AI in academic writing: Assessing current usage and future implications

Eva Nikmatul Rabbianty\textsuperscript{1,2}, Siti Azizah\textsuperscript{1}, Nina Khayatul Virdyna\textsuperscript{1}

\textsuperscript{1}English Education Department, Institut Agama Islam Negeri Madura
Jl. Raya Pangleger KM. 4, Pamekasan 69371, Indonesia
\textsuperscript{2}eva@iainmadura.ac.id

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Abstract: Artificial intelligence (AI) integration in academic writing has gained significant attention due to its potential impact on authorship, the natural character of academic works, and ethical considerations. This Study aims to assess the faculty members' perceptions on their current usage of AI in academic writing and explore its future implications. The research involved an online survey administered to 68 faculty members responding to closed and open-ended questions. The study revealed faculty members' perceptions of AI integration in academic writing and its implications for authorship and the authenticity of academic work. Findings reveal widespread adoption of AI tools among faculty members, offering efficiency, productivity, and accuracy benefits in areas like grammar checks, reference management, writing assistance, and plagiarism detection. However, concerns arise over authorship preservation and maintaining academic work's unique character, emphasizing the need for clear guidelines. Ethical considerations and best practices are also highlighted to use AI while safeguarding academic integrity effectively. These insights extend to educators, policy makers, and researchers, offering a comprehensive view of AI's current role in academic writing and guiding ethical discussions and best practices. Ultimately, this research enhances teaching and learning practices in Indonesian higher education institutions through responsible AI integration.

Keywords: academic writing authorship; AI current usage; AI future implication; artificial intelligence; ChatGPT.

A. Introduction

The increasing use of Artificial Intelligence (AI) and automation drives a transformation that blurs the boundaries between humans and machines (Cerratto Pargman et al., 2022; Yeung, 2018). This transformation has significantly impacted academic writing, influencing how we create, consume, and evaluate written work.
The rapid advancements in technology, particularly AI, have revolutionized academic writing and presented new opportunities to enhance the quality and efficiency of writing processes (Kurniati & Fithriani, 2022; Nakazawa et al., 2022). These advancements can potentially transform academic writing practices and shape the educational landscape (Rudolph et al., 2023). However, despite the growing presence of AI in academic writing, it remains crucial to conduct a comprehensive assessment of its current usage and explore its future implications (Kurniati & Fithriani, 2022). So, for addressing this gap, this research aims to evaluate the implementation of AI in academic writing within the context of Higher Education in Indonesia.

Ethical considerations surrounding the responsible use of AI in academic writing, including issues related to plagiarism and originality and the impact on creativity, are also examined. AI-powered tools have the potential to detect and prevent plagiarism, but questions arise regarding their impact on the originality and creativity of academic work (Ballardini, 2019). This research also investigates these ethical considerations and explores how the integration of AI can support originality and creativity in academic writing in current and future settings.

By considering the specific needs and challenges faced by higher education where academic writing is a regular requirement, the research aims to contribute to the existing body of knowledge and assist educators, students, and researchers in effectively navigating the evolving landscape of AI in academic writing. This study explores into the impact of faculty members’ perceptions on the integration of Artificial Intelligence (AI) in academic writing, specifically examining how these perceptions influence authorship attributes and the intrinsic nature of academic works. Furthermore, the research pursues to identify and analyze the ethical considerations and optimal methodologies crucial for the proficient utilization of AI in academic writing. The primary focus lies in ensuring the preservation of authorship rights and upholding the fundamental tenets of academic integrity throughout the utilization of AI in the academic writing process.

Academic writing has witnessed a significant transformation with the advent of AI and automation. These technological advancements encompass a wide range of computer programs and algorithms that aid in various aspects of the writing process. From grammar and spelling error checks to plagiarism detection tools, AI has become an indispensable
writer assistant (Passonneau et al., 2017). Additionally, AI-driven programs can generate written content by adhering to predefined parameters, ensuring efficiency and accuracy in creating academic work.

The impact of AI and automation on academic writing has been extensively studied. Researchers such as Roscoe et al. (2014) have highlighted the substantial influence of these technologies on the writing process. Passonneau et al. (2017) have demonstrated that AI improves writing efficiency, accuracy, and the identification of grammar, syntax, and citation errors. Moreover, AI can contribute to idea generation and enhance argument refinement by suggesting alternative phrasings, sentence structures, and supporting evidence (Parra G. et al., 2019; Roemmele & Gordon, 2015).

However, alongside the benefits, concerns have been raised regarding the potential drawbacks of relying too heavily on AI and automation in academic writing. One prominent concern is the fear that excessive use of AI may stifle creativity, originality, and critical thinking skills among writers. The worry stems from the notion that relying too heavily on automated tools might discourage independent thought and hinder the development of unique perspectives. Additionally, ethical considerations arise concerning authorship, plagiarism, and intellectual property rights when using AI and automation (Rudolph et al., 2023). These concerns necessitate carefully examining the advantages and disadvantages of AI and automation in writing.

Using AI in academic writing challenges our conventional understanding of authorship, originality, and creativity in various ways (Livingston & Risse, 2019). The advent of AI allows for collaborative authorship between humans and machines, as AI systems can be trained to generate content based on provided parameters or inputs from human creators (Rahimi at Passonneau et al., 2017). This collaboration blurs the lines of authorship, raising questions about who should be credited as the author of a work and whether AI-generated content can genuinely be considered original.

Moreover, using AI also challenges the notion of originality (Guadamuz, 2020; Nakazawa et al., 2022). AI can generate content based on existing works, such as composing music based on a melody or creating an image derived from an existing photograph. Additionally, AI can produce content based on rules or algorithms, creating
works that human creators may not have conceived. It prompts inquiries into the authenticity and copyright protection of AI-generated works.

As AI continues to push the boundaries of authorship, originality, and creativity, it is vital to consider the ethical implications of these transformations. Attribution becomes a significant ethical consideration in this context, as determining the rightful credit for a particular work can be challenging due to the involvement of AI-generated content (Rodrigues, 2020). It raises concerns regarding plagiarism and recognizing human and machine contributions appropriately. Ensuring that credit is appropriately assigned and acknowledging the contributions of humans and machines becomes imperative.

Bias represents another ethical concern concerning AI-generated content. AI models often rely on large datasets, which can perpetuate societal biases and discrimination (Ragot et al., 2020). It holds considerable ethical ramifications, particularly in fields like journalism or academic research, where AI-generated content can propagate false or misleading information. It is crucial to ensure that AI-generated content remains accessible from bias, upholding principles of integrity and accuracy.

**B. Method**

To achieve the objective of this study, a mixed-method approach was employed, precisely the explanatory-sequential mixed methods procedure proposed by Cresswell (2012). It consisted of two phases: the first phase involved collecting and analyzing quantitative survey data. In contrast, the second phase comprised a follow-up qualitative research component to provide further insights and elaboration on the quantitative findings.

In May 2023, an online survey was conducted in Indonesia, targeting potential lecturers, doctoral students, and academic writers. The survey, conducted anonymously through Google Forms, was randomly distributed via direct messages and social media platforms. Sixty-eight respondents completed the survey, forming the final sample for analysis. The survey link was shared with various individuals to ensure diversity, and the snowball sampling technique was employed to encourage participant referrals. Prior to participation, informed consent was obtained from all participants, clearly outlining the study’s objectives, voluntary nature of involvement, and data usage.
Table 1 presents the demographic characteristics of the study's participants and the findings related to using AI tools in academic writing. The findings provide valuable insights into the demographics and patterns of AI tool usage among participants in academic writing, which can inform future research in this area.

<table>
<thead>
<tr>
<th>Demographic Characteristic</th>
<th>N</th>
<th>%</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>32</td>
<td>47</td>
<td>68</td>
</tr>
<tr>
<td>Female</td>
<td>36</td>
<td>53</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25-30 Years</td>
<td>4</td>
<td>5.9</td>
<td>68</td>
</tr>
<tr>
<td>30-35 Years</td>
<td>14</td>
<td>20.6</td>
<td></td>
</tr>
<tr>
<td>35-40 Years</td>
<td>15</td>
<td>22.1</td>
<td></td>
</tr>
<tr>
<td>40-45 Years</td>
<td>13</td>
<td>19.1</td>
<td></td>
</tr>
<tr>
<td>&gt; 45 Years</td>
<td>22</td>
<td>32.4</td>
<td></td>
</tr>
<tr>
<td>Jobs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lecturer</td>
<td>27</td>
<td>39.7</td>
<td>68</td>
</tr>
<tr>
<td>Lecturer with particular positions</td>
<td>12</td>
<td>17.6</td>
<td></td>
</tr>
<tr>
<td>Doctoral students</td>
<td>17</td>
<td>25</td>
<td></td>
</tr>
<tr>
<td>teachers</td>
<td>6</td>
<td>8.8</td>
<td></td>
</tr>
<tr>
<td>Journal editor</td>
<td>4</td>
<td>5.9</td>
<td></td>
</tr>
<tr>
<td>officer</td>
<td>1</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Freelance</td>
<td>1</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Affiliations</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>State Universities</td>
<td>51</td>
<td>75</td>
<td>68</td>
</tr>
<tr>
<td>Private Universities</td>
<td>16</td>
<td>23.5</td>
<td></td>
</tr>
<tr>
<td>Other Institution</td>
<td>1</td>
<td>1.5</td>
<td></td>
</tr>
<tr>
<td>Working Experience with AI</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1-5 Years</td>
<td>9</td>
<td>13.2</td>
<td>68</td>
</tr>
<tr>
<td>5-10 Years</td>
<td>12</td>
<td>17.6</td>
<td></td>
</tr>
<tr>
<td>10-15 Years</td>
<td>20</td>
<td>29.4</td>
<td></td>
</tr>
<tr>
<td>15-20 Years</td>
<td>14</td>
<td>20.6</td>
<td></td>
</tr>
<tr>
<td>20-25 Years</td>
<td>7</td>
<td>10.3</td>
<td></td>
</tr>
<tr>
<td>&gt; 25 Years</td>
<td>6</td>
<td>8.8</td>
<td></td>
</tr>
<tr>
<td>AI Tools</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mendeley</td>
<td>54</td>
<td>19.7</td>
<td>274</td>
</tr>
<tr>
<td>Turnitin</td>
<td>51</td>
<td>18.6</td>
<td></td>
</tr>
<tr>
<td>Grammarly</td>
<td>48</td>
<td>17.5</td>
<td></td>
</tr>
<tr>
<td>Sci-Hub</td>
<td>34</td>
<td>12.4</td>
<td></td>
</tr>
<tr>
<td>Zotero</td>
<td>32</td>
<td>11.7</td>
<td></td>
</tr>
<tr>
<td>Quillbot</td>
<td>28</td>
<td>10.2</td>
<td></td>
</tr>
<tr>
<td>Chat GPT</td>
<td>21</td>
<td>7.7</td>
<td></td>
</tr>
<tr>
<td>Connected Paper</td>
<td>2</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Research Rabbit</td>
<td>1</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Ref-N-Write</td>
<td>1</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>openknowledgemap</td>
<td>1</td>
<td>0.4</td>
<td></td>
</tr>
<tr>
<td>Paperdigest</td>
<td>1</td>
<td>0.4</td>
<td></td>
</tr>
</tbody>
</table>

This study used a questionnaire as the primary research instrument to gather participants' insights on utilizing AI tools in scientific writing. It consisted of three sections covering demographics: closed-ended and open-ended questions. Closed-ended questions examined participants' experiences and opinions on the usage and changes in scientific
writing due to AI integration. Open-ended questions allowed for detailed responses and recommendations regarding the use of AI and automation tools in academic writing. A thorough evaluation of their alignment with the research objectives was conducted before administering the survey to ensure the validity of survey items.

The questionnaire consisted of five quantitative and three qualitative statements—the quantitative statements related to various aspects of AI's influence on academic writing. The respondents were asked to indicate their level of agreement or disagreement on a four-point scale ranging from "strongly agree" to "strongly disagree," enabling them to indicate their level of agreement or disagreement with statements about using AI in academic writing. These responses were numerically scored, with the most positive response ("strongly agree") assigned a value of 4 and the most negative response ("strongly disagree") assigned a value of 1. In the second part of the questionnaire, the participants were asked to answer two open-ended questions: How do you perceive that AI alters the natural character of academic writing? Do you believe using AI in academic writing can lead to a loss of control or authorship over a scholarly work? How should we effectively utilize AI in academic writing to benefit authors without conflicting with academic ethics?

We conducted a comprehensive study that included qualitative data analysis, involving direct interviews with selected respondents, and quantitative insights gathered through a survey. In the qualitative analysis, respondents revealed nuanced perceptions regarding AI's impact on academic writing, highlighting the potential benefits while emphasizing the importance of ethical considerations, a balanced approach, and preserving the writer's control and authenticity. Meanwhile, in the quantitative aspect of the study, respondents were asked to rate their level of agreement with various statements on a Likert scale ranging from 'Very Disagree' to 'Very Agree.' The percentages reported in the table represent the distribution of responses for each statement.

For data analysis, descriptive statistics were employed to analyze the demographic characteristics, and the Likert scale responses were tabulated to assess the distribution of opinions. Thematic analysis was conducted on the open-ended responses to identify recurring themes and patterns in participants' qualitative feedback (Creswell, 2012). To
ensure the validity of the data, the survey instrument underwent rigorous scrutiny for alignment with the research objectives.

C. Result and Discussion

1. The result of the Quantitative Data

The table presents the responses obtained from a survey on the opinions regarding AI’s current and future usage in academic writing. The data reflect the percentage of participants who strongly disagree, disagree, agree, or strongly agree with various statements about AI’s role in academic writing. The statements cover a range of aspects, including the current utilization of AI, its potential expansion in the future, its ability to reduce time and effort in academic writing, its potential to transform research practices, and its impact on the assessment and evaluation of academic work. By examining these responses, we can gain insights into the perceptions and attitudes toward integrating AI in academic writing.

<table>
<thead>
<tr>
<th>Statement</th>
<th>Very Disagree (%)</th>
<th>Disagree (%)</th>
<th>Agree (%)</th>
<th>Very Agree (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AI is currently used in various ways to support academic writing</td>
<td>-</td>
<td>5.9</td>
<td>72.1</td>
<td>22.1</td>
</tr>
<tr>
<td>AI usage in academic writing will expand in the future.</td>
<td>-</td>
<td>4.5</td>
<td>62.7</td>
<td>32.8</td>
</tr>
<tr>
<td>AI can reduce the time and effort required for academic writing</td>
<td>2.9</td>
<td>17.6</td>
<td>54.4</td>
<td>25.0</td>
</tr>
<tr>
<td>AI can change the way research is conducted and reported</td>
<td>1.5</td>
<td>17.6</td>
<td>64.7</td>
<td>16.2</td>
</tr>
<tr>
<td>AI can change the assessment and evaluation of academic work</td>
<td>1.5</td>
<td>8.8</td>
<td>75</td>
<td>14.7</td>
</tr>
</tbody>
</table>

The integration of Artificial Intelligence (AI) in academic writing significantly impacts authorship and the natural character of academic works, as the quantitative data demonstrates. A substantial 72.1% of respondents agree that AI is currently used to support academic writing, and 22.1% indicating a "Very Agree" response. This widespread agreement highlights the influence of AI on the writing process, raising essential considerations about authorship and the preservation of the natural character of scholarly works.

Looking ahead, 62.7% of respondents believe that AI usage in academic writing will expand, and 32.8% expressing a "Very Agree" response. Conversely, 4.5% disagreed, suggesting a cautious perspective on the future expansion of AI usage. This divergence of
opinions emphasizes the need to carefully consider ethical considerations and best practices to preserve authorship and academic integrity while effectively utilizing AI.

The data further reveals that 54.4% of respondents agree, and 25.0% indicate a "Very Agree" response, that AI can reduce the time and effort required for academic writing. However, a smaller proportion of respondents (2.9%) disagreed, indicating some reservations regarding the potential efficiency gains offered by AI. This divergence underscores the importance of striking a balance between leveraging AI for increased productivity and maintaining the authenticity and originality of the author's voice.

Moreover, 64.7% of respondents agree, including 16.2% expressing a "Very Agree" response, that AI can change how research is conducted and reported. Conversely, a small percentage (1.5%) disagreed, raising concerns about the impact of AI on research methodologies and academic practices. This divergence necessitates a comprehensive examination of the ethical implications and potential risks associated with the changing landscape of research practices in light of AI integration.

Additionally, 75% of respondents agree, with 14.7% indicating a "Very Agree" response, that AI can change the assessment and evaluation of academic work. However, a small proportion (1.5%) expressed disagreement, signaling the need for careful consideration of AI-based assessment methods' potential biases and challenges. Ensuring a fair and robust evaluation process while harnessing the benefits of AI is paramount to maintaining academic integrity.

In conclusion, the quantitative data provides nuanced insights into the impact of AI integration in academic writing. The high levels of agreement, particularly the "Very Agree" responses, underscore the potential benefits and changes AI brings. However, the dissenting opinions revealed by the "Very Disagree" responses highlight the need for comprehensive ethical guidelines and best practices. By addressing concerns, striking a balance, and considering the full spectrum of responses, researchers can effectively leverage AI while safeguarding authorship and the natural character of academic works.

2. The result of Qualitative Data.

a. The impact of artificial intelligence on the inherent nature of writing within academic contexts.
AI has become increasingly prevalent in various domains, including academic writing. This research explores respondents' perspectives regarding AI’s influence on the natural character and originality of academic writing. Through qualitative data analysis, we present the key findings from our Study.

Respondent 1 shared their perspective on the impact of AI on academic writing. According to their viewpoint, AI has remained the natural character of academic writing. While AI can assist in certain aspects of writing, it needs to replicate human writing style more perfectly. It highlights the continued significance of human contribution to academic writing. However, respondent 14 also noted the potential for AI technology to advance and better support writers in producing high-quality academic texts.

Respondent 5 raised an exciting concern regarding the use of AI in academic works. They emphasized that AI might hinder the exhibition of distinctive characteristics associated with the author. When AI is incorporated into the writing process, there is a risk of limiting the author’s unique writing style and personal voice. This observation underscores the importance of maintaining the individuality and authenticity of academic works.

An intriguing viewpoint was presented by respondent 6, who suggested that AI’s ability to provide comprehensive answers to problems could potentially diminish the necessity of scientific research. This perspective raises questions about the role of AI in academic writing and its potential implications for the pursuit of rigorous scientific inquiry.

On the other hand, respondent 10 offered a more balanced perspective, highlighting that AI does not fundamentally alter the scientific character of academic writing when used judiciously. As a tool, AI can assist in academic writing without compromising the scientific rigor and authenticity of the work. This viewpoint emphasizes the importance of responsible and measured integration of AI technology in academic writing practices.

Respondent 12 provided valuable insights into AI’s practical benefits and limitations in academic writing. They acknowledged the helpfulness of AI in expediting the writing process. However, respondent 12 also cautioned against
excessive reliance on AI, as it can potentially limit the generation of original ideas. They expressed concerns that academic works produced with excessive AI usage may appear rigid, contrived, and lacking the genuine thoughts and sincerity of the writer/researcher. It highlights the importance of balancing AI assistance and preserving the writer’s authentic voice.

Our research also revealed concerns regarding the impact of AI on the validation of information in academic writing. Respondent 24 noted that the ease of obtaining information through AI has made writers less diligent in cross-checking the validity of the information.

Furthermore, respondent 36 raised a thought-provoking point regarding the dependency on AI in research. They noted that researchers might need more confidence when utilizing AI, highlighting the potential risk of over-reliance on AI as a crutch.

On a more positive note, respondent 41 highlighted the value of AI in generating ideas for writing. AI can serve as a valuable source of inspiration and assistance in the creative process of academic writing. By overcoming writer’s block and stimulating new perspectives, AI can contribute positively to the writing process.

Respondent 50 stated that a researcher provided a perspective highlighting their personal experience with AI in academic writing. As a researcher, she stated that everything has stayed the same for her due to AI. According to her, the role of AI is primarily to assist with finding sources for references, such as using platforms like SciHub, and in grammar checking through widely accepted tools like Grammarly or Google Docs. However, she explicitly mentioned that she does not overly rely on AI, indicating a balanced approach where AI is a supportive tool rather than a primary source for their academic writing endeavors. The role of AI, according to respondent 50, is primarily to assist with finding sources for references, such as using platforms like SciHub, and in grammar checking through widely accepted tools like Grammarly or Google Docs. However, respondent 50 explicitly mentioned that they do not overly rely on AI, indicating a balanced approach where AI is a supportive tool rather than a primary source for their academic writing endeavors.
In conclusion, our research has provided diverse perspectives on the impact of AI on academic writing. While some respondents acknowledged the potential benefits of AI in enhancing writing processes, concerns were raised about its impact on the natural character, originality, and validation of academic works. The findings emphasize the need for a balanced and cautious approach when

b. **The utilisation of AI in academic writing can result in a potential relinquishment of control or authorship over scholarly work.**

Integrating AI in academic writing has undeniably revolutionized the research landscape, offering various benefits in terms of efficiency and productivity. However, this technological advancement has also sparked a debate regarding its potential implications for the control and authorship of scholarly works. By critically analyzing the perspectives and experiences of researchers, we aim to shed light on the complexities and considerations surrounding the utilization of AI in academic writing.

Respondent 5 asserts that writers maintain independence in comprehending a problem, indicating that AI does not diminish their autonomy. It suggests writers can utilize AI-generated content as a supplementary tool while retaining their analytical and interpretive abilities.

In contrast, respondent 7 suggests that the use of AI in writing can be justified if its purpose is to enhance efficiency and save time. The researcher retains control over the writing process, treating AI-generated content as a reference or an alternative viewpoint to consider. This perspective acknowledges the potential benefits of AI while underscoring the importance of the writer's authority in shaping the final output.

Respondent 21 raises a cautionary note, highlighting the risk of AI-generated content deviating from the writer's intended meaning if adopted without careful review. It emphasizes writers' need to actively engage with AI-generated suggestions and ensure that the final content aligns with their original intent.

Respondent 23 introduces competing AI systems designed to counteract and challenge each other. This observation implies that the presence of alternative AI models can contribute to the overall reliability and credibility of AI-generated content by offering diverse perspectives.
Respondent 31 draws attention to the current limitations of AI-generated content, emphasizing the need for writers to edit and revise the output personally. This recognizes that the quality of AI-generated content may not yet be on par with human-written content, necessitating the writer's intervention to enhance the final result.

Respondent 40 highlights the significance of the writer's background knowledge and focus. While AI can offer assistance, the researcher's expertise and concentration remain crucial in effectively leveraging AI. A writer's lack of focused background knowledge may limit how AI can assist in the writing process.

Respondent 43 stresses the essential role of the writer in maintaining control, using the example of Grammarly. AI suggestions provided by tools like Grammarly should be evaluated by the writer's judgment, ensuring coherence and intuition based on their knowledge. This viewpoint underlines the importance of the writer's active involvement and decision-making in the writing process.

Lastly, respondent 47 cautions against negligence in reviewing AI-generated content. Merely copying AI results without applying scientific selection to evaluate the credibility and quality of reference sources can compromise the integrity and rigor of the research findings.

These perspectives collectively indicate the need for a balanced approach to utilizing AI in writing. While AI can be a valuable tool, the writer's role in maintaining control, conducting critical evaluation, and ensuring the final output aligns with their intent remains vital in preserving the integrity and uniqueness of the written work.

c. Effectively utilizing AI in academic writing to benefit authors while adhering to academic ethics

Integrating AI in writing processes has sparked a significant debate in academic circles. Qualitative data from multiple respondents shed light on various perspectives regarding the benefits and considerations of AI in writing. These insights provide a foundation for a more argumentative analysis of the topic.

One of the most beneficial uses of AI for writers, as highlighted by Respondent 2, is its ability to check grammar and spelling errors. AI tools like Grammarly have gained popularity for their effectiveness in identifying and rectifying linguistic
mistakes. It ensures that written work maintains a high standard of accuracy and professionalism. Furthermore, Respondent 2 also mentioned the role of AI in plagiarism checking, with tools like Turnitin assisting writers in ensuring the originality and integrity of their work. The safeguards against unintentional plagiarism and upholds academic integrity.

Reference management systems, such as Mendeley, emerged as another valuable AI tool, according to Respondent 2. These systems streamline organizing and managing references, saving writers time and effort. By automating tasks such as citation formatting and bibliography creation, writers can focus more on the content of their work. It enhances efficiency and helps maintain consistency in academic writing.

Despite the benefits, ethical considerations are important in integrating AI into writing processes. Respondent 17 emphasizes the need for writers to use authorized AI products that adhere to ethical standards and principles of scientific publication. It ensures that the use of AI aligns with the principles of academic integrity, accountability, and responsible research conduct. Respondent 37 further supports this by noting that AI should not be relied upon as a primary reference in academic writing, as it does not provide credible references. It highlights the significance of independent research and the evaluation of sources by writers.

The qualitative data from respondent 27 supports the argument that AI can positively impact writing when used to improve the quality without compromising the ideas or originality of the author. However, automated paragraph generation and automatic paraphrasing should be avoided to preserve the authenticity of the writing (respondent 27). It highlights the need for a balanced approach, leveraging AI as a helpful tool while maintaining the writer's control over the content and ensuring the integrity of the work.

The argument for the writer's involvement in the writing process remains robust. Respondent 29 stresses that AI should be seen as a tool, not the primary focus. It should include the creative input and individuality of the writer. This sentiment is supported by Respondent 28, who emphasizes the importance of AI applications focusing solely on improving the writing system rather than altering the content.
Respondent 30 suggests implementing clear and structured academic ethics guidelines to address potential concerns and ensure ethical conduct. These guidelines serve as a reference and provide writers with a framework for ethical decision-making. By adhering to these guidelines, writers can navigate the complexities of AI integration in writing while upholding the highest standards of academic integrity.

The qualitative data from respondent 43 indicates that AI can greatly benefit word and phrase selection and grammar correction, especially in writing foreign languages. This emphasizes the writer’s role in maintaining the distinct character of their work. Additionally, respondent 52 highlights that AI should not be used as a primary reference in academic writing but as a source of information and supplementary assistance. This supports the argument that writers should rely on their research and critical thinking skills to ensure the credibility and integrity of their work, utilizing AI as a supportive tool rather than a primary source.

In conclusion, the qualitative data highlights the multifaceted nature of AI integration in writing. While AI offers benefits such as grammar and spelling checks, plagiarism detection, reference management, and translation assistance, it is essential to strike a balance that upholds the involvement and originality of the writer. As supported by multiple respondents, adherence to ethical standards is vital to maintaining the credibility and integrity of academic writing. By utilizing AI as a tool and implementing clear ethical guidelines, writers can harness the benefits of AI while retaining control over their work and preserving their unique contributions to the academic discourse.

3. The Impact of AI Integration on Authorship and the Natural Character of Academic Writings

Integrating AI in academic writing has significant implications for the future of authorship and academic writing. As AI technologies continue to advance, the role of AI in the writing process is expected to expand further (Nakazawa et al., 2022). This raises important questions about the evolving nature of authorship and the need for clear guidelines on attribution and ownership (Frye, 2022). Authors must navigate the challenges of collaborating with AI systems while maintaining their unique perspectives and voices (Ballardini, 2019). The concept of a hybrid model of authorship, where humans
work in collaboration with AI systems, may become more prevalent, requiring a careful balance between leveraging AI for productivity gains and preserving the authenticity and originality of academic writings (Ballardini, 2019).

Efficiency and productivity are key advantages of AI integration in academic writing (Thorp, 2023). The survey results indicate that most respondents believe AI can reduce the time and effort required for writing tasks (Respondent 14). AI tools can automate tedious and time-consuming grammar and style checks, allowing researchers to focus on higher-order tasks. This can lead to increased productivity and faster generation of academic writing (respondent 27). However, it is crucial to address concerns raised by dissenting opinions regarding the potential risks of compromising the integrity and uniqueness of academic writing through excessive reliance on AI-generated content (respondent 43). A cautious approach is needed to ensure that AI integration in academic writing enhances efficiency without undermining the natural character of academic writing.

Ethical considerations and best practices are paramount when integrating AI into academic writing. Transparency and attribution are critical to recognizing the contributions of AI systems in the writing process. Proper citation practices and adherence to ethical guidelines are essential to maintaining academic integrity (respondent 17 & Respondent 27). Additionally, intellectual property rights related to AI-generated content must be addressed to protect authors’ rights and ensure fair attribution. Data privacy and security should be safeguarded to maintain trust in AI systems used for academic writing, aligning with relevant regulations and ethical standards (respondent 47).

The integration of AI in academic writing has ignited a heated debate surrounding its impact on authorship and the natural character of scholarly works (Khalil & Er, 2023). While proponents argue that AI tools and algorithms enhance efficiency and productivity without compromising authorship, several concerns emerge when delving deeper into the implications (Kurniati & Fithriani, 2022). It is essential to critically evaluate these arguments and recognize the potential risks associated with AI integration. Proponents contend that AI tools aid the writing process, asserting that they do not undermine writers’ authorship (Ghotbi et al., 2022). They argue that AI can assist in comprehending complex
problems, offering suggestions, and generating ideas while writers retain decision-making authority (Nakazawa et al., 2022). However, this viewpoint relies heavily on the assumption that AI tools augment writers’ skills and knowledge. Nevertheless, the findings of Ragot et al. (2020) support the notion that AI tools are designed to complement human expertise rather than replace it.

The concern over unintended deviations from the writer's intended meaning arises as a significant risk when relying solely on AI-generated content. Respondent 21 highlights this issue, emphasizing the potential loss of control over the nuances and subtleties of the writing, which can fundamentally affect the integrity of scholarly work. Writers must tread carefully and exercise constant vigilance to ensure the accuracy and coherence of their work.

Furthermore, doubts surrounding the quality and reliability of AI-generated content must be addressed (Rodrigues, 2020). Respondent 31 emphasizes that AI-generated content may necessitate personal editing and revision due to the current limitations of AI capabilities. The findings of Rodrigues (2020) support this concern, asserting the need for human intervention to ensure the accuracy and coherence of the content. While AI tools provide valuable suggestions, they should remain the writer’s critical evaluation and intervention (Nakazawa et al., 2022).

Preserving the authenticity and individuality of academic writing is a paramount concern that cannot be overlooked. Respondent 43 stresses the writer’s presence and control as crucial factors in effectively utilizing AI. Excessive reliance should not compromise the writer’s "voice" concept in academic writing on AI-generated content. Writers can uphold their unique perspectives and styles by judging and evaluating AI suggestions based on their knowledge and expertise (Ghotbi et al., 2022). However, striking the right balance between leveraging AI for assistance and maintaining the writer’s authenticity remains a challenge that requires careful consideration.

To ensure the integrity of academic writing, writers must critically evaluate the credibility and quality of AI-generated content. Respondent 47 underscores the importance of conducting thorough reviews and applying scientific selection when utilizing AI. This aligns with the principles of academic integrity, which demand proper source attribution and critical evaluation of incorporated information (Khalil & Er, 2023).
However, it is crucial to acknowledge that AI integration introduces new complexities and considerations that may require additional guidelines and training to navigate effectively.

In conclusion, while AI can undoubtedly enhance efficiency and productivity in academic writing, a cautious approach is necessary to preserve authorship and the natural character of academic writing. The arguments presented by proponents must be critically evaluated alongside the concerns raised. Writers should actively engage with AI-generated suggestions, critically evaluate the content, and ensure its alignment with their original intent. By preserving their independence and actively intervening in the writing process, writers can strive to uphold the integrity, authenticity, and individuality of their scholarly works. Vigilance, critical thinking, and adherence to ethical guidelines will be essential as the integration of AI in academic writing continues to evolve.

4. Ethical Considerations and Best Practices for Utilizing AI in Academic Writing while Preserving Authorship and Academic Integrity

Ethical considerations and best practices are paramount when utilizing AI in academic writing to preserve authorship and academic integrity. The integration of AI in writing processes has sparked significant debates, and this study aims to explore the perceptions and attitudes towards AI in academic writing through lectures in higher education. By combining qualitative and quantitative data, we can comprehensively understand the impact, considerations, and best practices associated with AI’s current and future integration while maintaining ethical standards.

The qualitative data highlights several benefits of utilizing AI in academic writing. Respondent 2 emphasizes the role of AI in checking grammar and spelling errors, ensuring accuracy and professionalism. Tools like Grammarly have gained popularity for their effectiveness in identifying and rectifying linguistic mistakes. Additionally, plagiarism-checking tools like Turnitin assist in maintaining originality and upholding academic integrity (Mphahlele & McKenna, 2019). Respondent 2 also mentions the value of reference management systems like Mendeley, streamlining the organization of references and enhancing efficiency (Kratochvil, 2017).

The quantitative data support these findings, indicating that most respondents (72.1%) agree that AI is currently used to support academic writing. This widespread
agreement underscores the recognition of AI's benefits in improving writing quality and efficiency.

As highlighted by multiple respondents, ethical considerations are crucial in integrating AI into academic writing. Respondent 17 emphasizes the importance of using authorized AI products that adhere to ethical standards and principles of scientific publication. This ensures that the use of AI aligns with the principles of academic integrity, accountability, and responsible research conduct. Respondent 37 further supports this notion by noting that AI should not be relied upon as a primary reference, emphasizing the significance of independent research and source evaluation by writers.

These ethical considerations align with the quantitative data, revealing that a substantial proportion of respondents (62.7%) believe that AI usage in academic writing will expand. This emphasizes the need to establish ethical guidelines and best practices to ensure AI’s responsible and accountable integration while preserving authorship and academic integrity.

The qualitative data presents various perspectives on maintaining academic work’s distinct character and authenticity. Respondent 27 suggests a balanced approach, utilizing AI for citation management and grammar correction but avoiding automated paragraph generation and automatic paraphrasing. Respondent 29 emphasizes the writer's involvement in the writing process and uses AI as a tool rather than the primary focus.

The findings of this study have important implications for writers, institutions, and policymakers in the field of academic writing. By providing insights into the perceptions, attitudes, and ethical considerations of AI integration, this research offers guidance for the effective utilization of AI while preserving authorship and academic integrity. The qualitative data emphasizes the importance of ethical guidelines, authorized AI products, and maintaining the involvement and distinct character of the writer in the writing process. These findings contribute to developing best practices and policies surrounding AI in academic writing.

This Study contributes to the existing body of knowledge by combining qualitative and quantitative data to provide a comprehensive understanding of the benefits, ethical considerations, and best practices associated with AI integration in academic writing. By synthesizing qualitative and quantitative findings, this research provides a more robust
and holistic examination of the topic, contributing to the novelty and advancement of research in this field.

D. Conclusion

Integrating AI in academic writing brings opportunities and challenges regarding authorship, the natural character of academic works, and ethical considerations. The findings of this Study shed light on these aspects and provide valuable insights into effective practices for utilizing AI while preserving authorship and academic integrity. AI tools offer benefits such as grammar and style checks, reference management, and plagiarism detection. However, caution is necessary to ensure the writer’s voice and authenticity are not compromised. Maintaining control and exercising judgment in engaging with AI-generated content is crucial to preserving the distinct character of scholarly works.

Ethical considerations play a pivotal role in integrating AI into academic writing. Adhering to ethical guidelines, using authorized AI products, and ensuring responsible research conduct are essential. Writers must critically evaluate the credibility and quality of AI-generated content, conduct thorough reviews, and apply scientific selection. Proper source attribution, citation practices, and data privacy and security are paramount to upholding academic integrity. A balanced approach is recommended to utilize AI while effectively preserving authorship and academic integrity. AI should be seen as a tool rather than the primary focus, with human intervention and expertise remaining central. Establishing clear ethical guidelines and best practices is necessary to navigate the complexities of AI integration in academic writing. These guidelines should address attribution, ownership, intellectual property rights, and the responsible use of AI-generated content.

The integration of AI in academic writing has the potential to enhance productivity and efficiency while posing challenges to authorship and the natural character of academic works. Adhering to ethical considerations and implementing best practices can ensure responsible and accountable AI integration. By maintaining the writer’s control and authenticity, critically evaluating AI-generated content, and establishing clear guidelines,
academic writing can benefit from AI technology while upholding the principles of authorship and academic integrity.

References


