

## Advantages of AI in Academic Essay Writing

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### Abstract

This chapter explores how Artificial Intelligence (AI) tools can assist Ecuadorian undergraduate students in improving their argumentative essay writing skills. It outlines the significant challenges these students face, including common writing mistakes, obstacles in the writing process, and the specific AI tools they are likely to use. This research utilizes a mixed-methods approach, incorporating pre- and post-test analyses alongside student feedback to evaluate the effectiveness of AI tools such as ChatGPT, Grammarly, and Copilot in enhancing grammar, essay structure, and the inclusion of supporting details. Consequently, this study advocates for integrating AI into educational practices, providing essential insights for educators to effectively support students in developing their argumentative writing competencies. The findings reveal that while AI tools significantly improve writing quality, an over-reliance on these technologies can result in disorganized texts, emphasizing the need for active reading and critical thinking skills.

**Keywords:** argumentative essay structure, AI tools, critical thinking, previous knowledge.

### Resumen

Este capítulo explora cómo las herramientas de inteligencia artificial (IA) pueden ayudar a los estudiantes universitarios ecuatorianos a mejorar sus habilidades de redacción de ensayos argumentativos. Se describen los desafíos importantes que enfrentan estos estudiantes, incluidos los errores de escritura comunes, los obstáculos en el proceso de escritura y las herramientas de IA específicas que es probable que utilicen. Esta investigación utiliza un enfoque de métodos mixtos, incorporando análisis previos y posteriores a la prueba junto con la retroalimentación de los estudiantes para evaluar la eficacia de las herramientas de IA como ChatGPT, Grammarly y Copilot para mejorar la gramática, la estructura del ensayo y la inclusión de detalles de apoyo. En consecuencia, este estudio aboga por la integración de la IA en las prácticas educativas, proporcionando información esencial para que los educadores apoyen eficazmente a los estudiantes en el desarrollo de sus competencias de escritura argumentativa. Los hallazgos revelan que, si bien las herramientas de IA mejoran significativamente la calidad de la escritura, una dependencia excesiva de estas tecnologías puede dar lugar a textos desorganizados, lo que enfatiza la necesidad de habilidades de lectura activa y pensamiento crítico.

**Palabras clave:** Estructura del ensayo argumentativo, herramientas de IA, pensamiento crítico, conocimiento previo.

## Introduction

Argumentative essays are essential in academic writing because they help students develop critical thinking and communication skills. Writing an argumentative essay requires students to take a clear position on a topic and support their ideas with facts that address opposing views (Hyland, 2008). This can be difficult for undergraduate students, especially those learning English as a Foreign Language (EFL). The complexity of organizing ideas and writing solid and logical essays makes argumentative writing challenging for many students.

Recently, advancements in technology, especially Artificial Intelligence (AI), have provided new tools to assist students in overcoming these challenges. AI writing tools like Grammarly, ChatGPT, QuillBot, and Wordtune are becoming popular among students and educators. These tools can help students improve their writing by checking grammar and spelling, offering suggestions for better sentence structure, and even helping with the overall flow of the essay. According to Raheem et al. (2023), AI tools improve writing quality and save students time when editing and proofreading. Mhlanga (2023) also notes that AI tools like ChatGPT can encourage students to think more creatively and critically, which can help them produce more precise and effective essays.

Although AI tools have shown benefits for writing, most studies focus on improving grammar, punctuation, or short paragraphs. Less attention has been given to how these tools can help with more complex writing tasks like argumentative essays. In addition, most research has been done in developed countries, with little attention paid to how AI tools are used in developing countries like Ecuador. As Quijano (2023) mentions, AI in Ecuadorian education is still new and has excellent potential for students and teachers. In English language teaching, AI can provide personalized feedback and make learning more adaptive for students.

Despite these positive developments, few studies have explored how Ecuadorian undergraduate students use AI tools to improve their argumentative essays. Research by Parra & Calero (2018) has shown that tools like Grammarly can help students with grammar and punctuation, but these studies did not look at how AI tools can assist with constructing solid arguments. Other studies, like those by Mosquera (2024), mention that AI tools can be helpful for brainstorming, organizing, and revising essays. However, more research is still needed on how these tools support the entire writing process for argumentative essays, especially in Ecuadorian higher education. Therefore, the following research questions have emerged.

- What mistakes do students make when writing academic essays?
- What are the obstacles students face in the academic writing process?
- What AI tools are most likely used during the writing process?

The present research tries to fill these gaps by examining how different AI writing tools help Ecuadorian undergraduate students write better argumentative essays. By looking at how students use AI to improve their thesis statements, gather evidence, organize their essays, and address opposing arguments, this study hopes to show how AI can improve academic writing. This research will also provide valuable insights for educators, offering recommendations on better integrating AI tools into teaching to support students in their essay writing.

The results of this study suggest that more effective reading is necessary to acquire previous knowledge of the topic. Strong comprehension, organization of information, and identification of key points are essential for clear and coherent writing. While AI tools can help, relying on them alone may result in disorganized text. Thus, active reading and critical thinking are vital for high-quality academic work.

### **Literature Review**

In alignment with the research questions posed, it becomes essential to thoroughly define and elaborate on key concepts that underpin the significance of this study. Providing clear and precise definitions is crucial to ensuring a comprehensive understanding of the research's objectives and the context in which it is situated. Therefore, the following section will offer a detailed exposition of the core concepts of this work, carefully delimiting each one to establish a foundation for the subsequent analysis and discussion. These definitions will serve as the conceptual framework necessary for interpreting the findings and implications of the study.

### **What is an Essay?**

Meyers (2014) argued that an essay is not merely a collection of sentences but rather a cohesive thematic description structured within well-organized paragraphs, where each section serves a specific purpose. According to this definition, an essay consists of three fundamental components: the introduction, which sets the stage by presenting the main idea or thesis; the body, which typically includes at least two, but often more body paragraphs that expand on the central theme through evidence, examples, and analysis; and the conclusion, which provides a summary and reinforces the overall argument. Furthermore, the introduction functions as a roadmap, guiding the reader through the essay's purpose and structure, while the body paragraphs are critical in offering detailed support and development of the thesis. Finally, the conclusion restates the main argument and synthesizes the key points discussed, creating a sense of closure and reinforcing the essay's thematic unity.

The introduction of an essay serves several essential functions, laying the groundwork for the discussion that follows by establishing the specific topic and clearly stating the author's position through a well-formulated thesis statement. Additionally, it often provides a brief preview of the essay's content, helping to orient the reader and set expectations for the argument that will be developed. The essay's body introduces each paragraph using a topic sentence. This topic sentence is subsequently supported by data, evidence, and detailed explanations that reinforce the subtopic and create a logical progression toward the next paragraph. The concluding paragraph critically summarizes the essay's main arguments and leaves a lasting impression on the reader. This may be achieved by posing a thought-provoking question or incorporating a memorable quote reinforcing the essay's thematic significance. Regardless of the specific method employed, the conclusion ensures that the essay ends with a sense of completeness and intellectual momentum.

Caulfield (2024) defines an essay as structured writing designed to inform or persuade, depending on the author's objective, thus bridging the gap between academic rigor and creative expression. Essays are commonly divided into four primary categories: expository, narrative, descriptive, and argumentative, each with its unique approach to conveying ideas, allowing writers to select the most appropriate form for their purpose. While narrative and descriptive essays prioritize the development of creativity and emotional depth by encouraging storytelling and vivid description, expository and argumentative essays concentrate on delivering information with well-supported

arguments. In academic settings, particularly at the college level, argumentative essays are especially prominent because they require students to engage with multifaceted issues critically, construct coherent arguments, and back their claims with substantial evidence. This form of writing enhances students' analytical skills and equips them to participate in scholarly debates, where evidence-based reasoning is vital. Therefore, mastering the argumentative essay empowers students to articulate their views persuasively, enabling them to contribute thoughtfully to intellectual discourse.

### **Argumentative Essay**

College students must master four types of essays: expository, narrative, descriptive, and argumentative for their assignments. Having gained a clear understanding of the importance of academic writing, it is now crucial to focus on the fourth type of academic essay: argumentative. This type of essay is essential in developing students' abilities to express and defend a position using logical reasons and evidence. The following section will examine the nature of argumentative essays, examining their structure, purpose, and strategies necessary for practical argumentation. Hyland (2008) expresses that argumentative essays offer a clear position on a particular topic or issue and support that position with evidence and reasoning. The primary purpose of an argumentative essay is to persuade the reader to accept or agree with the author's point of view.

The key features of the argumentative essay are:

- 1. A straightforward thesis statement:** A paper begins with a strong thesis statement that outlines the central argument or claim the writer intends to support.
- 2. Evidence and support:** Authors provide proof, such as facts, statistics, examples, and expert opinions, to support their claims. Evidence is essential to convincing the reader that the argument is valid.
- 3. Rebuttal:** A well-structured argumentative essay acknowledges and addresses opposing views. It shows the author's understanding of the issue's complexity and strengthens their argument in rebutting the rejection.
- 4. Logical structure:** Articles are organized logically and usually follow a clear structure, including an introduction, a body (each focusing on a specific point), and a conclusion.
- 5. Persuasive language:** The author uses compelling and rhetorical techniques to engage the reader and encourage them to consider the argument presented.

Hyland emphasizes the importance of understanding the rhetorical structure of argumentative essays. This structure usually includes:

- *Introduction:* Introduces the topic and presents the thesis or central argument.
- *Body section:* Each section should focus on a specific point that supports the thesis, including claims, evidence, and rebuttals.
- *Conclusion:* Summarizes the main points and reinforces the thesis, often suggesting implications or additional areas for consideration.

Hyland believes students need to know the typical patterns and conventions of argumentative writing to write coherent and effective essays. Genre analysis, which identifies argumentative genres' specific characteristics and functions, can develop this

understanding. As Hyland (2008) points out, EFL/ESL students face significant challenges when writing argumentative essays.

First, many students do not understand text organization well, making it difficult for them to construct coherent arguments. In addition, discursive forms tend to have limited capabilities that hinder their ability to follow the conventions of argumentation types. The lack of explicit knowledge about argumentative essays' linguistic and structural features further complicates the writing process and leaves students unaware of what is required for effective writing. Although process methodologies are commonly used in the teaching of writing, they often do not meet the specific structural needs of argumentative writing, resulting in insufficient training of students. Moreover, many students have problems with research skills, including library searches and selecting appropriate materials, which are essential to support their claims. Finally, these problems underscore the need for specific instruction that emphasizes the process and outcomes of argumentative writing.

After analyzing the format and importance of the argumentative essay, it is crucial to explore the actual writing process. The process of writing is an essential element in creating academic work that is coherent and well-organized. It consists of multiple steps, such as exploring the topic, audience, and purpose, prewriting to get ideas, organizing the ideas, revising the draft, editing, proofreading, and writing a new draft. Comprehending every one of these phases is not only beneficial for structuring ideas efficiently but also guarantees that the final product is refined and convincing. In the upcoming section, we will examine every stage of the writing process and its importance in creating top-notch academic essays. Meyers (2014) establishes that step one is exploring your topic, audience, and purpose. It allows your mind to explore ideas in the initial stage. Capture those thoughts by taking notes. Eventually, it would help if you concentrated your writing on your subject, readers, and objectives in a more organized manner. Therefore, choosing a topic you know and are passionate about is crucial. You will then have something intriguing to share and express with clarity and confidence. Furthermore, the less knowledge your audience has about the subject, the greater the news to define terms and offer fundamental background information. Lastly, it is essential to consider the purpose of your essay to determine whether your objective is to inform, persuade, or entertain.

According to Meyers (2014), the second step is prewriting, which involves generating and organizing ideas. Once the ideas have been collected, the most relevant ones can be highlighted. A second free writing can then be carried out, focusing on narrating the ideas concisely and adding additional details. This process is known as brainstorming, which consists of listing emerging ideas.

In the third step, Meyers (2014) points out that organizing the ideas highlighted in the previous stage is necessary. This procedure, commonly called outlining, represents the best way to move forward with a plan. It allows you to list the essay's thesis, the topic sentences of the body paragraphs, and the supporting information corresponding to each topic sentence.

According to Meyers (2014), the fourth step is to write the first draft. At this stage, it is crucial to be very specific with your ideas, as new perspectives may emerge, and you may also discover a more effective way to organize them.

In the fifth step, Meyers (2014) focuses on revising the draft, stressing that revision differs from editing. Revision involves modifying, deleting, adding, or rearranging content. It is time to reevaluate the work to ensure it is clear, logically structured, and

complete. Editing, in contrast, refers to reviewing the document at the end of the writing process to correct spelling or grammatical errors and make minor adjustments.

The revision begins with a thorough reading of the first draft. It is essential to analyze the structure, the choice of vocabulary, and the details presented. Make annotations in the margins and on the lines. Rearrange sections, adjust sentences, replace words, or make new sections. Afterward, produce a clean copy.

As Meyers (2014) outlined, step 6 focuses on editing and proofreading this section. It is crucial to meticulously review every aspect and proofread the draft, checking for spelling, grammatical errors, incomplete sentences, and improper punctuation. It is also advisable to read the paper several times and, if possible, read it aloud.

Finally, in step 7, Meyers (2014) mentions the importance of writing a new draft that includes all the changes made. You should also read the paper repeatedly and proofread it carefully to ensure you are satisfied with the result.

### **The Use of AI in Academic Writing**

Lee et al. (2024) define a writing assistant as a computational system from which users can benefit to improve the quality and effectiveness of their writing, whether grammar and spelling checks to generate ideas and writing style. Integrating AI writing tools in Academic Writing is growing in popularity due to the several benefits students and educators can get from them. AI writing tools can enhance our writing skills by making the accuracy and fluency of writing easier and saving time students and researchers spend on editing and proofreading (Raheem et al., 2023). AI enables students to improve their weaknesses and overcome obstacles when writing using AI tools.

Applications such as CHATGPT, QuillBot, Grammarly, Wordtune and Jeni use sophisticated algorithms to detect common grammar, punctuation, and sentence structure issues, offering suggestions to improve clarity and writing style. A study by Tambunan et al., (2022) showed that Grammarly enhanced students' grammar and punctuation. Grammarly brings an opportunity for students to improve but also learn in the process. Likewise, another study by Mhlanga (2023), highlighted the use of CHATGPT in stimulating students' creative and critical thinking. CHATGPT assists students in the creation of sentences and coherence in a text.

In Ecuador, the use of AI in Education is still developing. Quijano (2023) suggested that AI can be groundbreaking for teachers and learners. The author believes AI can be used for TEFL in areas like planning, immediate feedback enabling students to correct their mistakes, and providing personalized and adaptive learning. Previous findings by Parra & Calero (2018) evidenced positive aspects of using applications such as Grammarly and Grammarly for writing. Those applications provide high-level feedback concerning grammar, punctuation, tone, and style. However, they acknowledge that even though AI tools are helpful for quick feedback, they can't fully grasp the originality of ideas or complex arguments.

Mosquera (2024), on the other hand, stated that AI writing tools like CHATGPT could be helpful for activities such as brainstorming, outlining, revision, or reducing repetitive vocabulary. The Argumentative Essay requires that students search for enough information on the Internet to support their ideas and create a well-constructed essay, so CHATGPT can be a silver bullet for students who perceive writing essays as challenging.

From those previous studies, the authors identified several gaps. Firstly, there is a need for more information regarding AI tools for academic writing in undergraduate students. Only a few studies on academic writing essays using AI tools have been carried out in Ecuador. Secondly, previous studies focused on using just one or two Apps, such as Grammarly and ChatGPT, to assist students in writing paragraphs. Students need to have the chance to use many of them simultaneously to get different results and improve their writing. Finally, even though those studies provided positive and negative points about using AI tools to improve writing skills, most focus on AI writing tools for writing short paragraphs instead of Argumentative Essays. In this sense, the authors considered it relevant to apply this research to higher education students.

## **Methodology**

This research employs a mixed-method approach, combining quantitative and qualitative data to understand the study objective. It also used an experimental method within the phenomenological research approach based on studying consciousness and experiences from a first-person perspective. Therefore, the research explores and describes the participants' lived experiences about using AI tools in the essay writing process.

### ***Participants***

This study involves an Academic Writing professor and 15 college students majoring in Pedagogy of English Teaching.

### ***Instruments***

To collect data, the following instruments were used:

1. **Questionnaire:** A Google Form survey was administered to the students to gather qualitative data on their experiences using AI tools for writing and their attitudes towards them. These surveys included open-ended and closed-ended questions to capture a broad range of insights.
2. **Argumentative Essay:** This writing activity was necessary for -pre- and post-tests, which were prepared to determine students' weaknesses in the essay writing process. The Pre-test was applied to identify how difficult it is for students to write an argumentative essay and which sections they struggled with most (introduction, body, or conclusion) without using AI tools. On the other hand, a post-test was applied to determine which sections of the essay were improved using AI.
3. **Checklist:** This instrument identified the stages where students struggled most, helping to determine whether they followed the writing process correctly.
4. **Interview Guide:** This instrument was used to interview the academic writing professor to assess his observations and insights regarding the students' weaknesses during the essay writing process.

The applied instruments in this research were validated and approved by experts.

## **Procedure**

### ***Survey***

A WhatsApp chat group administered the Google Form survey. They had a whole day to answer questions and write about their experiences during the writing process and the Apps they rely on when writing argumentative essays in the Academic Writing subject.

### *Pre-test*

The experimental activity in this study involved students writing about “their best experience in high school.” They were instructed to follow the structure they had learned during the semester without using any AI writing tool. They were not allowed to modify the essay's structure or look up more advanced vocabulary.

### *Check List*

During the Pre-test and Post-test, a checklist was used; the same indicators were used in both procedures to uncover the common mistakes they make when writing an essay without any AI writing tool and using AI.

### *Interview*

The interview lasted 30 minutes, and the professor exposed students’ difficulties during the interview. He mentioned the areas in which they struggle most and the steps students do not tend to follow when writing essays. Moreover, the academic writing professor explained how he encourages students to use AI to improve their essays. Nevertheless, he also said he can tell students rely too much on technology that they do not even take a second to revise what they get from those AI writing tools.

### *Post-test*

In the post-test, students were allowed to use the AI-assisted writing tool ChatGPT. The participants had the opportunity to use it while writing the same topic, following the same structure, allowing them to modify and improve their essays. As they wrote their essays and the prompts such as “modify the structure, the writing style, use more advanced vocabulary, order the essay and coherence,” this AI provided them with real-time feedback in those areas. Moreover, students could also use the Scribbr AI writing tool, which allowed them to modify some areas of their essays related to paraphrasing and grammar.

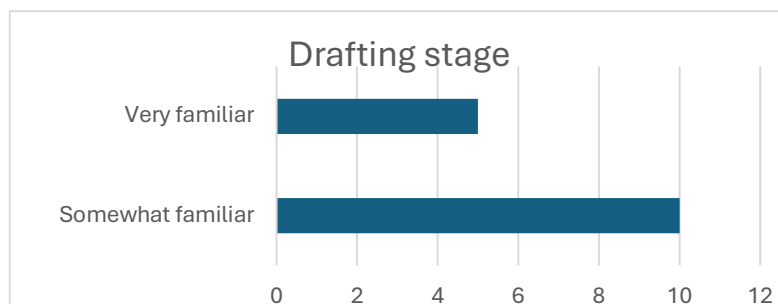
## **Results**

### **Survey**

The survey's first question explored students' familiarity with the drafting stage of essay writing. Out of 15 respondents, 10 students reported being "somewhat familiar" with this stage, while only 5 described themselves as "very familiar." As shown in Figure 1, most students demonstrated some knowledge but needed a deeper familiarity with the drafting stage.

**Figure 1**

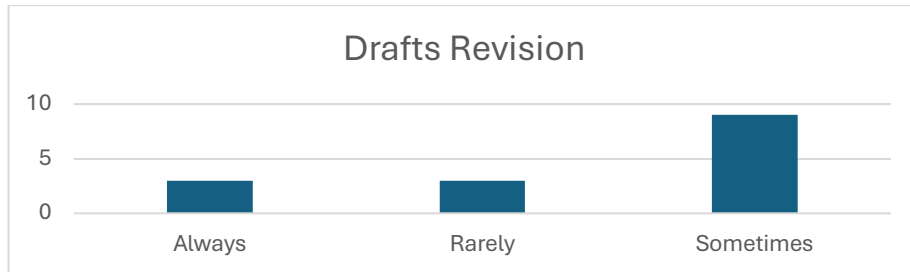
### *Drafting Stage*





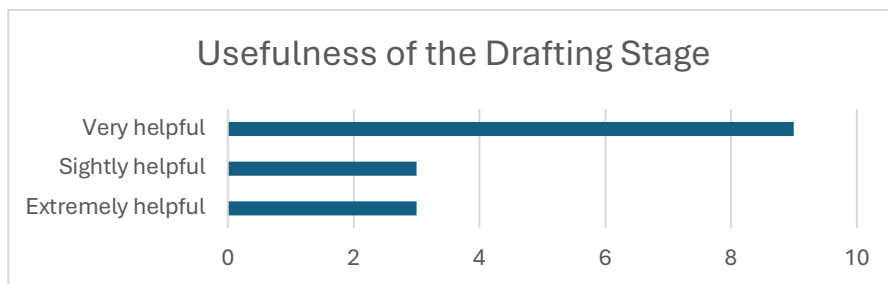
In the second question, students were asked how frequently they revise their drafts or have others review them. As Figure 2 illustrates, three students reported revising their drafts "always," while an equal number revised them "rarely" and "sometimes."

**Figure 2**  
*Frequency of Revising Drafts*



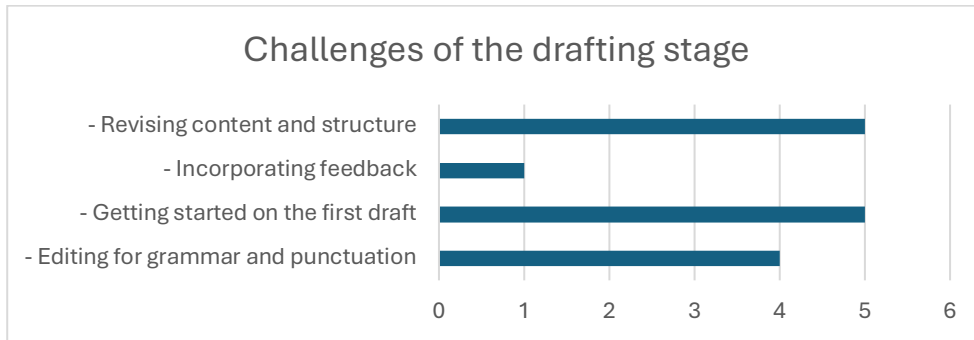
Students' perceptions of the usefulness of the drafting stage were also explored. As demonstrated in Figure 3, the majority (n = 9) found the drafting stage to be "very helpful." Four students rated it as "slightly helpful," while three students considered it "extremely helpful."

**Figure 3**  
*Perceived Usefulness of the Drafting Stage*



The fourth question examined the challenges students face during the drafting stage. As shown in Figure 4, five students identified "revising content and structure" as the most difficult aspect, with an equal number struggling to "get started on the first draft." Four students noted difficulties with "editing for grammar and punctuation," while only one student found "incorporating feedback" to be challenging.

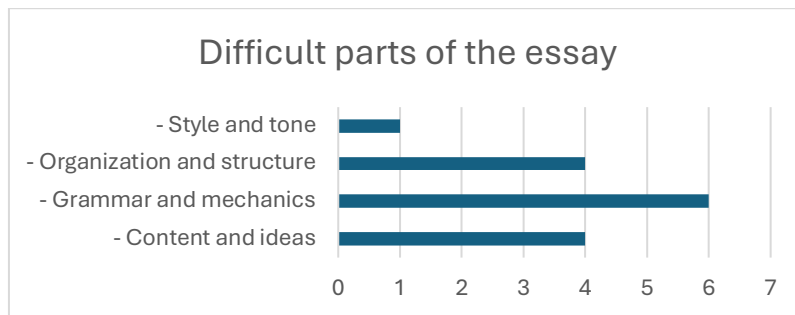
**Figure 4**  
*Challenges in the Drafting Stage*



The fifth question aimed to uncover the steps students follow in essay writing. Twelve students indicated that they adhere to a structured process involving "outline, first draft, and brainstorming." In contrast, only three students incorporate "peer and teacher revision and edit while writing."

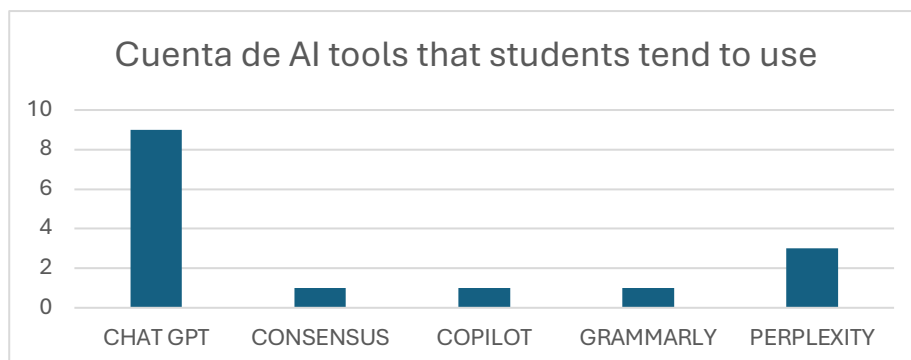
In the sixth question, students highlighted the difficulties they encountered while writing their final essays. As shown in Figure 5, "grammar and mechanics" were the primary challenge for six students, followed by "content and ideas" and "organization and structure," which were mentioned by four students. Only one student identified "style and tone" as an issue.

**Figure 5**  
*Difficulties in Final Essay Writing*



The seventh question revealed that students use AI tools to aid their writing. Figure 6 indicates that one out of three students used Grammarly, Copilot, and Consensus. Three students used Perplexity, and ChatGPT emerged as the tool most used by nine students.

**Figure 6**  
*AI tools used for writing*



Question number 8 in the Survey was about circumstances in which they needed to use an AI writing tool, it was found that AI writing tools, such as ChatGPT, Perplexity, and Consensus, play a significant role in enhancing the quality of students' essays. These tools assist in generating ideas, adding content, clarifying thoughts, improving structure, and checking for grammar and punctuation errors. These tools' varied and prolonged use underscores their importance in the modern writing process, helping students produce well-crafted and coherent essays.

### ***Interview***

**Table 1**

*Common Mistakes Students Make when Writing an Academic Essay*

<b>Interview Results</b>	<b>Categories</b>
<p>Answer: Students often start writing without first reading about the topic, which leads to a superficial understanding. They skip brainstorming, resulting in a lack of diverse ideas and logical organization.</p> <p>In addition, many do not prepare an outline before writing, resulting in essays that appear disorganized and poorly structured. Aside from problems include erroneous generalities that fail to efficiently convey the focus of the essay, and frequent errors in designing thesis statements that are accurate, descriptive and understandable.</p>	<ul style="list-style-type: none"> <li>• Lack of reading comprehension.</li> </ul>

**Table 2**

*Aspects of the Writing Process Students Struggle Most*

<b>Interview Results</b>	<b>Categories</b>
<p>Answer: An academic writing expert pointed out that a lot of students skip the research phase before they start writing, which results in arguments that lack depth. They also tend to struggle during brainstorming sessions, often failing to come up with and organize their ideas effectively.</p> <p>In the introduction, many students make mistakes when trying to write their thesis statements, which are vital for steering the direction of the essay. Furthermore, in the body paragraphs, it is common for students to stumble when creating strong topic sentences, which are crucial for keeping the essay coherent and focused.</p>	<ul style="list-style-type: none"> <li>• Brainstorming</li> <li>• Lack of Reading Comprehension</li> <li>• Thesis statement</li> </ul>

**Table 3**

*Organization before students begin writing*

<b>Interview Results</b>	<b>Categories</b>
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Answer: They jump straight into writing the essay without any preparation. This approach results in a shallow understanding of the topic, jumbled ideas, and, in the end, essays that are less effective and coherent.	<ul style="list-style-type: none"> <li>• Disorganized Thoughts</li> </ul>
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**Table 4**

*Common Issues Observed in Students' Writing Related to Structured and Coherence*

<b>Interview Results</b>	<b>Categories</b>
Answer: One common issue I notice in students' writing regarding structure and coherence is their unclear understanding of the topic. When they are not familiar with the subject, it often results in vague or irrelevant content, disorganized thoughts and weak arguments. Without a strong grasp of the material, they find it difficult to create a logical and cohesive narrative.	<ul style="list-style-type: none"> <li>• Structure and coherence</li> <li>• Organization</li> </ul>

**Table 5**

*key Areas I Often Focus on When Giving Feedback*

<b>Interview Results</b>	<b>Categories</b>
Answer: When I give feedback on writing, I often focus on supporting details and examples. These components are essential because they improve the clarity and persuasiveness of the work by offering solid evidence to support the main ideas. Encouraging students to include relevant and well-chosen details helps bolster their arguments, making their essays more engaging and credible.	<ul style="list-style-type: none"> <li>• Supporting details and examples.</li> <li>• Lack of Reading Comprehension</li> </ul>

**Table 6**

*Students Respond to Feedback on their Writing*

<b>Interview Results</b>	<b>Categories</b>
Answer: Even though I provide feedback on their writing, students typically continue to make mistakes because they lack a proper understanding of the topic. This indicates that their response to feedback is often ineffective, as they struggle to incorporate corrections and improve their work without a solid grasp of the subject matter.	<ul style="list-style-type: none"> <li>• Lack of Reading Comprehension</li> </ul>

**Table 7***Main Hurdles Students Encounter in the Writing Process of an Academic Essay*

<b>Interview Results</b>	<b>Categories</b>
<p>Answer: From my perspective, the main hurdles students encounter during the writing process of an academic essay are primarily due to their lack of familiarity with the topic, as they often don't read or research before starting to write. Additionally, their insufficient English proficiency, particularly with new vocabulary, further complicates their ability to articulate and develop their ideas effectively.</p>	<ul style="list-style-type: none"> <li>• Lack of Reading Comprehension</li> <li>• Lack of Vocabulary</li> </ul>

**Table 8***Style and Tone challenges students commonly face*

<b>Interview Results</b>	<b>Categories</b>
<p>Answer: In terms of style and tone, students commonly face challenges in summarizing and paraphrasing from other sources. They often struggle to condense information accurately while maintaining the original meaning, and to rephrase content in their own words without losing the intended context. This can result in either overly simplistic or improperly attributed work, affecting the overall quality and integrity of their writing.</p>	<ul style="list-style-type: none"> <li>• Summarizing and paraphrasing.</li> </ul>

**Table 9***Grammatical or Punctuation Errors Commonly Observed in Students' Writing*

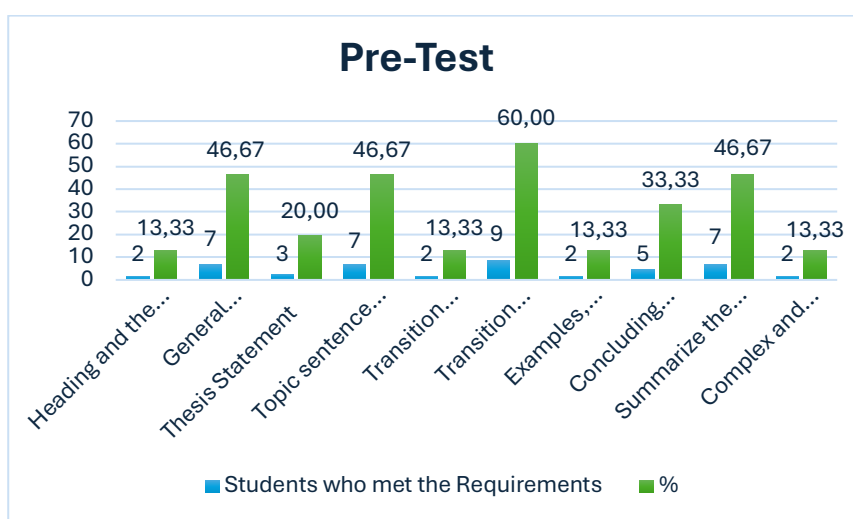
<b>Interview Results</b>	<b>Categories</b>
<p>Answer: In students' writing, I often observe grammatical errors in constructing complex and compound-complex sentences, leading to incorrect punctuation usage. To address these issues, I focus on teaching the rules of sentence structure and punctuation explicitly, providing examples and exercises that emphasize the correct use of commas, semicolons, and conjunctions in complex sentences. Additionally, I encourage students to practice writing varied sentence types to improve their understanding and application of these grammatical concepts.</p>	<ul style="list-style-type: none"> <li>• Constructing complex and compound complex sentences.</li> <li>• Punctuation</li> </ul>

**Table 10**  
*Barriers when Students Use AI Writing Tools*

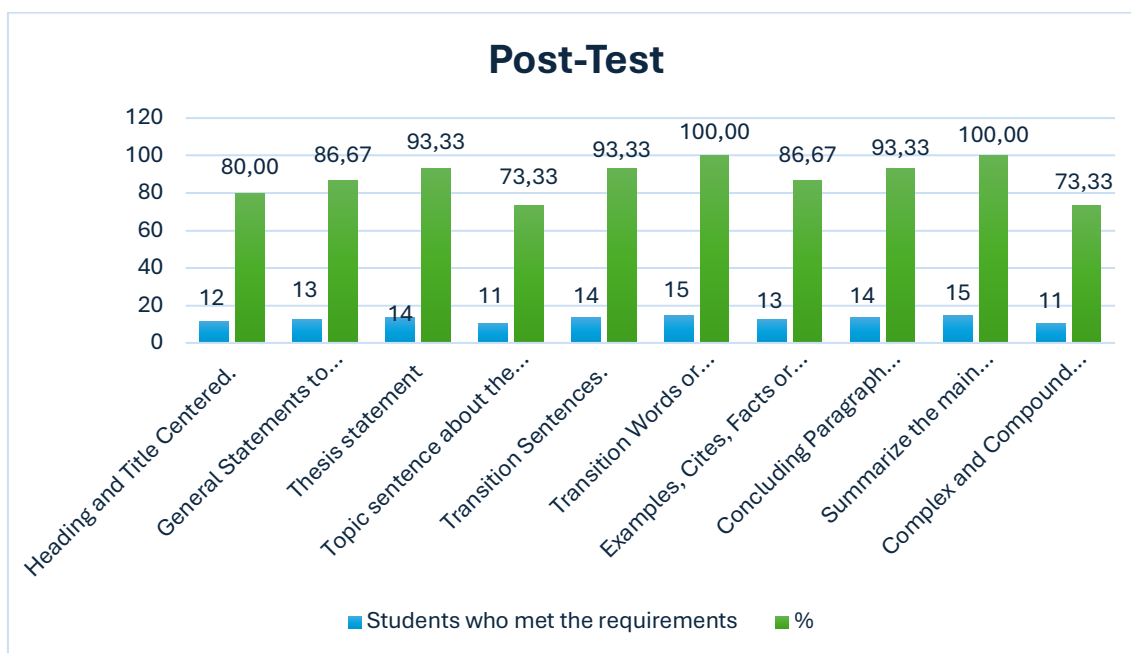
Interview Results	Categories
<p>Answer: I encourage my students to use various AI writing tools as they can be instrumental in understanding topics before writing academic essays. However, a significant barrier is that students often copy directly from these tools without engaging with or reading the content, which leads to a lack of comprehension and the potential for incorporating AI errors. To address this, I emphasize the importance of reading and critically evaluating AI-generated content to ensure a deeper understanding and prevent plagiarism.</p>	<ul style="list-style-type: none"> <li>• Lack of Reading Comprehension</li> </ul>

During the interview conducted to understand the challenges students face in writing essays, several categories emerged as frequently recurring issues. The most essential problem mentioned by the professional interviewee was the lack of reading skills, which was identified as a significant impediment to the development of the writing process. The lack of skill impairs students' ability to create concepts and their lexis and level of understanding, complicating solidly based essay writing. Idea generation was a frequent challenge because it was difficult for students to create and structure ideas efficiently before starting to write. The categories of structure, coherence, and organization were frequently mentioned. Many students expressed frustration at being unable to maintain a logical flow in their writing, sometimes losing the focus of their argument. Overall, a lack of reading skills was identified as the main obstacle, and the crucial importance of students engaging with diverse texts to improve their critical thinking skills, vocabulary, and ability to write well-structured and cohesive essays was highlighted.

**Figure 7**  
*Pre-Test*



**Figure 8**  
*Post-Test*



The Pre and Post-test results revealed significant improvements when writing essays. In the Pre-test, many areas showed low performance, whereas the Post-test data demonstrated much higher adherence to essay writing standards, there were notable increases, with some criteria, like using transition words and paraphrasing the thesis, reaching 100%.

### Checklist

The observation checklist results indicated that not all students generated their ideas through brainstorming; only a few organized them using mind maps. Since the topic required them to write about experiences in school, none of the students used online libraries to look up information. Some students demonstrated the ability to formulate clear and concise thesis statements for their essays. However, it was observed that in both the pre-test and post-test, students did not review or refine their thesis statements based on feedback from peers or instructors. Additionally, during the post-test, students were allowed to use AI writing tools. As a result, they believed they did not need to check their grammar, content, style, or punctuation, assuming the AI would perfect their essays. This reliance on AI was evident, as students did not make any further checks on their work.

### Discussion

This study examined the advantages that artificial intelligence (AI) tools, such as ChatGPT, Copilot, Grammarly, Perplexity, ChatPDF, and Scrib AI, offer in helping higher education students develop academic writing skills. Several instruments were employed to gain deeper insights into students' writing difficulties and their improvements when using AI. The significant findings are discussed below.

Firstly, the students' mistakes, the pre-test results revealed that students did not engage in brainstorming steps before writing and needed to gain knowledge of advanced grammar. The pre-test indicated that students frequently made grammar and punctuation

mistakes in their essays. They struggled to construct complex and compound-complex sentences, and their limited vocabulary made writing arduous. These findings align with the research by Pakaya and Nabu (2022), who concluded that many errors and difficulties in writing are due to a lack of vocabulary, grammar, and punctuation. A limited English vocabulary can hinder the clarity and effectiveness of academic writing. Encountering new vocabulary words can be particularly challenging for students with developing English proficiency.

Secondly, the pre-test results highlighted students' obstacles when writing their essays, such as reading and analyzing the topic before writing. The absence of these processes makes it difficult for students to produce coherent academic essays. Therefore, the authors suggest academic writing requires grammar skills, comprehension of the subject, and brainstorming ideas. Furthermore, students struggled to sequence their ideas logically, leading to essays that lacked coherence and organization. These findings resonate with the analysis by Nguyen (2022), who concluded that reading habits and attitudes toward reading play a crucial role in writing achievement. Moreover, the pre-test showed that because students did not organize their ideas, they did not provide supporting details such as examples and facts, which weakened their essays. These findings are consistent with the outcomes identified by Emak and Ismail (2021), who found that students who read frequently can better enhance their writing skills.

Finally, the AI tools most likely used by students, the post-test results, and the checklist demonstrated that students relied heavily on AI tools. Their essays improved significantly in grammar, punctuation, structure, and the inclusion of supporting details due to the use of AI tools like ChatGPT, Copilot, and Scrib AI. These findings align with research by Song and Song (2023), who noted that AI tools allow students to work at their own pace and receive instant feedback, leading to better-written texts. However, the students' heavy reliance on AI can be a double-edged sword, as evidenced by a few errors in essay structure and a lack of coherence in ideas in the post-test results. This outcome is consistent with the findings of Malik et al. (2023), who emphasized that while AI tools can enhance writing, they may also impact creativity, critical thinking, and ethics, highlighting the importance of maintaining human involvement when using AI.

## **Conclusions**

Research highlights that reading comprehension is fundamental to constructing well-written texts. Therefore, organizing the information and identifying key points are crucial before writing academic essays. A deep understanding of the topic is essential for writing a coherent and well-structured text. Relying solely on AI tools to generate essays can lead to issues with organization, clarity, and cohesion, as these tools may not fully grasp the subject's nuances, or the logical flow required for effective communication. Finally, integrating active reading and critical thinking into writing remains crucial for producing insightful and compelling academic work.

## **References.**

*Books* | Professor Ken Hyland. (n.d).

<http://www.kenhyland.org/index.php/publications/books/>

Mosquera Bustos, A. I. (2024). El uso de Chatgpt para mejorar la escritura académica en inglés de los estudiantes. PUCESE - Escuela de Licenciatura en Pedagogía del Idioma Inglés. <https://repositorio.puce.edu.ec/handle/123456789/42587>



- Emak, L. and Ismail, H. (2021) Incorporating Reading in Writing Classes and Its Effects on ESL Learners' Writing. *Creative Education*, **12**, 1949-1962. doi: [10.4236/ce.2021.128149](https://doi.org/10.4236/ce.2021.128149).
- Hyland, K. (1990). A Genre Description of the Argumentative Essay. *RELC Journal*, 21(1), 66-78. <https://doi.org/10.1177/003368829002100105>
- Hyland, K. (2019). *Second Language Writing*. (2nd ed.) Cambridge University Press.
- Lee, M., Gero, K. I., Chung, J. J. Y., Shum, S. B., Raheja, V., Shen, H., Venugopalan, S., Wambsganss, T., Zhou, D., Alghamdi, E. A., August, T., Bhat, A., Choksi, M. Z., Dutta, S., Guo, J. L. C., Hoque, M. N., Kim, Y., Knight, S., Neshaei, S. P., ... Siangliulue, P. (2024). A Design Space for Intelligent and Interactive Writing Assistants. In *CHI 2024 - Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems* Article 1054 (Conference on Human Factors in Computing Systems - Proceedings). Association for Computing Machinery. <https://doi.org/10.1145/3613904.3642697>
- Malik, R., Pratiwi, Y., Andajani, K., Numertayasa, W., Suharti, S., Darwis, A., & Marzuki. (2023, December). Exploring Artificial Intelligence in Academic Essay: Higher Education Student's Perspective. *ScienceDirect*, 5. <https://doi.org/10.1016/j.ijedro.2023.100296>
- Marzuki, , Widiati, U., Rusdin, D., Darwin, , & Indrawati, I. (2023). The impact of AI writing tools on the content and organization of students' writing: EFL teachers' perspective. *Cogent Education*, 10(2). <https://doi.org/10.1080/2331186X.2023.2236469>
- Meyers, A. (2014). *Longman Academic Writing Series 5: Essays to Research Papers* (Pearson Education, Inc. ed., Vol. 5). Pearson Education. [https://books.google.com.ec/books/about/Longman\\_Academic\\_Writing\\_Series.html?id=qmJcmwEACAAJ&redir\\_esc=y](https://books.google.com.ec/books/about/Longman_Academic_Writing_Series.html?id=qmJcmwEACAAJ&redir_esc=y)
- Mhlanga, David, Open AI in Education, the Responsible and Ethical Use of ChatGPT Towards Lifelong Learning (February 11, 2023). Available at SSRN: <https://ssrn.com/abstract=4354422> or <http://dx.doi.org/10.2139/ssrn.4354422>
- Nguyen, T. T. H. (2022). The Effects of Reading Habits on Writing Performance: A Case Study at Van Lang University. *International Journal of TESOL & Education*, 2(4), 105-133. <https://doi.org/10.54855/ijte.22247>
- Parra G., L., & Calero S., X. (2019). Automated Writing Evaluation Tools in the Improvement of the Writing Skill. *International Journal of Instruction*, 12(2), 209-226. <https://doi.org/10.29333/iji.2019.12214a>
- Nabu, A., & Pakaya, N. . (2022). Identify students' difficulties in essay writing courses. *Journal of English Teaching and Linguistic Issues (JETLI)*, 1(2), 66–74. <https://doi.org/10.58194/jetli.v1i2.213>
- Quijano, J. (2023, August 04). The rise of AI in language education: a game changer for teaching English as a foreign language in Ecuad. *KRONOS*, 95-102.
- Raheem, B., Anjum, F., & Ghafar, Z. (2023, October). Exploring the Profound Impact of Artificial Intelligence Applications (Quillbot, Grammarly and ChatGPT) on English Academic Writing: A Systematic Review. *International Journal of Integrative Research (IJIR)*, 1, 599-622.

[https://www.researchgate.net/profile/Zanyar-Ghafar/publication/375238415\\_Exploring\\_the\\_Profound\\_Impact\\_of\\_Artificial\\_Intelligence\\_Applications\\_Quillbot\\_Grammarly\\_and\\_ChatGPT\\_on\\_English\\_Academic\\_Writing\\_A\\_Systematic\\_Review/links/6544adc13fa26f66f4cfb981/Exp](https://www.researchgate.net/profile/Zanyar-Ghafar/publication/375238415_Exploring_the_Profound_Impact_of_Artificial_Intelligence_Applications_Quillbot_Grammarly_and_ChatGPT_on_English_Academic_Writing_A_Systematic_Review/links/6544adc13fa26f66f4cfb981/Exp)

Song C and Song Y (2023) Enhancing academic writing skills and motivation: assessing the efficacy of ChatGPT in AI-assisted language learning for EFL students. *Front. Psychol.* 14:1260843. doi: 10.3389/fpsyg.2023.1260843

Smith, David Woodruff, "Phenomenology", *The Stanford Encyclopedia of Philosophy* (Summer 2018 Edition), Edward N. Zalta (ed.), URL = <<https://plato.stanford.edu/archives/sum2018/entries/phenomenology/>>.

Tambunan, A. R. S., Andayani, W., Sari, W. S., & Lubis, F. K. (2022). Investigating EFL students' linguistic problems using grammarly as automated writing evaluation feedback. *Indonesian Journal of Applied Linguistics*, *12*(1), 16–27. <https://doi.org/10.17509/ijal.v12i1.46428>

*Teaching and researching writing.* (n.d.). Routledge & CRC Press. <https://www.routledge.com/Teaching-and-Researching-Writing/Hyland/p/book/9781032056197?srsId=AfmBOorrj12YaLL3HW6ISXi hpKVDguXYhUjTAM0bx9mhYvMNvBXEPNn4>