarism, a comprehensive framework addressing the ethical and legal ramifications of AI-generated academic material is now lacking.⁵³ Current rules do not clearly address matters like as AI-assisted authorship, disclosure obligations, or accountability.

The lack of institutional AI governance in Indian academics engenders legal ambiguity and heightens the danger of disparate practices. The UGC must now establish clear and consistent standards for the use of generative AI in research and academic writing. These principles must reconcile innovation with integrity by allowing ethical AI use while enforcing openness, disclosure, and human responsibility. Implementing a formal regulatory framework will safeguard academic standards and integrate Indian higher education with the developing worldwide best practices in AI governance.

8. RECOMMENDATIONS AND SUGGESTIONS

8.1 Legal Reforms

A critical need in the age of generative artificial intelligence is the elucidation of copyright ownership concerning AI-assisted academic works.⁵⁴ Legislatures need to revise current copyright regimes to expressly acknowledge AI as a tool rather than a creator, while clearly delineating the criteria under which human users may claim authorship and ownership. This clarification will diminish legal ambiguity and provide researchers, publishers, and institutions with consistent regulations pertaining to intellectual property rights.⁵⁵ Copyright legislation should mandate verifiable human intellectual contribution as a condition for protection, so guaranteeing that uniqueness is rooted in human creation.

Moreover, the legal acknowledgment of AI-assisted work must be meticulously organized. Instead of attributing authorship to AI systems, legislation may recognize AI-assisted works as a separate

⁵³ University Grants Commission, *UGC (Promotion of Academic Integrity and Prevention of Plagiarism in Higher Educational Institutions) Regulations, 2018* (notified 31 Jul 2018, Gazette of India, University Grants Commission, New Delhi).

⁵⁴ S Singh, 'Adapting Copyright in the Age of AI: Rethinking Authorship and Safeguarding Generative AI Work' (2024).

⁵⁵ Harshal Chhabra and Kanishk Gaurav Pandey, 'Balancing Indian Copyright Law with AI-Generated Content: The "Significant Human Input" Approach' (21 March 2024) *NLS Forum (Indian Journal of Law and Technology)*

category in which human writers maintain ownership and accountability, contingent upon public disclosure of AI participation.⁵⁶ This method maintains the human-centered essence of copyright while embracing technical advancement.

8.2 Academic Policy Measures

Academic institutions and publications must implement explicit policy mechanisms to govern the use of AI in research. The obligatory declaration of AI use need to be included into institutional research ethical protocols and journal submission criteria. Such disclosures must specify the nature, purpose, and scope of AI help, allowing reviewers and readers to evaluate the integrity of the research process. Disclosure standards foster transparency while without impeding the proper use of AI.⁵⁷

Updated plagiarism standards are crucial for addressing AI-generated material. Conventional definitions of plagiarism must be broadened to include the misrepresenting of AI-generated content as original human study.⁵⁸ Institutions must explicitly differentiate between allowable AI help, such as language editing, and prohibited activities, such as the generation of significant academic work devoid of human intellectual involvement. Revising plagiarism guidelines would guarantee equity and uniformity in the enforcement of academic integrity.

8.3 Ethical Best Practices

In addition to legal and legislative improvements, ethical best practices are essential for directing appropriate AI use in academic research. Universities and research institutions need to allocate resources towards training programs that educate researchers, teachers, and students on the ethical, legal, and methodological ramifications of generative AI.⁵⁹ This training may improve

⁵⁶ NN Gutowski, 'Disclosing the Machine: Trends, Policies, and Considerations of Artificial Intelligence Use in Law Review Authorship' (2025) *Jacksonville University Law Review*

⁵⁷ HY Hsu, A Hakouz and G Fotouhi, 'Towards Responsible Generative AI in Academia: A Synthesis of AI Policies on Academic Writing in the Field of Educational Research' (2025) 5(5) *AI and Ethics* 5467–5484.

⁵⁸ J Hutson, 'Rethinking Plagiarism in the Era of Generative AI' (2024) 4(1) *Journal of Intelligent Communication*

⁵⁹ R Michel-Villarreal, E Vilalta-Perdomo, DE Salinas-Navarro, R Thierry-Aguilera and FS Gerardou, 'Challenges and Opportunities of Generative AI for Higher Education as Explained by ChatGPT' (2023) 13(9) *Education Sciences* 856.

understanding of dangers like prejudice, delusion, and copyright infringement, while fostering educated and responsible use.

The advancement of a human-in-the-loop research paradigm is of similar significance. This methodology guarantees ongoing human supervision and decision-making throughout the study process, with AI functioning only as an auxiliary instrument. By maintaining human verification, critical analysis, and responsibility, scholars may use the advantages of AI while preserving academic integrity. Collectively, these proposals provide a measured approach for incorporating AI into academic research while maintaining ethical and legal requirements.

9. CONCLUSION

The growing incorporation of generative artificial intelligence into academic research has radically transformed conventional methods of knowledge generation and distribution. This work has analyzed the ethical and legal dilemmas related to the use of AI-generated material in academic research, emphasizing copyright, plagiarism, and responsibility. The research reveals that current copyright frameworks, based on human authorship and originality, are inadequate for addressing the challenges posed by AI-assisted scholarship. AI-generated academic work presents considerable issues related to ownership, copyright, and authorship attribution, particularly in the lack of explicit legal direction.

The report emphasizes that using AI-generated material presents significant threats to academic integrity when used without openness and rigorous scrutiny. Although AI tools might improve productivity and accessibility, unchecked dependence on these technologies may result in plagiarism, misrepresentation, and the degradation of fundamental academic principles. Ethical dilemmas, including algorithmic prejudice, falsified citations, and less critical thinking, highlight the need of preserving human accountability and intellectual oversight in research outcomes. Consequently, reconciling innovation with academic integrity is crucial. Generative AI need to be seen as an auxiliary instrument that enhances, rather than supplants, human intelligence. Legal changes, institutional rules, and ethical best practices must collaborate to guarantee that AI-assisted research is transparent, responsible, and credible. Compulsory disclosure of AI utilization,

updated plagiarism criteria, and human-in-the-loop research frameworks provide effective means to attain this equilibrium.

In the future, the role of AI in academic research is expected to broaden as technologies advance. Proactive regulatory frameworks and ethical governance structures are essential for responsibly molding the future. By integrating innovation with integrity, the academic community may use the capabilities of AI while upholding the core tenets of research, trust, and intellectual honesty.

