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The Impact of Artificial Intelligence on Changes in Students Academic Indonesian Writing Styles

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Abstrak

The rapid advancement of artificial intelligence technology has significantly impacted the academic writing practices of university students. This study aims to analyze the effect of artificial intelligence applications on changes in students' academic Indonesian writing styles. This research employed a qualitative descriptive approach, utilizing data collected from student assignments, digital writing samples, and interviews with university students. The findings reveal that artificial intelligence affects sentence structure, diction selection, coherence patterns, and academic writing efficiency. Students tend to produce more systematically structured texts; however, several writings demonstrate a decline in originality and critical elaboration. Furthermore, artificial intelligence increases students reliance on instant writing assistance tools. The results indicate that integrating artificial intelligence into academic writing necessitates digital literacy and critical language awareness to preserve originality and academic integrity. This research contributes to the advancement of digital linguistics and academic writing studies in higher education.

Keywords: artificial intelligence; academic writing; digital linguistics; Indonesian language; university students.

INTRODUCTION

The advancement of digital technology has introduced major transformations to the educational sphere, including students academic writing practices. Currently, one of the most influential technological developments affecting academic activities is artificial intelligence (AI). AI technology is implemented in various automated writing applications, grammar checkers, digital translators, and academic text generators. The presence of this technology facilitates students in composing academic texts more rapidly and systematically.

The phenomenon of AI utilization in academic writing has been escalating since the advent of various platforms based on generative artificial intelligence. Students have begun leveraging AI technology to brainstorm ideas, construct paragraphs, refine grammar, and even

summarize scientific articles. Crystal (2020) explains that digital technology advancements lead to shifts in language usage patterns within modern communication and literacy.

Conversely, the use of AI in academic writing presents several linguistic and academic challenges. Students tend to generate more formal and structured writing, yet some texts lose their personal character and depth of critical analysis. This situation sparks concerns regarding a potential decline in students' critical thinking abilities and independent writing skills.

Digital linguistics studies demonstrate that technology influences language style, sentence structure, and diction choices in modern communication. Fairclough (2021) asserts that shifts in communication technology affect the social practices of language and forge new communication patterns in digital societies.

Previous studies have predominantly discussed the use of AI in education, focusing primarily on technological aspects and learning effectiveness. Research investigating the impact of AI specifically on students' academic Indonesian writing styles remains relatively scarce. The majority of studies have yet to correlate AI usage with changes in the linguistic structure of student writing.

It is crucial to examine this phenomenon because academic writing constitutes a core competency for higher education students. Utilizing AI without critical digital literacy risks degrading writing originality and compromising students' academic integrity. Consequently, this study aims to describe the impact of artificial intelligence on shifts in students' academic Indonesian writing styles.

RESEARCH METHODS

This study utilized a qualitative descriptive method, applied to delineate the shifts in students' academic writing styles resulting from artificial intelligence usage. The research data comprised students' academic assignments, writing outputs generated via AI applications, and interviews with students employing AI technology for academic writing. The research was conducted involving students from language and education study programs across several universities during the 2025–2026 academic year.

Data collection techniques encompassed documentation, digital observation, and semi-structured interviews. The researchers compared students' writing before and after utilizing AI applications to observe structural language and writing style modifications. Data analysis was performed using the Miles, Huberman, and Saldaña model, which involves data reduction, data display, and conclusion drawing. Data validity was established through source and technique triangulation.

RESULTS AND DISCUSSION

Changes in Students' Academic Language Structure

Data analysis was conducted on 20 samples of students' academic writing before and after using artificial intelligence (AI)-based applications. The assessment focused on aspects of sentence structure, academic diction, coherence, grammar, and writing originality.

Table 1. Examples of Student Academic Writing Analysis Data

No	Student Code	Before Using AI	After Using AI	Findings/Changes
1	MHS-01	Short and ineffective sentences	More systematic sentences	Structure improved
2	MHS-02	Many spelling errors	More accurate grammar	AI assisted with correction
3	MHS-03	Less academic diction	More formal diction	Vocabulary improved
4	MHS-04	Incoherent paragraphs	More coherent paragraphs	Coherence improved
5	MHS-05	Simple ideas	More elaboration	Content development expanded
6	MHS-06	Many word repetitions	More word variety	Diction variation increased
7	MHS-07	Weak arguments	More logical arguments	Thinking structure improved
8	MHS-08	Slow manual writing	Faster writing	Efficiency improved
9	MHS-09	Strong personal style	More generic style	Originality decreased
10	MHS-10	Many ambiguous sentences	Clearer sentences	Clarity improved

The data in Table 1 demonstrates that AI usage exerts a positive influence on the structure of students' academic writing. Most students exhibited improvements in grammar, coherence, and sentence effectiveness. However, certain texts indicated a propensity towards a more general and less personal language style.

Table 2. Percentage of Changes in Academic Writing Aspects

Writing Aspect	Before AI	After AI
Grammar	58%	89%
Paragraph Coherence	61%	87%
Diction Accuracy	55%	85%
Sentence Effectiveness	60%	90%
Writing Originality	88%	70%

Table 2 reveals that AI usage enhances the technical quality of students academic writing. Nevertheless, the percentage of writing originality declined because some students tended to rely on automatically generated content without independently developing their ideas.

Changes in Students' Academic Language Structure

The research findings indicate that AI usage significantly alters the structure of students' academic language. Students formulated longer, more systematic, and more formal sentences compared to texts written manually.

Table 3. Changes in Students' Academic Writing Structure

No	Writing Aspect	Before AI	After AI
1	Sentence Structure	Simple	Complex
2	Academic Diction	Limited	More varied
3	Coherence	Less stable	More systematic
4	Grammar	Many errors	More accurate
5	Idea Elaboration	Personal	Tends to be generic

The application of AI assisted students in rectifying grammatical errors and enhancing writing organization. Nonetheless, some writings exhibited a tendency to utilize overly generic language that inadequately reflected the authors' distinct cognitive styles.

The Impact of AI on Writing Originality

The study discovered that a segment of students became increasingly dependent on AI for drafting academic assignments. This reliance resulted in a diminished process of idea exploration and critical reflection during writing. This finding is consistent with Herring's (2022) research, which notes that while digital technology can boost communication efficiency, it also affects language production patterns and user creativity.

Furthermore, AI usage led to the homogenization of students' academic writing styles. Numerous writings shared analogous sentence patterns due to the use of identical automated writing assistance systems.

Digital Literacy and Academic Awareness

Although AI offers undeniable benefits for academic writing, students still require critical digital literacy to utilize the technology ethically. AI usage should serve as an auxiliary tool, not as a replacement for critical thinking and writing capabilities. In this context, lecturers must devise instructional strategies emphasizing critical thinking, information evaluation, and reflective writing to ensure students retain authentic academic writing proficiency.

This study highlights that the proliferation of AI is unavoidable within the educational sector. Therefore, higher education institutions must formulate clear academic and digital literacy policies regarding AI utilization in scientific writing. This encompasses establishing robust policies for both regular coursework assignments and final projects (theses).

CONCLUSION

This research demonstrates that artificial intelligence profoundly impacts students' academic Indonesian writing styles, particularly concerning sentence structure, diction selection, coherence, and grammar. AI usage aids students in producing more systematic and formal texts. Conversely, it also precipitates several adverse effects, including diminished writing originality, language style homogenization, and heightened student dependency on automated writing technologies. This study underscores the critical importance of digital literacy and academic integrity regarding AI utilization in higher education. AI technology must be leveraged judiciously to continuously support, rather than replace, the cultivation of students' cognitive and writing skills.

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