



Mohamed Kheider University of Biskra  
Faculty of Letters and Foreign Languages  
Department of English Language and Literature

# MASTER DISSERTATION

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**Exploring EFL Students 'Perceptions on the use of Grammarly as an AI Writing Tool to Enhance Academic Writing Proficiency The Case Study of Master Two English Students at Mohammed Kheider University**

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Dissertation submitted to the Department of English as Partial Fulfillment of the Requirement for the degree of Master in Science of Language

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### **Declaration**

I, Amina **FERCHICHI**, solemnly declare that this dissertation, submitted to the Department of the English language and Literature at Biskra University, is entirely my own work, free from plagiarism, and has not been submitted to any other educational institution. I have appropriately acknowledged and cited all sources used, and I have conducted myself with academic integrity throughout the process. I understand the severe consequences of academic misconduct and affirm the authenticity of my dissertation.

## ***Dedication***

*I would like to dedicate my dissertation*

*To my beloved parents whose continuous support and encouragement made it possible to me to do this work*

*To “My mother” you have been my angel during this period of time, your endless encouragement have been the foundation upon which I built my academic dissertation*

*To my dear friends “Oumaima, Luna, Fedoua, Meriem, Ryma, Fatima”, Thank you for providing me with the endless support, love and understanding.*

*To everyone who believed in me and helped me complete my work.*

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## Abstract

Mastering academic writing is categorized as a crucial task that is required in higher educational and academic settings since it is a means for conveying and communicating complex ideas through well-structured and evidence-based piece of writings. Yet, the ability to perform academic writing skills might be a complex task for university students precisely foreign language (EFL) students, for instance great number of EFL students show several difficulties and weaknesses while composing academic writing. Therefore, the current research aims to investigate the effectiveness of Grammarly as an AI tool to enhance EFL students' academic writing. Moreover, this study is targeted for Master Two students at Mohamed Kheider of Biskra University. In this respect, this study hypothesized that Grammarly AI writing tool based assistant could potentially be an effective solution to improve students' academic writing. In light of the variation of artificial intelligence writing tools, it is necessary to explore both students and teachers familiarity and awareness on Grammarly based on their perspectives. Hence, a qualitative research method used to collect qualitative data by applying both unstructured interview and questionnaire. The questionnaire is addressed to Master Two EFL students (N= 25), while the interview is tailored to collect data from EFL teachers (N= 7). The interpretation of data was done through thematic analysis, therefore the findings indicate that both teachers and students express positive responses towards the integration of Grammarly in academic writing besides the most of students and teachers are aware and familiar with the potential of such Artificial Intelligence writing tools. Consequently, EFL students are recommended to use Grammarly as means to reduce the level of challenges and improve ability to write academically.

**Keywords:** Academic writing, Artificial Intelligence, Biskra University, Grammarly, Master Two EFL Students

## Acronyms

**EFL:** English as a Foreign Language

**AW:** Academic Writing

**AI:** Artificial Intelligence

**AWP:** Academic Writing Process

**ITSs:** Intelligent Tutoring Systems

**NLP:** Natural Language Processing

**AWP:** Academic Writing Program

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المخلص

## **General Introduction**

### **1. The Background of the study**

One of the most important components of higher education is being able to write critically, logically, and in reliable form. Having a good level of writing skills is crucial for English as Foreign language students for their future research, careers, and undergraduate periods. Mastering academic writing plays an important role in assisting EFL students to write their assignments, research papers, and dissertations and fulfilling their academic objectives (Aunurrahman et al., 2017). However, EFL students are facing many challenges and difficulties when it comes to the writing process. Poor writing skills may lead to unacceptable forms of plagiarism such as intentional and unintentional plagiarism.

Moreover, English as Foreign Language (EFL) students' difficulties in mastering academic writing are often caused by a lack of feedback, practice, and traditional approaches to teaching academic writing. Nowadays, with the development of technology, Artificial Intelligence has appeared and influenced many academic fields. The influence of AI has touched the field of English as a foreign language, in which AI has developed many writing tools to reduce difficulties and challenges during the AW process. It could be a better solution now to provide EFL students with the potential to improve their academic writing.

### **2. Statement of the Problem**

Higher education requires a good level of academic writing proficiency, despite the fact that some EFL students face challenges that hinder their writing. These obstacles include grammar mistakes, punctuation, misspelling, and others like generating ideas. Besides, disability to develop ideas, putting an outline together, summarizing, and paraphrasing are also considered as challenges that undergraduate students encounter during academic writing (Bian & Wang 2016, as cited in Ratnawati et al., 2018, p. 42). This current issue can be caused by the traditional methods that are used by teachers, which may not be effective

enough, as well as the lack of time management in the classroom and energy to provide one-on-one personalized feedback. In addition to the lack of practice in academic writing sessions. The reasons that have already been mentioned will cause another common issue such as intentional and unintentional plagiarism. Therefore, it is crucial for EFL students to improve their academic writing skills and avoid such issues as much as possible.

### **3. Research Rational**

Artificial intelligence-based writing tools compared to the traditional methods of instruction might be an effective solution to provide EFL students with their needs, such as personalized feedback, grammar and spelling checking, paraphrasing, plagiarism detection and suggesting ideas and sentences.

### **4. Research Questions**

The current study proposed the following research questions:

**RQ1:** How do EFL students perceive the integration of Grammarly into the academic writing process?

**RQ2:** How can Grammarly the AI writing tool reduce the difficulties that are faced by EFL students during Academic writing?

**RQ3:** How can Grammarly benefit the foreign language learning and teaching?

### **5. Research Hypotheses**

This research hypothesized:

**RH1:** The integration of Grammarly the AI writing Assistant into academic writing will reduce the EFL students 'grammar mistakes, misspellings and plagiarism.

**RH2:** The personalized feedback and style suggestions that are provided by Grammarly can increase EFL students' self-efficiency to produce effective writing.

**RH3:** EFL teachers and students will positively perceive the integration of Grammarly into academic writing process.

## 6. Aims of the Study

This study aims to:

- Investigate the role of Grammarly as an AI writing tool to enhance EFL students' academic writing.
- See to what extent AI writing tools can reduce the students' difficulties while writing academically.
- Suggest AI writing tools to facilitate the writing skill and make it an easy process for EFL students.

## 7. Methodology

In this current study, the issue of exploring EFL students perceptions and experiences on the use of Grammarly requires case study design, a qualitative method approach is the appropriate research methodology to fit the current study and gain deep understanding based on participants experiences and perceptions on the current issue. It applies both unstructured questionnaire and interview to collect data from EFL students and teachers in order to gain detailed information on the required issue.

## 8. Data Collection Methods

The researcher applied a qualitative paradigm to carry on this study, the study requires two types of data gathering tools interview and questionnaire. The unstructured questionnaire seeks to gather qualitative data on students' perceptions towards using AI writing tools during academic writing process while the unstructured interview is conducted to gather teachers' perspectives regarding the use of Grammarly in order to provide the research with valuable insights from teachers' visions.

## 9. Population Sampling

Master Two students of English department at Mohamed Kheider University of Biskra are selected randomly to represent this study. Master students have been chosen as a sample in

this study because they are most concerned with finding solutions to improve their academic writing and more aware of using AI writing tools. The study deals with 25 Master Two students from the whole population in addition to 7 EFL teachers.

### **10. Structure of the Study**

This research consists of three main chapters. With the first two chapters are focused on the theoretical aspects, they are divided into two sections. The first section discusses the Academic Writing, and the second section is dealing with Artificial intelligence. The final chapter is concerned with the field work, which deals with the interpretation and analysis of data. Moreover, the first chapter that is concerned with academic writing provides a comprehensive exploration on the concept of academic writing in terms of its major features genres etc... On the other hand, the second chapter shifts the focus on Artificial Intelligence by providing its main types and its implications in education, particularly in the context of language learning, moving to Grammarly as an important aspect in this chapter and discussing its integration in the academic writing process. Finally, the third chapter emphasizes on analyzing the results that are tackled while collecting the qualitative data then summarizing and discussing the key findings of the research.

# CHAPTER ONE



## **Chapter One: Academic Writing**

### **Introduction**

#### **1.1 Definitions of Academic Writing**

#### **1.2 Characteristics of Academic Writing**

#### **1.3 Academic Writing process**

#### **1.4 Academic Writing Genres**

#### **1.5 Teaching Academic Writing Approaches**

#### **1.6 The Main Challenges Faced by EFL Students during Academic Writing**

### **Conclusion**

## **Introduction**

Mastering academic writing is considered as a challenging process for graduate and undergraduate students, it is one of the most crucial skills required in higher education settings. Students must effectively and critically convey their ideas through the writing process to fulfill their academic needs. Moreover, academic writing helps students organize their thoughts and ideas, communicate effectively, and provide evidence to support their claims (Mork and Oldham, 2018, as cited in Alek). Therefore, academic writing plays a significant role in enabling EFL students to write their research papers, assignments, dissertations, and other academic works. During the academic writing process EFL students should follow some requirements such as being formal enough, utilize specific vocabulary and terms besides being evident in order to be an effective writer. However, Writing effectively can be a challenging task for some EFL students especially for those who are disable to write due to some reasons such as lack of practice, limited vocabulary, feedback and traditional methods of teaching academic writing. More specifically this section discusses the academic writing's definitions, describing its characteristics, academic writing process (important stages), academic writing genres, the specific challenges faced by students and teaching academic writing approaches.

### **1.1 Definitions of Academic Writing**

“The way to get into the world of the scholars is through writing professional academic work, even with the highest academic qualification” (Mustapha &Galti, 2023, p.15). According to Viorica Condrat (2015), academic writing is a form of writing that seeks to communicate with a specific audience that shares the same knowledge. The purpose of such writing is to produce a desired impact on the reader. In addition, Gurung (2022) differentiates between academic writing and general writing: Academic writing is different from general writing in terms of its technical nature and organization. Unlike general writing,

which simply records information, academic writing combines ideas, details, and elements in a well-organized manner to effectively convey the intended message to the reader. It involves organizing, drafting, and revising to ensure that all elements are presented in a logical and chronological order. Essentially, academic writing is a coherent and structured form of writing that is distinct from general writing.

Academic writing is characterized by a formal tone, careful word choice, a clear focus on the research subject under inquiry, and the usage of the third person rather than the first person perspective (Research Guides, n.d). Academic writers define the boundaries of their fields through their writing. Precisely the term academic writing is the act of writing for publications and conferences that academics attend, as well as to complete assignments as teachers and researchers (Thais et al., 2006, as cited in Fatimah, 2019). Moreover, the intended audience has a great influence on the style, tone and genre of writing as it was said by Anstey (2014), Academic writing is a complex and structured process that requires a specific tone and style to effectively communicate with a targeted audience. In other hand, Good academic writing necessitates accuracy, neutrality, sound grammar, coherent organization, select vocabulary, and reliable data. It is important to ensure that each paragraph is centered around one main idea, linked smoothly with appropriate punctuation (Munro & Ramlaul, 2020). Furthermore, as mentioned by Chauhan (2022), Academic writing involves various elements, including content, organization, critical thinking, word choice, grammar, and mechanics. Additionally, it requires following certain conventions such as objectivity, formality, citation style, clarity, and conciseness.

Overall, Academic writing is a structured and organized process that follows specific rules. It is intended for a particular audience and requires a specific tone and style to effectively communicate ideas and thoughts.

## **1.2 Characteristics of academic writing**

Academic writing is a specific style of writing, it has some specific features that differentiate it from other types of writing. Formality, complexity, coherence, specific vocabulary, hedging, objectivity, precision and conciseness are the most common characteristics of academic writing. Writers need to take into consideration the key features of academic writing to effectively communicate their thoughts and ideas to the target audience. Akkaya and Aydın (2018, p130) stated that “Academic writings require a planned blending of rules of language and writing, times of action, type of discourse (subjective or objective), mastery of the specific field terminology, by following the academic stylistic standards”. Ratnawati et al (2018) assert that to be able to write effectively, students need to possess certain writing abilities such as arranging words in a sentence, constructing ideas in a paragraph, and utilizing correct grammar and punctuation.

### **1.2.1 Formality**

Formality can be defined as using a specific style or tone that is appropriate for academic or scholarly communications by avoiding slang, colloquial language, or any informality, as mentioned by some researchers formal language is distinguished from informal language by avoiding subjectivity, direct interactions, and colloquial expressions (Liardét et al., 2019). In addition, According to Larsson and Kaatari (2020), “formality is defined as a situational construct and operationalized through the use of registers”. Moreover, Heylighen and Dewaele (1999) suggest that academic writing is characterized by deep formality which refers to precision, objectivity, and significance in linguistic expressions to reduce ambiguity and context dependence. Likewise, Academic writing tends to be free of ambiguity or implicit meaning besides avoiding personal opinions and contractions to avoid any misunderstanding. Furthermore, formality is also characterized by other factors such as

narrativity, lexical correctness, syntactic simplicity, coherence, and cohesion, which influence the overall quality of writing to different extents (Xie, 2022).

### **1.2.2 Complexity**

Nesi and Gardner (2019) believe that “linguistic complexity is a mark of language proficiency.” It is considered one of the most crucial features of academic writing. Complexity is mainly related to formality since it is required in academic literacy and complex texts. It is generally addressed to knowledgeable readers and experts. Complex texts use specific and advanced levels of vocabulary and terminology, such as jargon along with complex sentence structures, as mentioned by Chelghum and Grin (2018, p105) “academic writing is more complex; it has longer words with varied vocabulary and usually complicated grammar, compared to spoken language.”

### **1.2.3 Objectivity**

Academic writing seeks to be objective and free of personal opinions, emotions, and judgmental language in order to establish credibility and trust. Furthermore, objectivity in AW is also called scholarly objectivity because it emphasizes the use of agentless passive voice instead of active voice. Objectivity is also called “impersonality” (Luukka & Markkanen, 1997, as cited in Hardjanto & Roselani, 2022). In addition, Hardjanto and Roselani(2022) claim that impersonalization is a technique utilized in academic writing to maintain objectivity and minimize direct reference to individuals. By emphasizing the message rather than the persons involved in the discourse, it foregrounds information and background agency, particularly that of the writer(s). This strategy is crucial in achieving the objectivity of academic writing. All in all, objectivity could be achieved by minimizing the use of personal bias. The writers need to be neutral and communicate their ideas and thoughts clearly and objectively.

### **1.2.4 Coherence and Cohesion**

Academic writing is more than just using correct spelling, specific tone vocabulary and impersonality. It also involves organizing and connecting ideas logically and ensuring that sentences and paragraphs are linked appropriately. These important aspects of writing are known as coherence and cohesion.

In addition, Cohesion can be defined as the syntactic connection of linguistic forms in a surface structure. Moreover, there are two major categories of cohesion devices: one is grammatical devices, the other is lexical devices, each of which contains several specific forms. While coherence refers to the quality where words and sentences are logically interconnected, reflecting a rational and fitting structure of the overall discussion (Zhang, 2023). Precisely, cohesion emphasizes on the use of transitional word and phrases, repeated ideas and key terms and structured sentences, In other hand coherence refers to the unity and flow of ideas in a piece of writings.

### **1.2.5 Precision and Conciseness**

Academic writers must be precise and concise when conveying their intended meaning. Precision refers to the use of appropriate and accurate language besides choosing the exact words according to the intended message, whereas conciseness means expressing ideas clearly without unnecessary adjectives, adverbs, and phrases to let the reader understand the important concepts without confusing them with unnecessary details. Briefly, Using precise language means being accurate, while using concise language means being brief. Additionally, in academic writing, being concise involves the use of only essential words to convey the intended meaning clearly and keep the reader interested (Mu & Lim, 2022).

### **1.2.6 Hedging**

According to Lateef and Hussein (2023); Hedging refers to the use of uncertain or vague language by writers to soften the impact of their assertions and claims. It is a technique used

in academic writing to convey ideas and arguments suitably. However, if not used correctly, hedging can hinder effective communication between the writer and the reader. Moreover, hedging is used to convey ideas and claims with uncertainty, so writers present their arguments more objectively to establish credibility, therefore it is crucial to use hedging appropriately to avoid any kind of ambiguity or vague claims in the peace of writing.

To sum up, these general features that have been mentioned are regarded as fundamentals of academic writing, it is necessary to deal with each characteristic during Aw in addition to acknowledging and citing sources to avoid any attempt of plagiarism that may affect the writing process besides following specific academic styles such as (MLA, APA, Chicago, etc...) to produce high valued writings accepted by the academic community.

### **1.3 Academic writing Process**

Writing in effective way it is not a practice done randomly, it is a process required well definite steps and stages to follow to achieve the target objective of the writer. Additionally, the writing process is viewed as a cycle, which begins with the planning stage. After the planning is completed, the writer transforms the thoughts into a written draft. Next, the writer evaluates the draft, and if unsatisfied, plans to revise it and the writing process starts over again in a circular manner (Taib et al., 2022), from this claim it can be understood that AWP goes through important key stages ,are pre-writing, planning, drafting, revising, and editing.

#### **1.3.1 Pre-writing stage**

Pre-writing as the initial stage in the writing process, it involves collecting ideas and information, brainstorming ideas and thoughts and organizing them. According to Mohammed, Hasan and Ameen (2023), in their article, they define writing pre-writing strategies as "Prewriting strategies include any measures or preparations that take place prior to writing the final draft" (p. 220). Also, they suggest pre-writing strategies for learners including:

- ✓ **Brainstorming:** The term was first developed by Alex Faickney Osborn in 1942. In a nutshell, brainstorming is thinking in a creative way; it is gathering the already existing idea or creating new ones.
- ✓ **Listing:** is a prewriting strategy that consists of recording whatever ideas, words, phrases, and images come to your mind about a specific topic.
- ✓ **Free writing:** is a writing strategy developed by Peter Elbow in 1973; it is when a person writes non-stop for a period of time without considering the spelling, grammar, or punctuation marks.
  - ✓ **Clustering:** also known as mapping and webbing, is a practical way of gathering information in a diagram.
  - ✓ **Asking questions:** This type of prewriting strategy is an effortless way to start writing your first draft especially when you find difficulty in finding ideas for your topic.
  - ✓ **Drafting:** Drafting is crucial before writing because not only it helps you to produce a more organized final draft but also to clarify and modify your initial plan as well as your ideas. (p. 221)

### **1.3.2 Planning**

According to Nezakatgoo (2016) in the realm of second language acquisition, planning is considered as a variable that stands on its own and is regarded as one of the most crucial processes involved in written production. Furthermore, the act of planning is a clever and effective approach that can be applied to a variety of problem-solving activities (Haas, 1989). The planning stage could be considered as accompanying practice with pre-writing stage, it involves outlining the main ideas and creating an appropriate plan for the essay. Moreover, Eyre (2022) argues that the planning process should be considered as a series of strategies, involving: identifying objectives, selecting and generating ideas and content besides organizing and structuring them.

### **1.2.3 Drafting Stage**

During this stage the research mainly translate the ideas and thoughts that have outlined in the planning stage into written form in order to be communicated for the target audience, this



phase is considered as important step that could contribute in creating a good quality of writing, drafting in scientific papers as well is considered as crucial phase as described by Khadilkar (2018) in his scientific article entitled "The Art and Craft of Making a Draft: Writing a Good-Quality Scientific Paper is an art"(p.151) Specifically, Budiharso (2014) defined the drafting process as an essential step in the writing process, it refers to where the researcher creates his initial version by composing paragraphs made up of sentences.

#### **1.3.4 Revising stage**

"Revision constitutes an important component of the writing process that integrates text interpretation, reflection, and production" (Mazgutova,2020,p.715). Another brief definition which explain this critical process by Budiharso (2014) states that "Revising involves smoothing out a writing, adding more detail, and making other changes that helps achieve best way to write"(p.61).Furthermore, The revising stage refers to the process of reviewing and making adjustment where necessarily to the written work, revising enables the writer to reconsider the modification besides deleting unnecessarily ideas to better communicate his writing and improve clarity and coherence .

#### **1.3.5 Editing Stage**

According to Gladon, Graves, and Kelly (2011)"Revising and editing are the last steps of the writing process"(p.155). These steps occur after you have revised for content, and spending quality time doing these steps gives you the opportunity to correct grammar or style errors as well as citation, and formatting mistakes. Editing also gives you a chance to review your assignment and writing goals to make sure you have met the criteria. In addition editing is regarded as "checking mechanical problems and correcting the problems"( Budiharso, 2014,p.61).In this regard, editing is mainly concerned with carefully reviewing and correcting typical errors such as grammar errors, misspelling and punctuation errors, clarity, coherence and the overall work , it is a crucial step that provide the writer with the ability to perform

effective piece of writing that is credible and professional besides clear and understandable to the target audience.

### **1.4 Academic writing Genres**

Academic writing encompasses with a wide range of types each with distinct characteristics and levels of complexity in content development (Turmudi, 2017). Moreover, AW as a broad term includes various writing genres, each one differentiates from the other by its own characteristics and objectives, Academic setting is dealing with a variety of academic genres such as research articles, essays, dissertations and research papers are the most common ones .It is important for graduate and post graduate students to be aware of academic writing genres and improve their writing competencies.

#### **1.4.1 Essays**

According to Ishchenko and Chernysh (2022) in their article “an essay is traditionally understood as a prose work with an arbitrary composition, which is characterized by the fictionalization of recorded individual impressions, associations or information obtained from various fields of knowledge, an unsystematic combination of philosophical, literary-critical, popular science, and sometimes specifically scientific elements”(p.47). Furthermore, an essay could be defined as a piece of writing it could be formal or informal depending on the goal of the writer , its structure consists of introductory paragraph that include the topic sentence, body paragraph which followed by supporting ideas and arguments to provides truth and evidence and concluding paragraph which summarizes the main point. In brief academic writing, specifically essays, instructs students in the process of analyzing and selecting valuable information for subsequent research, examining ideas from alternative perspectives, and effectively communicating concepts and finding to the intended audience, an essay is viewed as proficient for assessing various language competencies (Medvid & Podolkova, 2019).

### **1.4.2 Research Articles (papers)**

Research articles are one of the common genres in academic writing; it aims to present findings to a scholarly audience, according to Johnson and Smith (2023); academic research articles are a crucial type of publication that aim to contribute to the advancement of knowledge in various fields, they go through a careful peer review process to ensure the research presented is of high quality and validity. As mentioned by Pallivalappil and Jagadeesha (2022) "Research papers provide the path for the expansion of knowledge, allowing for the emergence of new information and the avoidance of duplication of previous research effort. Researchers use their paper to convey their findings to the rest of the world" (p.507). Moreover, another definition provided by a scholar which clearly describes a research article, it is a type of scientific article that has a consistent format and length, and it is used to present the progress and findings of a new research study (Toczyłowski, 2022). Precisely, the research paper's focus encompasses the research field and the researcher's viewpoint on it. In addition, it strives to offer a quick view of the central theme to the best extent possible (Sharma, 2022).

### **1.4.3 Thesis and dissertation**

According to Parija and Kate (2018), in most institutes and universities, a dissertation and thesis are a part of the curriculum and a mandatory requirement for the award of a postgraduate or doctoral degree. There is a clear distinction between the two terms, as mentioned by Smith (2019); at the master's level, students usually write a thesis, while at the doctoral level, they work on a dissertation. A thesis is generally shorter and involves original research, while dissertations are more extensive and aim to contribute to the knowledge of the field. Moreover, both a thesis and a dissertation are concerned as academic papers and require specific methodology and rules to deal with. As a result, it can be said that students are required to write a thesis to demonstrate their expertise in a particular subject, whereas a dissertation is

expected to be more extended and to contribute new knowledge to the field of interests (Smith, 2021). Specifically, dissertations are expected to provide a deeper level of investigation and original research, while a thesis relies on demonstrating student's understanding on specific subject.

### **1.5 Teaching Academic Writing Approaches**

Writing academically is one of the complex tasks that EFL students may face during their academic journey, instructors must provide their students with the available techniques and approaches to enhance their writing, as mentioned by Kadmiry (2021); Mastering the skill of writing is crucial for language learners, particularly for those who are learning English as a foreign language. However, developing writing abilities can be a challenging process. Therefore, providing efficient and effective writing instruction for EFL students is essential to help them overcome writing difficulties and approach writing tasks with confidence. Teaching academic writing has taken various approaches and methods over time, to enable students to develop their writing and write effectively. Elashri (2013) suggested that "There are four approaches for teaching and learning writing: the "product-focused approach" and the "process -focused approach" the genre-based approach to teaching writing, process and genre-based approach to teaching writing"(p.3). As well as, Satjapiboon and Chuchart (2010) pointed that" there are three main approaches to teaching academic writing "the process-based approach, the content-based approach, and the genre-based approach" (p.88).

#### **1.5.1 The Process Based Approach**

The concept of a process-based approach to writing emphasizes that there are crucial learning processes involved in the creation of any piece of writing (Marantika & Tustiawati, 2023). These processes are concerned with the stages of the writing process such as brainstorming, drafting, editing, etc... Moreover, According to Ghaith (2002), as cited in Rohmatika (n.d), the writing process approach necessitates that students are given more

autonomy and accountability for their learning. This method involves students making decisions regarding the type of genre and topic they want to write about and collaborating with others during the writing process. In addition, The process approach aims to help students understand and manage the thinking processes involved in writing. It focuses on addressing each individual's unique requirements (Nemouchi, n.d). So far, the process-based approach is learner's learner-centered, it enables students to develop their writing strategies and gain creativity and control over their writing skills besides it motivates them to practice the writing process. Overall, writing is a multi-faceted process that involves stages and steps including generating ideas, setting goals, discovering appropriate style and assessing the writing process, and searching for suitable language to convey the target message besides writing is an act of solving problems that require creativity and attention to details (Samsudin, 2016). Instructors and teachers need to put more focus on the process-based approach that involves all the writing crucial steps before the final product.

### **1.5.2 The Product Based Approach**

The product-based approach is considered the traditional method of teaching writing, and it focuses on the final product, in other words, instructors and teachers emphasize correcting and giving feedback about grammar, spelling, and punctuation errors. According Hyland (2003) as cited in Burhansyah and Masrizal“ writing is seen as a product constructed from the writer's command of grammatical and lexical knowledge, and writing development is considered to be the result of imitating and manipulating models provided by the teacher “(p.3). As Dr. Nemouchi (n.d.) mentioned in his article, he claimed that; the product approach to teaching writing is rooted in the traditions of rhetoric and involves studying model texts to help students understand the features of effective writing. By analyzing students' writing, this approach aims to identify their strengths and weaknesses and improve their accuracy. The goal is to make students familiar with the conventions of writing through the use of models

before they produce their final drafts. Furthermore, Samsudin (2016) asserts that instructors who support the traditional approach believe that it needs to take into consideration that students are disabled to create well-structured, cohesive written pieces without teachers' explicit instructions about grammar, syntactic rules, and the target language conventions, they claim that these skills are not inherent in students and must be taught systematically. In brief, the product-based approach or the traditional method of teaching writing emphasizes providing students with clear examples and assistance to help students produce accurate and coherent written work by focusing on the outcomes.

### **1.5.3 The Genre Based Approach**

The genre based approach in teaching writing involves teaching students and learners to understand the specific features and characteristics of various genres of academic writing contexts. An interesting definition describes the genre based approach as “an approach to teaching that provides students with tools for understanding texts as genres, for analyzing those genres, and for using this insight in their writing” (Tardy, 2019, p.24 as cited in Thaksanan & Chaturongakul, 2023, p.297). As well, the genre approach involves providing students with assistance on the understanding of the language and communication techniques that are unique to a particular type of discourse (Hyland, 2004, 2007 as cited in Nagao, 2018). Moreover, it is understood that the focus of genre based approach not only being aware of genres and types of writing but indeed it serves to raise students' awareness of different contexts when it comes to the language use ,as said by Tuan(2011)”the genre-based approach emphasizes the importance of exploring the social and cultural context of language use on a piece of writing”(p.123).

### **1.6 The Main challenges Faced by EFL Students during Academic Writing**

Numerous studies mentioned that academic writing is not an easy process especially for foreign language students, they are more likely to face various difficulties when it comes to

writing their thesis, research papers and assignments. Those challenges might lead to cause the main issue which is the lack of the writing skill. Moreover in a study which describes the difficulties faced by post graduate students noted that postgraduate students, especially those who speak English as a second language, often struggle with including citations in their master's thesis. Additionally, these students may face difficulty in organizing reference material and paraphrasing it in their research report (Hyland,2019 as cited in Tiwari, 2023). Post-graduate students generally faced difficulties within the lack of vocabulary ,grammar and punctuation errors as Harmer (2001as cited in Khasawneh,2023) argues that “grammar describes the people’s ways in writing and speaking, in which these rules are changeable based on the different ways of people’s communication”(p.5).Besides “Students struggle with academic writing, such as expressing ideas by attracting readers ‘interest” (Asnas & Hidayanti, 2024,p.125).In other hand, these common difficulties may cause due to some reasons as mentioned here; Some of the reasons for the issue were related to the way the writing was approached, a lack of drive to write, not enough time spent on learning, insufficient opportunities to practice, and unfavorable criticism from teachers (Khasawneh,2023).

### **Conclusion**

To conclude, mastering academic writing stands as a crucial task that every university student needs deal with especially Foreign language learners to convey their messages to the target audience through written work, the purpose of this chapter is to communicate the academic writing components in terms of characteristics, genres and teaching methods besides highlighting at the end the main challenges may face by EFL students. EFL students must develop their writing by being aware of the main stages that any piece of writing goes through. Another concern is that nothing comes randomly that is the writing skill it necessities rules and requirements to follow. Another thing to consider is that creating

acceptable work is not a big deal, the question is not about creating a magical piece of writing but instead is about creating an acceptable piece of writing understandable and conveys the main message to the specific audience.



# CHAPTER TWO

## Chapter Two: Artificial Intelligence

## **Chapter Two: Artificial Intelligence**

### **Introduction**

**2.1 Definitions of Artificial intelligence (AI)**

**2.2 Types of Artificial Intelligence (AI)**

**2.3 Evaluation of AI in Education**

**2.4 Importance of Artificial Intelligence in Language Learning**

**2.5 Grammarly**

**2.6 The Integration of Grammarly into Academic writing Process**

**2.7 Benefits of Grammarly for Academic Writing**

**2.8 Limitations and Challenges of Grammarly**

### **Conclusion**

## **Introduction**

Nowadays, the spread of technologies and artificial intelligence has significantly influenced various domains including the educational setting, artificial intelligence (AI) has a great impact on higher education levels in terms of facilitating and revolutionizing learning. Moreover, AI powered tools also have had profound effects on foreign language teaching and learning particularly English as a Foreign Language (EFL) section. The incorporation of AI in EFL education has grown in importance, it has the potential to improve the acquisition of foreign languages easily and assists EFL students in learning the four skills of the target language (speaking, listening, reading, writing). Additionally, AI- powered tools based assistants such as Grammarly a well know writing assistant shows a great impact on the writing skills specifically academic writing by empowering EFL students with the ability to write essays, thesis, and assignments in an acceptably. Precisely, this section discusses the concept of AI writing tools and the integration of AI- powered tools among EFL students by highlighting its importance besides focusing on discussing Grammarly as an AI tool and how it improves EFL students' academic writing.

### **2.1 Definitions of Artificial Intelligence (AI)**

According to Shapiro (2003), artificial intelligence is an area within computer science and engineering that focuses on using computational methods to comprehend what is commonly referred as an intelligent behavior, and on developing creations that demonstrate such behavior. As well as Deng (2018) mentioned that, artificial intelligence (AI) encompasses the domain of computer and technology dedicated to the advancement of theories, methodologies, algorithms, and practical applications designed to replicate and augment human intelligence. In other words AI is designed to teach computers and machines how to think and learn similar to humans, these programs use sets of instructions to perform tasks, understand and solve problems equivalent to human intelligence. Furthermore, Williams

(1983) precisely mentioned that “Artificial Intelligence (A.I.) is a multidisciplinary field whose goal is to automate activities that presently require human intelligence”(p.94).In addition, “AI is the ability of machines to adapt to new and emerging situations, problem-solve, answer questions, create plans, and perform other intelligent functions typically associated with human beings”( Owan et al., 2023,p.1). In brief, artificial is mainly designed to possess computers in order to imitate intelligent human behavior.

## **2.2 Types of Artificial Intelligence (AI)**

Artificial intelligence as a branch of technology has varied in types, each type has specific scope, method and potential. In this respect, a study classifies AI types into four primary kinds of AI include reactive machines, limited memory, theory of mind, and self-awareness. These classifications vary in their underlying principles, objectives, and methodologies employed, as well as in their capacity to imitate human behaviors to different extents (Chung, Le, Thaichon, & Quach, 2022).

### **2.2.1 Reactive Machines**

Reactive AI is an artificial intelligence system lacks of memory and responds to stimuli without the capacity to memorize the past experience, it is characterized by lack of interaction and consciousness. An illustration of a reactive apparatus is IBM's Deep Blue, known for its success over chess world champion Garry Kasparov in 1997. Deep Blue utilized a set of predetermined principles to analyze the chessboard before making moves. However, it lacked the capability to acquire knowledge or improve its performance. Reactive machines are beneficial for tasks that require swift and precise responses to specific situations, such as supervising machinery or addressing urgent matters (GCFGlobal, n.d.). Simply, Reactive machines, the fundamental type of AI systems, function based solely on immediate reactions. They lack the ability to retain memories or past encounters for future

decision-making. Instead, a reactive machine assesses the current state of the world and makes decisions solely based on that assessment ( Neil Sahota, 2023).

### **2.2.2 Limited Memory**

Limited memory artificial intelligence unlike the reactive AI has the capacity to store and retrieve certain past experiences .Moreover, limited Memory AI utilizes past and present data to make decisions towards desired goals. However, its capacity to retain past data for prolonged use is restricted, relying on a finite memory capacity. Although performance can improve with additional training data, it cannot maintain an extensive repository of past experiences over extended periods (IBM, 2023). A good example of limited memory such Generative AI tools such as “CHATGPT” and “Self driven cars”.

### **2.2.3 Theory of Mind**

Theory of mind AI are designed to interpret and understand intentions, emotions, desires, and mental states of AI agents or humans. In addition, Theory of Mind AI represents the third level of artificial intelligence, possessing the ability to comprehend the requirements of other intelligent beings. Machines strive to achieve the capacity to recognize and recall the emotions and requirements of other entities, adapting their actions accordingly. This ability mirrors human social interaction, where individuals adjust their behavior based on the emotions and needs of others (Arya, 2024). In brief, theory of mind has the potential to comprehend the world and the cognitive and emotional states of other entities.

### **2.2.4 Self- Aware**

Self- aware artificial intelligence is an AI system and it is considered the final type of AI also it is mainly characterized by consciousness, The rise of self-aware AI marks a new epoch in which artificial intelligence develops the capacity to self-reflect, assess, and enhance its cognitive processes (Groves, 2023). According to Jorge (2023) the concept of self- aware entails developing AI systems that comprehend their own existence, identity, thoughts, and

emotions, this capacity could empower AI to engage with the world more deeply, mirroring certain facets of the human experience.

### **2.3 Evaluation of AI in Education**

In recent years the emergence of AI technologies has influenced various sectors and education is one of these sectors that show a significant interest on the use of AI technologies in order to facilitate both learning and teaching. Furthermore, "Technological tools and educational software have impacted learning and teaching by enhancing how the dissemination of knowledge takes place from teachers to students as well as between peers" (Oluwafemi Ayotunde et al., 2023, p.215). Jiahui et al. (2021) claim that "The application of AI in the field of education has realized the full integration of teaching and learning, and also provided an opportunity for the reform of teaching and learning"(p.207).Moreover, AI integration into education has offered a wide range of applications it could be summarized in these crucial key points:

#### **2.3.1 Personalized learning**

Artificial intelligence tools can provide learners with personalized learning that are tailored to their interests and previous knowledge besides providing learners with motivation for learning. AI advancements offer great potential for enhancing personalized online learning, by using AI algorithms and data analysis, online platforms gather information on students' strengths, weaknesses, preferences, and progress, allowing for tailored learning paths and content recommendations.AI tools provide real-time feedback and adaptive assessments, aiding students in tracking their performance and identifying areas for improvement (Dunn,2023).

#### **2.3.2 Real-time feedback**

AI systems can provide students with feedback while they are interacting with learning materials, this AI generated feedback designed to tackle individual errors, misunderstandings

or areas requiring understanding. As well, it serves to boost learners' involvement, aids self-directed learning, ultimately enabling productive learning encounters (Rohn, 2023). Furthermore, AI algorithms are able to adaptively adjust the challenge level to student's specific skill levels by analyzing real-time data and quickly providing feedback. These iterative feedback system ensures evaluations that are more accurate and customized, resulting in a more efficient and fruitful learning process and better academic outcomes.

### **2.3.3 Adaptive Learning Platforms**

Adaptive learning platforms are educational software utilize artificial intelligence to personalize learning for each students, it is close to personalized education since its main goal is student's needs. In other words adaptive platforms that tailor content and difficulty levels to match student performance, providing personalized assistance and challenges. Moreover, these platforms evaluate data related to the performance, strengths, weaknesses, and learning preferences of learners. This allows for the creation of tailored learning paths that address the unique needs of every employee (Gupta, 2023).

### **2.3.4 Intelligent Tutoring Systems (ITS)**

Intelligent tutoring systems are computer based systems that use artificial intelligence to simulate human tutor and providing guidance, they offer numerous advantages similar to those provided by human tutors to a broad spectrum of students. Intelligent Tutoring Systems (ITSs) are applicable across diverse educational contexts such as schools, universities, and online learning platforms, catering to learners at varying levels and phases of their educational progression. ("Revolutionizing Learning: The Advantages of AI Intelligent Tutoring Systems," n.d.). Moreover, these systems have the capability to furnish instructors and developers with instantaneous data for the purpose of enhancing pedagogical techniques (Koedinger & Tanner, 2013).

### **2.3.5 Virtual Assistants and Chatbots**

Virtual assistants and chatbots are AI tools are tailored to provide personal assistance, feedback and answering questions rapidly besides other various functions such as searching for information, making recommendations etc... In addition, chatbot can simulate human-like dialogue-based interactive communications to assist students in revisiting learning resources (Göschlberger & Brandstetter, 2019; Jomah et al., 2016; Smith & Evans, 2018 as cited in Essel et al.,2022). Moreover, When appropriately programmed, chatbots and virtual assistants serve as counselors, student support, and guidance tools, reducing labor costs and enabling teachers to analyze students with AI assistance (Goyal, Minz, & Sha, 2023). In brief AI chatbots adapt to individual needs, providing immediate support and making learning accessible for both learners and teachers.

#### **2.4 Importance of Artificial Intelligence in Language Learning**

Artificial intelligence has also had a great influence in language learning and offers many opportunities for language learners and English foreign language learners (EFL) precisely, since English language is considered one of the most global language that all people around the world are trying to learn .According to Oluwafemi Ayotunde et al.(2023); the overall advantage of artificial intelligence in the educational endeavors of students encompasses the customization of instructional sessions, conducting lessons from a distance regardless of geographical constraints or technological tools, prompt feedback from educators and automated conversational agents, and continuous availability of educational resources throughout the learning journey(p.216). Additionally, AI systems has also had a great impact in learning motivation and engagement as mentioned here “The use of AI as a technique for motivating students is an exciting and rapidly developing area of research in education, with the potential to provide personalized learning experiences that can enhance motivation, engagement and learning outcomes” (Neji et al., 2023, p.98).



Moreover, Artificial intelligence has extended to various aspects of language learning, it has claimed that; AI-driven tutors and chatbots have revolutionized the landscape of foreign language learning by enabling students to interact with AI tutors that replicate authentic interpersonal situations, consequently affording them new opportunities to enhance their proficiency in written and verbal communication (Chisega-Negrilă, 2023). Likewise AI provide grammar and vocabulary assistance also as claimed by Stošić and Malyuga(2024)“AI enables the analysis of vocabulary breadth, precision in word usage, and diversity in vocabulary”(p.25).

## **2.5 Grammarly**

In the realm of modern technologies which has transformed various aspects in our lifestyles, Artificial intelligence provides humanity with performing various tasks that require human intelligence. One of these tasks that is requiring human intelligence is the writing skill, AI has designed powered technologies to facilitate the writing skill for humans for instance there are many applications and AI tools that could manage the writing process such as Grammarly. Moreover, Grammarly has appeared as an AI writing tool based assistance that aims to reduce some writing obstacles and help to create effective written work. Grammarly is an AI powered writing assistant that helps users improve their writing by offering suggestion for grammar, spelling, tone also generating ideas. Furthermore, Grammarly AI writing tool based assistance using a variety of methods like machine learning and deep learning and consistently break new ground in natural language processing (NLP) and generative AI. It is usually addressed for professionals writers, students or anyone who wants to enhance his writing ability.

### **2.5.1 An Overview of Grammarly**

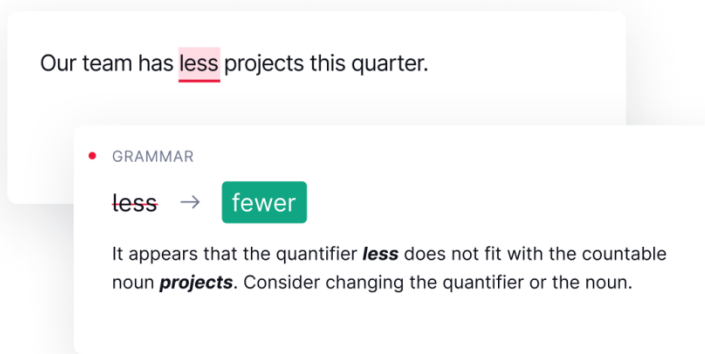
The creators of Grammarly, Alex Shevchenko, Max Lytvyn, and Dmytro Lider, established the company in 2009 with the goal of enhancing communication through

innovative technology. Each founder brought their own specialized knowledge to the project, playing a crucial role in the growth and development of Grammarly as a primary writing aid. Collaboratively, Shevchenko, Lytvyn, and Lider have elevated Grammarly to a respected and dependable platform for improving writing abilities and promoting concise and efficient communication in diverse settings. Grammarly offers two types free and premium accounts tailored to different needs and preferences; for the free version it provides checking grammar, spelling, and punctuation, assisting users in identifying and fixing common errors. It offers a browser add-on for instant writing suggestions, a web-based editor for document creation and uploading, and weekly reports on writing performance to monitor habits and improve. Whereas, Grammarly Premium is an enhanced version of Grammarly, offering advanced grammar and style checking features, refined suggestions, tone detection, vocabulary enhancement, and plagiarism detection, and is easily integrated into Microsoft Office applications like Word and Outlook.

## **2.5.2 Features of Grammarly**

### ***2.5.2.1 Grammar and spelling checks***

Grammarly provides detection on grammar errors and corrects them such as subject-verb agreements, punctuation mistakes and spelling.



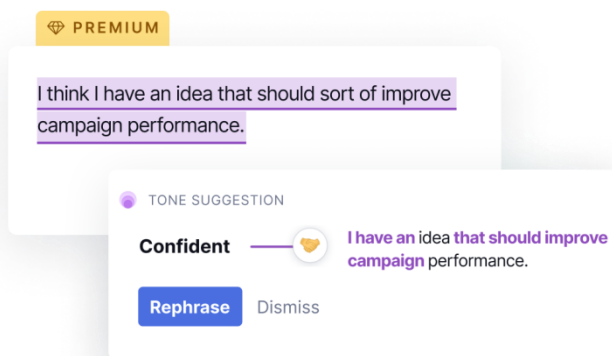
**Figure 2.1:** Free Grammar checker Adopted from( Grammarly,2024)

### 2.5.2.2 Contextual Aware

By offering context based suggestion to reduce any possibility of unnoticed errors.

### 2.5.2.3 Tone Detection and Adjustment

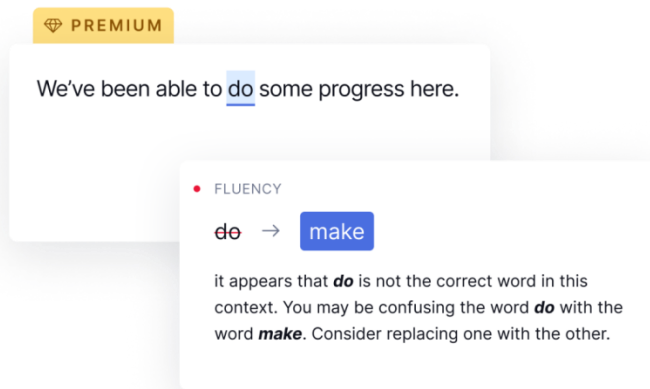
When accessing to Grammarly, the writer can choose the appropriate tone in order to match the written work whether it is formal, casual, professional or friendly.



**Figure 2.2:** Tone Suggestion Adopted from (Grammarly, 2024)

### 2.5.2.4 Vocabulary Enhancement

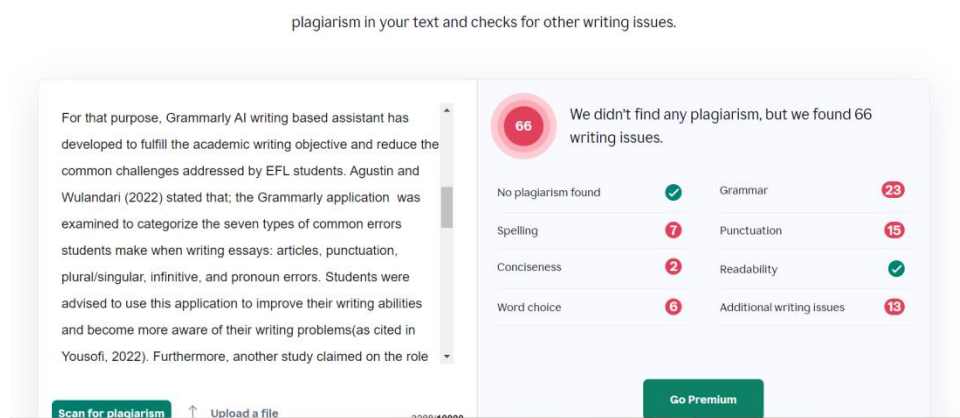
Grammarly suggests synonyms and alternative words to create richness in the giving work.



**Figure 2.3:** Fluency Suggestion Adopted from ( Grammarly, 2024)

### 2.5.2.5 Plagiarism Detection

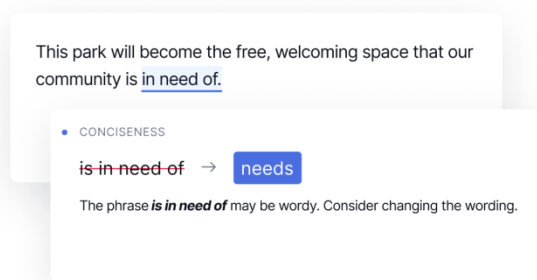
This option is offered by Grammarly's premium version it scans and detects texts to ensure the written work is original and free of any attempts of plagiarism.



**Figure 2.4:** Plagiarism Detection Adopted from( Grammarly, 2024)

### 2.5.2.6 Style Suggestion

Grammarly enhance the clarity and style of learning by providing alternatives for repetitive words, sentence structure and ambiguous language.



**Figure 2.5:** Full- Sentence Rewrites Adopted from ( Grammarly,2024)

### 2.5.2.7 Integration with Various Platforms

Grammarly integrates with various popular platforms such as Google Docs, Microsoft Word and web browsers by providing real time suggestion during the writing process.

## 2.6 The Integration of Grammarly into Academic writing Process

Improving academic writing is becoming a must especially for higher education students and EFL learners. Moreover, mastering academic writing for foreign language students could open the door for many opportunities since English language is required whether in journals, dissertations, or international conferences. The development of EFL students' academic writing is crucial and part of the academic setting, hence it requires specific steps to create comprehensible piece of writing, it has claimed that "The academic writing style needs special addressing as it stands out from all other registers for its formality, objectivity, and prescriptiveness" (Zinkevich & Ledeneva, 2021,p.52). However, EFL students are facing issues when it comes to writing and they are struggling to achieve an effective piece of writing free of mistakes and addressing the target meaning.

For that purpose, Grammarly AI writing based assistant has developed to fulfill the academic writing objective and reduce the common challenges addressed by EFL students. Agustin and Wulandari (2022) stated that; the Grammarly application was examined to categorize the seven types of common errors students make when writing essays: articles,

punctuation, plural/singular, infinitive, and pronoun errors. Students were advised to use this application to improve their writing abilities and become more aware of their writing problems (as cited in Yousofi, 2022). Furthermore, another study claimed on the role of Grammarly in Academic writing process especially in the editing stage "Before the students submit the essays to the lecturers, they can use the Grammarly application to automatically check their corrective feedback from the tool" (Dewi, 2023, p.156). For instance, Grammarly as AI tool shows a great impact on evaluating students' academic writing as it provides personalized feedback as mentioned here; "Students can click on the underlined word for a detailed explanation of true and false words Grammarly also explains 'Performance Scores', so students know their abilities in writing" (Jelita et al., 2023, p.45).

### **2.7 Benefits of Grammarly for Academic Writing**

Grammarly has offered various advantages to enhance academic writing based on students' perception in great number of studies, those advantages were summarized by Astuti and Sumarni (2023); Grammarly is a program that monitors written English for mistakes, ensuring the proper flow of writing. It offers non-plagiarized writing aid to rectify spelling and grammatical mistakes, and can identify poor academic behavior, such as plagiarism, by comparing online-available textual material. Moreover, in a study on exploring students' experiences on using Grammarly it has shown that; Academic writing program (AWP) provides fast assessment speed rate, clarifications with examples, simple account access and a free service that evaluates academic writing (Nova, 2018). Furthermore, another claim which highlights the primary benefits of Grammarly for AW include enhancing writing abilities, identifying contextual spelling and grammatical errors, integrating with Microsoft Office, and providing definitions and synonyms by double-clicking (Gain, Rao, & Bhat, 2019).

## 2.8 Limitations and Challenges of Grammarly

Despite the effectiveness of using Grammarly as an AI writing tool but it has shown some shown some challenges and limitation .First of all , for the free version it does not allowed for plagiarism detection only one time at the beginning of using the application. Moreover, the premium version of Grammarly which is expensive, in addition in a research by Dewi (2023) shows that the main challenges faced by student while using Grammarly is concerning with the two versions of Grammarly by arguing that “for the free version having limited features to check errors, Grammarly for the premium version being expensive for students, and Grammarly cannot be accessed offline. Grammarly-free user has limitation because Grammarly is used effectively to cast off basic errors, grammar, punctuation, and conciseness, while Grammarly premium includes a variety of extra features consisting of readability sentence rewrites, tone adjustments, plagiarism detection, word choice, formality stage, fluency, and extra superior pointers”(p.160). Also another researchers mentioned that , “excessive dependence on Grammarly can also hinder students' writing abilities” (Khan et al., 2024,p.1369).That means the over use of Grammarly may impeding students ‘ability to learn grammar rules and punctuation besides their ability on writing effectively and in their own style.

### Conclusion

To conclude, as the appearance of AI benefits humans' lifestyle in many aspects, it has also shown a great influence on higher education especially learning foreign languages . It is important to look for both sides of AI as it can facilitate some tasks as it can also be harmful, the integration of AI and Grammarly into academic writing could facilitate these crucial and complex tasks in order to fulfill the academic needs by reducing the errors and mistakes that can hinder the target message addressed by students and make it comprehensible by the specific audience addressed for.

The purpose of this chapter is to provide an overview of Artificial intelligence into education and foreign language learning by suggesting Grammarly as an effective AI tool to enhance academic writing.



# CHAPTER THREE

## Chapter Three: Methodology and Data Analysis

## **Chapter Three: Methodology and Data Analysis**

### **Introduction**

#### **3.1 Research design**

#### **3.2 The Sample**

#### **3.3 Data Collection**

##### **3.3.1 The Unstructured Students' Questionnaire**

##### **3.3.2 The Unstructured Teachers Interview**

#### **3.4 Discussion and synthesis of the findings**

### **Conclusion**

## **Introduction**

The following chapter aims to analyze and interpret the current research field work that was conducted to explore the perceptions of teachers and students towards the integration of Grammarly as an AI tool to ameliorate Students' academic writing skills. More specifically, this chapter will carefully discuss the research methods that has been used in this study, besides it will describe the research strategy, the data collection, the sample of the study and the discussion of the final results. To finalize, the purpose behind this research is to investigate how Artificial Intelligence writing tool such Grammarly can benefit the foreign language learning and teaching.

### **3.1 Research Design**

To better understand and explore the EFL students on the use of Grammarly as an artificial intelligence (AI) writing tool to improve academic writing skills, a qualitative research is required to fulfill the objective of assessing the impact of Grammarly on EFL students by following the case study design to better understand and explores the current issue. Moreover, the given research design aims to find out students and teachers experiences and perceptions by applying both qualitative tools questionnaire and interview in order to provide valuable insights into the effectiveness of artificial intelligence writing tool in educational context.

### **3.2 The Sample**

The suitable population for the current research was Master Two students because they are more aware of using AI tools specifically, writing tools such as Grammarly besides they are most concerned with improving their academic writing skills. As result, the target sample for this research was 25 master 2 students of English at the University of Mohammed Kheider Biskra. In addition to 7 teachers of English for more insightful information on the following study.

### 3.3 Data Collection Methods

The current research employs common qualitative research tools, unstructured questionnaire and interview. The data was collected to gather both teachers and students' perspectives and opinions on the use of AI powered program writing tool to assist students in improving their academic writing. Therefore, an online questionnaire was conducted to gather data from students' perceptions besides an interview designed for teachers of English to gain more information on the effectiveness of Grammarly in the academic writing process.

#### 3.3.1 The Unstructured Students' Questionnaire

##### 3.3.1.2 *Description of the Unstructured Questionnaire*

The questionnaire was addressed to Master 2 EFL students (science of the language) at University of Mohamed Kheider Biskra. 25 students out of 160 Master Two students were chosen as a sample in order to contribute in this study by answering the online questionnaire. Therefore, the questionnaire's primary questions includes general information how students think about academic writing process and specifying the main challenges they are faced, moving to the questions that identify their familiarity and opinions regarding the integration of Grammarly application into academic writing.

The unstructured questionnaire involved 10 open-ended questions, for each question students were required to answer by giving explanation. The unstructured questionnaire is designed using Google forms and published online for Master Two students to collect data about their perceptions. Moreover, the creation of the questionnaire was based on specific questions to cover all the crucial points that address the main purpose of the current study.

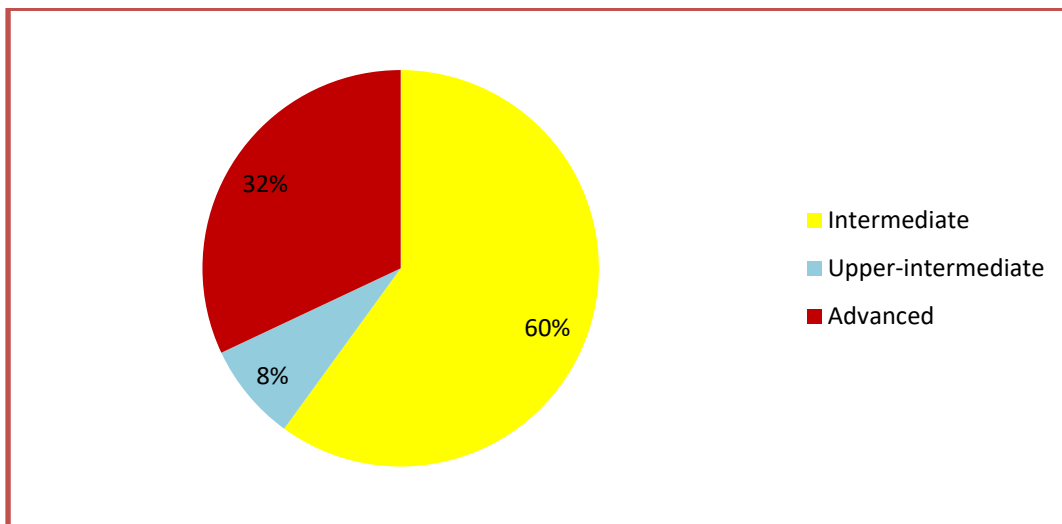
##### 3.3.1.3 *Analysis of the Unstructured Questionnaire*

**Question 1:** How would you describe your proficiency level in English?

**Table 3. 1**

*Students' Level of Language Proficiency*

<b>Proficiency Level</b>	<b>Frequency</b>	<b>Percentage%</b>
Intermediate	15	60%
Upper intermediate	2	8%
Advanced	8	32%
Total	25	100%



*Figure 3.6 Students' Level of Language Proficiency*

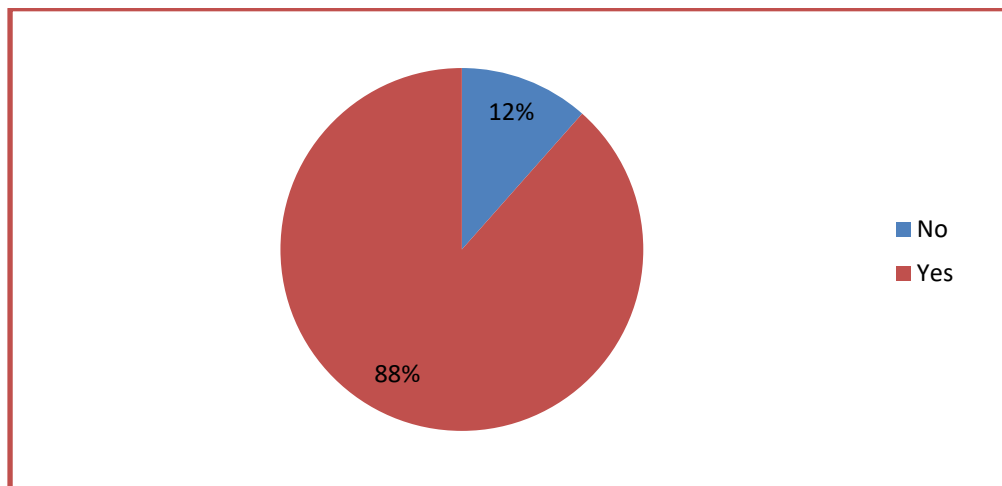
This figure indicates that 60% of Master 2 students have an intermediate level of proficiency. In the other hand, about 32% of participants have an advanced level, whereas only small percentage 8% of students have an upper-intermediate level of proficiency in English. As a result, the following findings above suggest that there is a diverse range of language levels among Master 2 students, but the results indicate that the majority seem to have solid foundation in English.

**Question 2:** Have you faced any challenges in the academic writing process? (Yes/No) If yes, what are the specific challenges you face?

**Table 3.2**

*Students' Academic writing Challenges*

Options	Frequency	Percentage
Yes	22	88%
No	3	12%
Total	25	100%



**Figure 3.7** *Students' Academic writing Challenges*

According to this figure 7, a small number 12% of participants who responded by “No” which indicated that they did not encounter any difficulties during the academic writing process, the absence of reported challenges may be influenced by some factors such as mastering the writing skills, the awareness of different writing styles, good level of language proficiency, awareness of grammar rules etc... Conversely, 88% represents a great number of participants responded by “Yes” with providing the main challenges that they are encountered in the academic writing process, those challenges are categorized as the followings:

**Table 3.3**

*The main challenges faced by EEL students*

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1. Language and Style Proficiency	Maintaining academic tone. Finding the appropriate academic words. Limited vocabulary.
2. Grammar and Punctuation Errors	Miss spelling errors Lack of academic vocabulary. Unaware of academic writing requirements. Grammar errors Punctuation mistakes Grammar challenges Disability to master Grammar rules
3. Structural and Organization Issues	Structuring the paper Structural issues Lack of coherence
4. Knowledge and information constraints	Lack of prior knowledge Lack of ideas Lack of information in certain domain Unable to generate ideas
5. Other Challenges	Time constraints Limited feedback Writing essays

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Overall, these findings highlight the main gap that the majority of EFL Master 2 students encounter during academic writing process, these multifaceted difficulties and challenges reflecting to diverse needs and experiences of participants. While, the absence of difficulties among some participants highlight potential impact of prior experience and mastering the academic writing skills.

**Question 3:** How can you explain the reasons of the lack of Academic writing skills EFL students?

According to this question, the participants highlight the common reasons for the lack of academic writing skills, they are categorized into 6 key themes as followings:

**Table 3.4**

*Reasons behind the lack of academic writing skills*

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1.Lack of Practice and Exposure	<p>Lack of practice outside the classroom.          Limited practice of academic rules.          Writing only for Exams\ tests.          Not enough practice inside the classroom.          Neglect the writing skills since high school.</p>
2. Vocabulary and Language Proficiency Level	<p>Limited academic vocabulary.          Difficulty in expressing complex ideas in foreign language.          Inadequate vocabulary.          Inappropriate use of vocabulary.          Lack of innovative ideas.</p>
3.Inability to master Grammar and Syntax rules	<p>Poor level of English Grammar and syntax.          Inability to formulate a correct sentence structure.          Poor command of English tenses and grammar.          Inability to deal with complex sentence structure.</p>
4. Instructional Factors	<p>Inadequate teaching.          Lack of feedback provided by teachers.          Unproductive teaching methods.          Lack of emphasis on teaching writing skills.</p>
5.Reading Deficiencies	<p>Lack of reading lead to limited vocabulary.          Insufficient exposure to academic language and conventions through reading.</p>
6.Motivational Factors	<p>Absence of motivation.          Lack of motivational support to engage in writing          The limited exposure to English outside classroom effect motivation.</p>

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The following research results that were suggested by participants' responses address the main issues that contribute to the lack of academic writing skills among foreign language learners and hindering their way to mastering the academic writing process. Moreover, by addressing such factors it will become easy for educators and instructors to understand the reasons behind the poor writing skills, and implementing appropriate effective teaching methods that could address the main gap, providing opportunities for impactful feedback and practice besides enhancing reading and creating supportive and motivating learning environment outside and inside the classroom.

**Question 4:** How important is it for EFL students to improve their academic writing skills?

Students' perspectives emphasize the significance of improving academic writing skills, it is summarized into key themes:

**Table 3.5***The importance of improving academic writing skills among EFL students*


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1. Academic and Professional success	<p>Enhancing academic writing skills is crucial for academic success.</p> <p>Good writing skills are essential for writing research papers, dissertation and other academic tasks.</p> <p>It is important for students' future career and occupation.</p> <p>Unlock the door to new opportunities in students' academic and professional journey.</p> <p>It is crucial for participating in scholarly discourse.</p> <p>Academic writing proficiency is vital task for students' evaluations and assessments.</p>
2. Communication and Expression	<p>Improving academic writing skills allow students to communicate effectively their thoughts and ideas.</p> <p>Enhancing academic writing skills help students to understand and convey complex ideas and concepts.</p>
3. Integration with Other Language Skills and Learning	<p>Improving the writing skills is important as the other skills to achieve effective language learning.</p> <p>Good writing skill is associated with good reading they complete each other.</p>
4. Confidence and Self-expression	<p>Improving the writing skills increases and boosts self-confidence while learning and practicing English.</p>

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Based on students' perspectives about the importance of improving academic writing skills, it is understood that mastering academic writing skills plays a pivotal role in various aspects. Furthermore, Master Two students highlight that the importance of developing academic writing skills is not only necessary for academic success but also for professional and future career, they also emphasis on the role of enhancing academic writing in promoting

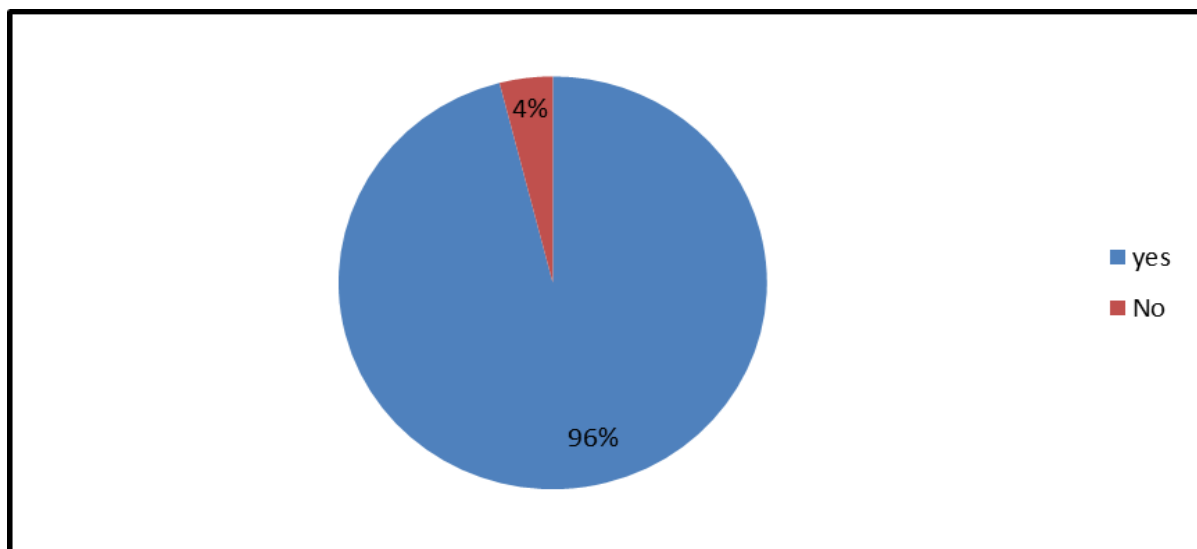
confidence to actively participate in professional discussion using effectively English language and engaging in complex academic tasks, besides clearly conveying and understanding different ideas and thoughts. All in all improving academic writing is a must, it is required in all academic and professional settings, it is the only way for the writer to address and convey his\ her ideas and thoughts to the target audience.

**Question 5:** Are you familiar with AI (artificial intelligence) writing tools such as Grammarly ?

**Table 3.6**

*Students' Familiarity with Grammarly AI Writing Tool*

Options	Frequency	Percentage%
Yes	24	96%
No	1	4%
<b>Total</b>	<b>25</b>	<b>100%</b>



**Figure 3.8** *The Familiarity of Grammarly Among EFL Students*

Based on the results presented in this figure which indicate 96% that the majority of students are familiar with AI tools such Grammarly. Meanwhile, 4% represents small

percentage of EFL students who are unaware of Grammarly AI tool. As a result, the widespread familiarity with Grammarly among Master Two students indicates that the integration Grammarly as an AI tool into academic writing process could be an effective application to improve students' academic writing and may reduce the difficulties that EFL students usually faced during academic writing process.

**Question 6:** How can AI writing tool such Grammarly contribute to improve the quality of Academic writing? Please provide details.

The following question seeks to understand the role of Grammarly as an AI writing assistant among EFL students, in fact the majority of respondents reflect positively to the effectiveness of Grammarly while only small number disagree about its effectiveness. The results of the responses are categorized as following themes in the table:

**Table 3.7***The effectiveness of Grammarly*


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1.Enhancing Writing Quality	Academic	Grammarly enhance the overall quality of academic writing by offering suggestion for coherence and clarity Grammarly has the potential to improve sentence structure. Grammarly helps in ensuring the accuracy and professionalism of writing for academic success It offers insights for tone and writing style Grammarly offers plagiarism detection
2.Error Grammar correction	detection and	Grammarly helps in catching errors that might have been missed. Grammarly detecting and correcting Grammar and punctuation mistakes besides misspellings. Grammarly helps in eliminating wordiness It offers detection of intentional and unintentional errors.
3.Facilitating Academic writing process	the	Grammarly offers suggestion of ideas and generating outlines. It helps to overcoming writers' block by providing content snippets
4.Time Efficiency	Saving and	Grammarly can be a time saving by quickly identify errors and making the writing process more efficient.
5.Limitation and Concerns		Grammarly could reduce human creativity and critical thinking. Overreliance on Grammarly might hinder students from developing their own writing skills and lead to low quality writing.
6.Educational Impact		Few respondents highlight the educational benefit of Grammarly including self-efficacy and understanding of academic integrity.

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The responses mentioned above indicate that the majority of Master Two students benefit from using Grammarly as an effective tool and sharing their personal experience during using

it to improve the overall quality of their writing generally and detecting errors and mistakes, providing personalized feedback on the mistakes and suggesting correction particularly, while some of the respondents express in another way some concerns about the potential limitation of using such AI tool and overreliance on it could be an additional obstacle to their writing. In summary Artificial Intelligence writing tools were created to reduce the level of difficulty and errors in the writing process, and creating a balanced approach which involve both teachers' instructions and Grammarly assistance would be the effective way to enhance the quality of academic writing.

**Question 7:** Are there any challenges you have encountered while using Grammarly for Academic writing?

Grammarly users highlight different challenges while using Grammarly application, those challenges are mentioned in the next table:

**Table 3.8**

*The limitations and challenges of Grammarly*

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1. Financial Constraints	Grammarly premium version is unaffordable Some features that could enhance the quality of writing of Grammarly are inaccessible in the free version.
2. Limited Understanding	Some respondents claim that Grammarly may not always catch and identify all the specific errors.
3. Unfamiliarity with Using Grammarly	Some respondents are unfamiliar with using Grammarly which can hinder its effective use.

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While Grammarly could be an effective tool, Grammarly users addressed some issues encountered by during using it for academic writing process. One of these challenges that present a significant issue is the premium version of Grammarly, students may be disable to access in the advanced features that could improve the quality of writing such as plagiarism

detection, advanced vocabulary and grammar besides style suggestion. Moreover, participants express other concerns that Grammarly could not always identify the specific errors in writing which could be refer to the limitation of the tool to understand certain errors especially with understanding some contexts errors. But Grammarly remains as a valuable tool that its main purpose to reduce the common mistakes made by students, by getting access to the free version which offers range of functions that might help the writers. It is important to address these challenges as a way for students to overcome this issues also Grammarly creators need to rethink about the premium version of the application and make it accessible for students.

**Question8:** Do you think Grammarly addresses the specific needs of EFL students' academic writing? Why and Why not?

The effectiveness of Grammarly has been explored from different perspectives of Foreign Language Students, most of respondents show positive views on the use of Grammarly as an effective tool that address students' needs while some of students responded to this question by saying "No" and others believe it is effective but it has some limitations and concerns, the opinions of respondents regarding this question is summarized as the following themes:

**Table 3.9**

*Different shared views on Grammarly in addressing the needs of EFL students*

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1. Positive views	Grammarly is helpful tool assist EFL students to recheck grammar , syntax, writing style and punctuation which are the crucial aspects of academic writing. Grammarly helps to identify the gaps in students' writing and providing feedback. Grammarly can suggest ideas to kickstart creative process.
2.Negative views	Grammarly is not always accurate and does not address all needs of EFL students. Grammarly app does not treat the problem from its roots. Some important features as "fluency "are paid.
3.Mixed views	Grammarly main focuses on surface-level errors and may not provide in depth feedback on more complex language issues. Its feedback is not effective enough, EFL students may also need feedback from teachers.

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From the great number of responses which showed positive reactions on the effectiveness of Grammarly in addressing the specific needs of EFL students in academic writing, their claims emphasise on addressing the important features that Grammarly offers to improve the writing such as detecting errors and offers correction, identifying gaps and improve them, besides suggesting ideas and plans to start writing, in general enhance the overall quality of writing. In other hand, despite the advantages of the AI writing tool, some users express some concerns and limitations regarding its accuracy, they claim that Grammaly may not always address all the needs in addition to some features that are crucial for improving the quality of writing are paid such as fluency improvements, while other participants criticize the overreliance on Grammarly application and its feedback may not be impactful enough as



teachers' feedback. Therefore, a conjunction with teachers' instructions and other resources such Grammarly ensure that EFL students can benefit more from both resources.

**Question 9:** Do you think AI writing tools such Grammarly can replace the traditional methods of providing feedback? Why and Why not?

Respondents shared different perspectives and views concerned the feedback provide teachers and Grammarly, their claims summarized in the following table:

**Table 3.10**

*Grammarly VS Traditional method of giving feedback*

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1. Teachers' Feedback and Human Touch is Crucial	<p>Most of students claim that teachers' feedback is more accurate and effective and it is impossible to replace human brain by AI machine.</p> <p>Students learn better from teachers' insightful feedback.</p> <p>AI feedback cannot replace the detailed feedback of teachers.</p>
2. AI Writing Tools as Time Saving and Effective corrector	<p>AI writing tools feedback is faster than the traditional methods.</p> <p>Grammarly provide a quick correction of errors and mistakes.</p> <p>AI writing tools provide fast responses.</p> <p>Grammarly has the potential to provide immediate personalized feedback.</p> <p>Grammarly is fast and always accessible and available</p>
3. Limitation of AI Writing tools and Grammarly	<p>Grammarly lacks the nuanced understanding of contextual insights that human brain provides.</p> <p>Over reliance on AI tools is lead to the <b>lack</b> of creativity.</p>

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Over all, one of respondents noted that both methods of giving feedback are crucial and creating a combination between them can create more effective approach that improves the writing process. Moreover, teachers' feedback is more detailed and impactful and AI writing tools feedback is just a machine assistant was tailored to reduce the level of challenges and

difficulties that are faced by students during academic writing, and in fact it would not replace human minds in giving instructions and insightful feedback as teachers usually do. In other words, Grammarly helps both teachers and students to achieve an acceptable written work by its functions in saving time, identifying errors and provide correction.

**Question 10:** In your opinion, what are the advantages and disadvantages of using AI-powered writing tools like Grammarly for academic writing?

According to the following question, students' responses were divided into two aspects of views:

**Table 3.11**

*Advantages and Disadvantages of Grammarly*

Advantages	Disadvantages
Grammarly as an effective checking program <ul style="list-style-type: none"> <li>✓ Grammarly has the potential to detect plagiarism.</li> <li>✓ Grammarly offers assistance in detecting grammar, punctuation and miss spelling mistakes and correcting them</li> </ul>	Grammarly Lacks creativity and Increase Laziness <ul style="list-style-type: none"> <li>✓ Over use of Grammarly lead to laziness and over relying on it which kills creativity.</li> <li>✓ Increasing dependency on technology.</li> </ul>
Facilitating the writing process <ul style="list-style-type: none"> <li>✓ Grammarly enhance the writing process by providing useful correction and motivating students to overcome writing challenges.</li> <li>✓ Grammarly enhanced the quality of writing</li> <li>✓ Grammarly enhance proofreading that is considered as an essential step in the writing process.</li> <li>✓ Grammarly suggest correct sentence structure and appropriate vocabulary.</li> <li>✓ It reduces any type of errors in the written work.</li> </ul>	Lack of Contextual Understanding <ul style="list-style-type: none"> <li>✓ AI may not grasp the context of the written work which can lead to miss understanding and provide incorrect suggestions.</li> <li>✓ Expensive</li> <li>✓ The premium version of Grammarly which offers important features is very expensive</li> </ul>
Efficiency and Time Saving <ul style="list-style-type: none"> <li>✓ Grammarly helps students do their work in short time and it does not consume</li> </ul>	Off Line Accessibility <ul style="list-style-type: none"> <li>✓ Off line access is always unavailable</li> </ul>

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efforts and time.

- ✓ Grammarly provide instant feedback.
  - ✓ It increases efficiency.
- 

To summarize, it is crucial to take into consideration both sides of using Grammarly and be aware of using it besides understanding its main purpose. Moreover, enhancing academic writing require both students' cognitive ability to overcome challenges and use their creativity and seeking assistance from external factors such Grammarly and teachers' instructions. Furthermore, overreliance on AI tools may create additional issues. As mentioned in the final section of the questionnaire where the researcher asked the respondents to add further additions concerning the use of Grammarly, some respondents claimed that students need to be careful while using AI writing tools and try to use Grammarly thoughtfully in order to achieve positive outcomes on the writing process.

### **3.3.2 The Unstructured Teachers' Interview**

#### ***3.3.2.2 Descriptions of Teachers' Interview***

The unstructured interview was conducted to investigate the role of Grammarly in enhancing EFL students' academic writing. This interview addressed to 7 EFL teachers at Mohamed Khaider University of Biskra English department to gather data based on their perceptions on Grammarly application in order to provide the current research with valuable insights. The interview contained 8 open-ended questions, the first questions of the interview involve general information about teachers 'experiences with teaching the writing skills moving to teachers' familiarity with Grammarly AI writing assistant.

#### ***3.3.2.3 Analysis of Teachers' Interview***

To better analyze the reported data, a thematic analysis method is chosen in the analysis of teachers' interview.

**Question 1:** How long have you been teaching EFL students?

**Table 3.12**

*Teachers' Teaching Experience*

<b>Teachers</b>	<b>Years of Experience</b>
Teacher A	08 years
Teacher B	15 years
Teacher C	15 years
Teacher D	16 years
Teacher E	28 years
Teacher F	13 years
Teacher G	17 years

Based on the provided table number (12) which shows a variation in years of experience in teaching EFL students, results indicate that teachers' experience in teaching EFL students range from 8 years to 38 years, most of the interviewees started teaching EFL students in high school and middle schools. Moreover, the number of years in teaching experience represents that EFL teachers have an extensive knowledge besides a solid amount experience in teaching EFL students.

**Question 2:** Could you briefly describe your experience with teaching EFL students the writing skills?

**Teacher A:** "Most of my experience was with 1st year EFL university students. I can describe my experience as being good and challenging. The ultimate goal of written expression teachers is to develop students' writing skill. This includes teaching them how to identify the parts of speech, how to formulate correct sentences (respecting word order, clauses, ...), how to use punctuation properly, how to elaborate good paragraph (respecting

form and structure), how to use unity and coherence, etc. I can describe it as challenging when it comes to students' weak backgrounds, lack of focus, lack of interest and motivation or lack of self-confidence. Also, the difficulty to deal with different levels in one class and try to help all of them. What is more is the recurrent mistakes students do in writing despite all the explanation, practice, and feedback done. Another challenge is the time: 2 sessions per week dedicated to writing are not enough to teach all the necessary concepts, do sufficient practice and provide effective feedback. The positive side of my experience is/was to witness a progress/improvement of my (low) students' level throughout time. This has been a good reward for my efforts".

**Teacher B:** "The writing skill is one of the challenging skills to be taught to youngsters or university students most of the time students are asked to write a replica of the text given in texts and examination".

**Teacher C:** "I started teaching written expression then, it was replaced by academic writing which I find it more interesting, learners are able to write in English but non academically they needed a lot of support to be effective academic writers.

**Teacher D:** "It is very challenging with a majority of average or below the average level students".

**Teacher E:** "It is a demanding task that requires much more effort and diversification of teaching and assessment methods".

**Teacher F:** "In fact, I have taught writing expression only for one year, it was remarkably meaningful as the students that taught were very motivated and appreciated both what I taught(content)and the way I taught them (teaching methodology)".

**Teacher G:** "I have taught writing skills not explicitly as writing course but implicitly in other courses such as methodology, linguistics and ESP".

According to the reported responses, the majority of teachers stated that teaching writing skills is a challenging task especially when dealing with students who lack motivation, focus and have a limited background besides teaching different levels within the same time and limited time could impact the teaching instructions, practice and giving impactful feedback. Moreover, the teachers assert that teaching writing skills is a demanding task that requires various teaching and assessment methods to fulfill the overall needs of EFL students. For instance, teachers show the significance of teaching the writing skills by teaching it implicitly in other modules such “methodology” as mentioned by teacher F and G. While, teachers A sheds lights on the positive side of teaching the writing skills by expressing satisfaction in witnessing their students' progress overtime, in addition to teacher F who mentioned that students were very motivated also teacher C noticed that teaching academic writing rather than written expression was more engaging even though students was disable to write formally and academically.

**Question 3:** Have you noticed any challenges faced by EFL students in academic writing during your teaching experience? If yes what are the common challenges faced by EFL students?

**Teacher A:** “Lack of vocabulary which lead to poor style and content.

lack of ideas about a specific topic to write about, poor grammar: students struggle with some grammar rules mainly the use of English tenses, subject/verb agreement, word order in questions and negatives, etc. This led to different mistakes and affects the overall outcome. poor spelling: mistakes and errors on writing properly some words (even very common ones). Mistakes in punctuation and mechanics: many students whether overuse punctuation marks (especially the comma and the colons) or forget to use them, making their writing confusing and their ideas mixed. problems with ordering ideas and using correct transitions (coherence).

Interference of their mother tongue (i.e. they think in Arabic they translate in English. this results, in general, in an awkward, unclear or wrong meaning or structure of writing”.

**Teacher B:** “Definitely, Algerian university students of English face different challenges when writing. Such challenges are poor vocabulary, faulty grammar, poor word choice, faulty writing mechanics, and interlingual (interference of L1) challenges”.

**Teacher C:** “They lack of the academic style, they are able to produce only personal writings, they have difficulties with planning writing, revising and proof reading. They do not know how to be organized, cohesive and coherent. Even, they have problems with mechanics and grammar”.

**Teacher D:** “Lack of practice, lack of reading, absence of initiative, mixing up informal and formal writing”.

**Teacher E:**” There are several challenges such as language mechanics, word choice, cohesion, coherence and punctuation”.

**Teacher F:** “Of course, students face challenges as English is a foreign language. Some of the challenges is that students think in Arabic and write in an Arabic style which is totally different from the English language structure of sentences. Also, students do not read texts or books in English; as a result, they lack a wide range of English vocabulary and collocations”.

**Teacher G:**” Yes, of course we can name some such as their weak proficiency level, the lack of training and practice”.

Teachers' responses shed light on various challenges faced by EFL students during academic writing, those challenges are caused by several factors, one important factor that may hinder students 'academic writing is interference of L1 as mentioned by teacher F, teacher B and teacher A, in this case students think in Arabic and write in Arabic style. Moreover, many teachers noticed that EFL students lack of vocabulary, have a poor knowledge on grammar rules, sentence structures, and writing mechanics in general.

Additionally, teachers D and G mentioned that one of this factors that lead to students' difficulties is lack of reading besides another challenge that is pointed by most of the teachers is the lack of practice. Furthermore, EFL students faced issues with the overall organization and flow of ideas also the lack of exposure to academic writing conventions. Overall, teachers cited the multifaceted nature of challenges that EFL students encountered over years of experience in teaching English as a foreign language.

**Question 4:** Have you heard of AI writing assistants such "Grammarly" before? If so, what is your understanding on its purpose?

**Teacher A:** "Yes, its purpose to generate blocked ideas".

**Teacher B:** "Yes, an assisting tool based on large language models".

**Teacher C:** "Yes, it is good for polishing and revising, but bad for writing as they may lead to plagiarism".

**Teacher D:** " Yes, it is a nice and effective application that may help students become effective writers if it is well used".

**Teacher E:** "Of course, I am aware of AI writing programs that are used to improve EFL writing, but I am not familiar with them".

**Teacher F:** " Yes, I know about these tools. As for Grammarly, it helps students and academic writers improve the quality of their writing by providing significant corrections".

**Teacher G:** " Yes, I know this program. It is a typing assistant (digital tool) that reviews/corrects spelling, grammar, punctuation, clarity in writing".

Based on the responses that were mentioned by the teachers which indicate that EFL teachers have a varied level of understanding and perceptives regarding Grammarly. On this respect, some teachers show that they are aware of AI writing tools abut quite unfamiliar with Grammarly by addressing only a general aim of the tool as mentioned by both teachers A and E as a helpful tool to improve writing and generate ideas. In other hand, some teachers such



as teacher B, teacher G and teacher F provide more detailed descriptions on the purpose of Grammarly as it has the potential to correct errors and improve the overall quality of writing besides it has various features. Moreover, teacher C highlight the benefits of the AI tool in writing in addition to addressing the misused of this application will cause plagiarism, another teacher D emphasizes on the importance of using Grammarly and describes it as an effective tool that could help students to become effective writers.

**Question 5:** Have you used Grammarly before or recommend it to your students?

**Teacher A:** “Yes, I both used it and recommended it to my students especially my master 2 candidates preparing their master dissertation. It was to help them improve their writing by themselves to push them be more autonomous and rely less on their supervisor.it is also a good way for teachers to save time and effort, allowing him to focus more on higher-level issues”.

**Teacher B:**” Yes I recommended it for my students”.

**Teacher C:** “Never”.

**Teacher D:** “Personally I belong to another generation; I rely on myself to correct mistakes. I have never used such application; I prefer an oxford dictionary instead”.

**Teacher E:** “Actually, I do not use it myself. As for my supervisees, I usually recommend Grammarly as a way to overcome errors particularly those related to mechanics of writing”.

**Teacher F:** “No, never”.

**Teacher G:** “Yes, I do recommend it for practice and feedback”.

The responses of teachers regarding their use or recommendation of Grammarly present a mixed view. Some of teachers like teacher A, teacher B, teacher E and teacher G usually recommend it for their students they see it as a valuable resource and help students to rely on themselves and overcome the challenges in addition to it saves time and help educators as mentioned by teacher A. Conversely, teachers like teacher D prefer to rely on the traditional

resources such as dictionaries instead of AI powered writing assistants. Additionally, a few teachers, notably teacher C and teacher F stated that they have never used or recommended it which may indicate for the disinterested of using such AI writing tool in the academic context.

**Question 6:** Do you think Grammarly contribute to improve the quality of writing? If yes How do you do think Grammarly help EFL students?

**Teacher A:** “Yes, I strongly agree. In general, Grammarly help students become better writers by helping them spot their errors/mistakes (in grammar, spelling, coherence, vocabulary use...) and corrects them, thus, offering a good revision (proofreading) of all aspects of written language. It also helps avoid (unintentional) plagiarism especially for students doing projects, research papers or theses, thus, assuring them originality. It helps them assess their written productions by themselves without the need of the teacher especially for homework's or personal writings when the teacher is not always available to provide feedback. In short, it promotes students' autonomy and self-reliance. it also increases their confidence in writing”.

**Teacher B:**” Yes, it provides a variety of options and the users can select the ones that go with proficiency level”.

**Teacher C:** “Yes, if used in the final phase of writing to polish the draft and improve it but not at the beginning”.

**Teacher D:** “Due to the lack of proficiency among students as regards grammar and mechanics, this tool can be beneficial for them if they know how to use it”.

**Teacher E:** “Yes, it is helpful for continuous practice to help learners overcome some requiring language issues”.

**Teacher F:** “Of course, it is very helpful. This tool understands students' texts, contexts and it automatically adjusts the text”.

**Teacher G:** “Definitely Grammarly could be a solution to EFL learners’ ills in writing. However, the latter need to know and practice the mechanics of writing relying solely on themselves”.

According to the interview with various teachers, it is clear that all the teachers agree that Grammarly can help students in improving their academic writing by providing detection and correction of grammar, vocabulary, miss spelling and punctuation errors in addition to improve other aspects of language as it offers many options. Moreover, teacher A summarizes all the features that are offered by Grammarly such as plagiarism detection besides provide proofreading and self-revising as it is mentioned by teacher C it could be more beneficial if it is used as a final step. Furthermore, most of the teachers assert that Grammarly promotes self-reliance by improving and assessing their writings without teacher’s feedback as Grammarly provides instant feedback as well as increases practice. Additionally, Grammarly has the potential to understand the specific needs of students and automatically adjust the texts as mentioned by teacher F. Over all, Grammarly could be an effective tool but students have to be aware of certain rules of language mechanics, practice more and do not misused Grammarly and over rely on it as teacher G claimed.

**Question 7:** Do you believe that Grammarly can provide EFL students with effective feedback?

**Teacher A:** “Yes because it is a reliable digital assistant/tool made by experts. It checks grammar, punctuation, spelling, tone... Moreover, it suggests what is to be changed/ corrected and tells why. (i.e. each suggestion comes with clear explanation. therefore, students do not only have ready revision and proofreading but they can also learn from their mistakes to avoid them another time”.

**Teacher B:** “Yes, I think it's very beneficial especially when it comes to writing mechanisms and punctuation rules”.

**Teacher C:** “Yes, I think it does. Still, EFL learners are enraged to master the rules of writing. Grammarly is a good slave but a bad master”.

**Teacher D:** “Somehow, especially spelling and grammatical mistakes”.

**Teacher E:** “Yes of course”.

**Teacher F:** “The informative feedback can be provided only by the teacher; he is the one who can explain the mistakes and teach how to avoid it. This application corrects the mistakes but it does not the reasons behind its commitment”.

**Teacher G:**” Yes of course”.

Teachers' responses provide mixed perspectives on the feedback provided by Grammarly, most of the informants agree on the effectiveness of Grammarly in giving feedback. Moreover, teacher A strongly believes that Grammarly can be a reliable tool for EFL students by offering detection on the errors and correct it as well as providing explanation for the suggested correction. Additionally, other teachers such as Teacher G, teacher E and teacher B who show positive responses by stating simply “Yes” which can indicate for the effectiveness of the application. In contrast, some teachers express some concerns on Grammarly by expressing mixed views such as teacher D and C which indicate that it could be helpful in a certain case but should not rely on it. Whereas, teacher E express disagreement by stating that Grammarly could correct mistakes but it could not provide impactful feedback as the teacher does. All in all, Grammarly could be helpful and reliable tool but it may not replace the teacher feedback and guideless.

**Question 8:** In your opinion what are the advantages and disadvantages of using Grammarly?

**Teacher A:**” advantages: -easy to use – free- improves autonomy- correct the main types of mistakes, improves writing skill, enhances self-confidence and motivation to write encourages self-assessment, gain time and effort for teachers+ students, help proofread long papers and projects. disadvantages: encourages laziness (students will no more rely on his

own critical thinking and will not try to search in books, dictionaries... to proofread his work, but will go to an easy and effortless way), Requires having a digital material to download it: pc, smartphone, tablet..., limited features( in correcting errors) in the free version+ expensive premium version, Inability to access it offline: needs internet”.

**Teacher B:** “Well, as for the advantages, if it is used appropriately, it will help students a lot. Concerning the disadvantages, the over use of such tools may result in totally dependent writers”.

**Teacher B:** “Well, as for the advantages, if it is used appropriately, it will help students a lot. Concerning the disadvantages, the over use of such tools may result in totally dependent writers”.

**Teacher C:** “This application remains an effective one if it is well used especially for learners who have no one correct their mistakes. However, complete reliance on it is dangerous”.

**Teacher D:** “The advantages: it checks spelling, grammar and style mistakes. The disadvantages: It, indirectly sows laziness in students. Sometimes, this tool generates ideas not related to the topic under study”.

**Teacher E:** “It is helpful tool, it saves time, it is trustworthy. However, it could be dangerous if EFL learners miss out the outs of efficient writing”.

**Teacher F:** “The advantages are all related to effective feedback. The advantages for learners can be summarized in the overuse and over reliance on the tool”.

**Teacher G:** “The advantages are allowing writers to discover their points of weakness through its feedback. The disadvantage is over reliance on it leads to laziness and plagiarism”.

Teachers' responses show a balanced view on the advantages and disadvantages of Grammarly. Several teachers noted that Grammarly has the potential to detect errors and

reduce mistakes as well as providing feedback simply it helpful and effective tool besides it saves time, also teacher A emphasizes on the role of Grammarly in prompting self-efficiency and gain time for both teachers and students. However, despite its effectiveness many teachers identify some disadvantages of using Grammarly, they cautioned against the overreliance on Grammarly, they assert that the overuse of Grammarly could lead to laziness also the overdependence on such tools may reduce students' creativity and create another issue which is plagiarism. Another mentioned weak points of Grammarly are that this application is not always available to access without internet in addition to the free version has limited features which require students to pay for the full capabilities and Grammarly sometimes misleads students by providing false understanding of the context giving to it.

To finalize the interview the researcher provided the teachers with free question in order to add extra comment regarding the use of Grammarly. Some of the teachers provide a piece of advice to conclude the interview as mentioned in the followings:

**Teacher A:** "teachers should advise students to use it because its advantages are huge".

**Teacher B:** "It must remain as a means for detecting errors and not an objective".

**Teacher C:** "Use Grammarly sparingly".

**Teacher D:** "Chat Gpt, Grammarly, Quillbot are all applications that can be useful if well used. An overreliance on them may result plagiarism".

**Teacher E:** "It should be used wisely".

Over all, teachers' remarks underscore the need to use Grammarly application and other similar tools thoughtfully rather than overreliance on it. Teachers claim that Grammarly is only a tool that will help students to reduce some challenges by detecting and correcting errors and it can be more effective if students use it in a good way besides relying on themselves and use their creativity instead of rely on the application all the time. Simply,

EFL students should create a balanced approach between relying on themselves in addition to seeking assistance from AI tools and teachers' guidance.

### **3.4 Discussion and Synthesis of the Findings**

This part is concerned with summarizing the results and findings that were tackled in students' questionnaire and teachers' interview.

#### **3.4.1 Students' Questionnaire Discussion**

Firstly, the findings suggest that Master 2 students vary in various levels of language backgrounds but results highlight that the majority of students seem to have an intermediate level of language proficiency. Moreover, the great number of students who seem to have intermediate level can be considered acceptable for their program in term of they are able to master English, engage in discussion and produce academic writing. Even though most of Master 2 students expressed their disability to master the academic writing effectively as it considered one of the most crucial tasks, they need to produce it appropriately, EFL learners point that they encountered certain difficulties while writing, for instance, lack of vocabulary, encompassing grammar and punctuation mistakes, lack of coherence and cohesion are the most common difficulties that faced by EFL students. Furthermore, the results indicate various factors that stand behind the failure of mastering the academic writing, the primary factor that leads to this issue is lack of sufficient practice whether it is outside or inside the classroom also another prominent reason is the limited vocabulary and language proficiency which leads to difficulty in expressing and understanding complex ideas in the foreign language besides difficulty in mastering grammar and syntax rules in addition to the academic conventions and rules, another factors which poses significant challenges are the lack of teachers' feedback, limited exposure to the reading skill and motivation. Hence, respondents emphasize on addressing the need to improve the academic writing skills by defining its importance, they claim that mastering academic writing is not limited to

educational setting only, it may offer many opportunities for the future and professional career, the students also recognize the role of academic writing in boosting self-confidence and self-expression which facilitate for them to participate in scholarly and professional discussion. Thus, the integration of Grammarly among EFL students as means to improve EFL students' academic writing shows a great interest on it, the students were largely familiar with such AI tool. Additionally, the majority of Master 2 students expressed positive views on the contribution of Grammarly as an AI writing tool to enhancing the overall quality of their writings also offering detection on grammar, miss spelling and punctuation errors besides it offers additional features such as colorful feedback and plagiarism detection. While some participants express concerns on the overreliance on technology and its feedback is not effective enough to replace human mind and teachers' instructions in addition to another opinions on its limitation as it is not always accessible, some features are limited to only the paid version and sometimes their suggestion mislead the writers. Finally, Artificial intelligence writing tools ultimate aim to reduce challenges and help writers to create a work free of mistakes and errors, students need to improve their own writing style by themselves and use technology only for assistance.

#### **3.4.2 Teachers' Interview Discussion**

Teachers' responses provide a detailed explanation on the difficulties that are encountered by EFL in academic writing based on their long years of experience, EFL teachers noticed that learners' difficulties summarized in limited background and vocabulary, inability to master grammar rules, faulty writing mechanics and lack of exposure to academic writing conventions. Some of the teachers believe that the lack of practice could be the only reason for the failure in mastering academic writing. Moreover, suggesting AI writing tools such Grammarly to reduce EFL students' difficulties and addressing their specific needs attracted teachers' interests by expressing positive views on its effectiveness. Hence, all the teachers



agree that Grammarly could be helpful and accurate tool because it catches errors and correcting them and offering feedback on the mistakes in addition to help students to rely on themselves and practice. Moreover, teachers express some concerns on the overuse of AI, they believe it will limit student's creativity and lead to laziness also they suggest that students need to improve their own styles and use Grammarly very often to recheck errors and polish the piece of writing. Meanwhile, the most of respondents assert that the feedback provided by Grammarly is beneficial and trustful but teachers' feedback is more impactful. Overall, Teachers advice students to be more careful while using Grammarly since it helps them to improve their writing but it remains as a tool, they also emphasize on advising students to avoid overreliance on technology.

### **Conclusion**

To conclude, the purpose of this chapter is to analyze and discuss the findings from the data that is gathered from the questionnaire and teachers' interview. In short, the data collection tools such as the questionnaire was addressed to Master students (applied linguistics) at English department University of Mohammed Kheider Biskra, the aim of questionnaire was to identify students' difficulties in academic writing and their level of familiarity on the use of Grammarly based on their perceptions. In addition to the interview which aims to gain more detailed understanding from EFL teachers on their experience teaching the writing skills specifically academic writing and how Grammarly effects students' performance in academic writing.

### **General Conclusion**

The ability to perform effective academic writing has been considered crucial task and its importance plays a significant role in offering many opportunities for professional and academic journey, therefore higher education emphasizes on requiring students to master academic writing in order to communicate and convey their ideas besides engaging in their academic assignments, dissertations and papers. Despite its importance, students are lacking the academic writing skills, more specifically foreign language (EFL) students are encountering several challenges within performing an effective academic writing. Furthermore, this study aims to identify the major difficulties that are faced by EFL students during the AW process in addition to explore the effect of integrating Grammarly AI writing tool as an effective solution for enhancing EFL students' academic writing skills. The study follows qualitative research approach; it applies a Questionnaire to gather data from Master Two students of English at Mohammed Kheider university of Biskra besides an interview is conducted to collect detailed information from EFL teachers' opinions. Moreover, the current research includes two main theoretical chapters, for the chapter one it provides detailed overview on academic writing while the second chapter discusses the Artificial Intelligence.

Moreover, the chapter three which focuses on fieldwork discusses the methodology and data analysis. Therefore, the results provided by the data analysis revealed that both teachers and students show positive attitudes regarding the incorporation of Grammarly into academic writing, the majority of students suggest they are using Grammarly to improve the overall writing in addition to detecting any kind of errors and mistakes in order to perform a well written work. Also Master Two students confirm that Grammarly has the potential to address the specific needs of EFL students. Hence, the students' responses highlight the main purpose for using Grammarly as the current study aims to achieve. Additionally, the perspectives of EFL experienced teachers have provided the study with more evidence, they

are mostly agree with the integration of Grammarly as means to help EFL students overcome and reduce their difficulties and obstacles during the Academic writing process, as provided in this two quotes “ it is helpful for continuous practice, to help learners overcome some requiring language issues” “ due to the lack of proficiency among students as regards grammar and mechanics, this tool can be beneficial for them if they know how to use it”, based on the mentioned responses of teachers which indicate that the instructors agree with the incorporation of the AI written tool as an effective solution for EFL.

To finalize, the objective of the research to introduce Grammarly as an AI writing tool among EFL students might be an effective solution and improve the academic writing skills.

### **Recommendations**

Based on the results and findings provided in the analysis of data, the researcher suggests the following recommendations:

- Teachers need to put more emphasize on practicing academic writing inside the classrooms.
- Teaching academic writing conventions should start from the first years of license degree not only master degrees.
- Teachers need to adapt new methods of teaching academic writing rather than the traditional approaches.
- Grammarly and AI writing tools are effective solutions to eliminate errors in the written work.
- A combination of teachers' instruction and assistance from Grammarly will create an effective approach to master academic writing.
- EFL students should practice more and use Grammarly at the final stage of writing process "editing".
- The feedback provided by Grammarly help students to avoid the mistakes that are repetitively committed.

### References

- Akkaya, A., & Aydın, G. (2018). Views of Academicians on Traits of Academic Writing. *Educational Policy Analysis and Strategic Research*, 13(2), 128–160. <https://doi.org/10.29329/epasr.2018.143.7>
- Ale, R., & Viethen, J. (2021, July). The automated writing assistance landscape in 2021. *Natural Language Engineering*, 27(4), 511–518.
- Alek. (n.d.). What/Why is academic writing important? Universitas Islam Negeri Syarif Hidayatullah Jakarta, The Faculty of Educational Sciences, The Department of English Education.
- Anstey, A. (2014, August). Writing style: abstract thoughts. *British Journal of Dermatology*, 171(2), 205–206. <https://doi.org/10.1111/bjd.13181>
- Arya, N. (2024, March 5). Theory of Mind AI in Artificial Intelligence. Ejable. Retrieved from <https://www.ejable.com/>
- Asnas, S. A. M., & Hidayanti, I. (2024, February 27). Uncovering EFL students' frequent difficulties in academic writing and the coping strategies: The case of a college in Indonesia. *Journal on English as a Foreign Language*, 14(1), 124–151. Retrieved from <https://doi.org/10.23971/jefl.v14i1.7472>
- Astuti, D., & Sumarni, S. (2023, December 29). Grammarly in students' self-directed learning for writing skills: Advantages and disadvantages. *INSANIA: Jurnal Pemikiran Alternatif Kependidikan*, 28(1a), 36–50. <https://doi.org/10.24090/insania.v28i1a.8899>
- Budiharso, T. (2014). Strategies in developing English and Indonesian academic writing by EFL students. *Lingua*, 11(1), 59-70. [ps://doi.org/10.1007/s13224-018-1133-5](https://doi.org/10.1007/s13224-018-1133-5)

Burhansyah, & Masrizal. (n.d.). A review of the effectiveness of product-based approach in the teaching of writing. Department of English Education, Faculty of Teacher Training and Education, Universitas Syiah Kuala, Banda Aceh 23111, Indonesia.

Butte-Glenn Community College. (n.d.). Butte-Glenn Community College Retrieved from <https://butte.edu>

C., Williams. (1983). A Brief Introduction To Artificial Intelligence. 94-99. Retrieved from doi: 10.1109/OCEANS.1983.1152096

College Essays, Research Papers, Book Reports | Internet Public Library. (n.d.). <https://www>

Condrat, V. (2015). \_Academic writing as an interactive process\_ (PhD thesis, XXIX cycle, Ca' Foscari University of Venice).

Chauhan, P. (2022, December 31). Fundamentals of Academic Writing: A Literature Review. Journal of NELTA, 27(1-2), 161-180. Retrieved from <https://doi.org/10.3126/nelta.v27i1-2.53201>

Chelghoum, A., & Grine, N. (2018, December 30). Yabancı dil olarak ingilizce öğrenen öğrencilerin işbirlikçi yazma projeleri ile akedemik yazılarını geliştirme. RumeliDE Dil Ve Edebiyat Araştırmaları Dergisi, 13, 103-114. Retrieved from <https://doi.org/10.29000/rumelide.504255>.

Chisega-Negrilă, A.-M. (2023). The New Revolution in Language Learning: The Power of Artificial Intelligence and Education 4.0. Retrieved from <https://doi.org/10.53477/2284-9378-23-17>

Chung, K., Le, (J. D.), Thaichon, P., & Quach, S. (2022). Types of artificial intelligence (AI) in marketing management. In Artificial Intelligence for Marketing Management (1st ed., p. 12). Routledge. Retrieved from <https://www.taylorfrancis.com/>

- DAI Marwani, M. (2020, July 15). Academic Writing: Challenges and Potential Solutions. *Arab World English Journal*, 6, 114–121. Retrieved from <https://doi.org/10.24093/awej/call6.8>.
- Deng, L. (2018, January). Artificial Intelligence in the Rising Wave of Deep Learning: The Historical Path and Future Outlook [Perspectives]. *IEEE Signal Processing Magazine*, 35(1), 180–177. Retrieved from <https://doi.org/10.1109/msp.2017.2762725>
- Dewi, U. (2023, May 10). Grammarly as Automated Writing Evaluation: Its Effectiveness from EFL Students' Perceptions. *Lingua Cultura*, 16(2), 155–161. Retrieved from <https://doi.org/10.21512/lc.v16i2.8315>.
- Dunn, A. (2023, August 20). *\_How the emergence of artificial intelligence (AI) will affect the eLearning industry\_*. *eLearning Industry*. Retrieved from <https://elearningindustry.com/>
- Elashri, I. I. E. A. (2013). The effect of the genre-based approach to teaching writing on the EFL Al-Azhr secondary students' writing skills and their attitudes towards writing (Doctoral dissertation, Mansoura University, Faculty of Education, Department of Methods and Curriculum).
- Essel, H. B., Vlachopoulos, D., Tachie-Menson, A., Johnson, E. E., & Baah, P. K. (2022, November 15). The impact of a virtual teaching assistant (chatbot) on students' learning in Ghanaian higher education. *International Journal of Educational Technology in Higher Education*, 19(1). Retrieved from <https://doi.org/10.1186/s41239-022-00362-6>
- Eyre, J. (2022, June 1). Planning for writing: What the results of NMSSA tell us about students' use of planning strategies. *Set: Research Information for Teachers*, 1, 20–29. Retrieved from <https://doi.org/10.18296/set.0215>

- Fatimah, N. (2019, July 13). Students' Needs for Academic Writing at the English Education Department. *English Language Teaching Educational Journal*, 1(3), 161. <https://doi.org/10.12928/eltej.v1i3.744>
- Galti, A., & Mustapha, A. (2023). An introduction to academic writing. Retrieved from [https://www.researchgate.net/publication/34567890\\_An\\_Introduction\\_to\\_Academic\\_Writing](https://www.researchgate.net/publication/34567890_An_Introduction_to_Academic_Writing)
- Gain, A., Rao, M., & Bhat, S. K. (2019). Usage of Grammarly. – Online grammar and spelling checker tool at the Health Sciences Library, Manipal Academy of Higher Education, Manipal: A study. *Library Philosophy and Practice (University of Idaho Library)*,1-13.
- GCFGGlobal. (n.d.). The AI revolution - types of AI. GCFGGlobal. <https://edu.gcfglobal.org/en/>
- Gladon, R. J., Graves, W. R., & Kelly, J. M. (n.d.). Revising and editing. In *Authoring scientific papers for publication* (pp. 155-174). Iowa State University. <https://doi.org/10.1002/9781118041673.ch13>
- Groves, D. (2023). Unleashing potential: The first self-aware AI and its transformative impact. Retrieved from <https://www.linkedin.com/in/dustin-groves-603297285>
- Goyal, P., Minz, N. K., & Sha, A. (December 2023). Chatbots and Virtual Assistants in Education: Enhancing Student Support and Engagement
- Gupta, D. (2023, September 27). 7 Best Adaptive Learning Platforms in 2024.
- Gurung, R. K. (2022, July 21). Why Academic Writing? *Pursuits: A Journal of English Studies*, 6(1), 75–82. Retrieved from <https://doi.org/10.3126/pursuits.v6i1.46853>
- Haas, C. (1989). How the writing indium shapes the writing process: Effects of word processing on planning.
- Hardjanto, T. D., & Roselani, N. G. A. (2022, September 30). Objectifying Science: Impersonalization in English Research Articles From Different Disciplines. *Theory*



and Practice in Language Studies, 12(10), 2072–2083.

<https://doi.org/10.17507/tpls.1210.14>

Heylighen, F., & Dewaele, J.-M. (1999). Formality of language: Definition, measurement and behavioral determinants (Internal Report). Center "Leo Apostel", Free University of Brussels. Retrieved from <http://pespmc1.vub.ac.be/HEYL.html>

IBM. (2023, October 12). \_Understanding the different types of artificial intelligence\_. Retrieved from <https://www.ibm.com/>

Ishchenko, O., & Chernysh, A. (2022). ESSAY AS A PRIORITY GENRE OF ACADEMIC WRITING. *Filologični Traktati*, 14(2), 47–55. Retrieved from <https://doi.org/10.21272/ftk>.

Jelita, K. N., Daud, A., & Masyhur, M. (2023, May 2). THE EFFECTIVENESS OF USING GRAMMARLY ON HIGH SCHOOL STUDENTS' WRITING QUALITY. *International Journal of Educational Best Practices*, 7(1), 43-55. Retrieved from <https://doi.org/10.31258/ijebp.v7n1>.

Jiahui, H., Saleh, S., & Yufei, L. (2021). Promotion of Artificial Intelligence Technology in the Teaching of Biochemistry. *The International Journal of Learning in Higher Education*, 28(1), 85–95. <https://doi.org/10.18848/2327-7955/cgp/v28i01/85-95>

Johnson, C. D., & Smith, A. B. (2023). The Role of Research Articles in Academic Discourse. *Journal of Scholarly Communication*, 45(2), 123-145.

Jorge, H. (n.d.). Self-awareness in artificial intelligence. Medium. Retrieved from [https://medium.com/?source=---two\\_column\\_layout\\_nav-----](https://medium.com/?source=---two_column_layout_nav-----)

Kadmiry, M. (2021, March 15). The Comparison between the Process-oriented Approach and the Product-oriented Approach in Teaching Writing The Case of Moroccan EFL Students in Preparatory Classes for the Grandes Ecoles. *Arab World English Journal*, 12(1), 198–214. <https://doi.org/10.24093/awej/vol12no1.14>

- Kadmiry, M. (2021, March 15). The Comparison between the Process-oriented Approach and the Product-oriented Approach in Teaching Writing The Case of Moroccan EFL Students in Preparatory Classes for the Grandes Ecoles. *Arab World English Journal*, 12(1), 198–214. <https://doi.org/10.24093/awej/vol12no1.14>
- Khadilkar, S. S. (2018, May 21). The Art and Craft of Making a Draft: Writing a Good-Quality Scientific Paper! *The Journal of Obstetrics and Gynecology of India*, 68(3), 151–154. <https://doi.org/10.1007/s13224-018-1133-5>
- Khan, M. O., Nazim, M., & Alzubi, A. A. F. (2024). Exploring Arab EFL Learners' Attitudes: Is Grammarly a Game-Changer in Academic Writing Classes? *Educational Administration: Theory and Practice*. <https://doi.org/10.53555/kuey.v30i4.1612>
- Khasawneh, M. (2023). Investigating writing challenges encountered by Saudi EFL learners: Implications for improvement. *Revista Imagens da Educação*, 13(1), 1-14. Retrieved from <https://doi.org/10.4025/imagenseduc.v10i3.62335>
- Koedinger, K., & Tanner, M. (2013, July 9). 7 Things You Should Know About Intelligent Tutoring Systems.
- Larsson, T., & Kaatari, H. (2020, May). Syntactic complexity across registers: Investigating (in)formality in second-language writing. *Journal of English for Academic Purposes*, 45, 100850. Retrieved from <https://doi.org/10.1016/j.jeap.2020.100850>
- Liardét, C. L., Black, S., & Bardetta, V. S. (2019, March). Defining formality: Adapting to the abstract demands of academic discourse. *Journal of English for Academic Purposes*, 38, 146–158. Retrieved from <https://doi.org/10.1016/j.jeap.2019.02.007>
- Lateef, B. S., & Hussein, J. Q. (2023, February 27). A Pragmatic Analysis of Hedging Devices of Iraqi Authors' English Literary Research Articles. *Journal of AlMaarif University College*, 34(1), 355–366. Retrieved from <https://doi.org/10.51345/v34i1.584.g344>

- Lazar Stošić, & Elena N. Malyuga. (2024, February 29). APPLICATION OF ARTIFICIAL INTELLIGENCE IN LANGUAGE SKILLS TESTING. ANGLISTICUM. Journal of the Association-Institute for English Language and American Studies, 13(1), 22–34. <https://doi.org/10.58885/ijllis.v13i1.22ls>
- Marantika, I. M. Y., & Tustiawati, I. A. M. (2023, March 18). Students' Perspectives on Their Writing Skills and The Application of Process Writing Approach in the Academic Writing Classroom. Journey: Journal of English Language and Pedagogy, 6(1), 230–241. Retrieved from <https://doi.org/10.33503/journey.v6i1.2676>
- Mazgutova, D. (2020, November 15). Changes in Revision Behaviours of L2 Writers in an Intensive English for Academic Purposes Program. International Journal of Educational Methodology, 6(4), 715–727. Retrieved from <https://doi.org/10.12973/ijem.6.4.715>
- Medvid, O., & Podolkova, S. (2019). Essay as a Form of Academic Writing. Edukacyjna Analiza Transakcyjna, 8, 215–225. Retrieved from <https://doi.org/10.16926/eat.2019.08.13>
- Mohammed, S., Hasan, B. A., & Ameen, S. (2023). The importance of prewriting strategies in the students' writing production. International Journal of Humanities and Social Sciences. Retrieved from <https://doi.org/10.33193/IJoHSS.54.2023.573>
- Mollick, E. R., & Mollick, L. (2023). Assigning AI: Seven Approaches for Students, with Prompts . SSRN Electronic Journal. Retrieved from <https://doi.org/10.2139/ssrn.4475995>.
- Mu, W., & Lim, K. (2022). Revision for Concision: A Constrained Paraphrase Generation Task. Retrieved from <https://doi.org/10.48550/arXiv.2210.14257>

- Munro, L., & Ramlaul, A. (2020). Research writing: Tips and common errors. In A. Ramlaul (Ed.), *Medical imaging and radiotherapy research: Skills and strategies* (pp. 407-422). Retrieved from <https://www.researchgate.net/publication/340110410>
- Nagao, A. (2018, April 23). A Genre-Based Approach to Writing Instruction in EFL Classroom Contexts. *English Language Teaching*, 11(5), 130. Retrieved from <https://doi.org/10.5539/elt.v11n5p130>
- Neji, W., Boughattas, N., & Ziadi, F. (2023). Exploring New AI-Based Technologies to Enhance Students' Motivation. *Issues in Informing Science and Information Technology*, 20, 095–110. <https://doi.org/10.28945/5149>
- Nemouchi, A. (n.d). *Approaches to Teaching Writing*. University of Constantine.
- Nezakatgoo, B. (2016). The impact of planning strategies on the EFL learners' writing performance across different task types. *Modern Journal of Language Teaching Methods*, 6(6), 314.
- Nova, M. (2018, April 16). Utilizing Grammarly in Evaluating Academic Writing: A Narrative Research on EFL Students' Experience. *Premise: Journal of English Education*, 7(1), 80. Retrieved from <https://doi.org/10.24127/pj.v7i1.1332>
- Oluwafemi Ayotunde, O., Jamil, D. I., & Cavus, N. (2023, June 30). THE IMPACT OF ARTIFICIAL INTELLIGENCE IN FOREIGN LANGUAGE LEARNING USING LEARNING MANAGEMENT SYSTEMS: A SYSTEMATIC LITERATURE REVIEW. *Information Technologies and Learning Tools*, 95(3), 215–228. <https://doi.org/10.33407/itlt.v95i3.5233>
- Owan, V. J., Abang, K. B., Idika, D. O., Etta, E. O., & Bassey, B. A. (2023, August 1). Exploring the potential of artificial intelligence tools in educational measurement and assessment. *Eurasia Journal of Mathematics, Science and Technology Education*, 19(8), em2307. Retrieved from <https://doi.org/10.29333/ejmste/13428>

- Pallivalappil, A. S., & S. N., Jagadeesha (2022, June 23). A Decentralised Research Article Publishing and Archiving System. *International Journal of Case Studies in Business, IT, and Education*, 506–520. Retrieved from <https://doi.org/10.47992/ijcsbe.2581.6942.0176>
- Parija, S. C., & Kate, V. (2018). Thesis, Dissertation and Project. Jawaharlal Institute of Postgraduate Medical Education and Research. (pp. 3-10).
- Ratnawati, R., Faridah, D., Anam, S., & Retnaningdyah, P. (2018). Exploring Academic Writing Needs of Indonesian EFL Undergraduate Students. *SSRN Electronic Journal*. Retrieved from <https://doi.org/10.2139/ssrn.3308318>
- Ratnawati, R., Faridah, D., Anam, S., & Retnaningdyah, P. (2018). Exploring Academic Writing Needs of Indonesian EFL Undergraduate Students. *SSRN Electronic Journal*. Retrieved from <https://doi.org/10.2139/ssrn.3308318>
- Rohmatika, A. (n.d). The effectiveness of process approach in teaching writing viewed from students' level of creativity and its implication towards writing assessment. English Department, Faculty of Languages and Arts, Semarang State University.
- Revolutionizing Learning: The Advantages of AI Intelligent Tutoring Systems. (n.d.). Retrieved from <https://aiworldschool.com/>
- Rohn, S. (2023, July 25). What is Generative AI? Retrieved from <https://whatfix.com/>
- Sahota, N. (2023, August 15). 7 types of artificial intelligence (with examples). Retrieved from <https://www.neilsahota.com/>
- Samsudin, Z. (2016). Comparing the Process Approach with the Product Approach in Teaching Academic Writing to First-year Undergraduates. *The Asian Journal of English Language & Pedagogy*, 4, 84-104.

- Satjapiboon, S., & Chuchart, A. (2010). Multidimensional instruction model for comprehensive academic writing capability development: The integrative approach. *International Journal of Behavioral Science*, 5(1), 88-99.
- Smith, J. (2019). *Writing and Publishing Your Thesis or Dissertation: A Practical Guide*.
- Smith, J. (2021). Difference between a thesis and a dissertation. Retrieved from <https://example.com/difference-thesis-dissertation/>
- Shapiro, S. C. (2003). Artificial intelligence (AI). pp. 89-93
- Sharma, Y. P. (2022, December 31). Composition of a Research Paper. *Journal of Fine Arts Campus*, 4(2), 21–26. Retrieved from <https://doi.org/10.3126/jfac.v4i2.54836>
- Shirahata, T., Tono, Y., Satake, Y., Isahara, H., & Saiga, T. (2020, September). Detecting Formality in Academic Writing Using Sentence Embeddings. In *Proceedings of the 2020 Conference on Empirical Methods in Natural Language Processing (EMNLP)* (pp. 1453–1465). Association for Computational Linguistics. Retrieved from <https://doi.org/10.18653/v1/2020.emnlp-main.116>
- Smalzer, W. (2014). *Write to be Read: Reading, Reflection, and Writing* (3rd ed.). Cambridge University Press.
- Taib, S. A., Rahmat, N. H., Sim, M. S., Mohammad Iliyas, S. M., Sa'adan, N., & Jenal, N. (2022, August 4). Processing Academic Writing Online: The Case For Process Approach. *International Journal of Academic Research in Business and Social Sciences*, 12(8). Retrieved from <https://doi.org/10.6007/ijarbss/v12-i8/13174>
- Tiwari, H. P. (2023, June 28). Supervisors' Perspectives on Generic Difficulties Faced by EFL Students in Writing Thesis: A Multiple Case Analysis. *Molung Educational Frontier*, 69–91. Retrieved from <https://doi.org/10.3126/mef.v13i01.56025>

- Thaksanan, P., & Chaturongakul, P. (2023). Enhancing EFL Students' Performance and Genre Awareness in Academic Writing through Genre-based Instruction. SSRN Electronic Journal. Retrieved from <https://doi.org/10.2139/ssrn.4497563>
- Toba, R. M., Noor, W. N., & Nurweni, A. (2019). The Current Issues of Indonesian EFL Students' Writing Skills: Ability, Problem, and Reason in Writing Comparison and Contrast Essay. *Journal of Education and Learning (EduLearn)*, 13(2), 203. Retrieved from <https://doi.org/10.11591/edulearn.v13i2.13092>
- Toczyłowski, K. (2022). Genre-Specific Characteristics of the English Research Article: Analysis of the Content Macrostructure of the Results and Discussion Sections.
- Tuan, L. T. (2011, November 1). Teaching Writing through Genre-based Approach. *Theory and Practice in Language Studies*, 1(11). <https://doi.org/10.4304/tpls.1.11.1471-1478>
- Turmudi, D. (2017, November 2). RETHINKING ACADEMIC ESSAY WRITING: SELECTED GENRES IN COMPARISON. *Premise: Journal of English Education*, 6(2), 119. Retrieved from <https://doi.org/10.24127/pj.v6i2.1052>
- Universitas Islam Negeri Syarif Hidayatullah Jakarta. (n.d.). Universitas Islam Negeri Syarif Hidayatullah Jakarta.
- Utami, S. P. T., Andayani, A., Winarni, R., & Sumarwati, S. (2023, October 1). Utilization of artificial intelligence technology in an academic writing class: How do Indonesian students perceive? *Contemporary Educational Technology*, 15(4), ep450.
- Wang, P. (2017). Building a writing course: Transfer between L1 and L2, self-efficacy, and experience in writing. *Journal of Second Language Writing*, 27, 108-117. Retrieved from <https://doi.org/10.1016/j.jslw.2014.09.002>
- Xie, Y. (2022, August 27). The Relationship between Text Formality and Writing Quality. Retrieved from <https://doi.org/10.1016/j.jeap.2019.02.007>

Yousofi, R. (2022, November 9). Grammarly deployment (in)efficacy within EFL academic writing classrooms: an attitudinal report from Afghanistan. *Cogent Education*, 9(1).

Retrieved from <https://doi.org/10.1080/2331186x.2022.2142446>

Zinkevich, N. A., & Ledeneva, T. V. (2021, December 29). Using Grammarly to Enhance Students' Academic Writing Skills. *Professional Discourse & Communication*, 3(4),

51–63. Retrieved from <https://doi.org/10.24833/2687-0126-2021-3-4-51-63>

Zhang, Y. (2023). Cohesion and coherence for English writing—A case study of argumentation. *Frontiers in Educational Research*, 6(9), Article 060921. Retrieved

from <https://doi.org/10.25236/FER.2023.060921>



## **Appendices**

**Appendix A:** Students' Questionnaire

**Appendix B:** Teachers' Interview

## Appendix A: A Questionnaire for EFL Students at Biskra University

Dear students.

Thank you for participating in this study. The purpose is to investigate the effectiveness of AI writing tools, specifically Grammarly, in improving the academic writing skills of EFL students. Your honest and thoughtful responses are crucial for understanding this impact.

1. How would you describe your proficiency level in English? (upper-intermediate, Intermediate, Advanced).

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2. Have you faced any challenges in the academic writing process? (Yes/No)

If yes, What are the specific challenges you face?

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3. How can you explain the reasons of the lack of Academic writing skills for EFL students?

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4. How important is it for EFL students to improve their academic writing skills?

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5. Are you familiar with AI(artificial intelligence ) writing tools such as Grammarly ?

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6. How Do you think AI writing tool such Grammarly contribute to improve the quality of Academic writing? Please provide details.

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7. Are there any challenges you have encountered while using Grammarly for Academic writing?

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8. Do you think Grammarly addresses the specific needs of EFL students' Academic Writing? Why and Why not?

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9. Do you think AI writing tools can replace the traditional methods of providing feedback? Why and Why not?

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10. In your opinion, what are the advantages and disadvantages of using AI-powered writing tools like Grammarly for academic writing?

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Is there anything else you would like to add regarding the use of Grammarly in academic writing?

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## Appendix B: Teachers' Interview

Dear teachers

Thank you for participating in this study. This interview seeks to find out the perspectives of EFL teachers on the role of Artificial intelligence in assessing EFL students to improve student's academic writing . Specifically exploring the role of Grammarly in the area of foreign language teaching as an AI tool.

Item 1.How long have you been teaching EFL students?

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Item 2.Could you briefly describe your experience with teaching EFL students the writing skills ?

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Item 3.Have you noticed any challenges faced by EFL students in academic writing during your teaching experience ? If yes what are the common challenges faced by EFL students ?

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Item4: Have you heard of AI writing assistants such "Grammarly" before ? If so what is your understanding on its purpose ?

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Item 5: Have you used Grammarly before or recommend it to your students ?

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Item6: Do you think Grammarly contribute to improve the quality of writing? If yes How do you do think Grammarly help EFL students ?

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Item7. Do you believe that Grammarly can provide EFL students with effective feedback ?

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Item8: In your opinion what are the advantages and disadvantages of using Grammarly?

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Is there anything you would like to add regarding the use of Grammarly ?

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## الملخص

يتم تصنيف إتقان الكتابة الأكاديمية على أنها مهمة حاسمة مطلوبة في البيئات التعليمية والأكاديمية العليا لأنها وسيلة لنقل وتوصيل الأفكار المعقدة من خلال كتابات جيدة التنظيم وقائمة على الأدلة. ومع ذلك فإن القدرة على أداء مهارات الكتابة الأكاديمية قد تكون مهمة معقدة لطلاب الجامعات على وجه التحديد طلاب اللغة الأجنبية (EFL)، على سبيل المثال يظهر عدد كبير من طلاب اللغة الإنجليزية كلغة أجنبية العديد من الصعوبات ونقاط الضعف أثناء تأليف الكتابة الأكاديمية. لذلك يهدف البحث الحالي إلى التحقق من مدى فعالية Grammarly أداة الذكاء الاصطناعي لتعزيز الكتابة الأكاديمية لطلاب اللغة الإنجليزية كلغة أجنبية. علاوة على ذلك تسعى فكرة دمج Grammarly في عملية الكتابة الأكاديمية إلى تقليل الصعوبات التي يواجهها طلاب اللغة الإنجليزية كلغة أجنبية ومساعدتهم على التغلب على تحدياتهم أثناء الكتابة الأكاديمية، وتستهدف هذه الدراسة طلاب الماجستير الثاني بجامعة محمد خيضر من جامعة بسكرة. في هذا الصدد، افترضت هذه الدراسة أن المساعد القائم على أداة الكتابة Grammarly AI يمكن أن يكون حلاً فعالاً لتحسين الكتابة الأكاديمية للطلاب. في ضوء تنوع أدوات الكتابة باستخدام الذكاء الاصطناعي، من الضروري استكشاف مدى إلمام الطلاب والمدرسين ووعيهم بقواعد النحو بناءً على وجهات نظرهم. ومن ثم، يتم استخدام طريقة البحث النوعي لجمع البيانات النوعية من خلال تطبيق كل من المقابلة والاستبيان. الاستبيان موجه إلى طلاب ماجستير اللغة الإنجليزية كلغة أجنبية (العدد = 25)؛ بينما تم تصميم المقابلة لجمع البيانات من معلمي اللغة الإنجليزية كلغة أجنبية (العدد = 7). يشير تفسير البيانات وتحليلها إلى أن كلاً من المعلمين والطلاب يعبرون عن ردود فعل إيجابية تجاه دمج Grammarly في الكتابة الأكاديمية إلى جانب أن معظم الطلاب والمدرسين على دراية وإلمام بإمكانيات أدوات الكتابة باستخدام الذكاء الاصطناعي. وبالتالي، يُنصح طلاب اللغة الإنجليزية باستخدام Grammarly كوسيلة لتقليل مستوى التحديات وتحسين القدرة على الكتابة الأكاديمية.