Exploring the Adherence to AI-Generated Writing Standards: Practice Levels among University Students

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Abstract

Since writing was done with a quill, then with typewriters, and up to modern text processing programs, writing has always adhered to standards concerning the responsibilities and roles of the author, which cannot be abdicated. Given that adherence to writing standards may be a suitable way to regulate the use of generative artificial intelligence, this study explores the extent to which a sample of university students adhere to the standards of AI-generated writing. A total of 326 students majoring in the humanities participated in the study. The research was designed as a quantitative study, employing a descriptive-analytical approach to process the obtained results. A proposed list of standards for AI-generated writing suitable for undergraduate students was prepared and presented to experts. Based on the proposed standards list, data were collected using a graduated practice scale that illustrates the levels of student adherence to AI-generated writing standards. The scaled measure delved into student practices related to standards such as Input Guidance, Disciplined Dependability, Content Validation, Critical Analysis, Documentation, Review and Editing, and Responsibility. Students achieved beginner and intermediate ratings in their adherence to AI-generated writing standards, and they attained very low levels in the advanced practices of standard. This paper contributes to our understanding of how students apply AI-generated writing standards. The gap revealed by the current study's results prompts us to establish regulatory guidelines to enforce student adherence to AI-generated writing standards.

Keywords: generative artificial intelligence, AI-generated writing standards, writing processes, input guidance

1. Introduction

Throughout the years, writing has been a human endeavor rooted in thought and human experiences. Writing has uniquely relied on humans, reflecting their thoughts, experiences, and ways of thinking. Recently, generative language artificial intelligence models have emerged with significant capabilities that enable them to rival humans in producing and generating linguistic texts. These models rely on prior inputs and machine learning, as well as on electronic neural networks and algorithms to connect ideas and events, thereby simulating humans in producing high-quality linguistic texts. In the context of the technological development of artificial generative language models, the concept of writing and authorship has been fundamentally altered, prompting a reevaluation of the definitions of

writing, the writer, and the skills associated with each. Moreover, when using generative writing models, it is crucial to balance leveraging the language model's capabilities while maintaining the significance of human expertise.

Generative language intelligence models have been designed to compile and produce text that resembles human-produced text based on a set of input commands. These models are useful for various natural language processing tasks such as text generation, translation, conversation, and providing suggestions (Thorne, 2024). Generative language intelligence models are distinguished by their rapid written production, constant availability, diversity, and creativity. Thus, generative language intelligence models have impressed users with their level of complexity and human-like intelligence (Alshraah et al., 2024).

The importance of generative language intelligence models is closely tied to the importance of writing itself and the need for users, such as students, to face writing situations they encounter during their studies. As Al-Shahat (2022) mentions, writing is the fourth language skill after listening, speaking, and reading. Writing is the mirror that reflects students' linguistic and intellectual abilities, as well as the primary means of expression and documentation in all learning activities. In the educational context, language AI models like ChatGPT and Gemini have recently become a field of interest for researchers, educators, and students due to their exceptional capabilities in diversifying learning contexts, opening new horizons for self-learning, providing feedback, support, guidance, suggesting ideas, producing and analyzing texts. Additionally, these models possess the ability for self-learning and building on previous learning experiences and inputs. Generative AI works by producing responses and solutions based on the experiences it has gained from human-inputted data (Baidoo-Anu & Ansah, 2023). Despite their proficiency, these language models rely on non-standardized educational writing, which means they are not free from errors, biases, and the potential for plagiarism and falsification. There are always concerns about these language models regarding their negative impact on the educational process and the excessive use by students (Al Lily et al., 2023).

Detection tools for AI-generated texts do not verify adherence to proper writing standards; they do not provide fundamental solutions to writing problems but rather serve as monitoring tools that authors can circumvent. In the field of writing using artificial intelligence, as discussed by Farrelly & Baker (2023) and Law (2024), large language models are trained on vast amounts of data, which presents a high possibility of misinterpreting inputs and directives. AI can deviate from the intended course and produce information irrelevant to the inputs. In other words, if the instructions or inputs provided to AI are not specific and well-understood, this can lead to inaccurate or off-topic results. AI may generate incorrect information or responses, which can sometimes be creative but wrong, this phenomenon is known as hallucination in the context of AI. AI writing tools have the capability to generate multiple and diverse ideas; however, there is a potential for verbosity, errors, biases, and context deviations. This necessitates adherence to clear standards during the production of AI-generated writing.

Students across the globe are increasingly benefiting from AI models to produce and enhance their writing. In the university stage, writing plays a significant role as it represents the culmination of the educational phases, where students need to deepen their writing skills through crafting reports, assignments, essays, taking lecture notes, and answering questions. AI-supported tools provide substantial assistance to students in various aspects of writing essays, completing assignments, and conducting mini-research projects. Despite the numerous advantages, challenges remain in using AI technologies in student writing. Ethical considerations related to data privacy and security must be addressed to protect intellectual property. Additionally, students need to develop critical thinking skills to evaluate the quality and reliability of AI-generated content and avoid excessive reliance on artificial tools, which necessitates clear standards for writing.

Generative language AI models are connected to writing both as skills and processes; however, the writer is the language model, while the student's role is to control inputs, and edit and monitor outputs. This requires specific standards for input processing, generation, verification, editing, and evaluation (Ginting et al., 2023). Students should adhere to these standards to mitigate potential risks and ensure ethical considerations and the integrity of AI-generated content. Zhao et al. (2024) noted that AI writing tools have gained significant attention in recent years as a new means to enhance student writing. However, there has been limited research on how these tools are actually used in practice.

While countries around the world are developing guidelines that include standards for using AI in student writing, contributions in this area within Arab countries remain insufficient. At the level of Arab schools and universities, there is currently no practical guide outlining standards for the use of generative AI tools in writing by university or school students. On the contrary, many Arab countries have rushed to ban generative AI sites rather than providing students with guidelines on how to use these sites effectively and ethically. This aspect remains underexplored, particularly for university students. Writing has traditionally been a responsible activity with clear standards, but

university students may not find these standards sufficiently relevant to their goals in AI-generated writing. Therefore, this study aims to address this gap by exploring the extent to which students adhere to these standards in their practices. The primary goal is to enhance academic guidance on AI writing standards for students by answering the central question: How well do university students adhere to standards for AI-generated writing in their practices? The current study does not focus on the effectiveness of generative language models in providing and producing written texts. The benefits of these models are already evident. Instead, the focus here is on the practices of students who use and direct these models for writing in light of regulatory standards.

2. Literature Review

2.1 Writing Dependent on AI Tools

Writing is often perceived as an individual human activity performed by a writer working alone (Storch, 2019). Writing is a complex cognitive process that requires a specific level of knowledge and continuous generation of ideas and concepts, as well as the ability to shape, organize, and present these ideas on paper in a compelling and impactful manner. In addition to being a human accomplishment that demands advanced cognitive abilities such as critical thinking and creativity, writing is a core language skill, alongside listening, speaking, and reading. It is a unique human trait that reflects one's capacity to think and express ideas in written form through the use of language (Baskara, 2023).

With the advent of generative AI models, the perception of the concept of writing and the role of the writer has changed. The traditional notion of the author has evolved, and new definitions of the person or model performing the act of writing have been constructed. Students can now produce texts independently without guidance or supervision from teachers or authorities. This writing is characterized by complete freedom of expression and speed in performance. Al-Raimi et al. (2024) and Tossell et al. (2024) assert that generative language AI models provide a suitable opportunity to overcome the challenges students face in writing. The release of generative AI models in their current form represents a significant milestone in human history. These models primarily rely on machine learning and natural language processing, allowing them to serve multiple fields (Ding & Zou, 2024). According to Victor et al. (2023), generative AI models open unprecedented opportunities for students in various areas such as translation and text production. All these models rely on artificial neural networks based on AI to simulate human capabilities (Strobel et al., 2024). This category of generative AI techniques has emerged from foundational models, such as deep learning models and large-scale models trained on massive, unstructured data covering multiple topics. Developers can adapt these models for a wide range of applications by fine-tuning them to fit each specific task (Aydın & Karaarslan, 2023).

A study by Bhimavarapu (2023) investigated whether generative AI could help increase human productivity in writing. The study hypothesized that generative AI would have a positive impact on human writing productivity. The results indicated that the use of generative AI did indeed enhance writing productivity by reducing the number of errors and shortening the time spent on writing. However, the extent to which students' productivity in producing quality work is significant also depends on how much work they delegate to generative AI, as well as how the AI is perceived by the students.

Considering AI-based writing, Zhao et al. (2024) explored how university students use a variety of digital tools during the writing process to address the challenges they encounter in academic writing. Song & Song (2023) investigated the impact of AI-assisted language learning on writing skills and motivation among students learning English as a foreign language. The study participants demonstrated enhanced proficiency in various aspects of writing, including organization, coherence, grammar, and vocabulary.

Yan (2023) employed the use of ChatGPT for text creation in a one-week second language writing training course. The results demonstrated the benefits of applying ChatGPT in teaching second language writing. Additionally, ChatGPT provided an automated writing workflow that could enhance writing efficiency. However, participants generally expressed concerns about ChatGPT's threats to academic integrity and educational fairness, highlighting the need for regulatory policies and instructional guidelines to manage the appropriate use of ChatGPT. Mahapatra (2024) found a positive impact of ChatGPT on academic writing skills among students, with students' perceptions of this impact being highly positive. ChatGPT was identified as a valuable tool for feedback in large writing classes. Imran and Almusharraf (2023) noted that using ChatGPT as an academic writing assistant has become an integral part of the writing process, with opportunities to support students' writing skills through this model, although challenges remain. On the other hand, Herbold et al. (2023) found that ChatGPT generates articles on free topics with higher quality ratings compared to human-written articles; the writing style of AI models exhibits linguistic

characteristics different from those found in human-written texts.

On the other hand, as discussed by studies (Xie & Wang, 2024; Söğüt, 2024; Aisyi, 2024), there is concern that excessive reliance on generative AI models may lead to a decline in traditional and creative writing skills among students, as they might become dependent on AI for text production rather than developing their own abilities. Additionally, concerns about academic integrity arise, as students could use these tools for cheating or submitting work that is not their own. These generative models also raise questions about intellectual property rights, as materials from multiple sources might be used without proper attribution. It is essential to establish controls and guidelines for using these tools in a way that promotes learning and the development of fundamental skills among students.

In summary, it appears that the literature related to writing dependent on AI tools indicates a shift in the traditional concept of writing and the traditional role of the writer. There seems to be an opportunity to enrich writing and its skills among students through AI tools. These tools can provide an interactive learning environment that helps students develop their ideas and improve their writing techniques, thereby enhancing their ability to produce high-quality content in less time. Conversely, there are several concerns raised by a significant number of previous studies that cannot be ignored. Prominent among these concerns is the potential for students to become overly reliant on AI, which may lead to a decline in their writing skills and their ability to think critically and creatively independently. Additionally, there is concern about ensuring adherence to clear policies, standards, and specific guidelines to ensure that these tools are used in a way that enhances learning.

2.2 Writing Standards in the Context of Generative AI Tools

The landscape of writing challenges has changed since the advent of generative AI models. Writing itself is no longer a challenge for students. The primary challenge has shifted from the ability to write to the ability to effectively utilize these models. Previously, writing challenges were associated with understanding the processes and skills required for writing, many of which have been overcome by generative AI models. Conversely, new challenges have emerged related to keeping up with developments and updates in the field of AI to understand how to improve the use of these tools, as well as understanding the ethics of use, improving inputs, blending student ideas with AI ideas, evaluating and judging content, and other aspects of proper usage.

The field of generative AI language models presents both a remarkable opportunity and a cause for concern, as they are not restricted to a specific style of writing. These tools generate free-form writing across various domains based on the inputs provided by the user (Söğüt, 2024). In the field of education, many studies have explored aspects of apprehension regarding the use of AI writing tools. These studies have highlighted a range of concerns and challenges faced by users in this domain. Ginting et al. (2023) pointed out fears of excessive use potentially leading to a decline in traditional writing skills, and consequently, a weakening of personal creative writing skills. Specifically, Michel-Villarreal et al. (2023) noted that ChatGPT represents a revolution in higher education by leveraging deep learning models to create human-like content. However, its integration into academic settings raises concerns about academic integrity, plagiarism detection, and the potential impact on critical thinking skills. Additionally, studies (Michel-Villarreal et al., 2023; Lo, 2023; Hong, 2023) have emphasized the urgent need for clear policies, guidelines, and frameworks for the responsible integration of ChatGPT into higher education, and the need for further research to explore best practices and strategies for using generative AI for educational purposes.

Odri & Yoon (2023) pointed out that while AI tools are useful for collecting and analyzing data, they can also facilitate academic fraud in writing. Additionally, there are numerous methods to evade detection of AI-generated writing, and their increasingly sophisticated nature may make this task more challenging. Lin (2024) noted that generative AI tools, like large language models, are rapidly transforming academic writing and real-world applications. However, discussions on ethical guidelines for generative AI in science remain fragmented, underscoring the urgent need for standards regarding the controls used in writing with these models.

Writing with generative AI tools often relies on students' self-use, placing them face-to-face with the generative model without supervision or guidance from teachers. Therefore, AI-generated writings require students to implement self-regulation controls for optimal information retrieval and text production. There is a need for research into the controls and standards used by students when employing generative AI models. Rather than attacking these models and fearing their negative impacts on the educational process, the focus should be on the behavior of students using these models. These artificial tools should not be viewed as a threat, but as an opportunity to enhance education, foster innovation, and encourage self-directed learning.

3. Methodology

3.1 Research Design

This study aimed to explore the extent of adherence to AI-generated writing standards in university students' practices. It investigates whether students meet the standards of Input Guidance, Disciplined Dependability, Content Validation, Critical Analysis, Documentation, Review and Editing, and Responsibility. To achieve this, the study was designed as a quantitative research study. Based on the quantitative results obtained from the study participants, a descriptive-analytical approach was employed to analyze the findings (Creswell, 2015). A checklist of artificial writing production standards was prepared and presented to experts to verify its accuracy and relevance for the participating students. Based on this checklist, a suitable graduated practice scale was developed to collect data from the participants. The practice scale outlines the levels of practice and students' adherence to AI-generated writing standards. The researchers used a convenient sampling method to obtain balanced and comprehensive insights into the results. They also utilized an accessible method to communicate with participants by distributing the performance scale online.

3.2 Research Participants

The participants in this study were selected from five public universities in Saudi Arabia. The researchers purposively chose these universities. All students participating in the study were enrolled in humanities disciplines, including education, literature, law, and management. The decision to select participants from the humanities was based on their frequent reliance on extensive writing in daily academic assignments and tasks, unlike non-humanities disciplines which may not rely as heavily on lengthy writing. The researchers employed a snowball sampling method to select the sample. In the initial stage, ten students were purposively selected from each university, representing a variety of theoretical disciplines to ensure comprehensive student representation. Each participant was asked to refer one or more colleagues from the same field of study. New participants were then asked to recruit additional participants based on their willingness to take part in the study. Through this method, the researchers successfully recruited 326 university students. Detailed demographic data of the study participants is presented in Table 1.

Table 1. Demographic Data of Study Participants (N=326)

Demographic data	Value	Frequency	Percentage
Gender	Male	187	57.3
	Female	139	42.7
Range of age	18 – 21	326	100
	King Faisal University	91	27.9
	Imam Abdul Rahman bin Faisal University	55	16.9
Universities	Hael University	71	21.8
	Al Qussaim university	51	15.6
	Taif University	58	17.8
	Educational sciences	112	34.3
General specialization	Arts and Social Sciences	94	28.8
	Law	58	17.8
	Business Management	62	19.1

3.3 Ethical Considerations

Ethical clearance with reference number KFU-REC-2024-ETHICS1945 was obtained from the Research Ethics Committee at King Faisal University to validate the application of this study to the participants. Ethical measures were followed by the researchers to ensure the confidentiality of participants' data and to prevent the disclosure of their identities or responses beyond the scope of the study's results. Participants were informed that their responses would be used solely for scientific research purposes. They were fully briefed on all aspects of the study, with assurances that their data would be used exclusively for research. This study upholds the principles of intellectual property rights. All participants contributed to this study voluntarily.

3.4 Study Tools

The researchers relied on two tools: (a) a proposed list of standards for AI-generated writing, and (b) a graduated practice scale to collect data from the study participants.

Table 2. Final List of Standards for AI-generated Writing

Domains	Standards	Low importance (1)	Moderate importance (2)	High importance (3)	Maximum value (N = 9)	Agreement percentage
		Importance of the standard				
Input guidance	Precisely define the writing topic.	0	0	9	27	100
	A clear and unambiguous request or question should be submitted to the language model.	0	0	9	27	100
	Use of specific and clear instructions regarding the desired outputs.	0	0	9	27	100
	Employ phrases that specify writing constraints, such as the level of detail and depth of style.	0	1	8	26	96.2
	Provide feedback to the AI model to guide future writing.	0	1	8	26	96.2
Disciplined Dependability	The role of the model should be to assist in writing, not to make final decisions.	0	0	9	27	100
	Blend the model's ideas with the user's ideas.	0	0	9	27	100
	The generative model is a complement to human expertise, not a substitute for it.	0	1	8	26	96.2
	Define clear roles for the generative model that it is responsible for.	0	2	7	25	92.5
content validation	The AI-generated content directly aligns with the writing topic.	0	0	9	27	100
	Verify that the AI-generated content possesses scientific accuracy.	0	0	9	27	100
	The generated text matches the generation inputs.	0	1	8	26	96.2
	The AI-generated content is organized and logically coherent.	0	0	9	27	100
	Ensure that the model's outputs are derived from reliable sources.	0	0	9	27	100
critical analysis	The text is complete and provides a comprehensive overview of the topic.	0	2	7	25	92.5
	The AI-generated text is clear and does not contain ambiguous or contradictory ideas.	0	0	9	27	100
	Human intervention is mandatory for AI-generated content that may contain sensitivities or potential biases.	0	1	8	26	96.2
	The AI-generated text complies with ethical and legal standards and cultural context.	0	0	9	27	100
documentation	Documenting the sources of the AI-generated text.	0	0	9	27	100
	Ensuring that the AI-generated text is based on reliable and recognized sources.	0	0	9	27	100
	Referring to the use of a text generation model during text production.	1	0	8	25	92.5
review and editing	Assess the overall coherence of the text	0	0	9	27	100
	The AI-generated text undergoes peer or expert review.	0	1	8	26	96.2
	Providing additional comments and notes on the text.	0	0	9	27	100
	Verifying the correctness of the language and style of the text.	0	0	9	27	100
responsibility	The AI-generated text is the responsibility of the user, not the generative model itself.	0	0	9	27	100
	Intellectual property rights are part of the writing process using generative AI models.	0	1	8	26	96.2

(a) Regarding the first study tool, the researchers developed a list of guidelines necessary for students to produce

AI-generated texts. The aim of preparing this list is to establish a set of standards for university students that outlines the correct use of generative AI tools in writing. The preliminary version of the standards list included seven main domains as writing guidelines: Input Guidance, Disciplined Dependability, Content Validation, Critical Analysis, Documentation, Review and Editing, and Responsibility. Each domain comprised a set of sub- standards. The standards list was developed based on previous literature (Al-Shahat, 2022; Baskara, 2023; Bhimavarapu, 2023; Ginting et al., 2023; Zhao et al., 2024; Aisyi, 2024; Al-Raimi et al, 2024). The preliminary version of the standards list was presented to a group of educational experts, totaling nine specialists in curricula, teaching methods, and educational technology, to verify the suitability of the criteria for university students. The experts were asked to add, delete, or modify the sub-criteria in light of their expertise. The objective of this procedure was to ensure that the criteria are essential for university students. The experts added new sub-criteria under each domain of the list. Based on the experts' opinions, no sub-criteria were deleted, as the agreement on the importance of each criterion exceeded 90%. Table 2 presents the final version of the criteria list.

(b) Regarding the Second Study Tool, the researchers developed a performance scale aimed at gathering data to explore the levels of practice and commitment of university students to the standards of AI-generated writing. The scale was constructed based on the standards refined by the experts. The researchers ensured that the scale was derived from the necessary standards for the students by initially building and refining the standards list. The scale underwent several validation procedures to achieve its final form. It was reviewed by the same experts who examined the standards list to ensure its validity for measuring the intended outcomes. Appropriate statistical methods were employed by the researchers to verify the internal consistency of the scale before distributing it to the participating students. The researchers used internal consistency methods by calculating Pearson correlation coefficients among the scale items. All correlation coefficients were within a reliable range. Additionally, Cronbach's alpha was used to verify the reliability of the scale, and the alpha coefficients were satisfactorily high. To overcome language barriers and misunderstandings, the scale was written in Arabic, the participants' first language. This ensured responses were based on comprehension and avoided limitations due to language proficiency. The scale consisted of two sections: the first section included demographic data of the study participants (gender, age, university, major). The second section comprised the graded standards of the scale. The scale was constructed based on a three-level performance rating for each standard, illustrating students' practices in AI-generated writing. This tiered description of each standard was designed to obtain more accurate responses from the participants. The graded practices appropriately describe students' behaviors during AI-generated writing production. Table 3 shows an example for clarification.

Table 3. Example of Graduated Practice Levels for AI-Generated Writing Standards

Domain	Standard	Novice (1)	gradual levels of practice Intermediate (2)	Advanced (3)
Input guidance	Precisely define the writing topic.	When I write, I define the topic for the generative AI model without providing detailed concepts, as the model handles that.	When writing, I specify the topic for the generative AI model, providing brief ideas about the concept.	In my writing, I precisely define the topic for the generative AI model, focusing on thoroughly and clearly explaining the topic idea.

3.5 Data Collection and Analysis

For data collection purposes, a performance rating scale was sent to the participating students online. The scale was sent as a Word file. The researchers used email, WhatsApp, Facebook, and similar communication tools to send the scale to the participants. Assistance was sought from colleagues teaching at other universities to reach potential participants. The research team manually compiled the students' responses into Microsoft Excel. The results were reviewed twice to ensure accuracy. Descriptive statistics were used through SPSS software for the purpose of analyzing the data collected from the participants, and then the results were presented and discussed.

4. Results and Discussions

4.1 Students' Adherence to AI-generated Writing Standards: Input Guidance

Table 4. Gradual Levels of Practice for "Input guidance" Domain (N=326)

Domain	Standards	gradual levels of practice		
		Novice (1)	Intermediate (2)	Advanced (3)
	Precisely define the writing topic.	When I write, I define the topic for the generative AI model without providing detailed concepts, as the model handles that.	When writing, I specify the topic for the generative AI model, providing brief ideas about the concept.	In my writing, I precisely define the topic for the generative AI model, focusing on thoroughly and clearly explaining the topic idea.
	%	42.4	35.2	22.4
	A clear and unambiguous request or question should be submitted to the language model.	When making a request or asking a question to the model, I focus on the main point but may leave some aspects undetailed, trusting the model to fill in the gaps.	When posing a request or question to the language model, I present a clear main point with some supporting details.	I ensure the request or question is completely clear and unambiguous, providing comprehensive details and context to eliminate any potential misunderstanding.
	%	43.3	38.2	18.5
Input guidance	Use of specific and clear instructions regarding the desired outputs.	I provide general guidelines without specifying detailed requirements, assuming the model can infer necessary details.	I include specific instructions on major requirements, expecting the model to fill in minor details and nuances.	I clarify precise and detailed requirements, ensuring no room for ambiguity, with the model understanding exactly what is needed in the outputs.
	%	51.8	28.7	19.5
	Employ phrases that specify writing constraints, such as the level of detail and depth of style.	When specifying writing constraints, I use general phrases providing minimal guidance on details and style, allowing flexibility for the model to interpret.	I use specific phrases to clarify moderate details and stylistic preferences, guiding the model while allowing some room for creativity.	I use precise and detailed phrases to explain exact requirements for details and depth, ensuring the model closely adheres to the specified guidelines without deviation.
	%	62.2	30.6	7.2
	Provide feedback to the AI model to guide future writing.	When providing feedback on the AI model, I offer general comments without specific improvement suggestions, trusting the model to adjust independently.	I provide comments along with some specific improvement suggestions, focusing on the main areas where adjustments can be made.	I offer detailed and actionable improvement suggestions, providing specific guidance on enhancing future writing based on identified strengths and weaknesses.
	%	58.8	26.5	14.7
Total average	%	51.7	31.84	16.46

The quantitative data in Table 4 show the participants' responses to the graded practices of student adherence to Input guidance standards when writing with generative AI tools. The results reveal that more than half of the participants apply Input guidance standards at a novice level. In contrast, only less than 17% apply advanced practices, while 31.8% apply intermediate practices. The data indicate that over half of the participants use elementary limitation of practices in accurately determining the writing topic and using clear language and inputs for the language model.

Despite the critical importance of Input Guidance criteria in directing the generative language model and producing well-structured written texts, students do not recognize the importance of accurately defining the writing topic, using specific instructions, and providing clear inputs. Only 16.4% of students achieved an advanced level of practice in the area of Input Guidance. It appears that students are not concerned with the fundamental principles that should be employed to produce quality text through artificial intelligence. Students may lack awareness of the importance of utilizing inputs to obtain deep results in writing. They do not focus on the type of inputs or their significance in determining the quality of the generated text. Instead, their primary concern is simply obtaining a written text, regardless of its content. There is an urgent need to train students on employing these criteria, as they are essential when dealing with generative language intelligence models.

When examining the results in this field closely, it becomes evident that the majority of students do not recognize the importance of accurately determining the writing topic and providing clear instructions to the model. Students appear to lack a deep understanding of how to effectively use input guidance standards. This deficiency may stem from insufficient education and training regarding these tools and their usage standards. This lack of awareness negatively impacts the quality of the generated texts. There is a significant gap between the potential offered by generative AI models and the actual level of benefit derived by the students. This gap seems to be due to the students' unawareness of the importance of input guidance standards and the lack of adequate training on their application.

Students' adherence to AI-generated writing standards: Disciplined Dependability

Table 5. Gradual Levels of Practice for "Disciplined Dependability" Domain (N=326)

Domain	Standards	gradual levels of practice		
		Novice (1)	Intermediate (2)	Advanced (3)
	The role of the model should be to assist in writing, not to make final decisions.	For me, the role of the model is not merely assisting in writing; it is the actual writer.	The model assists in writing by providing suggestions and detailed alternatives, yet it allows the writer to make final decisions regarding content and style.	The model assists in writing by providing detailed suggestions and improvements while respecting the author's final decision-making authority over content and style.
	%	49.6	35.4	15
	Blend the model's ideas with the user's ideas.	I do not mix the model's ideas with the user's. I rely solely on the model's suggestions without interference.	I blend the model's ideas with the user's, integrating both perspectives seamlessly.	I extensively mix the model's ideas with the user's, prioritizing the integration of both perspectives.
Disciplined Dependability	%	61.2	24.7	14.1
	The generative model is a complement to human expertise, not a substitute for it.	I see the generative model as a complement to human expertise, but I rely on it without interference.	The generative model is a valuable tool that complements human expertise. I provide input on what it writes.	The generative model enhances human expertise by integrating my writing with the model's output.
	%	64.1	23.9	12
	Define clear roles for the generative model that it is responsible for.	I am not concerned with defining the model's role as an assistant author during writing. I only care about the outputs.	I define general roles for the generative model, specifying its tasks and outputs.	I define detailed and comprehensive roles for the generative model, precisely outlining its tasks, outputs, and responsibilities.
	%	47.8	37.9	14.3
Total average	%	55.67	30.48	13.85

The data in Table 5 illustrate the degree to which students apply Disciplined Dependability standards when using generative AI models in writing. Regarding the overall results in this domain, only about 14% of the students fall into the advanced level of practices, while more than 55% fall into the poor level. When considering the role of the language model as an assistant in writing rather than a replacement for the original writer, the majority of students are at the beginner level in applying these practices. Furthermore, students do not focus on integrating their own ideas with those generated by the model.

Students often confuse their responsibility in writing with that of the language model, exhibiting an excessive degree of reliance on the model. Upon deeper examination of this aspect, it is evident that most students display a beginner level in understanding how to use the language model as an assistant rather than a substitute for the original writer. This indicates a lack of sufficient awareness among students regarding the effective use of generative AI to enhance their writing rather than relying on it entirely. It appears that students do not pay enough attention to merging their personal ideas with those generated by the language model. Instead, they show a tendency to excessively delegate

writing responsibilities to the model, indicating an over-reliance on generative AI.

Many students blur the line between their role as writers and the role of the language model, leading to inappropriate and excessive dependence on the model. This behavior reflects a weakness in self-discipline and independence, contradicting the practices of Disciplined Dependability, which require a careful balance between relying on tools and maintaining personal responsibility in writing. This can lead to a reduction in creativity and innovation in students' writing and reflects an imbalance in how generative AI tools are used as aids rather than replacements.

It seems crucial to raise students' awareness about the degree of dependency and trust when using generative writing models. Students urgently need to understand their independent roles and the permissible degree of delegation and reliance when using generative AI.

4.2 Students' Adherence to AI-generated Writing Standards: Content Validation

Table 6. Gradual Levels of Practice for "content validation" Domain (N=326)

Domain	Standards	gradual levels of practice		
		Novice (1)	Intermediate (2)	Advanced (3)
Content validation	The AI-generated content directly aligns with the writing topic.	When writing, I focus on ensuring the AI-generated content generally aligns with the writing topic.	I focus on ensuring the AI-generated content aligns with the writing topic in detail.	I focus on ensuring the AI-generated content aligns with the writing topic in a detailed and precise manner.
	%	34.8	44.6	20.6
	Verify that the AI-generated content possesses scientific accuracy.	I ensure the AI-generated content appears scientific, regardless of its accuracy.	I ensure the AI-generated content generally provides correct information and aligns with scientific principles.	I ensure the AI-generated content is highly accurate, well-researched, and supported by reliable sources.
	%	33.2	40.1	26.7
	The generated text matches the generation inputs.	The generated text sometimes aligns with the inputs, but I'm not overly concerned with occasional inconsistencies or deviations.	The generated text generally aligns with the inputs, maintaining coherence and connection to the provided inputs.	The generated text consistently and accurately aligns with the generation inputs, staying on topic without deviation.
	%	28.9	47.2	23.9
	The AI-generated content is organized and logically coherent.	The AI-generated content is sometimes organized and coherent, but there are occasional lapses in logical flow or structure.	The AI-generated content is generally organized and coherent but lacks coherence in details.	The organization of AI-generated content is consistently logical and cohesive, presenting information clearly and in an organized manner that maintains logical flow and coherence.
	%	32.9	40.2	26.9
	Ensure that the model's outputs are derived from reliable sources.	Model outputs occasionally cite reliable sources, with some lacking clear citations or verification.	Model outputs consistently cite reliable sources, generally providing supported information with reliable references.	Model outputs cite information from highly reliable sources, ensuring accuracy and credibility throughout.
	%	33.6	46.3	20.1
Total average	%	32.68	43.68	23.64

Verifying the authenticity of artificially generated content is undoubtedly one of the most important criteria. For students, the results in Table 6 show gradual levels of practice for "content validation" domain, more than 20% of

students practice content verification standards at an advanced level, while 43% achieve this at an intermediate level. However, over 30% of students may not be concerned with the authenticity of AI-generated content. University students might perceive AI-generated texts as secondary texts that no one reads. The association of these texts with academic assignments may lead students to believe that professors will not read them in detail. Students may assume that the intended audience, such as professors or lecturers, will not notice errors or review the content thoroughly. This assumption might make them think that verifying the content's authenticity is unnecessary, as the text will not be scrutinized in detail. Typically, a writer ensures the authenticity of the content knowing that it will be carefully reviewed by others. Conversely, university students do not care about verifying the authenticity of their written content, knowing that their work will not be examined in detail.

Regarding the above quantitative results, a significant proportion of students fall into the weak and intermediate levels in applying practices that align the text with inputs, scientific accuracy, and the absence of cognitive errors in the text. The large proportion of students who do not care about verifying the authenticity of generated content indicates neglect of these standards. This could be due to the belief that AI-generated texts are not of significant value and do not warrant thorough review or careful reading. Additionally, students' neglect of content verification standards might be attributed to their overconfidence in the ability of AI models to produce accurate content that directly aligns with the writing topic. This confidence can reduce the students' role in verifying the content's authenticity, as they believe the model works efficiently and provides correct content without needing additional review. Students may not realize that AI models rely on training data and can be prone to errors and biases, necessitating careful review of generated texts. Alternatively, students might be aware that AI models can be prone to errors and biases and that they should review the content carefully to avoid disseminating inaccurate information. However, there are no practical practices demonstrating to students how to overcome this issue.

4.3 Students' Adherence to AI-generated Writing Standards: Critical Analysis

Table 7. Gradual Levels of Practice for "Critical Analysis" Domain (N=326)

Domain	Standards	gradual levels of practice		
		Novice (1)	Intermediate (2)	Advanced (3)
Critical analysis	The text is complete and provides a comprehensive overview of the topic.	My concern is that the generated text should be relevant to the topic.	What matters to me is that the text generally provides a comprehensive overview of the topic and covers most of the main aspects.	The text provides a complete and comprehensive overview of the topic, detailing all relevant aspects.
	%	51.4	36.8	11.8
	The AI-generated text is clear and does not contain ambiguous or contradictory ideas.	It is not a problem if the AI-generated text sometimes contains vague or contradictory ideas.	The AI-generated text should generally avoid vague or contradictory ideas.	It is important for the AI-generated text to maintain clarity and coherence, and to be free of ambiguity and contradictions throughout.
	%	48.4	31.1	20.5
	Human intervention is mandatory for AI-generated content that may contain sensitivities or potential biases.	Human intervention is sometimes required for AI-generated content, which may contain potential sensitivities or biases.	Human intervention is generally necessary for AI-generated content that may contain potential sensitivities or biases.	Human intervention is always necessary for AI-generated content.
	%	61.7	20.7	17.6
	The AI-generated text complies with ethical and legal standards and cultural context.	The text generated by artificial intelligence sometimes aligns with ethical, legal, and cultural standards.	The text generated by artificial intelligence generally aligns with ethical, legal, and cultural standards.	The text created by artificial intelligence consistently adheres to strict ethical and legal standards and cultural context.
	%	55.6	34.7	9.7
Total average	%	54.3	30.8	14.9

The quantitative results in Table 7 illustrate the extent to which students apply critical analysis practices. This domain is related to the application of practices aimed at examining AI-generated text in terms of idea integration, clarity, avoidance of ambiguous and distorted ideas, potential biases, ethical standards, and the necessity of human intervention to address these aspects. More than half of the students received a low rating in these practices, and only about 14% apply advanced critical analysis standards to AI-generated text. These results indicate a deficiency in students' practices regarding the critical analysis of AI-generated texts. Many students seem to lack the ability or knowledge necessary to deeply evaluate texts in terms of idea integration, clarity, and bias avoidance. This outcome may once again be attributed to an overreliance on AI's ability to produce high-quality texts without human intervention.

Considering the quantitative results of this and previous domains, it is evident that students do not focus on writing analysis standards because their main concern is to obtain a written text, regardless of its quality. Once students have the text, they do not evaluate its integration or check for biases or erroneous ideas. They may disregard the ethical and legal implications of the text because they are writing for university assignments. Students feel they are writing in a closed environment, where their writings are not subject to publication, thus not focusing on critically analyzing the text.

In the context of university assignments, students may believe that their texts are not exposed to public scrutiny, reducing their motivation to adhere to ethical and legal standards. This belief could lead to neglecting the importance of analyzing the text to ensure it is free from biases or inaccuracies that could compromise its credibility. Students often consider the primary goal to be the production of a text that meets the assignment requirements, without prioritizing the integration of ideas or clarity. This approach results in ignoring the critical analysis of texts to verify their quality and comprehensiveness. Furthermore, the focus on quickly completing assignments may lead students to prioritize the quantity of text over its quality. This approach reduces the time allocated for the critical analysis and evaluation of texts in terms of idea integration, clarity, and adherence to analytical standards.

4.4 Students' Adherence to AI-generated Writing Standards: Documentation

Table 8. Gradual Levels of Practice for "Documentation" Domain (N=326)

Domain	Standards	gradual levels of practice		
		Novice (1)	Intermediate (2)	Advanced (3)
Documentation	Documenting the sources of the AI-generated text.	Sometimes, I document the sources of the AI-generated text.	Generally, I document the sources of the AI-generated text.	I always document the sources of the AI-generated text.
	%	61.3	26.4	12.3
	Ensuring that the AI-generated text is based on reliable and recognized sources.	I am not concerned with verifying whether the AI-generated text sometimes refers to reliable and recognized sources.	I ensure that the AI-generated text generally relies on reliable and recognized sources.	All content must be based on reliable and recognized sources.
	%	66.9	23.1	10
	Referring to the use of a text generation model during text production.	I do not mention the use of a text generation model during the production of the text.	Sometimes, I mention the use of a text generation model during the production of the text.	I explicitly acknowledge the use of a text generation model during the production of the text, openly recognizing its role.
	%	75.5	18.6	5.9
Total average	%	67.9	22.7	9.4

This domain includes several standards that clarify students' practices concerning the documentation of AI-generated texts and their attribution to original sources. The quantitative results in Table 8 indicate that only 9.4% of students adhere to practices related to documenting the sources of the text, ensuring that the text relies on accurate and recognized sources, and indicating the use of a text generation model during the production of the text. Approximately 68% of students apply the standards of this domain at a beginner level.

Students might hold the belief that documenting sources for AI-generated texts is not crucial, viewing the primary purpose of using AI models as a means to obtain written text quickly and efficiently. This lack of awareness leads them to overlook the importance of source documentation. Additionally, some students may think that AI-generated texts do not require documentation because they are considered automatically generated and not based on traditional sources like handwritten texts. This belief, coupled with excessive trust in the accuracy of AI models, might lead students to assume that the generated texts are accurate and complete without needing to verify their sources.

Furthermore, under the pressure of time and the desire to complete assignments quickly, students might prefer to focus on finishing the text rather than spending additional time on documenting sources. This results in reduced attention to proper documentation. Additionally, students might not indicate their use of generative AI models in writing due to a common perception in Arab universities that these models are entirely unreliable.

In connection with the previous domain, as with critical analysis, students might believe that the generated texts will not be subject to thorough scrutiny by professors or lecturers. This belief can reduce their motivation to document sources correctly. Lastly, students may struggle to find appropriate methods for documenting AI-generated texts, as these practices are still relatively new and may lack clear guidelines on how to document them, unlike traditional sources.

4.5 Students' Adherence to AI-generated Writing Standards: Review and Editing

Table 9. Gradual Levels of Practice for "Review and Editing" Domain (N=326)

Domain	Standards	gradual levels of practice		
		Novice (1)	Intermediate (2)	Advanced (3)
Review and editing	Assess the overall coherence of the text	Sometimes, I assess the overall coherence of the text.	I generally evaluate the overall coherence of the text, ensuring that most sections are logically connected and cohesive.	I ensure that all sections are logically connected, cohesive, and flow smoothly.
	%	82.4	11.2	6.4
	The AI-generated text undergoes peer or expert review.	The text I write using artificial intelligence is not subjected to peer review.	Sometimes, the text I write using artificial intelligence undergoes peer review.	The text generated by artificial intelligence undergoes continuous rigorous peer review by experts.
	%	90.3	6.2	3.5
	Providing additional comments and notes on the text.	Sometimes, I write additional comments and notes on the text.	Generally, I provide additional comments and notes on the text.	I consistently provide comprehensive and detailed comments and notes on the text.
	%	40.8	35.6	23.6
	Verifying the correctness of the language and style of the text.	I do not verify the language of the text. I trust the language generated by artificial intelligence.	I sometimes check the accuracy of the language and style of the text, while occasionally overlooking some errors or inconsistencies.	I continuously verify the accuracy of the language and style of the text.
	%	87.7	6.3	6
Total average	%	75.3	14.8	9.9

Regarding the domain of Review and Editing, the quantitative results presented in Table 9 indicate that 75% of students engage in reviewing and editing AI-generated texts at a novice level. These students may not focus on evaluating the overall coherence of the text, peer review of the generated content, adding comments and feedback on the text, or verifying the language and style of the text. Only approximately 10% of students perform these tasks at an advanced level. These results suggest that AI-generated texts are often relied upon as-is, without substantial review. Since most students do not engage in in-depth review of the texts, this may reflect a significant reliance on AI-generated content without considering its improvement or correction. Consequently, the results suggest that texts may be used without modification, potentially affecting the quality of writing. Notably, 87.7% of students express

confidence in AI-generated texts. This high level of confidence may indicate a lack of awareness among students regarding the limitations and potential flaws of AI-generated texts, such as issues with coherence, accuracy, or misleading information. This confidence in AI-generated texts likely prevents the application of Review and Editing standards. Additionally, approximately 90% of students do not perceive peer review of the text as a practice of importance. On the other hand, these results might suggest that students lack the necessary skills or experience to review texts accurately. Overall, these findings may be attributed to a combination of factors, including limited awareness of the potential limitations of AI-generated texts, inadequate skills in text review, and excessive confidence in AI's ability to produce error-free content.

4.6 Students' Adherence to AI-generated Writing Standards: Responsibility

Table 10. Gradual Levels of Practice for "Responsibility" Domain (N=326)

Domain	Standards	gradual levels of practice		
		Novice (1)	Intermediate (2)	Advanced (3)
Responsibility	The AI-generated text is the responsibility of the user, not the generative model itself.	Sometimes, the responsibility for the text generated by artificial intelligence falls on the user.	Generally, the responsibility for the text generated by artificial intelligence falls on the user.	The responsibility for the text generated by artificial intelligence consistently falls on the user.
	%	62.4	27.8	9.8
	Intellectual property rights are part of the writing process using generative AI models.	From time to time, I consider intellectual property rights in the writing process.	I generally consider intellectual property rights in the writing process.	Intellectual property rights must be consistently and rigorously respected in the writing process.
	%	55.3	34.4	10.3
Total average	%	58.9	31.1	10

Although AI models are capable of generating texts based on input data, they remain tools controlled by the user. The quantitative data in Table 10 indicate that approximately 60% of students apply the standards of responsibility for writing using generative AI at a novice level. Despite this high percentage, the user retains responsibility for the generated text and for every word written in it. Intellectual property rights remain a fundamental part of the writing process using generative AI models. As evidenced by previous findings, students believe that generative AI models serve as a replacement for critical thinking and personal creativity, rather than as tools that support and complement human efforts. This belief leads students to shirk responsibility for the generated text. Students may not realize that using AI to create texts does not absolve them of responsibility for the quality and accuracy of the text. They may assume that AI generates error-free content automatically. On the other hand, students may believe that the technology is responsible for the text, not themselves, which reduces their focus on the aspects of responsibility associated with the generated text. Additionally, the lack of sufficient laws currently governing AI-generated texts can be a major reason for students' lack of focus on taking responsibility. The absence of clear laws and guidelines on how to use AI-generated texts can leave students unaware of the standards they should follow, leading to the neglect of their responsibility for review and improvement. The establishment of clear and specific laws can help guide students and hold them accountable for the texts generated using AI, enhancing their adherence to ethical and legal standards in writing.

The overall findings highlight a substantial gap between the potential benefits of generative AI and the actual outcomes experienced by students, primarily attributed to insufficient training and education in applying Input Guidance standards. The findings reveal a troubling trend among students regarding their adherence to Disciplined Dependability standards in the context of using generative AI tools for writing. A significant majority of students demonstrate a beginner level of proficiency, indicating a pervasive confusion between their responsibilities as writers and the role of the AI model. This over-reliance on generative AI suggests a lack of understanding of how to utilize these tools as assistants rather than substitutes, ultimately stifling their creativity and independence. By excessively delegating writing tasks to the model, students not only diminish their own agency but also compromise the integration of personal ideas into their work. This finding aligns partially with the results reported by Chan & Lee (2023). Their study indicated that participants generally held an optimistic view regarding the potential advantages of generative AI, such as enhanced productivity, efficiency, and personalized learning experiences. However, students voiced growing concerns about the risks associated with over-reliance on these tools, as well as the ethical and

pedagogical implications involved.

The results regarding students' adherence to content validation standards reveal a concerning trend in their approach to verifying the authenticity of AI-generated texts. While a notable portion of students demonstrates advanced or intermediate practices in content validation, a significant number appear indifferent to the accuracy of their work, perhaps perceiving AI-generated content as secondary and not worthy of thorough scrutiny. This mindset may stem from a belief that their professors do not closely examine the material, leading to a diminished sense of responsibility for ensuring the authenticity of their outputs. Consequently, many students exhibit weak or intermediate levels of practice in aligning their texts with relevant inputs and scientific accuracy, neglecting crucial validation standards. This lack of diligence may also be fueled by an overconfidence in the capabilities of AI models, with students erroneously assuming that the technology guarantees accuracy without necessitating their involvement in the verification process. Such reliance can inhibit their critical engagement with the material and diminish the quality of their work. Furthermore, despite potential awareness of the limitations and biases inherent in AI-generated content, students may lack practical strategies to effectively address these challenges. This result is consistent with the study of Maurya & Maurya (2024), which identified significant differences in content accuracy, coherence, citation practices, and overall reliability between articles produced by humans and those generated by GPT. The study also highlighted potential biases, the influence of context, and the implications of AI-generated content for the future of academic communication.

The findings regarding students' adherence to critical analysis standards reveal a significant gap in their ability to effectively evaluate AI-generated texts. A majority of students demonstrate a low level of critical analysis, with only a small percentage applying advanced practices. This deficiency suggests that students struggle to engage with key elements such as idea integration, clarity, and bias avoidance, primarily due to an overreliance on AI's capabilities to generate coherent texts without the need for human intervention. This trend appears to be driven by a predominant focus on merely producing written assignments rather than critically assessing their quality and rigor. Many students seem to operate under the assumption that their work will not be subjected to rigorous scrutiny, as they view their writing as confined to a university context rather than as potentially public material. This mindset diminishes their motivation to adhere to ethical and legal standards, resulting in a neglect of critical analysis practices. Moreover, the pressure to complete assignments quickly may further contribute to students prioritizing volume over quality, leaving insufficient time for thorough evaluation of their work. Consequently, this approach fosters a superficial engagement with the texts, undermining the quality of their outputs. The current study presents contrasting findings compared to a study Shanto et al. (2024) that indicated a significant increase in students' reasoning levels when using ChatGPT, rising from an average of remembering (1.35) to justifying (2.4). Additionally, the survey results revealed that, on average, students felt that AI substantially aided them in generating ideas (4.0/5.0) and conducting critical analysis (4.2/5.0) when compared to their independent efforts.

The overall findings regarding students' adherence to AI-generated writing standards reveal a concerning pattern of underutilization of critical practices essential for producing high-quality written work. Across various domains-including Input Guidance, Disciplined Dependability, Content Validation, Critical Analysis, Documentation, and Responsibility-students frequently demonstrate novice levels of adherence, suggesting a fundamental misunderstanding of their roles when engaging with generative AI tools. One common thread is the overreliance on AI capabilities, which leads students to prioritize the expedience of generating text over the quality and rigor of their writing. This approach is particularly evident in their neglect of critical analysis and documentation practices, reflecting a perception that the content generated is sufficient without thorough scrutiny. Furthermore, the prevailing belief that AI can replace critical thinking and creativity undermines students' sense of responsibility for the accuracy and integrity of their work. The lack of awareness surrounding the ethical and legal implications of using AI-generated content further exacerbates these issues, indicating a need for educational interventions that emphasize the importance of critical engagement with AI tools. By fostering a deeper understanding of these standards and the necessity for personal accountability, educational institutions can equip students with the skills required to effectively leverage generative AI while upholding academic integrity and producing high-quality writing. Overall, these findings underscore the urgent need for targeted instructional strategies that clarify the role of students in the writing process and enhance their adherence to essential writing standards.

5. Conclusions

The current study highlights significant deficiencies in the adherence of undergraduate students to AI-generated writing standards. Most participants show a lack of recognition of the importance of accurately defining writing

topics and providing clear inputs, with only a few achieving an advanced level of practice in this aspect. This indicates a gap in understanding the fundamental principles necessary for producing high-quality text using AI tools, underscoring the urgent need for training in these standards. Furthermore, students exhibit an excessive reliance on AI models, neglecting to integrate their own ideas into the generated texts, and demonstrating a beginner level of practice in using AI as an assistant rather than a substitute for original writing. This over-reliance on AI undermines creativity and innovation, highlighting the need to raise awareness about balancing reliance on AI with personal responsibility. Another concern is the neglect of documenting AI-generated content, as many students perceive these texts as not being scrutinized or reviewed by others. Overconfidence in AI's ability to produce accurate content further diminishes their role in verifying authenticity, underscoring the necessity of instilling practices that ensure the accuracy and reliability of AI-generated texts. Students also display a low level of critical analysis, focusing primarily on obtaining text rather than ensuring its quality. This neglect of critical analysis standards highlights the need for critically analyzing AI-generated content to ensure its credibility and adherence to ethical standards. Moreover, students show a beginner level in reviewing and editing AI-generated texts, reflecting significant reliance on AI-generated content without substantial review. This neglect of review and editing standards indicates a lack of awareness of the risks associated with violating laws and guidelines in using AI tools. Overall, the study confirms a gap in the practices related to the application of AI-generated writing standards among university students.

6. Limitations

The study's limitations include the reliance on self-reported data, which may be subject to response bias. Since this study was conducted in an Arab environment, the results cannot be generalized to AI practices among all students. Some Arab institutions have approached generative AI tools with extreme caution for some time. Some of these institutions completely banned these tools at the beginning of their launch. Perhaps these measures have affected, in one way or another, the students' responses in the current study, unlike other countries where there was wider availability of generative AI tools. Additionally, the study's focus on students from humanities disciplines may limit the generalizability of the findings to other academic fields. Future research could explore a broader range of disciplines and employ mixed-methods approaches to gain a more comprehensive understanding of AI-generated writing practices.

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