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Natalia Vasylyshyna¹, Tetiana Skyrda², Natalia Lazorenko³, Iryna Kravets⁴

¹<https://orcid.org/0000-0002-0003-9998>

²<https://orcid.org/0000-0002-0281-824X>

³<https://orcid.org/0000-0003-0553-0804>

⁴<https://orcid.org/0000-0002-7845-0226>

^{1,2,3}NGE “SU “Kyiv Aviation Institute”, Ukraine

⁴National Academy of Internal Affairs, Ukraine

**LEGAL PERSPECTIVE ON ARTIFICIAL INTELLIGENCE AND
ACADEMIC INTEGRITY WITHIN UNIVERSITY EDUCATION
PROCESS PARTICIPANTS RESEARCH ACTIVITY: NEW
POSSIBILITIES ALONG WITH NEW LIMITATIONS**

Summary

The actuality of the ongoing paper might be supported with the further essential explanation that all individuals engaged in academic endeavors, regardless of their level of experience within an educational institution, are part of a community dedicated to maintaining intellectual integrity and transparency. This entails giving appropriate acknowledgment to the creators of ideas, data, and works that are referenced. A failure to demonstrate such respect, whether through inadequate citation, poor academic practices, data fabrication, outsourcing work, or other forms of misconduct, signifies an incomplete educational journey; it is unethical and can have enduring adverse effects on future professional opportunities. Plagiarism, while merely one type of academic misconduct, is particularly significant as academic work inherently relies on prior contributions; mastering the proper use and citation of others' work is an essential skill for any scholar. Thus, the importance of academic integrity cannot be overstated, as it not only reflects poorly on oneself but also tarnishes one's reputation as a scholar and undermines the core principles of academic dialogue. Furthermore, disciplinary actions may ensue, potentially resulting in long-term repercussions that could hinder future employment opportunities. Academic integrity plays a crucial role in the advancement of science, scholarly publications, and higher education institutions. Adherence to the principles

of academic integrity by authors and researchers is essential for the successful growth of academic journals, enhancing their impact and reputation, and broadening their readership. As stipulated in subsection 31, paragraph 1 of Article 58 of the Law of Ukraine “On Higher Education,” faculty and staff are required to: "uphold academic integrity in both the educational process and scientific (creative) endeavors, and to ensure that higher education students adhere to these standards."Furthermore, Article 42 of the Law of Ukraine "On Education" defines academic integrity as a collection of ethical principles and regulations established by law, which participants in the educational process must follow during learning, teaching, and conducting scientific activities to foster trust in research outcomes and/or scientific contributions. The key purpose of the ongoing study is to put emphasis on legal foundations that define and regulate the possible academic integrity violations along with outlining some of the widespread misconduct which takes place in modern research papers in order to prevent their repetition and popularization among scientific global community which might reduce legal breaches of academic integrity in future specific area investigations. This research findings have identified several breaches of academic integrity that may occur during the editorial and publishing processes. These include: academic plagiarism, which involves the publication of scientific or creative results obtained by others, misrepresented as one's own research or creativity, as well as the reproduction of published texts or works of art from other authors without proper attribution; self-plagiarism, defined as the act of publishing one's own previously published scientific results as if they were new contributions to the field; fabrication, which refers to the invention of data or facts utilized in educational or scientific research; falsification, characterized by the intentional alteration or modification of existing data related to educational or scientific endeavors; deception, which involves the provision of knowingly false information regarding one's own educational, scientific, or creative activities, or the organization of the educational process; the provision or receipt of funds, property, services, benefits, or any other material or non-material advantages by a participant in the editorial process, aimed at distorting the publication process and influencing a favorable decision regarding the publication of an article; biased evaluation of submitted works, which involves the intentional overestimation or underestimation of research results or content by reviewers or editors; unauthorized alterations to the text of a submitted manuscript without the authors' consent.

Keywords: legal concerns, digital age, artificial intelligence (AI), technology, ethical and integrity standards, academic integrity, academic research, research methodology, plagiarism, law violations, university learners, university teachers, misconduct in research, digital literacy, Code of Practice and Procedure

Introduction

The interaction of AI and academic integrity in university research is a complex, multifaceted issue that presents both exciting opportunities and significant challenges. While AI has the potential to revolutionize the way academic research is conducted, it also raises important questions about ethics, bias, accountability, and the preservation of authentic scholarly work. Addressing these challenges effectively will require ongoing collaboration between researchers, educators, and institutions to ensure that AI enhances rather than undermines the core values of academic integrity.

The increasing use of AI tools in research forces university teachers to adapt to new ways of conducting and supervising research. This shift requires educators to be knowledgeable about AI's capabilities, limitations, and ethical implications, as they will be guiding students and colleagues on how to use AI in academic research while upholding integrity. Moreover, they must maintain their own academic integrity, setting a strong example by using AI in ways that support authentic and transparent research practices.

A major challenge of AI in academic research is the potential over-reliance on automated systems, which might lead to a decline in critical thinking, creativity, and independent problem-solving among researchers. If AI systems are used to automate significant portions of the research process, it might lead to questions about the authenticity of the researcher's contribution and whether the work is truly their own.

Teachers need to ensure that their research activities remain driven by human intellect and judgment, with AI serving as a supportive tool rather than a substitute for the professional perfection. Although the topic of AI and academic integrity of university teachers research activity is not enough studied, so it is important to explore it deeper, especially new possibilities and new challenges.

It should be noted that early discussions about the role of artificial intelligence in academic research can be traced back to the 1990s and early 2000s when AI began to be applied to data analysis and pattern recognition in fields like bioinformatics, computational linguistics, and social sciences. As AI began to be applied in plagiarism detection in 1998, discussions around AI's role in maintaining academic integrity began to emerge. These discussions focused on the balance between using automated systems for plagiarism detection and the need for human judgment.

The article "The Role of University Faculty in the Digital Age" covers the role of faculty in an increasingly digital world, often touching on tools like AI for research. This explores the

use of AI in teaching and research and how academic integrity might be impacted by technological tools. R. P. McCabe and L. Trevino in 2001 explored evolving concerns about academic integrity as digital tools, including AI, were being integrated into academic processes [14].

It is necessary to note as AI evolved and its capabilities in machine learning, natural language processing, and data analysis became widely recognized, its role in academic research and integrity started to be more explicitly discussed. In the work "Artificial Intelligence in Research" the question of how AI can assist or complicate research and how it might challenge traditional concepts of authorship and integrity in research is described [9].

Traditionally, university teachers have played key roles in guiding research, from mentoring students to overseeing the research process. As AI technologies become more advanced, the role of university teachers is shifting. They are not only expected to be proficient in research methodologies but also in integrating and assessing AI tools in the research process. Some scholars argue that AI should not replace human judgment, but rather support university teachers by handling routine or time-consuming tasks, allowing them to focus on more complex and creative aspects of research.

Others caution against over-reliance on AI, as it could undermine critical thinking and independent scholarship among researchers. Such points as international framework for AI in education and guidelines for institutional policies was discussed in the article "AI and Education: Guidance for Policy-makers" in 2021. International Conference on Academic Integrity in 2020-2024 covered such problems as annual proceedings focusing on AI challenges, case studies and best practices and Policy recommendations.

The purpose of research is to improve understanding of AI capabilities in research, its new possibilities and new challenges. It is necessary to explore and critically examine how artificial intelligence is transforming academic research practices, particularly for university teachers, and to understand the implications of these changes for maintaining academic integrity. This research aims to address both the opportunities and challenges presented by AI integration into academic research workflows, focusing on ensuring that AI tools support thorough, ethical, and transparent research practices. This includes analyzing AI-powered plagiarism detection systems and examining their effectiveness in identifying violations of academic integrity.

The research also aims to explore how AI can be integrated into the peer review process, or in ensuring that research data is handled and presented transparently. As AI technology continues to evolve, it will likely bring new possibilities and challenges that researchers and

institutions must address. The research aims to forecast these developments and help institutions prepare for the changing dynamics of academic research [14].

The main task of the research is to investigate how AI tools influence the efficiency and quality of research conducted by university teachers. This involves exploring the role of AI in data collection, literature review automation, and analysis, and evaluating whether these tools enhance or detract from the rigor and depth of academic work.

One more task is to investigate how the integration of AI into academic research activities is reshaping the role of university teachers. This includes understanding how teachers use AI for research tasks, their changing responsibilities as mentors, and the extent to which they rely on AI tools in their own research activities. Another task involves exploring emerging AI technologies and considering how these might reshape research practices, academic workflows, and the future of academic integrity.

The goal is to ensure that AI tools are used in a manner that enhances research practices, maintains the ethical standards of academic work, and helps university teachers adapt to the changing landscape of academic research in the age of artificial intelligence [9].

Academic integrity and research integrity are interconnected yet distinct concepts within the academic and research landscape. Academic integrity encompasses the ethical principles that guide students in their educational endeavors, including the submissions they make for assignments and evaluations. In contrast, research integrity pertains to the ethical conduct of research activities and the responsible sharing of research outcomes. Both types of integrity are essential, as they foster a culture of excellence and trust within the academic and research communities. Plagiarism significantly undermines the credibility and reliability of both educational and research efforts, making it crucial to avoid such practices in order to maintain academic and research integrity. Plagiarism occurs when an individual utilizes another person's words, theories, data, or concepts without giving appropriate credit to the original source. Forms of plagiarism may include: direct copying - utilizing text or visual materials without quotation marks or proper citation of the source; mosaic or patchwork plagiarism - merging sentences from various sources or using another's text as a framework for one's own work, resulting in a new text that seems original; presenting another person's ideas, concepts, or arguments as one's own without proper acknowledgment of the source; self-plagiarism - reusing one's own previous work without appropriate citation or permission (Figure 1) [1].

The Importance of Maintaining Academic Integrity

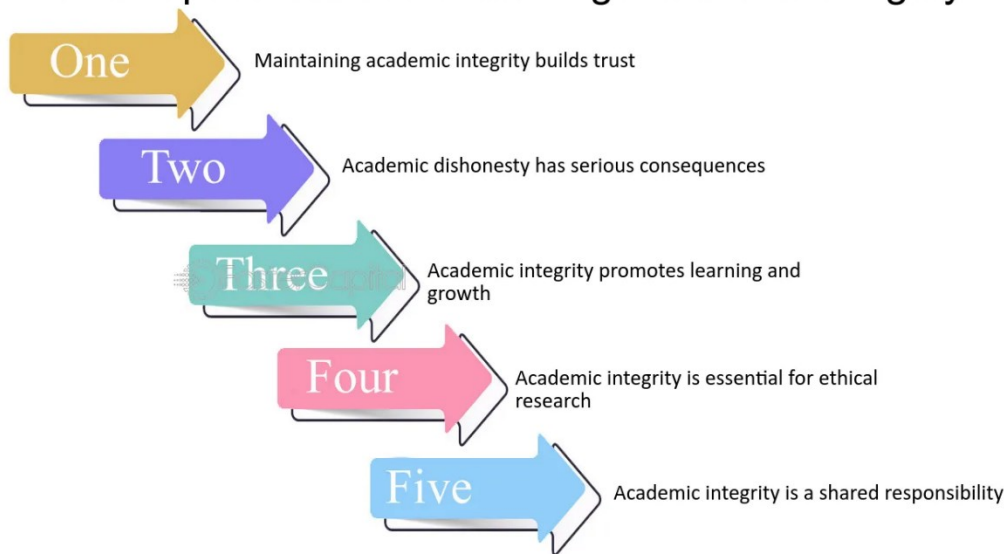


Figure 1. Academic Integrity Importance in Modern Researches at Universities

Source: Higher education in the 21st century: Meeting realworld demands, Economist Intelligence Unit Research Report sponsored by Academic Partners. The Economist, March 2024. (Barack, L. (2024)

The University's capacity to fulfill its objectives is contingent upon the quality and integrity of the academic endeavors undertaken by its faculty, staff, and students. The flourishing of academic freedom is possible only within a scholarly community that acknowledges the centrality of intellectual integrity, along with its associated rights and responsibilities, to its mission.

Adherence to fundamental honesty in one's work, expressions, ideas, and conduct is a principle that all community members must uphold. In all academic contexts, university learners are expected to maintain the highest standards of research and scholarship. Any form of academic misconduct, including but not limited to plagiarism, multiple submissions, false citations, and the use of fabricated data, is considered a grave infraction and will result in disciplinary measures. As constituents of the University community, graduate students are obligated to adhere to the regulations and procedures outlined in Rights, Rules, Responsibilities. Specifically, issues related to academic and research integrity are addressed in sections "2.4 Academic Regulations" and "2.6 The Graduate School" of Rights, Rules, Responsibilities [10].

Therefore, considering the mentioned above urgent issues referred to academic integrity in the research works of university educational process participants the core purpose of the ongoing study is to put emphasis on legal foundations that define and regulate the possible academic integrity violations along with outlining some of the widespread misconduct

which takes place in modern research papers in order to prevent their repetition and popularization among scientific global community which might reduce leagal breaches of academic integrity in future specific area investigations.

Purpose, subject and research methods

It is necessary to state that for this study, a mixed-methods approach was applied. The comprehensive, multifaceted approach to understanding the intersection of AI and academic integrity in university research was provided. By combining quantitative method, such as surveys with qualitative methods, as case studies and content analysis, the research produces both broad statistical insights and deep, contextualized understanding of the challenges and possibilities AI presents to academic integrity in university research.

The purpose of the survey is to gather quantitative and qualitative data directly from university teachers, researchers, and academic administrators about their experiences with AI tools in research and their perspectives on academic integrity. It is necessary to admit that case study examines how AI tools and technologies are being applied in real-world academic settings and how academic institutions are handling issues related to AI and academic integrity. Content analysis helps to analyze academic publications and institutional policies to assess how AI is discussed in the context of academic integrity and its potential risks and benefits. The research was done in Kyiv Aviation Institute, on the department of international relations. First, there was established a theoretical foundation for the research by reviewing existing literature on AI in academic research, academic integrity concerns, and the specific challenges posed within the domain of International Relations. Given the complex nature of AI and academic integrity, a mixed-methods approach combining both qualitative and quantitative methods were applied. Surveys and questionnaires gathered data on faculty and researchers' used of AI tools and their perceptions of AI's impact on research integrity. It was done by faculty members, researchers, and postgraduate students at the Department of International Relations. The surveys were designed with questions covering the use of AI tools, ethical concerns regarding academic integrity, and perceptions of AI's influence on research [4].

The study adhered to ethical standards, obtaining informed consent from participants, guaranteeing confidentiality, and explaining how data will be used. The surveys were distributed to faculty members and postgraduate researchers within the Department of International Relations, using both online platforms and paper-based methods. The survey included questions related to: the frequency and type of AI tools used in research; perceptions

on AI's role in enhancing or diminishing academic integrity; specific challenges faced when using AI tools in research. Then there was done a case study, we identified completed research projects within the department that have used AI tools, such as simulations in international diplomacy, and conducted in-depth case studies. Then we analyzed these case studies to identify any integrity challenges faced by the researchers, such as data manipulation, transparency, or AI tool errors. Afterwards data analysis was done, to analyze the collected data to extract meaningful patterns, trends, and insights regarding the use of AI tools and academic integrity in International Relations research. We synthesized data from the case studies to understand the practical implications of AI tools in International Relations research. Then there was organised a seminar at the department to present the research findings to faculty members and researchers. We discussed as well how AI is being used in their research and addressed any concerns about academic integrity. By focusing on International Relations as a discipline, the research emphasizes both the opportunities and challenges AI presents to the integrity of research methodologies, citation practices, and ethical standards. The findings of this study can serve as a foundation for future research and policy development in the use of AI in higher institutions.

This research constitutes a qualitative literature review, aimed at analyzing and clarifying information by utilizing texts and data obtained from diverse sources. The primary objective of this qualitative literature review is to gather, assess, and synthesize the existing body of knowledge related to the specific topic of interest, namely the impact of technology on the enhancement of language skills in educational settings. Data will be sourced from a variety of pertinent materials, including academic journals, books, research reports, and other scholarly articles, covering the period from 2021 to 2023.

This timeframe enables the researcher to track the developments, trends, and transformations that have occurred within this domain. A total of 14 articles were collected, all of which are pertinent to the research topic under consideration [7].

A significant benefit of utilizing a qualitative literature review lies in its flexibility to analyze and articulate intricate phenomena, as it is not limited by numerical or statistical parameters. This approach enables researchers to acquire deep insights into the progression of the subject matter over time, as well as the evolution of concepts and viewpoints related to the topic throughout the years. In this research project, it is essential to assess the reliability and credibility of the sources employed, while also critically examining the information collected [6].

When adopting a qualitative methodology, the researcher must skillfully present findings with both objectivity and introspection, provide clear and accurate interpretations, and

recognize the limitations inherent in the methodologies and data sources utilized. Within this qualitative literature review framework, various data analysis techniques can be employed. These techniques include content analysis to discern patterns and themes within the literature, thematic analysis to comprehend the underlying framework, coding to organize the data, constant comparative analysis to juxtapose the data, synthesis of findings, and triangulation to corroborate the results of the analysis.

The researcher will apply these techniques to explore the impact of technology on enhancing language skills in education and to identify patterns, trends, and themes present in the literature. The application of these data analysis techniques will yield a comprehensive understanding of the subject's evolution throughout the research period [1].

The La Trobe Research Integrity Policy emphasizes that researchers and research trainees at La Trobe University are required to follow responsible research practices as outlined in the Australian Code for the Responsible Conduct of Research. Researcher Responsibility of the Research Code mandates that researchers must appropriately and accurately cite and acknowledge relevant works. This obligation encompasses not only the citation of others' work but also the accurate representation of the evolution of one's own ideas and any prior publications pertinent to the research. Incorporating integrity into the publication process of research outputs is a fundamental element of research integrity.

All researchers, including staff and candidates pursuing higher degrees by research, are expected to be well-versed in the correct citation practices pertinent to their fields and to adhere to these standards. Accurate citation in accordance with disciplinary norms and the avoidance of plagiarism are critical to maintaining research integrity [3].

Understanding the prevalence of plagiarism violations is crucial for developing effective prevention and intervention strategies. The statistics show that there are high incidences of cheating, admission of academic dishonesty, inconsistency in reporting, academic fraud in research. According to recent research, nearly 29% of students reported an increase in their cheating behavior since the start of 2020. Despite this rise, less than 2% of students reported being caught cheating. In a study focusing on preservice teachers, more than 80% of participants admitted to engaging in at least one act of academic dishonesty during the previous two years. Only 4.5% of teachers act according to faculty guidelines when addressing such violations [15].

Consequently, students often face minimal consequences, such as verbal warnings, for dishonest actions. A review of 45 articles on academic dishonesty in higher education institutions found that 75.55% addressed cheating, while 11.11% focused on contract cheating, and 13.33% examined collusion.

In early summer 2023, a scandal emerged involving a prominent Harvard Business School professor accused of academic fraud, including data fabrication in several papers. This case highlighted systemic issues within academic research and underscored the importance of maintaining scientific integrity. These statistics underscore the need for comprehensive strategies to uphold academic integrity, including better detection methods, consistent enforcement of policies, and fostering a culture that values honesty in academic pursuits [15].

Research results

In the framework of the Higher Education Standards Framework 2021, the term 'academic integrity' refers to the obligation of educational institutions to guarantee that both their staff and students engage in learning and teaching with honesty, trust, fairness, respect, and responsibility throughout their courses and units of study. Likewise, 'research integrity' pertains to the institution's duty to ensure that research activities are conducted in an ethical and responsible manner, fostering a culture that values ethical research practices. The Australian Code for the Responsible Conduct of Research 2018 delineates various responsibilities and principles applicable to both institutions and researchers. Among the responsibilities pertinent to institutions are: the formulation and upkeep of accessible and up-to-date policies and procedures that align institutional practices with the principles and responsibilities outlined in the Responsible Conduct of Research Code; the establishment of channels for receiving concerns or complaints regarding potential violations of the Responsible Conduct of Research Code, along with the obligation to investigate and address such violations; and ensuring that any breaches are examined thoroughly and fairly, taking into account the procedural rights and welfare of all individuals involved in the investigation [13].

Academic integrity is a fundamental principle in scholarly work defines universally recognized standards which all participants of educational institutions are obliged to stick. Integrity refers to the ethical principles that govern research, teaching, and learning in higher education system. Teachers, as both educators and researchers, have a responsibility to uphold these principles, pledge adherence to the basic legal and moral principles of academic conduct in their work (Figure 2).

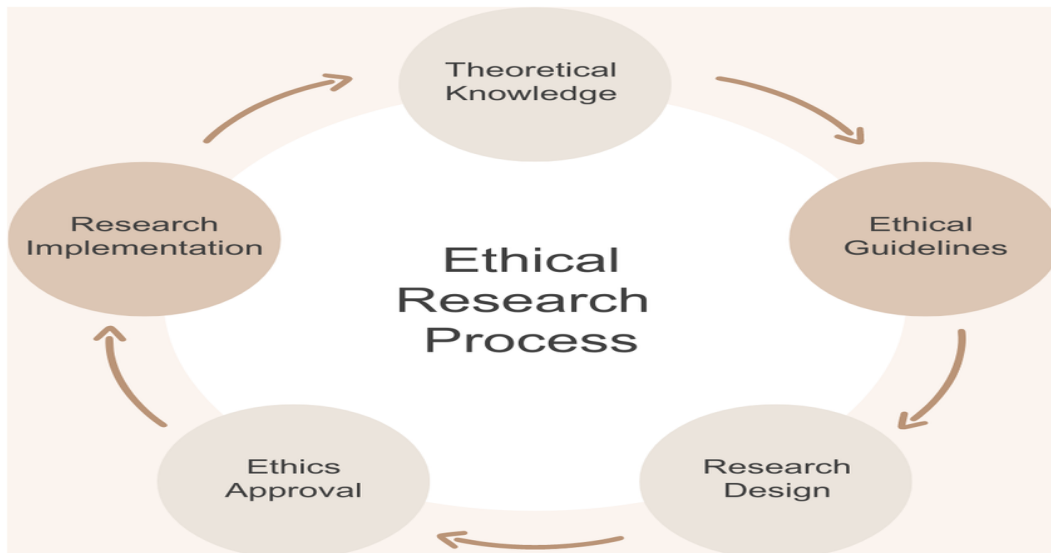


Figure 2. Stages of Ethical Research Process
Source: Result of Personal Scientific Research

Breaches of academic integrity, often referred to as 'academic misconduct' or 'academic dishonesty', encompass various actions such as plagiarism, collusion, contract cheating, recycling of work, and the fabrication of information. Similarly, breaches of research integrity, known as 'research misconduct', may involve plagiarism, falsification or fabrication of data, selective omission of data to skew results, or misleading authorship attributions. The National Statement of Ethical Conduct in Human Research further delineates specific violations, including the lack of consent and the coercion of participants.

The fundamental responsibilities concerning academic and research integrity are articulated in Standard 5.2 of the Threshold Standards. This standard aims to: uphold and advance academic and research integrity throughout the sector, ensuring accountability in third-party arrangements; and guarantee that institutions have established policies and procedures to prevent, address, and resolve allegations of academic and research misconduct [5].

Safeguarding academic and research integrity is crucial for maintaining both the integrity of educational institutions and the credibility of their qualifications and research outputs. This safeguarding also contributes to the reputation and international standing of the Australian higher education system, as well as the societal benefits derived from Australian research.

Consequently, it is imperative that academic and research integrity remains a central focus for all higher education providers, particularly in ensuring that research collaborations with external parties adhere to the integrity obligations outlined in the Threshold Standards. Additionally, Standards 4.1 and 4.2 of the Threshold Standards, which pertain to research and

research training, are also pertinent to the discourse on academic and research integrity, though they are only briefly mentioned here.

The University mandates that all individuals associated with it, including staff and students, utilizing University facilities or funding, adhere to the highest ethical and integrity standards in their research activities. To uphold these standards, they are required to:

a) maintain honesty in the proposal, execution, and reporting of research. They should aim for accuracy in research data and results while recognizing the contributions of others.

b) familiarize themselves with best practices and standards of integrity in research, such as the Code of Practice for Research issued by the UK Research Integrity Office or the Concordat to Support Research Integrity.

c) abide by ethical and legal obligations as stipulated by statutory and regulatory bodies, including obtaining ethical review and approval for research when necessary. They must ensure that their research aligns with relevant University policies, procedures, and any agreements or terms related to the project, while also promoting proper governance and transparency.

d) strive to protect the safety, dignity, well-being, and rights of all individuals involved in the research.

e) manage any actual or potential conflicts of interest effectively and transparently, reporting them to the appropriate authority as needed.

f) ensure they possess the requisite skills and training pertinent to their research area.

g) acknowledge their accountability to the University and their colleagues regarding their research conduct.

h) recognize, in accordance with disciplinary norms, that authorship of a research output should be granted only to those who have made a substantial intellectual, scholarly, or practical contribution to that work and are prepared to accept responsibility for it.

i) adhere to the requirements and guidance set forth by any relevant professional organizations in their research field [3].

Misconduct in Research, as defined by this Code of Practice and Procedure, encompasses a range of actions, including but not limited to the following activities undertaken during the proposal, execution, or reporting of research findings:

- the falsification or fabrication of data, which involves intentionally misleading or deliberately inaccurate reporting of research information.
- the misrepresentation of data, which includes the creation of fictitious data and the exclusion of inconvenient data from analysis and publication.
- the failure to adhere to established best practices for the appropriate preservation,

management, and sharing of primary data, artifacts, and materials.

- the unacknowledged appropriation of others' work, which includes plagiarism, the violation of confidentiality regarding unpublished materials, or the misappropriation of results, physical materials, or other resources.
- the misrepresentation of one's role in a research project, such as the omission of legitimate authors from outputs, granting authorship without justification, or misrepresenting credentials, including qualifications, experience, and publication history.
- neglecting to disclose conflicts of interest;
- failing to adhere to established procedures, legal, professional, or ethical standards, or to exercise appropriate diligence in fulfilling responsibilities to prevent undue harm or risk to humans, other vertebrates, cephalopods, or the environment;
- not complying with current guidelines on best practices in research, including the proper management of privileged, private, or confidential information obtained from individuals during the research process;
- engaging in inappropriate behavior during the peer review of research proposals, findings, or manuscripts submitted for publication.
- inadequate handling of misconduct allegations: not addressing potential violations or failing to follow agreed-upon procedures in the investigation of alleged research misconduct, which is a prerequisite for funding (Figure 3).

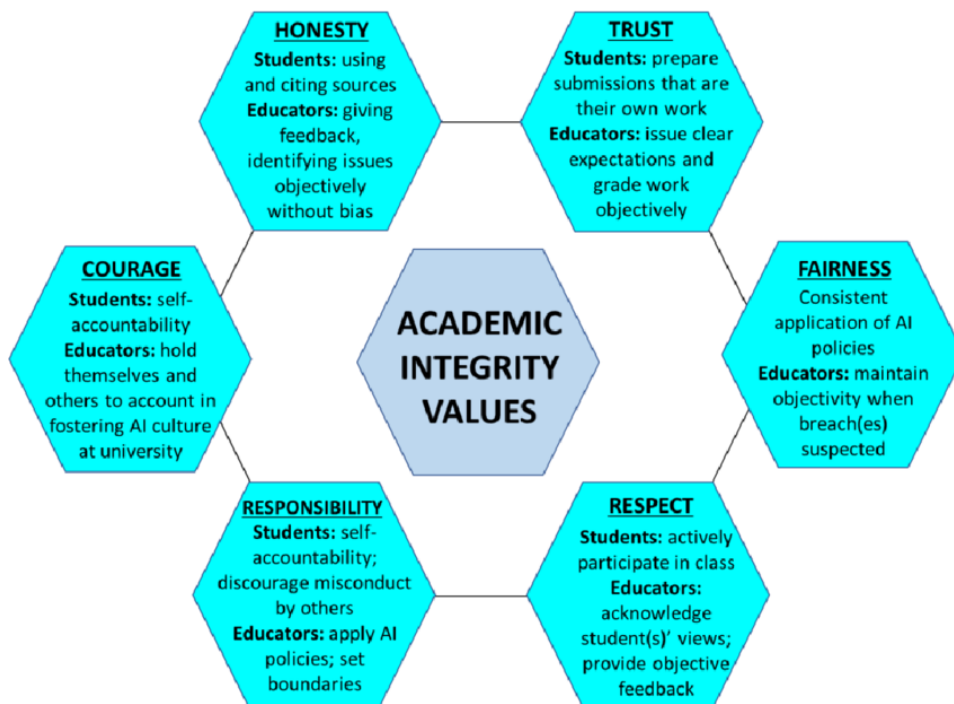


Figure 3. Academic Integrity Values for University Participants of Educational Process

Source: Reflections on the ethics, potential, and challenges of artificial intelligence in the framework of quality education (SDG4). Comunicar, 31(74), 37–47. <https://doi.org/10.3916/C74-2023-03>. (Flores–Vivar, J. M., & García–Peñalvo, F. J., 2023)

This paper examines the most common types of academic integrity violations that can occur in teachers' research works, raising concerns about the credibility of educational institutions and the validity of scholarly contributions where violations of academic integrity can undermine trust in educational institutions and distort academic progress.

There are various types of violations of academic integrity such as plagiarism (direct, self, mosaic and accidental); fabrication and falsification of data; authorship violations (ghost authorship, honorary authorship, disputed authorship); contract cheating and undisclosed assistance; ethical misconduct in peer review and citations; violation of ethical research standards; conflicts of interest, and redundant publications.

To analyze these violations, researchers can use various methods and hypotheses based on qualitative, quantitative, or mixed approaches.

In academic writing, it is considered plagiarism to draw any idea or any language from someone else without adequately crediting that source in your paper. It doesn't matter whether the source is a published author, another student, a website without clear authorship, a website that sells academic papers, or any other person: Taking credit for anyone else's work is stealing, and it is unacceptable in all academic situations, whether you do it intentionally or by accident.

Academic plagiarism – the deliberate purloining of someone else's work (text or ideas) either completely or partially by the writer who is not the author of this work, without proper referencing to the primary source. There are various methods to reveal plagiarism with popular detection tools:

Turnitin (compares academic papers with vast database of published work, a professor submits a student's paper to Turnitin, the software generates a report showing that 35% of the content matches an article from an online journal, indicating possible plagiarism [16].

Grammarly Plagiarism Checker (detects copied text and provides citation suggestions, a researcher uses Grammarly to check if they have unintentionally paraphrased without proper citation.

Copyscape (scans online content for duplicate text, a teacher uses Copyscape to check if students copied from blogs.

Plagscan (examines academic and professional documents, a journal editor uses Plagscan to verify originality before publication.

Sentence length (differences in sentence complexity, a style becomes highly technical

indicating plagiarism).

Word Choice (inconsistencies in vocabulary usage, a teacher notices the usage of highly academic terms) [17].

Grammar Patterns (changes in grammatical structure, a student known for making grammatical mistakes submits an essay with flawless academic language. The teacher uses stylometric analysis to compare the new work with previous assignments and finds a significant difference, suggesting plagiarism).

Peer Review and Expert Evaluation (experts in a field can recognize copied ideas or theories from existing research, peer reviewers can assess originality by cross-checking citations and arguments).

Reference Analysis (examines the quality and accuracy of cited sources, fake or irrelevant references may indicate an attempt to disguise plagiarism, verify that all sources exist and are properly cited, check if cited materials are relevant to the research, look for inconsistencies in formatting and citation styles (Figure 4).

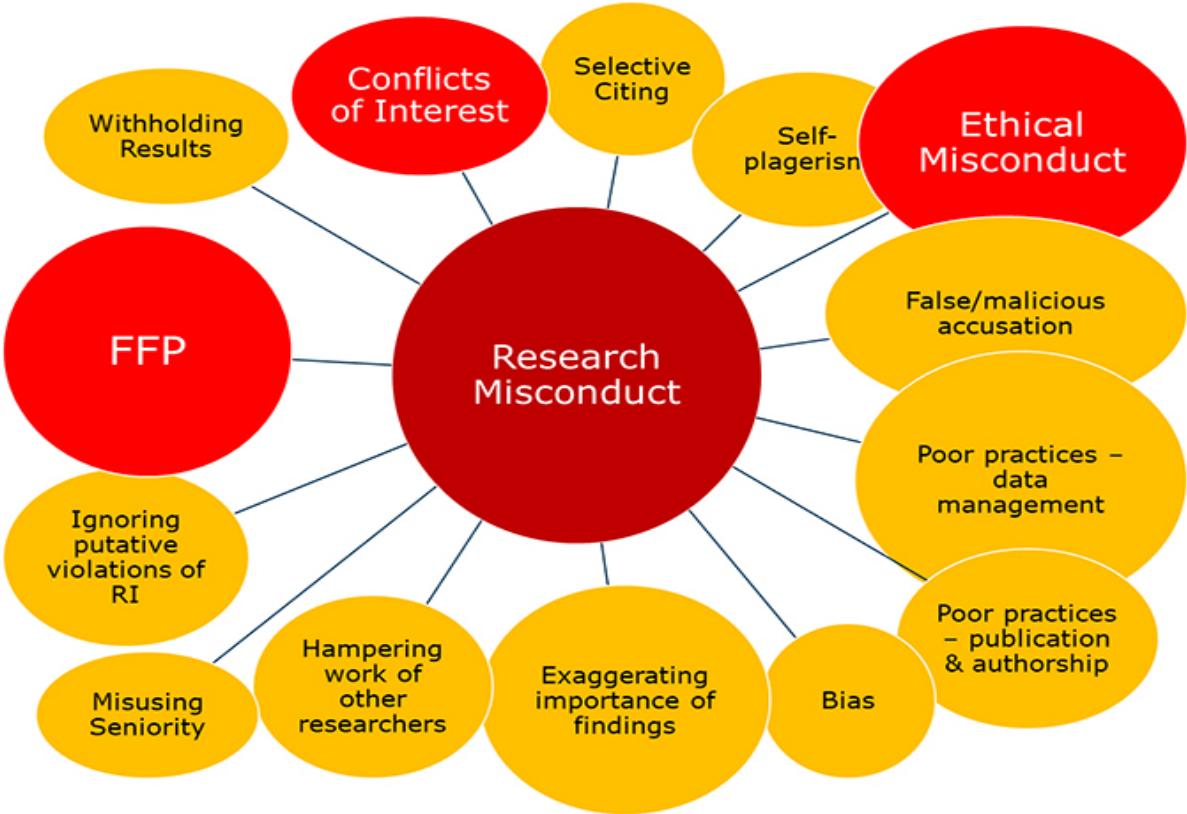


Figure 4. Research Misconduct Variations

Source: Levels of academic integrity violations. <https://nbacademicintegrity.rutgers.edu/academic-integrity-policy/levels-academic-integrity-violations>. (Rutgers University, 2021)

It is necessary to note that the survey was administered to 100 university faculty members in the field of academic research across various disciplines.

The survey question was: “What AI tools do you use in your academic research?” The results of the survey were the following:

- 40% of faculty reported using AI-based plagiarism detection tools;
- 37% reported using AI writing assistants
- 65% of faculty reported using AI for data analysis
- 29% used AI for literature review automation.

Table 1. Usage of AI Tools Indicators in Academic Research

Source: Own study

AI Tools	Percentage Of Faculty Using
AI for Plagiarism Detection	40%
AI Writing Assistants	37%
AI for Data Analysis	65%
AI for Literature Review	29%

The survey also assessed faculty perceptions of how AI affects academic integrity in research. The question of the second survey is: “How do you perceive AI’s impact on academic integrity in research?”

The results of the survey were the following:

- 37% of faculty believed AI had a positive impact, stating that AI tools like plagiarism detectors and data analysis systems helped ensure transparency and accuracy in research.
- 51% perceived no significant impact, suggesting that AI tools were a part of the research process but did not change the fundamental ethics of research.
- 9% were uncertain about the impact of AI.
- 5% believed AI had a negative impact due to the risk of AI-generated content being passed off as original.

Table 2. Faculty Perceptions of AI's Impact on Academic Integrity

Source: Own study

Perception of AI Impact On Integrity	Percentage of Faculty
Positive Impact	37%
No Impact	51%
Uncertain	9%
Negative Impact	5%

It is necessary to note, that to assess the relationship between the frequency of AI tool usage and perceived academic integrity issues, a statistical analysis was conducted. Faculty were asked about their frequency of using AI tools (Never, Rarely, Sometimes, Often, Always)

and their perception of academic integrity issues arising from AI usage.

The results of the survey were the following: Faculty Using AI Tools “Often” or “Always”:

- 25% reported that AI tools had a positive impact on academic integrity.
- 40% expressed no impact.
- 20% had concerns about AI-generated content leading to unintentional plagiarism.
- Faculty Using AI Tools “Never” or “Rarely”:
- 40% felt that AI tools had no impact on academic integrity.
- 10% were concerned about the potential ethical risks of AI.

It is necessary to note, that a case study analysis was conducted to evaluate how AI tools were used in specific research projects within the International Relations department. Two case studies were selected where AI tools were applied to political simulation models and geopolitical risk analysis.

Case Study 1: AI in Political Simulation:

- AI-driven simulations were used to model international conflicts.
- Academic Integrity Issue: Some faculty were concerned about the transparency of AI-generated results, questioning whether the assumptions embedded in AI models were adequately disclosed to readers.

Case Study 2: AI in Geopolitical Risk Assessment:

- AI tools were used to analyze vast amounts of data from international relations, including trade, political stability, and military movements.
- Academic Integrity Issue: Researchers noted that AI could inadvertently misinterpret data, leading to flawed conclusions. The challenge was ensuring that all AI-driven analysis was thoroughly reviewed for accuracy.

Both case studies highlighted that while AI tools enhanced research efficiency, there was a critical need for transparency in methodology and awareness of AI limitations. AI tools are widely used in research, especially for plagiarism detection and data analysis. Most faculty members view AI as having a neutral or positive impact on academic integrity. It is important to note, that challenges exist in terms of ensuring transparency in AI-generated content and the risk of bias in AI models.

Discussions of research finding

The integration of artificial intelligence into academic research, particularly in the

context of university teachers' activities, presents significant opportunities as well as considerable challenges. The adoption of AI tools across different disciplines has brought transformative changes, offering new ways to enhance research processes, streamline data analysis, and improve overall research quality.

However, these advancements have also raised concerns related to academic integrity, ethical considerations, and the potential misuse of AI tools. In this discussion, we examine both the positive and negative impacts of AI on academic integrity within the research activities of university teachers, especially within the context of International Relations and other academic disciplines.

AI has revolutionized academic research in several ways, particularly in how university teachers conduct and manage their research activities. AI tools can enhance productivity, improve research accuracy, and facilitate the completion of tasks that were previously time-consuming. One of the most significant benefits of AI in research is its ability to analyze large datasets quickly and accurately [12].

For researchers in fields like International Relations, where vast amounts of geopolitical, economic, and social data need to be processed, AI-based tools such as machine learning models, natural language processing (NLP), and predictive analytics are invaluable. These tools allow for more comprehensive analysis, uncovering patterns and insights that may have been missed by traditional methods. It is necessary to note, that plagiarism detection systems have become essential in academic environments.

For university teachers involved in research, these tools ensure that their work remains original and that proper citations are provided for any references used. As AI becomes more sophisticated, these tools are able to detect more nuanced forms of plagiarism, such as paraphrasing or translation-based plagiarism, which were previously harder to identify.

Despite these advancements, the use of AI in academic research also brings new challenges related to academic integrity. These concerns center around issues like authorship, plagiarism, bias in AI algorithms, and the potential for over-reliance on AI tools [5].

One of the primary concerns with the use of AI in research is the potential for AI-generated content to be used without proper attribution. Some AI tools, like ChatGPT, are capable of generating human-like text that can be incorporated into academic papers. While these tools can assist with drafting, there is a fine line between using AI as a support tool and passing off AI-generated content as original work.

There is a risk that university researchers might become overly dependent on AI tools for tasks such as data analysis, literature reviews, or even writing. This over-reliance can

diminish researchers' critical thinking and analytical skills. If researchers allow AI to handle too much of the intellectual work, they may miss the opportunity to engage deeply with the material, potentially leading to a reduction in the quality and originality of their research.

The challenge lies in balancing the new possibilities AI offers with the need to maintain academic integrity. Universities must implement safeguards to ensure that AI tools are used ethically and transparently. Universities should develop clear guidelines for the ethical use of AI in academic research. These guidelines should cover issues like plagiarism, authorship, transparency, and how AI tools should be credited (Figure 5).

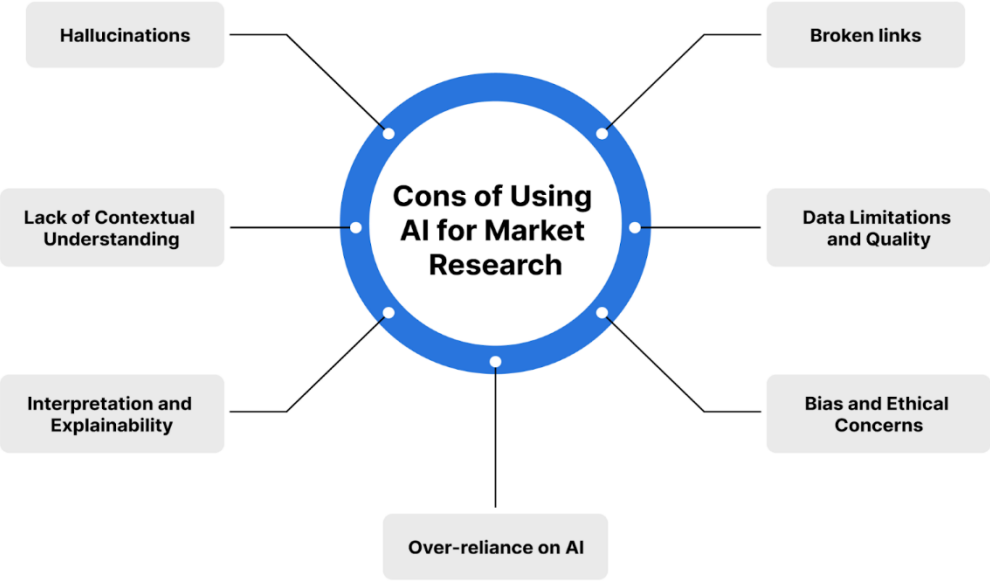


Figure 5. Limitations of AI Usage in Research at Universities
Source: New priorities for academic integrity: Equity, diversity, inclusion, decolonization and indigenization. *International Journal for Educational Integrity*, 18(10). <https://doi.org/10.1007/s40979-022-00105-0>. (Eaton, S., 2022)

Faculty members must be educated on the ethical implications of AI and how to responsibly integrate these tools into their work. Faculty members should receive training on how to use AI tools effectively while maintaining academic integrity. This includes understanding the limitations and biases of AI tools and knowing when and how to disclose the use of AI-generated content in research publications. The integration of AI into academic research presents both significant opportunities and challenges. AI has the potential to streamline research activities, enhance data analysis, and improve the accuracy of academic work.

However, there are valid concerns about how AI might compromise academic integrity, especially regarding plagiarism, authorship, and biases in research findings. To mitigate these

risks, universities must establish clear guidelines for the ethical use of AI, train faculty members on how to use AI tools responsibly, and create a culture of transparency and accountability in academic research [14].

Technology is essential in the field of education, particularly in enhancing access to a diverse array of learning materials in multiple languages. The emergence of the internet has enabled students and learners to easily navigate a vast selection of resources, including books, articles, videos, and lessons available in various languages. This accessibility not only fosters a deeper comprehension and improvement of language skills but also encourages significant cultural and linguistic enrichment. Furthermore, there are numerous technology-driven learning applications and platforms dedicated to enhancing language proficiency [8].

The significant contributions of technology to enhancing language proficiency in education highlight its essential role in the language acquisition process. However, it is crucial to recognize that technology serves merely as one instrument within the broader educational framework, with motivation and self-discipline being the primary determinants of achieving high levels of language proficiency [13].

Thus far, technology has facilitated a more interactive and personalized approach to language learning, granting students extensive access to educational resources and expanding their understanding of the cultural contexts associated with languages.

Nevertheless, the ultimate attainment of language proficiency is contingent upon the individual's commitment and sincerity in engaging with the learning process. The necessity for judicious and contextually appropriate use of technology in education cannot be overlooked. In this regard, prioritizing the effective integration of technology into the curriculum and learning activities is essential. Students should be encouraged to utilize technology as a valuable educational resource rather than merely a source of entertainment. This can be accomplished through thoughtful guidance and oversight, alongside fostering a sense of individual accountability in crafting their own learning experiences. By doing so, technology can continue to serve as a formidable ally in advancing language skills, while acknowledging the critical importance of personal motivation and dedication throughout the educational journey [2].

Conclusions

The digital era has significantly altered the development of English vocabulary, largely influenced by the omnipresence of social media and technological advancements. The swift emergence and spread of new words, along with the modification of existing ones, illustrate the

ever-evolving character of language within a digital framework.

These transformations carry important consequences for language learning and digital literacy, underscoring the necessity for continual adaptation in educational methodologies and linguistic studies. As language progresses in reaction to technological and cultural changes, comprehending these trends provides essential insights into the future direction of English and its significance in an increasingly dynamic environment.

To fully leverage technology's potential in enhancing language skills within the educational sector, several critical measures must be implemented. First and foremost, educational institutions should strive for a more comprehensive integration of technology into their curricula. This may involve the creation of detailed technology-driven learning modules that offer students a variety of language experiences.

Additionally, it is essential to prioritize teacher training focused on the application of technology in language instruction. Educators must receive sufficient training and resources to effectively incorporate technology into their teaching practices, thereby fostering an engaging and productive learning atmosphere [18].

Moreover, these initiatives must be complemented by efforts to ensure equitable access to technology and the internet. Addressing the existing digital divide is crucial to guarantee that all students have the same opportunities to benefit from technological advancements in their education. Furthermore, it is vital to implement careful oversight of technology usage in educational settings. This will help ensure that students utilize their devices not merely for entertainment but also for meaningful learning experiences.

In addition, motivating students and highlighting the significance of self-discipline in technology use is essential. Students should be made aware that technology serves as a tool to help them achieve their educational objectives, and they bear personal responsibility for its effective utilization. By adopting a thoughtful approach and providing the necessary support, we can effectively harness technology's capabilities to improve language skills in education, equipping students to tackle the global challenges that lie ahead.

The integration of Artificial Intelligence in academic research, particularly in the context of university teachers' activities, presents a paradigm shift in how research is conducted. AI tools offer substantial benefits, such as improving efficiency, accuracy, and the quality of academic work. These advancements have the potential to revolutionize academic processes by streamlining data analysis, assisting in literature reviews, providing automated plagiarism detection, and enhancing the overall research process. In fields like International Relations, where large datasets need to be processed and analyzed, AI plays a crucial role in identifying

patterns and insights that human researchers might miss. However, while AI offers significant advantages, it also raises several challenges, particularly in maintaining academic integrity. One of the primary concerns is the potential for AI-generated content to be used unethically, either by researchers or students. The fine line between using AI as a research aid and passing off AI-generated work as original is a growing concern that could lead to issues of plagiarism and authorship.

Furthermore, the over-reliance on AI tools can diminish critical thinking and analytical skills, which are fundamental to academic research. The absence of transparency in AI models and the inherent biases in the data used by these tools also pose significant ethical risks, potentially leading to flawed research outcomes. These risks highlight the need for careful oversight and ethical guidelines to govern AI use in academic research.

Despite these challenges, AI's potential to improve the quality and efficiency of research is undeniable. To strike a balance, universities and research institutions must implement robust ethical standards for AI use. Clear guidelines should be established to govern the ethical integration of AI, ensuring transparency, accountability, and proper citation practices. Training faculty members on the responsible use of AI tools and educating them on the ethical implications of AI in research are essential steps in fostering a culture of academic integrity.

In conclusion, AI can significantly enhance the academic research process, but its use must be accompanied by a commitment to academic integrity. By addressing the ethical challenges and implementing necessary safeguards, AI can serve as a valuable tool in academic research while upholding the ethical standards that are the cornerstone of scholarly work. The future of AI in academic research depends on how well these challenges are managed, ensuring that AI complements and enhances human intellectual effort rather than replacing it.

To mitigate these risks, universities must establish clear guidelines for the ethical use of AI, train faculty members on how to use AI tools responsibly, and create a culture of transparency and accountability in academic research. As AI continues to evolve, researchers, policymakers, and academic institutions must work together to ensure that AI is used in ways that support and enhance academic integrity, rather than undermine it.

By carefully navigating these possibilities and challenges, the academic community can ensure that AI becomes a valuable tool in the advancement of knowledge, while upholding the ethical standards that are central to academic research.

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