UNIVERSIDAD TÉCNICA DE AMBATO

DIRECCIÓN DE POSGRADO

MAESTRÍA EN LA ENSEÑANZA DEL IDIOMA INGLÉS COMO LENGUA EXTRANJERA

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TEMA: **"VIRTUAL WRITING TUTOR SOFTWARE IN THE DEVELOPMENT OF ACADEMIC WRITING SKILLS"**

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Trabajo de investigación, previo a la obtención del Grado Académico de Magíster en la Enseñanza del Idioma Inglés como Lengua Extranjera

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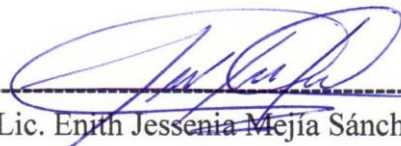# A LA UNIDAD ACADÉMICA DE TITULACIÓN DE LA FACULTAD

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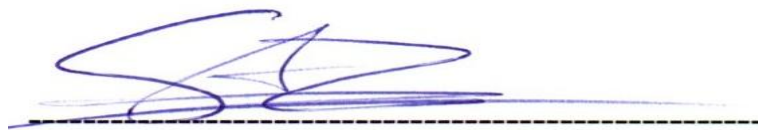**Miembro del Tribunal**

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DEDICATION

The present research work is dedicated from the bottom of my heart to the owner of everything: the Lord and who guides my life and holds my hand when difficulties show up. This is also to my wife, that extraordinary person who has been next to me through all this process, supporting me, motivating me not to give up. Thanks for all, beloved wife to be with me in order to make this dream come true.

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All my gratitude to my parents, especially my mom, Lucy, who was always there to help me out, not only with her words but also with her tenderness and support. To my daughters, Fer and Lalyta, my sisters, friends, my bosses, especially Marlon, such a great coordinator and motivador. And everybody else who, from one way or another, supported me to overcome difficulties and have this research finished.

UNIVERSIDAD TÉCNICA DE AMBATO

DIRECCIÓN DE POSGRADO

MAESTRÍA EN LA ENSEÑANZA DEL IDIOMA INGLÉS COMO LENGUA EXTRANJERA

TEMA:

"VIRTUAL WRITING TUTOR SOFTWARE IN THE DEVELOPMENT OF ACADEMIC WRITING SKILLS"

AUTOR: Licenciado Mario Giovanny Tacoamán Portilla

DIRECTORA: Licenciada Sara Nidhya Camacho Estrada

FECHA: 16 marzo, 2019

RESUMEN EJECUTIVO

Este estudio tuvo como finalidad analizar la influencia del software tutor virtual escritura Grammarly en el Desarrollo de las habilidades de escritura académica en lengua inglesa de un grupo de estudiantes del nivel Super-Intensive Level del Languages Institute, Espe-Inca Branch, Universidad de las Fuerzas Armadas, Quito, Ecuador. Esta investigación se llevó a cabo con una muestra representada por 25 estudiantes. El estudio combinó el enfoque cualitativo y cuantitativo y se empleó un diseño cuasi experimental. Para su implementación se usó la metodología de investigación acción en el aula por un periodo de seis semanas. Los datos se recolectaron por medio de la aplicación de un cuestionario, la observación, un pretest y un post test. Se usó el software de corrección gramatical Grammarly. El post test indicó una mejora en las habilidades de escritura académica de los estudiantes después de la implementación de la propuesta basada en el uso del software de corrección gramatical Grammarly.

Descriptores: Inglés, escritura académica, habilidades de escritura, grammar checker, Grammarly, English, Academic writing, writing skills.

UNIVERSIDAD TÉCNICA DE AMBATO

DIRECCION DE POSGRADO

MASTER PROGRAM OF TEACHING ENGLISH AS A FOREIGN LANGUAGE

RESEARCH TOPIC:

"VIRTUAL WRITING TUTOR SOFTWARE IN THE DEVELOPMENT OF ACADEMIC WRITING SKILLS"

Author: Licenciado Mario Giovanny Tacoamán Portilla

Directed by: Licenciada Sara Nidhya Camacho Estrada

Date: 16 march, 2019

EXECUTIVE SUMMARY

This study aimed to analyze the influence of a virtual writing tutor software on the development of the English academic writing skills in a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador. The sample of this research was 25 students. This research was based on qualitative and quantitative approaches. A quasi-experimental design, also known as before-and-after design, was implemented. This study used a Classroom Action Research design. It was carried out for six weeks. A questionnaire, an observation, and a pre-test and a post-test were used to collect the data. The virtual writing tutor software Grammarly was used in the English class to develop academic writing skills. The post-test indicated improvement in students' academic writing skills due to the activities implemented in the class.

Keywords: English, Academic writing, writing skills, Inglés, escrituraacadémica, habilidades de escritura, grammar checker, Grammarly.

INTRODUCTION

English plays an important role around the world; people who know English have more opportunities to study or work in many countries because English is considered the universal language, the most spoken language in the world (Crystal, 2012).

Writing is essential in our society. However, teachers and students have problems in the teaching-learning process. On the one hand, teachers have difficulties to motivate the students and to make them develop the writing competence and academic writing skills. On the other hand, students cannot learn, and they feel that they do not like either English language or writing.

So, writing instruction needs to be developed from a different perspective. It is necessary to integrate the ICT in the teaching process of writing, in order to motivate the students and develop their writing skills properly. So, in this research project, the use of a virtual writing tutor software is proposed to develop the academic writing skills in a group of Super-Intensive Level students at the Universidad de lasFuerzas Armadas-ESPE, Quito, Ecuador.

Base on the above arguments, this research aims to assess the use of a virtual writing tutor software to develop the academic writing skills in a group of Super-Intensive Level students at the Universidad de lasFuerzas Armadas-ESPE, Quito, Ecuador. It is oriented to improve the English academic writing skills and the communicative competence of the students, and to better their attitude towards writing and to the English language.

With this purpose, the current study combines the qualitative and quantitative approach, using a quasi-experimental research design. 25 Super-Intensive Level students participated. First, a pre-test was administered to evaluate the students writing skills. Then, based on the diagnosis, some teaching strategies were designed using a virtual writing tutor software to develop academic writing skills. Then a post-test was administered to evaluate the students writing skills after having participated in the teaching proposal.

This research report is organized as follows:

Chapter I. Problem statement. This chapter contains the theme of the problem, then the problem itself, which includes the contextualization of the problem, critical analysis, the prognosis, the formulation of the problem, questions guidelines, delimitation of the problem, justification, as well as the objectives of the research.

Chapter II.The theoretical framework. In this chapter, the research background, philosophical foundation, legal basis, key categories, and the hypothesis are presented.

Chapter III.Methodology. It covers the research scope and design, population and sample, operationalization of variables, data collection methods, and the research procedures.

Chapter IV.Analysis and Interpretation. In this chapter, results are presented: the results obtained through the survey, the observation and the pre-test and a post-test applied to the students are analyzed and interpreted.

Chapter V. Conclusions and Recommendations.In this chapter, conclusions and recommendations derived from the findings are reported.

Chapter VI.The proposal. Finally, the teaching guide proposed in this thesis is described.

CHAPTER I
PROBLEM STATEMENT

1.1 The theme of the problem

Virtual writing tutor software in the development of academic writing skills.

1.2 Problem Statement

1.2.1   Contextualization of the problem

In today's world, writing is an essential skill. It is essential for almost every aspect of our lives (Merkle, 2019). In the educational context, from elementary school to college (included PhD programs), writing skills are indispensable to be successful (Grabe & Kaplan, 2014), because they permit understanding of content materials in the different subjects and enhance its learning (Graham & Hall, Writing and Writing Difficulties From Primary Grades to College: Introduction to the Special Issue., 2016). Moreover, most of the professions require writing competence or, at least, some academic writing skills to write reports, papers, proposals, letters, among others (Nelms, 2017).

Writing is considered one of the hardest, most complicated and difficult language skills, especially in English as a foreign or a second language (Handayani & Johan, 2018). So, it should be formally studied in all the level of education. In all over the world, students have many difficulties and problems when writing in English. Even though the statistical information is not available, many studies have reported the different writing problems the students have.

Ien, Yunus, & Embi(2017) found that primary school students from Malaysia, have many grammatical problems. So, they designed a proposal to overcome those problems.

It was reported that Palestinian university students also have problems to write in English (Hammad, 2016). He found that the writing problems when writing essays included: lack of linguistic knowledge, incorrect translation, semantic problems (cohesion and coherence), and absence of academic format of the essay.

Similarly, in Bangladesh, Affrin(2016) found that university English language students face many problems when writing English. Among others, he found syntactical structure, spelling, capitalization, punctuation, tense, paragraph structure, coherence, and cohesion problems.

In Pakistan (Fareed, Ashraf, & Bilal, 2016), it was found that undergraduate English language students have the following writing problems: insufficient linguistic proficiency, lack of grammar, syntax, vocabulary and text organization knowledge; they do not like to write because of anxiety; they do not have a lack of ideas.

In Iran, similar writing problems were found in graduate English language students: cohesion, coherence, text structure and syntactical errors (Bagheri & Riasati, 2015).

In an International literature review, in which52 documents published in Spanish were analyzed, Chois & Jaramillo(2015) found that graduate students from different programs have writing problems and difficulties when writing academic text in the semantic, syntactical, pragmatic and discursive aspects of the writing skill.

In Sudan, Alfaki identified university students' writing problems in the English language. He found that the students have language problems related to morphology and syntax, grammar (spelling, punctuation, and capitalization), and the development of specific writing skills (Alfaki, 2015). Handayani && Johan, (2018) got similar findings in English language university students from Indonesia.

In Ecuador, we found some qualitative data related to the writing problems that students commit when writing in English. Similar to the International English language students, Ecuadorian students commit different errors when writing both in English and in Spanish, such as: syntactical structure, spelling, capitalization, punctuation, tense; text, paragraph structure and cohesive ties; and coherence (Magallanes, 2018; Escobar, 2017; Espinal, Andrés, & Gurumendi, 2015; Estupiñán, 2017; Peñafiel, y otros, 2017; Castillo, 2015). Most of the students who recognized that they have writing problems but cannot correct them (Vásconez, 2016).

Writingproblemshavealsobeenreported at the Universidad de las Fuerzas Armadas-ESPE, Quito, Ecuador (López, 2015; García Flores & Jiménez, 2017). According to the

English professors of this institute, most English language students have problems with the English Language when producing written texts: syntax structure, the grammatical structures, and vocabulary. Therefore, strategies for the solution of these problems should be designed, proposed and developed.

Apart from that, writing problems have implications for the whole learning process, because it is an important tool for learning language, values, and contents (Klein & Boscolo, 2016) and the development of intelligence and higher psychological processes (Daniels, 2016).

Therefore, teaching writing is very important from the very beginning of the educational system. However, many students experience many difficulties when learning to write: Grammas, creativity, organization, adequacy (Giménez, Luque, López-Zamora, & Fernández-Navas, 2015; Ritchey & Coker Jr, 2014; Graham & Hall, Writing and Writing Difficulties From Primary Grades to College: Introduction to the Special Issue., 2016).

Because of these difficulties, students do not want to write, they evade to write, they feel like not able to write, and they fail in subjects matters, both in language arts and content areas. Sometimes, they have disappointments in the social context, and they feel like they will fail (Foster, 2017).

Besides, motivation is a vital component of the teaching-learning process (Suryasa, Prayoga, & Werdistira, 2017; Rehman, Bilal, Sheikh, Bibi, & Nawaz, 2014). However, when learning to write, they are not encouraged enough to catch up with the important and necessary background knowledge that will let them successfully communicate with others. It makes the teaching process boring or, in some cases, not attractive to them. So, as the students do not feel comfortable, motivated, they do not learn (Lasagabaster, Doiz, & Sierra, 2014).

This is a traditional approach to teach English, which has shown not to be effective to make the students learn (McDonough & McDonough, 2014). For these reasons, it is necessary to change traditional methods for more active and dynamic ones (Canale, 2014; Richards & Rodgers, Approaches and methods in language teaching, 2014),

which engage students to learn and to realize the importance of using grammar rules appropriately when communicating in their real lives, both when writing and speaking (Chung, 2017).

Previous studies have shown that the use of ICT can improve the teaching of writing and, as a consequence, the students´ writing skills (Simonok, 2016; Buyse, 2014; Wollscheid, Sjaastad, & Tømte, 2016; Fattah, 2015). Therefore, ICT can be integrated into the writing classes (De Smedt & Van Keer, 2014). However, teachers have no many teaching experiences in integrating ICT in the writing class, in using educational software in the writing classes (Røkenes & Krumsvik, 2016; Scherer, Siddiq, & Teo, 2015).

In Ecuador, there have been some experiences using ICT in the teaching of English (Santacruz Fajardo & Aguilar Aguilera, 2016; Lechon de la Cruz, 2017; Barzola Tigrero, 2016; Villacreces & Paul, 2014; Matías & Alexandra, 2016y). However, most of these experiences are addressed to develop oral skills (Estrella Crespo, 2018; Beltrán & Alejandra, 2018; Chamba & Susana, 2018). It was found only two experiences on the use of automatic grammar checkers in Spanish and English has been proposed (Cáceres, 2018; Carrera, 2015).

Now, there are many free software tools to assess and develop the writing skills; however, to date, to our knowledge, they have not been used in the English academic writing classes or studied the effect of their use in the students´ writing skills.

As it was mentioned before, in the Languages Institute, at the Universidad de lasFuerzas Armadas-ESPE, Quito, Ecuador, students have difficulties in writing in English correctly. They commit many spelling, grammatical, stylistic and punctuation errors when writing academic texts. Even they considered that it should be solved, that they need to learn to write correctly, they think that it is complicated by the traditional teaching approach. Innovative practices are required.

Most of the ESPE Languages Institute students and teachers have access to technologies. Also, they know how to use them. Computer labs with internet access are available. However, English writing classes do not integrate ICT to design teaching activities.

As it has been reported, the use of the virtual writing tutor software, grammar checkers like Grammarly™, has been proved to be effective to develop the writing skills; so, these tools are among those strategies that can be implemented in the class,

There are several significant benefits of using virtual writing tutor software, grammar checkers or similar tools. It permits to get advantages of the students' interests and technological competences, on the one hand, and of the internet access, on the other.

Consequently, this research assesses the use of a virtual writing tutor software Grammarly™ to develop the academic writing skills in a group of Super-Intensive Level students at the Universidad de lasFuerzas Armadas-ESPE, Quito, Ecuador.

1.2.2 Problem scheme

Effects →

| The student feelsinsecure about writing in English. | The student does not develop his writing skill. | The student commits many grammatical errors |

Problem →

Limited writing skills

Causes →

| Lack of use of motivational and interesting writing teaching activities | Inadequate language teacher training in writing | Insufficient writing teaching activities based on the use of ICT |

Figure 1. Problem scheme

Elaborated by: Tacoaman, Mario (2019)

1.2.3   Critical analysis

When teaching English, especially writing skills, the use of motivational teaching activities is essential. It is possible to motivate young learners if classes consider their interests, needs, and preferences. If the students are not motivated, they do not participate actively or produce good, correct texts, they refuse to write, and feel they can neither write nor learn how to write. However, if the students feel motivated, they participate more actively in the class activities and, in consequence, they will learn to write, and write. Therefore, to guarantee students´learning, English writing classes should necessarily motivate the students. That is, activities related to their likes, needs, and interests should be included. ICT are among the students´ main interests; so, they should be included to enhance learning writing skills.

On the other hand, to develop an effective teaching academic writing skills proposal, teachers require adequate training, both in writing and in the use of ICT. So, teachers should use effective teaching strategies, so students could write, develop their writing skills. If teachers do not write and do not know how to use ICT for writing, students will not learn how to write and will have problems when they need to use written communication. This situation produces, first, a negative attitude, frustration and feeling of disability in the students, second, poor texts, ungrammatical constructions in English writing, and consequently, a wrong impression of the audience who could find the texts incomprehensible.

ICT are part of our daily lives. Young learners are considered digital natives. So, they prefer those teaching activities in which they can use ICT, apply their technical knowledge to solve their problems, to learn. That is why it is essential that the activities carried out in the English writing classes integrate de use of ICT. In this context, students will participate actively in the activities, produce better text, learn more contents and develop their academic writing skills. Consequently, they will write better, well-formed texts. If not, students will have many writing problems and, undoubtedly, will commit many grammatical errors.

1.2.4 Prognosis

In today´s world, everybody needs to write, especially in the lingua franca, English. The English language students need to know not only to speak but also how to write in English correctly in order to be successful in the academic, social and professional settings. If the English language

students do not know to write appropriately in English, they will have problems in their academic development and, probably, will not succeed in their academic and professional career, because most of the best and highly ranked professions require English language proficiency, both spoken and written.

However, to fulfill this purpose, students need to be motivated to learn English and to develop their academic writing skills. If the teaching activities are not coherent with their needs, interest, and likes, probably, they will not feel like learning, and in consequence, they will not develop their academic writing skills, will have writing problems and will commit many grammatical errors.

1.2.5 Research problem formulation

In this study, the following research question will be answered: How could the use of the virtual writing tutor software Grammarly™ enable Super-Intensive Level learners at the Universidad de lasFuerzas Armadas-ESPE, Quito, Ecuador, develop better academic writing skills?

1.2.6 Research questions

- What is the present situation of Super-Intensive Level students at Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador regarding academic writing skills?

- What is the influence of the use of a virtual writing tutor software on the level of motivation toward developing writing skills of a group of Super-Intensive Level students at Language Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador?

- How could the academic writing skills of a group of Super-Intensive Level students at the Language Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador, be improved using the virtual writing tutor software Grammarly™?

1.2.7 Delimitation of the study

The study was delimitated as follows:

1. **Place:** It was carried out at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Pichincha Province.

2. **Time:** It was developedbetween December 2018 and February 2019.

3. **Level**: This study was focused on Super-Intensive Level students.

4. **Participants**: 20 students took part in this research.

5. **Gender:** Male, as well as female students, were included

6. **Age:** All the students are on legal age, more than 18, an average of 21 years old.

7. **Subject:** the study focuses on improving English writing skills using a virtual writing tutor software.

1.3 Justification

English is the international language. It is considered the lingua franca of technology, culture, academia, education, and science. So, the English language students must know how to write correctly in English. It implies to write grammatically correct, to structure the texts properly and to organize the ideas in a coherent order. Then, this research project is important because it is coherent with the academic needs and interests.

The writing skills are not innate. Its learning does not occur in a natural process; they should be taught. However, many factors may affect the way we learn. The use of ICT in the class may influence the English writing skills learning process. As students are considered digital native, they prefer those kinds of activities that

involve the use of ICT, in which they can use technological devices and their digital competence. The use of ICT in the English writing class may motivate the students to learn and improve their writing skills. Therefore, this research will bring innovation and solutions to students' writing problems. Using a virtual writing tutor software, students will produce correct texts.

Nowadays, there are many online writing tutoring programs available for free on the web or in the computer word processors. As has been said, their use has proved to be effective to improve the students writing competence and skills. So, the inclusion of a virtual writing tutor software to develop the students' English academic writing skills could be easy, cheap and practical. They will not need any additional supplies, but a computer, to improve their writing skills.

In synthesis, it is feasible, relevant and innovative to use a virtual writing tutor software to develop the English academic writing skills and to evaluate its incidence on the students' competence and performance (written texts produced) and on their motivational levels to learn and to write in class and other social settings.

1.4 Objectives

1.4.1 General Objective

To analyze the influences of the virtual writing tutor software Grammarly™ on the development of the English academic writing skills in a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

1.4.2 Specific Objectives

- To analyze the development of the English academic writing skills of a group of Super-Intensive Level students at the Language Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

- To design teaching writing activities using the virtual writing tutor software Grammarly™ to develop the English academic writing skills in a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

- To Evaluate the influences of the use of the virtual writing tutor software Grammarly™ on the motivational levels toward developing the academic writing skills of a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

- To analyze the development of the English academic writing skills in a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador, by using the virtual writing tutor software Grammarly™.

CHAPTER II
THEORETICAL FRAMEWORK

This chapter reports a critical review of knowledge and previous studies related to the topic of investigation. It is organized as follows: first, it reviews and summarizes previous studies to indicate a gap in research. A systematic and update literature review could guarantee that the present study is original and has not been published previously. It is not a duplication of what has already been published on using Virtual writing tutor software in the development of academic writing skills. On the other hand, a theoretical background relevant to understand the research problem is presented.

2.1 Research background

Cáceres(2018) analyzed the incidence of the use of Automated Language Evaluation Tools on the Development of Grammar Skills in a group of 1st, 2nd and 3rd Bachillerato students of the UnidadEducativaEloy Alfaro, Quito, Ecuador. It combines qualitative and quantitative research approaches. First, she did a literature review on the research topic. Then, she did interviews with the students. Also, a pre-test and post-test were applied to the control and the experimental group before and after being exposed to the teaching proposal. As part of the intervention, students worked online in grammar websites: they do English grammar exercises. It was found that students feel motivated to participate in class activities. Also, they improved their grammar comprehension, they learned to correct their grammar errors, and they developed their writing skills. She concluded that this kind of strategies contribute to the development of the students' writing skill because they enjoy working with online grammar checkers.

This thesis is directly related to our research project because, like us, they studied the incidence of the use of Automated Language Evaluation Tools. It could serve as a guide because we could learn how she designed and evaluated the proposal. Her results will help us to analyze and discuss our findings.

Castillo (2015) assessed the incidence of the use of a practical manual to correct mistakes and errors and to improve students´ English writing skills. The proposal was addressed to eighth years Basic Education students from the UnidadEducativa Joaquin Lalama, Ambato city. She also combines qualitative and quantitative research approaches. She interviewed and surveyed the students and teachers. As a result of a diagnostic study, teachers considered that it is important to apply teaching writing strategies to correct students' grammatical errors. It improves their writing skill. Consequently, it was proposed the manual "Fun way to write English", which included exercises and activities with vocabulary, punctuation, spelling, and grammar. It was found that students liked the proposal and percolated in the activities; they learned grammar and improved their writing skills.

This research is focused on the use of a practical manual to teach grammar and develop writing skill. It helps to our research project because, it analyzes the incidence of the use of practical writing manual, which helps to make the diagnosis and the evaluation of a proposal addressed to develop the English writing skills, even it was not a virtual tutor. Moreover, its results will help us to analyze and discuss our findings.

Carrera (2015)developed a research project entitled "Software spelling and grammar and its impact on the application of rules of spelling and writing in students of the Faculty of Law, Social Sciences and Education. Its purpose was to determine the incidence of use of a self-correcting spelling and grammar software on the students' grammatical knowledge and writing skills. The population consisted of 41 students and 18 teachers from the Sistema de Estudios a Distancia SECED, Universidad Técnica de Babahoyo, Cantón de Babahoyo, Provincia Los Ríos. It was conducted a survey to determine how much students use self-correcting spelling and grammar software and to analyze how dependent on that practice they are. It was found that students are highly dependent on the use of self-correcting spelling and grammar software tools. However, the use of self-

correcting spelling and grammar software did not improve the students' English writing skills or their grammar knowledge.

This study is directly related to our research problem because it analyzes the incidence of use of a self-correcting spelling and grammar software on the students' grammatical knowledge and writing skills. Even though it does not include a teaching proposal, it analyzes the impact on the students' knowledge and practice. His results will help understand the development of the students' English Writing through writing software.

Finally, Sañudo (2015) carried out a research project based on a mixed approach. Pn the one hand, he did documental research on the use on a grammar checker for the teaching English writing tools; on the other, he reported his own experiences using this software. He concluded that grammar checkers solves many of the errors and mistakes that learners commit when writing in English. The software also offers useful information about the errors and the correct expressions. Using this kind of programs, students can individually correct the errors, without the help of others, especially, the teacher. The use of grammar checkers to teach English writing tools can improve the students' grammar knowledge and their writing skills.

The results of this investigation are very relevant to the development of the study because this author made a systematic review of the literature on the use of grammar checker. It will help us to clarify some concepts, which will serve to interpret the incidence of the use on a grammar checker on the development of writing skills and grammar knowledge.

After having analyzed four previous studies related to our research problem, it was concluded that all of them achieved their objective. Applying virtual writing tutor-based teaching proposals enhanced the development of English academic writing skills. So, students improved their writing skills and grammar knowledge.

2.2 Philosophical foundations

This research is based on the following philosophical foundations:

First, it is based on constructivism. It is a theory that explains how knowledge is constructed, how learning occurs (Smith L. , 2017). From this perspective, learners are the main character in the learning process. Playing an active role, they construct their knowledge from their previous knowledge, their interests, and needs. Learning should be an active process in the classroom, in which existing knowledge relates to new information. The teacher facilitates situations n in which students can use their knowledge, competencies and their cognitive tools to learn (Bada & Olusegun, 2015).

Second, Bandura's Socio-Cognitive theory (1986) supports this research. This theory considers that people learn skills and knowledge by doing, being involved in real practical activities. If those activities are authentic, significative and interesting for le learners; if they are based on what learners like, know, and what they want to know, students are motivated to learn, and they develop their knowledge.

 Third, this research is supported by the conception of academic writing as a socio-cognitive process (Gregg & Steinberg, 2016). From this viewpoint, writing is a process in which the writer, based on his previous knowledge, his competence, his interests, and needs, construct meaning using the written language. In this process, the writer follows four steps: first, he prepares, in mind, screen or paper, what he wants to write: explores ideas, writes drafts, talks, and reads. Then, based on what planned, he puts in words his ideas in a draft. After that, he revises content, coherence, cohesion, and supports of the ideas. Finally, he checks grammar, spelling, transcription, organization (Elbow, 1998; Smith F. , 2013).

2.3 Legal basis

From a normative and legal perspective, this study is based on the following statements:

First, The Acuerdo Ministerial 052-14 (2014) supports this research. This establishes that English as a foreign language must be an essential component of the academic activities that schools offer English should be taught from elementary school until the college level.

Secondly, this project is based on some articles of the Ley Orgánica de Educación Intercultural (LOEI) (2016, p. 12).

The article 2: promotes the inclusion of the English language in the teaching and learning process:

> bb. Plurilingüismo. - Se reconoce el derecho de todas las personas, comunas, comunidades, pueblos y nacionalidades a formarse en su propia lengua y en los idiomas oficiales de relación intercultural; así como en otros de relación con la comunidad internacional.

The article 3: also encourages the teaching and learning of a foreign language in order to educate people in a multilingual conception. The LOEI promotes communication between Ecuadorian with non-Spanish speaking people, who speak English. It also promotes research using in other languages, especially English.

Article 19: It states that education should consider linguistic criteria to better the people life conditions. In our case, it refers to the teaching and learning of English academic writing.

Besides, the Article 124 of the Ley de Educación Superior establishes that:

> Es responsabilidad de las instituciones del Sistema de Educación Superior proporcionar a quienes egresen de cualesquiera de las

carreras o programas, el conocimiento efectivo de sus deberes y
derechos ciudadanos y de la realidad socioeconómica, cultural y
ecológica del país; el dominio de un idioma extranjero y el manejo
efectivo de herramientas informáticas (Ecuador, 2010).

To sum up, the Ecuadorian legal framework establishes among the main priorities
the multilingual education, in which English is considered the first linguistic
option to learn. It will increase academical, professional and social opportunities
to Ecuadorians. By teaching English as a foreign language, Ecuador recognizes
English   as   the   lingua.

2.4 Key categories

Language
teaching
approaches

Teaching
writing
strategies

Automated
Language
Evaluation
Tools

Virtual writng
tutor software

Language

Writing process

Academic writing

Academic writing
skills

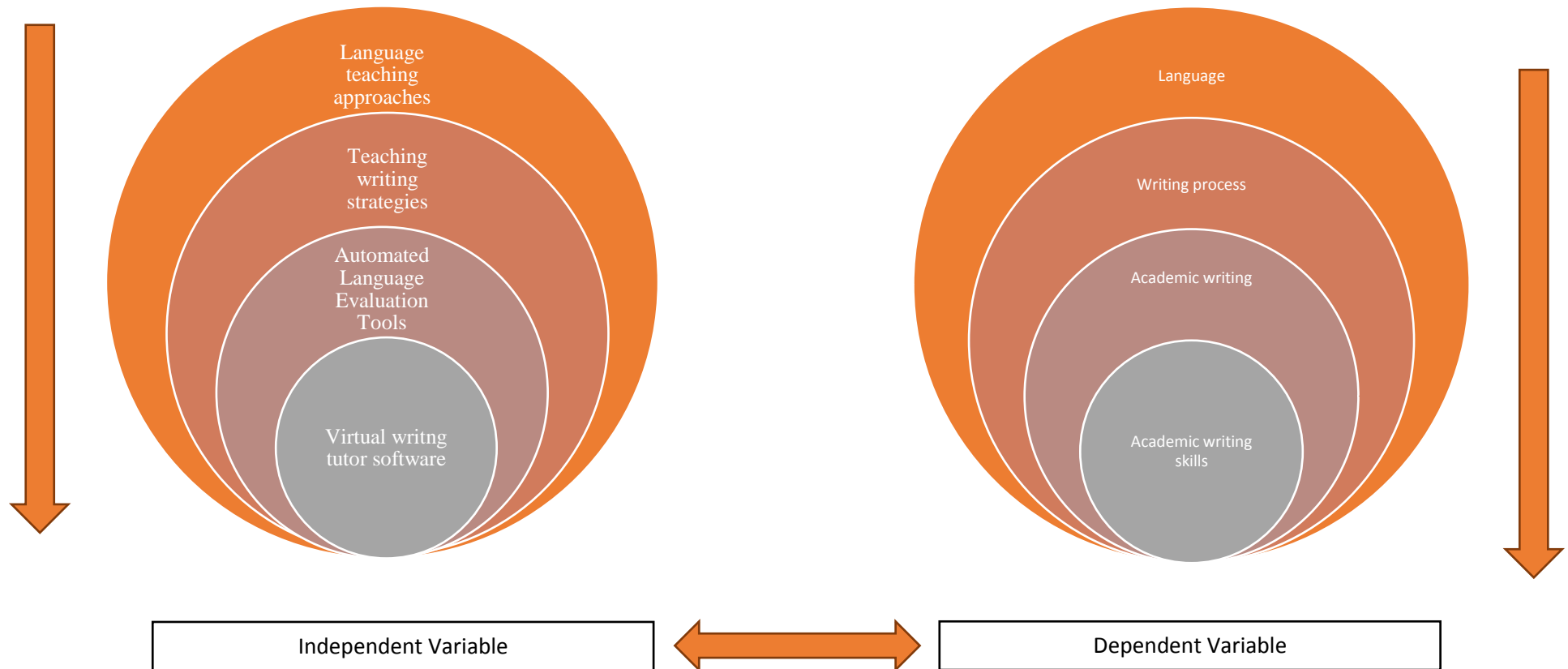| Independent Variable	Dependent Variable

Figure 2. Categories

Elaborated by: Tacoamán, Mario (2019)

2.4.1   Independent variable

2.4.1.1 Languageteachingapproaches

In the last forty years, different English teaching methods and approaches have been designed and proposed to improve learning and develop language skills. They go from the most traditional teaching to the most innovative communicative approaches. Richards & Rodgers (2014) have synthesized the main methods and approaches, which are briefly summarized as follows:

a) Grammar-translation method

The grammar translation method consists of teaching the English language by emphasizing on grammatical rules. Learning occurs mainly by translation to and from the target language. It gives more importance to learn reading and writing. Grammar rules must be drilled and memorized. Vocabulary is taught by repeating and memorizing isolated words. The development of oral expression has not much importance (Richards & Rodgers, 2014).

b) Audio-lingual method

According to the b)   Audio-lingual method, learning a language means learning habits; the main concerns of this method is to identify, exercise and memorize the grammatical structures and the basic sentence patterns. To learn a new language, first it should be heard and extensively drilled before being learned in its written form. There is much practice of dialogues of everyday situations. Much attention is given to pronunciation (Sharpe, 2018; Ghofur, Degeng, Widiati, & Setyosari, 2017).

c) The Direct Method

According to this method, students should learn entirely in the target language. Moreover, a second language is learned like the first language. It emphasizes oral communication. Translation is not recommended. Besides, spontaneous use of language, grammatical rules and structures are evaded. To teach everyday vocabulary is highly recommended, but it is taught by emphasizing on the correct pronunciation (Ajow, 2016)

d) The Silent Way

The Silent Way method promotes the natural learning of languages. It permits students to experience themselves as independent, responsible, and autonomous learners. It does not promote formal instruction, but it enhances the students to learn the language of their natural environment. The teacher has just the necessary participation in making learners have control of the language use for communication (Richards C. , 2017; Richards & Rodgers, 2014).

e) Suggestopedia

According to Suggestology, language is learned in a comfortable environment. Language learning occurs when learners can receive enough input. In this way, blocks to learning are eliminated. Mental relaxation is highly recommended because it helps to learn new information during the lesson. For that purpose, soft baroque music is played in class. Reading before sleeping or before they get up is also proposed (Richards C. , 2017; Richards & Rodgers, 2014).

f) Total Physical Response (TPR)

Total Physical Response (known as TPR) is a method based on listening. It associates language with the physical activities in which learners are involved to promote language comprehension and learning. Based on this method, learners should respond, first, to simple commands such as "open the window", "write", "give me your pencil"; then, more complex commands are introduced. Much importance is given to listening comprehension (Asher, 1969).

g) The Natural Approach

The natural approach emphasizes working in the similarities between the first, second and foreign language learning processes. Language is taught and learned through real communication. Mistakes are not usually corrected. Learning vocabulary is enhanced before learning grammatical structures. Learning takes place when students are exposed to natural language, that could be comprehensible for them (Weaver, 2018; Krashen & Terrell, 1983).

h) Community Language Learning

It was created to produce a cooperative learning community where students can benefit and learn from one another. A classroom is considered a place where a group of learners shares, rather than as a formal class. Using the mother language is recommended. It is translated by the teacher and then repeated by the students (Ali, 2018).

i) Communicative Language Teaching (CLT)

Communicative Language Teaching emphasizes on language for communication. Learning a language means learning to communicate through real and authentic communicative situations in the target language. Communicative interactions are proposed for students to learn the language and contents from different areas. Authentic and real discourse is introduced in the learning process (Ghofur, Degeng, Widiati, & Setyosari, 2017).

2.4.1.2   Teachingwritingstrategies

As has been said, writing follows a four-steps recursive process: prewriting, writing, and revision (which includes a correction step) (Smith F. , 2013; Elbow, 1998; Fareed, Ashraf, & Bilal, 2016; Balkır & Topkaya, 2017). So, the teaching of writing should consider this process to propose different strategies.

Brainstorm

Brainstorm is a fundamental strategy to develop writing skills. The student gathers ideas about what he is going to write, content, audience, structure, etc. In this kind of activities, content is more important than form. The student finds ideas that then he will put in words. He may use diagrams, mind maps, conceptual maps, word lists, among others. If the writer has many ideas to write, it could help him to organize them, to establish hierarchy, to decide what is more pertinent and relevant, and what could be omitted (Graham, Harris, & Chambers, 2016; Balkır & Topkaya, 2017).

Free writing

For some writers, it is useful to write whatever comes to mind to find the appropriate idea, purpose, theme, text to write. The writer writes the ideas,

describe de images, ask the question, describe the examples as they come to mind. In this activity, no attention should be paid to grammar, organization, punctuation, presentation. Later, he will have plenty of time to consider all those aspects (Joaquin, Kim,, & Shin, 2016).

To analyze the topic

When the student has a topic to write about, but it is too general. It is recommended to analyze it. It implies to divide it into parts to decide which is the most interesting and pertinent to the writing task. Writing requires to define the topic. This strategy helps the student limit the writing problem (Joaquin, Kim,, & Shin, 2016).

Outlining

At the beginning of the writing process, the learner could outline his ideas, which could help him to organize what he wants to say. In this way, he can consider the kind of text he pretends to write, its organization and the way he wants to develop the ideas. In this way, the hierarchy between ideas could be established (Hung & Van, 2018).

Drawing (depicting)

This strategy is used to generate ideas by drawing pictures of anything. It is beneficial before free writing, in which students are asked to write about a self-selected topic. When representing the ideas graphically, the learner can express his primary interests in which he wants to focus. It is highly recommended to those students with graphics abilities to manage information (Hung & Van, 2018; Lu, y otros, 2019).

Word list

 Base on this strategy, the writer writes a list of words of different topics. Then, classify these words according to the topics. He can grade them in each topic or organize them inductively or deductively. When there are many words in the lists, the writer has many options to start writing (Balkır & Topkaya, 2017)

Videos watching and listening to music

For some writers, doing recreational activities help to create ideas when they are blocked. It has been found that there are significant improvements when the learner watches video films as a writing strategy. It enhances the ideas, text organization and to the audience representation. Other writers listen to music for relaxation. In this state, the student can think and generate ideas more easily (Balkır & Topkaya, 2017).

Reading and researching

Sometimes, the best writing strategy if to find out information. When the teacher assigns the topic on which the student should write, it is probable that he has neither enough previous knowledge nor experiences on the topic. So, a good option is to do research, read to learn as much as possible on the topic (Balkır & Topkaya, 2017). It is a common practice when writing an academic text. Usually, before writing an essay, papers, project or thesis, the student should research an read a lot (Alameddine & Mirza, 2016)(Balkır & Topkaya, 2017)

Revising

Text revision is a fundamental process to improve both the written products and the learners´ writing skills. It can be done during the whole process, or at the end (Shibani, Knight, & Shum, 2018). It can also be developed by the teacher, the students, the classmates o any other person who could be competent in the content area of the text (Suzuki, Nassaji, && Sato, 2019).

Editing and correcting

After having finished the written text, when it has been revised by the own student or any other revisor, and before hanging or publishing it, the editing process is necessary to correct grammar, punctuation, spelling, presentation. In this stage, content is not considered, but language form, diagramming and presentation (Isaacson, 2017). The student can do it manually, that is: he reads the text to find errors and mistakes, checks spelling, looks for the meaning of words in the dictionaries, thesauruses, and encyclopedias. He can also use computer tools, such

as Grammar checkers (Buyse, 2014; Carrera, 2015; Castillo, 2015; Cáceres, 2018).

2.4.1.3 Automated Language Evaluation Tools

Automated language evaluation tools are critical aspects of the writing process in today's world. Most students and teachers have technological devices where these tools can be used: smartphones, tablets, laptops, among others. The academic literature suggests that technologies like these improve the students´ writing skills (Buyse, 2014; Wollscheid, Sjaastad, & Tømte, 2016; Fattah, 2015). Therefore, the use of virtual tools, designed to develop the students´ writing skills, are highly recommended in the writing classes (De Smedt & Van Keer, 2014).

However, technologies do not substitute teachers, training, and knowledge. Both teachers and students are required to know about technology, language, writing and the content area in order to use the automated language evaluation tools correctly (Ranalli, Link, & Chukharev-Hudilainen, 2017).

When teachers and students have the appropriate training and enough knowledge, these tools have proved to be effective to develop the students´ writing skills (Buyse, 2014; Carrera, 2015; Castillo, 2015; Cáceres, 2018). When they are used correctly, time and effort reduced.

Automated Language Evaluation Tools detect grammatical errors and mistakes; vocabulary pitfalls, spelling mistakes, misspelling. The tools mark the problem; the student must decide to accept corrections proposed, because they are appropriate, or ignore them. By taking these decisions, it enhances the development of the students´ writing skills (Cáceres, 2018).

Online Grammar Checker

Grammar checkers are among the most virtual tools used to develop writing skills. It includes spelling, grammar, punctuation, style, capitalization, transcription. Almost all word processors include a spelling and grammar checker program. As a computer software, you can program the grammar checker: automatic error identification, automatic error correction; you can additionally choose the autocorrect options orCheck spelling and grammar manually. You can also edit

the characteristics of the word processor grammar checkers. Grammar checkers identify the problems by highlighting or underlining errors. Usually, they suggest corrections and explain what the problem was(Sañudo, 2015).

Grammar checkers are tools to enhance the development of writing skills, but their applications and capacity are limited. They include just a stage of the writing process: editing (Smith F. , 2013). They just find formulaic problems: syntax, punctuation, capitalization, spelling, transcription. However, grammar checkers do not either identify or correct errors of content (Potter & Fuller, 2018).

Godolakis(2013) proposes three practice to complement the grammar checker use:

First, check the incorrect word in a dictionary. In this way, you can compare the option the checker offers with one of the dictionaries.

Second, check a grammar handbook for grammatical error. Sometimes, the context is needed, and the grammar checkers have limited context support.

Third, analyze the positive and negative results of the grammar checker, to insert the changes that are required: include new words, include synonym, grammatical functions, among others.

Grammar checker benefits

Writing error-free texts is difficult, even for experts. The automated spell checker system can help professionals, students, website owners, bloggers and writers to deliver almost error-free text. It is critical for users that write in a language that is not their mother tongue. So they will benefit from using online tools. It will not only help them to correct the text, but they will also get information, why the use of a word is wrong in the given context (Cáceres, 2018; Godolakis, 2013; Sañudo, 2015; Carrera, 2015).

There are many grammar Checker programs online. They can be used in many languages. Among other, we can find: Instant Grammar Checker, Automatic Grammar Checker, Grammar Checker Online, Online Editor Grammar Checker,

Online Editor Grammar Checker,Language Tool - Spell and Grammar Checker, Grammarly, Sentence Checker.

They have some common characteristics. They are free and secure; they do not need subscriptions or registration; they do not have a limit of words or searches; they do not require additional software installation, and they can be used in any technological equipment.

2.4.2 Dependent Variable
2.4.2.1 Language

Language has been defined in different ways. For the LNS School Dictionary (2016), language is what community of user speaks. It could be natural language if people learn it naturally, from mother to son. It also could be national language when it is spoken historically by the population of a country if it is shared as a cultural knowledge by most of the people that live in a nation.

According to Chomsky (1981), language is constituted by an infinite set of sentences, that is constructed from a finite set of words. From this perspective, human beings can produce and understand an unlimited number of sentences from a limited number of lexical units. This capacity is universal and innate to the people. It also applies to all the natural languages.

Language is the capacity of human beings to use the linguistic system of codes to communicate (Richards, Platt, & Weber, 1985). This system of representation is formed of words and grammatical structures of the language.

It is distinguished two main concepts in this conception. First, linguistic competence, which is used to designate the linguistic knowledge about language that native speakers of a language have. It is the language system that permits to produce and comprehend the infinitive number of sentences above mentioned. This knowledge also gives the capacity to discriminate between the grammatical sentences and the ungrammatical ones (Chomsky, 1981; Richards, Platt, & Weber, 1985; Chomsky, Topics in the theory of generative grammar, 2013).

On the other hand, linguistic performance is the actual use of language in real situations. It means to use this knowledge to communicate, ideas, information,

desires, and emotions, make requests (Chomsky, 1981; Richards, Platt, & Weber, 1985; Chomsky, Topics in the theory of generative grammar, 2013).

As a reaction against this Chomsky' seminal conception, Dell Hymes proposed the notion of communicative competence (Canale, 2014), which refers to which refers to the linguistic and social knowledge of the language people have that permit them to use it appropriately (Hymes, 1972; Savignon, 2018).

Language can be performed in four different language skills: The receptive skills: listening, that is, to comprehend spoken language, reading, to (understand written language; and productive skills: speaking, produce oral language and writing, produce written language (Richards & Rodgers, 2014). This research is focused on writing skill.

2.4.2.2 Writing

In the academic context, writing is the most important productive skill. It is not the transcription of speaking. On the contrary, it is a system of representation of thoughts, knowledge, feeling of human beings (Smith F. , 2013; Richards, Platt, & Weber, Longman Dictionary of Applied Linguistics, 1985).

It can be defined as a process of meaning construction, in which the writer uses all the linguistic resources, his previous knowledge, expectations, interests, experiences, communicative competence to produce a discourse to accomplish any of the functions of language (Smith F. , 2013; Elbow, 1998).

In this context, grammar is necessary but not enough to write. The writing process requires some capacity, knowledge and information from the writer: a message, something to say; a purpose, a function to achieve; a format of the text, the rhetorical organization; linguistic, social, cultural and pragmatic knowledge of the language; knowledge of the audience, among other (Smith F. , 2013).

Writing process

The writing process has three recursive stages and a final linear one (Elbow, 1998; Grabe & Kaplan, 2014; Smith F. , 2013): prewriting or drafting, writing, rewriting or revision and editing.

The first three stages are flexible; they are not successive. The writer can go forward or backward according to his needs. In these stages, content, meaning,

pragmatic information and textual organization are more important. The editing stage, on the contrary, should be done at the end of the process, when the final draft has been accomplished. In this final stage, grammar, spelling, punctuation, transcription, and presentation are the central aspects to be considered one (Elbow, 1998; Grabe & Kaplan, 2014; Smith F. , 2013).

a) Prewriting

According to Smith (2013) and Elbow (Elbow, 1998), in the prewriting stage, writer prepares for writing, think on the idea, read, research: He writes an outline or a diagram, thinks on the idea, reads, or researches the topic. He can think on the audience, in the rhetorical organization or in the content to be developed. Sometimes, some writers talk to other people, do interviews. In this process, others relax, do recreational activities to let the ideas flow: listen to music, watch a film, swim, walk. This preparation could be done in paper, on the computer, in voice recorder, or mind. (Balkır & Topkaya, 2017; Gregg & Steinberg, 2016; Hung & Van, 2018; Joaquin, Kim,, & Shin, 2016; Klein & Boscolo, 2016; Lu, y otros, 2019).

b) Writing stage

Smith (2013) and Elbow (Elbow, 1998) consider that, in this stage, the writer sits and write the drafts based on what prepared previously in the prewriting stage or on the ideas that flow during the process. He puts in words what comes to his mind. As the writing process is not linear but recursive, he may stop to revise what he has written, or he may stop to prepare what comes.

c) Rewriting stage

Writing theorists (Elbow, 1998; Grabe & Kaplan, 2014; Smith F. , 2013) consider that in the rewriting stage writer analyzes the text, reflects on the content, the structure, the audience to improve the text quality. Sometimes, it implies to make a literature review, interviews, to ask for expert assistance. The write can review his text any time he considers it is necessary; he does not need to wait until the

final draft is done. When revising, the writer can change the whole text or just part of it. He can also reconsider the language, the rhetorical characteristics of the text based on the audience (Shibani, Knight, & Shum, 2018; Suzuki, Nassaji, && Sato, 2019).

d) Editing stage

This is the final stage of the writing process. Some authors consider it an independent stage; others include it in the rewriting stage (Elbow, 1998; Grabe & Kaplan, 2014; Smith F. , 2013). In both cases, it focuses on the form of the discourse. The main interests of the writer are a formal component of language: grammar, punctuation, spelling, capitalization, vocabulary, style, transcriptions and the diagrammatic aspects of the text presentation. (Shibani, Knight, & Shum, 2018; Suzuki, Nassaji, && Sato, 2019). Some authors have studied the development of this stage by the use of computer-mediated programs (Carrera, 2015; Castillo, 2015; Cáceres, 2018; Graham, Harris, & Chambers, 2016; Martinez & Olsen, 2015; Godolakis, 2013; Potter & Fuller, 2018; Sañudo, 2015). They have found that the use of grammar checkers and other automatic language evaluation tools are effective to improve writing skills.

2.4.2.3 Academic writing

Academic writing is considered a style that scholars use to gatekeep the boundaries of their disciplines. It has rules which are different from those used in everyday personal writing. In this context, researchers prefer to use a formal format to organize Ideas. Academic writing uses a clear, concise, objective, impersonal and specialized language (Gotti, 2005).

It refers to all the writing activities that are carried out in an academic context, with academic purposes (Swales & Feak, 2004; Paltridge, Starfield, & Tardy, 2016; Hyland & Jiang, 2017). It includes the writing practices in the professions (for example, Engineering, Accounting, Medicine), scientific publications (among others, papers, case reports, reviews, essays) and genres produced in institutionalized contexts for evaluation and promotion purposes (research projects, theses, dissertations, monographs, essays) (Candlin & Hyland, 1999).

Academic writing is different from personal writing because it requires to have academic training in content, language and text structure. It also requires to be part of an institutionalized academic context. Among its characteristics are objective, precise, clear, systematic, organized, evidence-based, specialized, correct (Swales, 1990).

Discourse genre

The notion of genre is key in the context of academic writing. So, the discourse genre is defined as follows:

Paltridge(Paltridge, 1997) consider that a genre is defined at the discourse level. It is not dependent on the presence of any superficial aspect of language in isolation. The sociocultural context defines a genre. For Biber(Biber, 1989), genres are defined and distinguished based on nonlinguistic, sociocultural and disciplinary criteria. Hyland (Hyland, 2002) defines the genre as a set of oral or written texts that have similar socially recognized objectives and which, consequently, have a similar format of organization to accomplish their purposes.

Swales (1990, pág. 58) considers that a discourse genre comprises a class of communicative acts, in which participants share some communicative purposes. They are recognized by the established members of the scientific community and therefore constitute the basis for the genre. This rationale guides the organizational structure of the text and influences the content and style choices. That is why prototypical examples of a genre show rhetorical patterns of organization and language use.

Bhatia (1993, pág. 13) adds some considerations to the Swales´ definition. He said that a genre is a communicative event characterized by the communicative purposes shared by the members of a given community in which it is used, read and write. A genre has a conventionalized structure in relations to its purpose, the way authors are positioned, and the linguistic choices.

Finally, Holmes (1997) defines the discourse genre as a type of texts, which main distinctive features are that has a specific communicative purpose and because of that, the text is organized in a specific format.

2.4.2.4 Writing skills

Writing implies the use of specific skills to communicate ideas, thoughts, and opinions efficiently. In the academic writing context, most of the time they should be learned.

Grammar Skills

Richards, Platt, and Weber (1985) define grammar as the description of the organization and structure of the language. It includes how words joint to generate sentences and phrases in the language. As highly conventionalized and arbitrary, grammar skills should be formally taught. It includes syntactical rules, word formation processes, punctuation, spelling, capitalization, academic style.

Discourse skills

As has been said, every genre has distinctive features: linguistic, textual, socio-cognitive and disciplinary characteristics that differentiate them from one another (Swales & Feak, 2004; Paltridge, Starfield, & Tardy, 2016; Hyland & Jiang, 2017). For Swales (1990, pág. 58), these features should be taught at the university level so that the students could succeed in the academic and professional future contexts.

It also includes the abilities to know what to say, when, how, and to whom to accomplish the writing purposes (Swales & Feak, 2004).

Rhetorical skills

 They consist of the knowledge to communicate appropriately according to the institutional and social context. As citation is different from a discipline to another; that is, scholars cite differently according to the discipline they are part of, the differences of these practices should be taught (Swales, 1990).

Text structure skills

Each genre has a different rhetorical organization. For example, research papers follow the IMRD format, which includes specific rhetorical sections constituted by distinctive elements (Swales, 1990; Holmes, 1997). Similarly, these have a modified IMRD format that consists of introduction, literature review, methods, results, discussion, conclusion. Like research papers, each of these sections includes different elements that distinguish them (Swales & Feak, 2004; Paltridge, 1997).

Text formal presentation and organization skills

Academic writing implies publication. The organization on the final draft will depend on the instructions of the journals, publishers, institutions (Faculties, doctoral programs, research funding, institutions). They usually are very specific, detailed, precise directions, which usually differentiate one another even in the same area. It requires to follow the established instructions (Swales & Feak, 2004; García Flores & Jiménez, 2017).

2.5 Hypothesis

H1: The use a virtual writing tutor software enhances the development of the English academicwriting skills in a group of Super-Intensive Level students at the Languages Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

H0: The use a virtual writing tutor software does not enhance the development of the English academicwriting skills in a group of Super-Intensive Level students at the Languages Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

2.6 Signaling hypothesis variables

Independent variable:A virtual writing tutor software.

Dependent variable: English academic writing skills.

CHAPTER III
METHODOLOGY

In this chapter, the methodological framework of this research is described. First, the type of study used is identified. Then, the research design is defined. After that, the population and sample are defined. Then, the operationalization of variables is presented in a chart. Finally, the methods of data collection are described.

3.1 Research scope

The current study combines the qualitative and quantitative approach. It analyzes the incidence of a virtual writing tutor software on the development of the English academic writing skills in a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

So, with that purpose, this research describes, on the one hand, both variables qualitatively in the theoretical foundation section. On the other hand, it analyzes quantitatively the errors found in the texts written by the sample before and after having been exposed to a tutorial for using the automated grammar checkers Grammarly®.

As Pérez (2002) states, qualitative research can relate human sciences to understand human practices; so, different perspectives are needed. On the other hand, the quantitative research approach contributes to quantify variable to understand the behavior of numerical variables based on statistical analysis (Gorard, 2001).

3.2 Research design

In this study, a quasi-experimental research design was used. Quasi-experimental designs are used when causal hypotheses need to be tested in one or two groups, in which members are randomly assigned. When there are two groups, both must be as similar as possible in terms of pre-intervention characteristics.

In this study, there was just one group, because there is only one Super-Intensive Level Course at the Languages Institute Espe-Inca Branch, Universidad de

lasFuerzas Armadas, Quito, Ecuador. The course could not have been divided. As the use of grammar checkers has been found to be effective to enhance the writing skills (Castillo, 2015; Carrera, 2015; Cáceres, 2018), if divided, part of the class could have been affected negatively, because they would not receive teaching proposal considered a good practice. Therefore, this group was not divided.

3.3 Population and sample

The population is constituted by the individuals that are part of the study group; so, it includes all the persons that could be part of the research. It is an essential element of the study. The sample, in turn, is defined as a part of the population when it is not possible or convenient to work with the whole population. The sample should represent the population, that it, it should have the characteristic of the population (Guachichullca, 2015).

In this research, a population is made of a group of 25 Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador. As the population is small, no sample was selected.

Table 1. Distributive of the population

POPULATION	TOTAL
Men	10
Women	15
total	25

Source: Tacoamán, Mario (2019)

3.4 Operationalization of variables

3.4.1 Independent variable: A virtual writing tutor software
Table 2. Independent variable: Complementary material

VARIABLE CHARACTERIZATION	DIMENSIONS	INDICATORS	BASIC ITEMS	TECHNIQUE AND INSTRUMENT
A virtual writing tutor software The virtual writing tutor software, such as Automated Language Evaluation Tools and Grammar Checkers, are apps designed to correct written texts and to develop writing skills, vocabulary, spelling, sentence structure, capitalization, syntax, style, and plagiarism. It can be used to teach grammar and the writing process. It can also be used to produce grammatically correct texts. They can be used online. (Sañudo, 2015; Yang, 2018; Cavaleri, 2016).	1. Automated Language Evaluation Tools	- Online Language Tools - Instant Grammar Checker - Online Grammar Check - Free - English Grammar - Checking Tool Free - Online Editor - Grammar Checker - Grammar and spellchecker	1. Do the students use the virtual writing tutor software Grammarly™? 2. Do the students identify errors by usingthe virtual writing tutor software Grammarly™? 3. Do the students feel motivated to write and to usethe virtual writing tutor software Grammarly™? 4. Do the students check grammar, style, and plagiarism using the virtual writing tutor software? 5. Do the students make grammar, style, and plagiarism corrections? 6. Do the students learn grammar, style, and to avoid plagiarism?	Observation /Sheet Survey /questionnaire
	2.Grammar checkers	- Vocabulary - Spelling - grammar - Punctuation - Syntax - Style - Plagiarism.	• Lexical appropriateness and cohesion. • Lexical collocations • Word agreement • Construction of sentences • Use of parts of the speech • Addition, omission, substitution, transposition of letters. • Punctuation marks: comma, colon, period, semicolon, hyphen • Citation and paraphrasing	

Source: Tacoamán, Mario (2019)

3.4.2 Dependent variable: English academic writing skills

Table 3. Dependent variable: English academic writing skills

VARIABLE CHARACTERIZATION	DIMENSIONS	INDICATORS	BASIC ITEMS	TECHNIQUE AND INSTRUMENT
English academic writing skills Academic writing is a style used to gatekeep the boundaries of disciplines. It is different personal writing, uses a formal format to organize Ideas. It is clear, concise, objective, impersonal and specialized (Gotti, 2005). The academic writing requires the appropriate use of spelling, grammatical and punctuation rules. It also implies the use of technical and specialized vocabulary to fulfill academic purposes (Swales &Feak, 2004). It includes fitting the academic styles to write according to academic conventions (for example, Linguistics), scientific publications (articles) and genres produced in institutionalized contexts for evaluation and promotion purposes (theses, dissertations, monographs, essays) (Candlin& Hyland, 1999).	1. Grammar Skills	1.1 Punctuation 1.2 Word agreement 1.3 Construction of sentences 1.4 Use of the parts of the speech	Appropriate and correct use of the grammatical, punctuation rules and spelling rules. Correct use of capitalization	Written task: essays of 1000 words length Rubric Pre-test Post-test
	2. Discourse skills	2.1 Audience 2.2 Purpose 2.3 Status 2.4 Roles 2.5 Discipline	Appropriate and correct use of the academic writing style	
	3. Rhetorical skills	3.1 Citation 3.2 Referencing 3.3 Quotation	Avoidance of plagiarism by using the appropriate citing style.	
	4. Text structure skills	4.1 Formal format 4.2 Cohesive ties 4.3 coherence	Appropriate and correct use of the cohesive ties to write coherent and cohesive texts	

Source: Tacoaman, Mario (2019)

3.5 Methods of data collection

3.5.1 Observation

Observation is a key way to collect data in scientific contexts. Participant observation is one of the most used methods in qualitative research. It can be used in any discipline, because it permits to gather information from different sources: persons, activities, cultural practices, among others. In education, it allows us to describe and to analyze teaching and learning process (Bogdan && Biklen, 1997).

Students will be observed during the implementation of the proposal. The interactions of the students when they are writing, working with the app, talking to the teacher or the classmates will be registered in the observation guide sheet.

The observation guide is a document in which objectives, variables, indicators or questions to be evaluated are included so that they can be verified. Also, general commentaries can be to be included. It allows describing the phenomenon from a whole perspective. As a guide, it can be organized in columns, in lines, or open (Macazaga, 2014) (to see the observation guide used, go through the appendix 1).

3.5.2 Survey

A questionnaire was designed to gather information related to the students´ motivation to use the Grammarly software to develop their academic writing skills. The questionnaire consists of eight closed questions. The students were asked if they feel motivated to use this grammar checker tool. Since it was an English class, the questionnaire was written in English (see Appendix 2).

3.5.3 Pre-test and post-test text analysis

A pre-test and a post-test were administered based on the writing of academic texts to assess the participants' academic writing skills. The pre-test was carried out in the first session; the students were required to write a like-essay text of about 1000 words length on a free topic. Then, in the last session, the students should write a similar text to complete the post-test assignment.

The texts were read and then analyzed using a rubric, in which different written language aspects associated with the academic writing were considered (Swales & Feak, 2004) (See appendix 3):

1) First, contextual spelling will be assessed. It implies to find out that words are spelled correctly. It includes to find out the word agreement, that is, if words agree with the surrounding words, considering the context.

2) Second, it will be evaluated the appropriate vocabulary choice (the correct word).

3) Third, the correct use of grammatical rules will be assessed. It includes syntaxis: number, gender, tense and mode correspondence; word agreement and punctuation: the correct use of the comma, colon, semicolon, period, question and quotation marks.

4) Fourth, sentence structure will be evaluated. It includes misplaced words, incomplete sentences,

5) Fifth, citation and paraphrasing will be evaluated to avoid plagiarism.

6) Finally, the use of academic style will be assessed.

The essays were assessed based on the following scales (See appendix 3):

- Poor: 1-2 points
- Weak: 3-4 points
- Adequate: 5-6 points
- Good: 7-8 points
- Outstanding: 9-10 points

3.5.4 Systematic literature review

A systematic review was carried out to collect available publications in different academic databases, searchers, online libraries and repositories, books, scientific articles, theses, and any other virtual documentation that could offer reliable and concise information related to the problem investigated (Graham, Harris, & Chambers, 2016).

3.6 Research procedures

Data were collected in three stages during the course: diagnosis, experimentation, evaluation. To gather the data, during the course, the students were asked to write seven texts. The first and the last texts, corresponding to the pre-test and post-test tasks, were analyzed using a rubric describe above.

To determine the students' academic writing skills, we choose short essays written in English, because this kind of written texts allows the students to express their ideas freely.

During the course, the students should write seven essays of a thousand words length. They were about a free topic but should have a formal, academic format. The texts were analyzed using a rubric describe above (See appendix 2).

3.6.1 Diagnosis

The first session of the course, the students were asked to write the first text according to the characteristics mentioned for the pre-test evaluation.

Through in-depth and detailed analysis, we sought to identify grammatical and academic styles errors in the students' texts: syntactical structure, spelling, capitalization, punctuation, tense, coherence, cohesion, style, and lexical problems. Then, the frequency and the type of errors were quantified and categorized manually and using the software Grammarly.

Based on the error patterns found, it was designed a 6-session course, two hours each, in which students work with six different online tools to solve their before mentioned problems:

1. Contextual Spell Checker
2. Vocabulary enhancement
3. Grammar Correction (syntaxis and punctuation)
4. Plagiarism Checker
5. Academic style awareness: Formality and conciseness.
6. Performance evaluation and synthesis of the experience.

During the second week of the course, students participated in a training class to learn how to access and use the grammar checker tools of the software Grammarly™, which had two parts:

1) First, it included an introduction to the grammar checker to be used, using two tutorials published on YouTube:

(a) Grammarly tutorial 2018: easily check grammar with Grammarly.

(b) How to use Grammarly to improve writing skills. In that session, students were asked to create an account in https://www.grammarly.com/.

When they had their users, they watch individually the two before mentioned tutorials. They could stop, go backward or forward, whenever they need. They could also ask questions to the teacher in order to clarify doubts, solve problems and to show they have comprehended how to use the tool.

2) Then, the students did exercises to practice the use of the app, to find grammatical errors and correct them using sample texts provided by the teacher-researcher in the Grammarly app.

3.6.2 Implementation of the proposal

Every class, they were asked to write a text. To use Grammarly, students can copy and paste a text into the input box in the Grammarly web site or upload a document to save the original formatting. When they had run their texts through the program, they had to write or copy the report of the errors that had been identified, according to the category studied that day, as follows:

1) In the first session, spelling.
2) In the second, vocabulary.
3) In the third, "grammar (syntaxis and punctuation)
4) In the fourth, plagiarism.
5) Finally, in the fifth, the academic style (formality and conciseness).

They were also asked to report the solution proposed by the tool for each error. Then, every error was analyzed based on the given proposal. When the students were aware of the problem and the solution, they could correct the text.

6) In the sixth class, they could integrate the criteria and make a whole check. That is, check the text for any error and correct them.

3.6.3 Evaluation

After having participated in the six sessions of the proposal, the students will be asked to write another text according to the instructions before mentioned for the pre-test evaluation. The texts were evaluated considering the different aspects, associated with the academic writing above mentioned in the text analysis section. The frequency and the type of errors were quantified and categorized manually and using the software Grammarly.

CHAPTER IV
ANALYSIS AND INTERPRETATION

In this chapter, the information gathered before and after the implementation of the proposal is reported. First, the pre-test results are presented and analyzed. Then, after having implemented the proposal, post-test results are, also, presented and analyzed. In both cases, descriptive and inferential statistic techniques were used. Then, data obtained from the observation and the questionnaire were reported and analyzed.

In the first part, data suggested that students have many writing and grammatical problems that need to be solved. In the second part, after implementing a proposal to improve their academic writing skills, data indicated that using the virtual writing tutor software Grammarly™ to develop the English academic writing skills is effective.

4.1 Class observation

In order to describe if the students were motivated when using the virtual writing tutor software Grammarly™ to develop their academic writing skills, class activities were observed during the application of the proposal. Classroom observation data were coded and analyzed qualitatively. Then, they were triangulated with the results gathered from the questionnaire and the pre-test and post-test results.

 It was found that at the beginning students did not spend much time in skills in revising and correcting their written texts; however, the activities and strategies proposed to enhance their academic writing skills were effective. During and at the end of the proposal, they gradually included the use of the virtual writing tutor software Grammarly™ to develop their academic writing skills. In the end, they could use it autonomously. It indicates that the academic English writing class could be improved.

Observations

- At the end of the proposal, the students always use the virtual writing tutor software Grammarly™ every time they write. It became a regular practice.

- It was observed that they often interact with one another and with the teacher. They ask questions to clarify doubts, solve problems, choose the appropriate option o just to share the experience.

- It was found that thanks to the use of the virtual writing tutor software Grammarly™, they are motivated to write, they participate actively in the writing assignments.

- Sometimes, when they did not finish the tasks in class, they save the drafts to work at home independently. In those cases, they search for more information to complement what was given in class.

- It was detected that they always look motivate to do all the activities proposed. They looked comfortable in the class. It seemed that they like the writing class, they like working with the virtual writing tutor software Grammarly™.

- To sum up, the teaching activities based on the use of the virtual writing tutor software Grammarly™ became part of the regular tools the students have, to develop their writing skills, and they felt motivated to write, correct and or learn.

4.2 Survey

A short questionnaire was administered to the students in order to collect the necessary information to evaluate the incidence of the use of the virtual writing tutor software Grammarly™ on the development of the students' academic writing skills and on their motivation to participate in writing activities. The results, as well as its brief interpretation, are shown below.

- It was found that they learned how to use the virtual writing tutor software Grammarly™. They considered that it is a practical tool to correct the written text.

- The students said that this app is easy to manage and useful for university English language students.

- The students indicated that they felt comfortable to use it in class and outside the class. So, they used it frequently.

- They considered that all English language university students should use it. So, they recommend it to their friends and partners.

- It also was found that as they felt comfortable to use of the Grammarly app to develop their writing skills, they wrote better, learned how to correct their texts and, therefore, they improved their English academic writing skills.

- To sum up, the virtual writing tutor software Grammarly™ seems to be a handy, practical, easy-to-use and effective tool for the students. So, they recommend using it in the English class.

4.3 Analysis of the results of the Pre-Test

As part of the pre-test, the students were required to complete a writing assignment, which consists of a short essay written in English on a free topicof about 1000 words length. The texts were read and then analyzed using the rubric (see appendix 3), in which different written language aspects associated with the academic writing were assessed: spelling, punctuation, grammar, sentence structure, vocabulary, style, and plagiarism.

As it was mentioned before, essays were assessed based on the following scales:

- Poor: 1-2 points
- Weak: 3-4 points

- Adequate: 5-6 points
- Good: 7-8 points
- Outstanding: 9-10 points.

The types of errors were identified, coded and classified. After coding the error types, the frequency of errors was counted and assessed. The type of errors was quantified and categorized manually and using the software Grammarly™.

First, results from the analysis of each of the seven categories are reported. Next, a synthesis of the results is presented.

4.3.1 Spelling

According to the results (figure 3), it was found that most of the students were scored as having an adequate performance. It represents the 88% of the sample. Only one was score as good, and no one was reported as being poor or outstanding. These middle scores could be associated to the teaching approach used in this academic writing class.

It suggests that all the students need to improve their writing skills using another method, which includes technology.
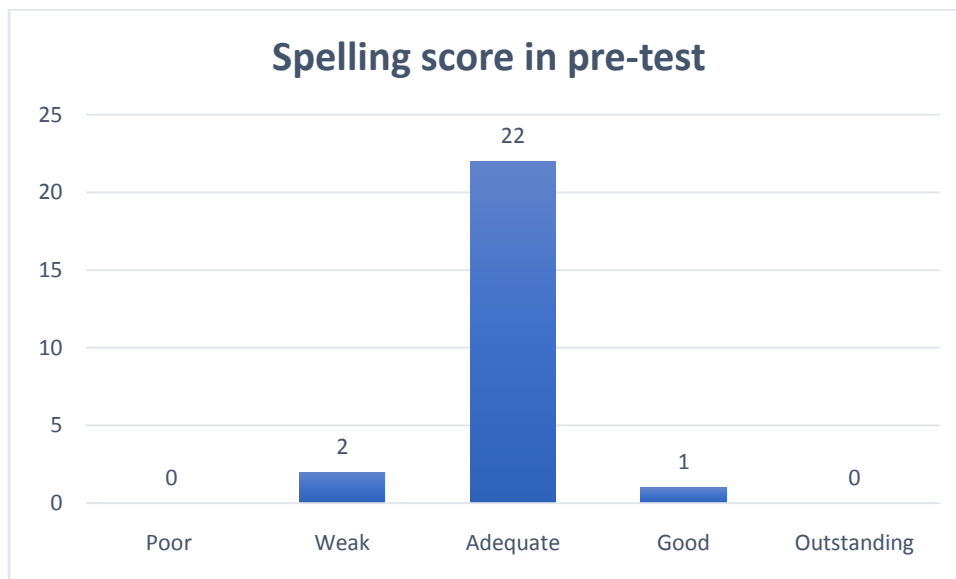
Figure 3. Spelling score in pre-test

Source: Results of pre-test y post-test

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4.3.2 Grammar: Analysis and interpretation

According to the grammar results, shown in figure 4, most of the students were scored as having a weak or adequate performance. It represents the 96% of the sample. Only one had a score of good, and no one was reported to have poor or outstanding scores. These low scores indicate that the students have difficulties to write grammatically correct texts in English. It also indicates that probably, the traditional teaching approach used in this academic writing class does not satisfy the students´ needs.

Therefore, results suggest that a different English writing teaching approach need to be implemented to improve students' writing skills, which includes technology.
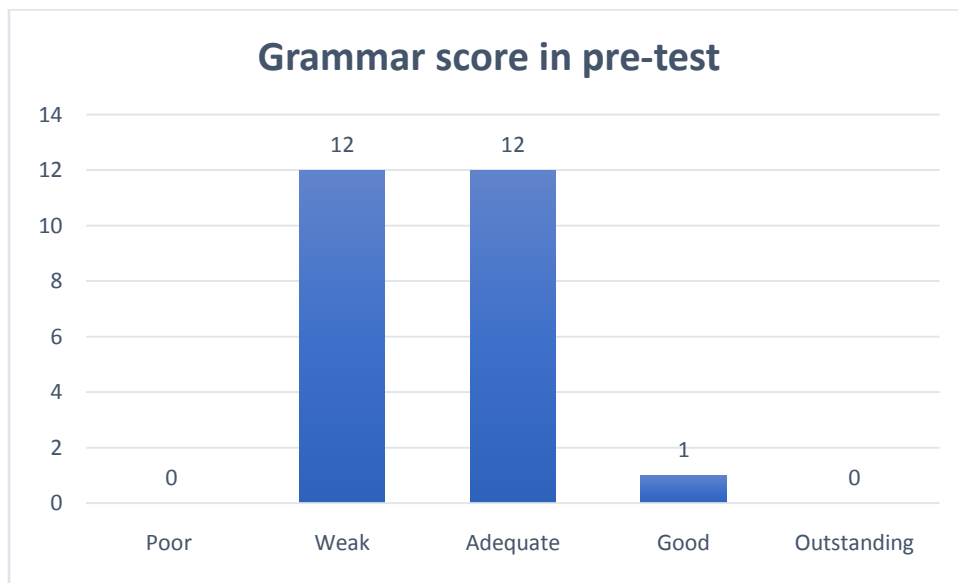
Figure 4. Grammar score in pre-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.3.3 Punctuation

As observed in the figure 5, the students had difficulties to use correctly punctuation marks when writing academic texts. Most of them, 92%, had weak and adequate scores. Just two students, which represents 8%, got a good score.

Probably, it is due to little and inefficient practice carried on in the classroom, lack of writing practice and lack of appropriate corrections and revision. Students need to practice more writing skill in order to learn the punctuation usage. To that purpose, the teacher could use ICT, especially, automated grammar checkers to enhance the development of writing skills.
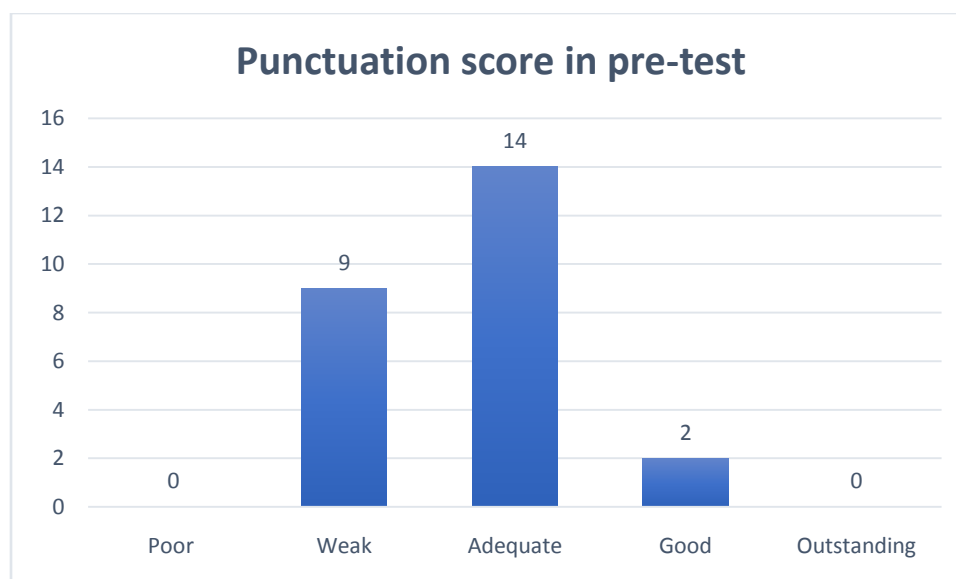
Figure 5. Punctuation score in pre-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.3.4 Sentence structure

As can be observed in the figure 6, all the students had weak or adequate scores. It means that all of them require, anyhow, improve their competence to write academic texts with adequate sentence structure. This writing skill involves grammar knowledge and authentic writing practice. Probably, the teacher has no either time or teaching experience to do that.

There, in order to help those students to improve their sentence structure writing skills, the teacher must incorporate language assistant tools, as grammar checkers, that could support his teaching writing.
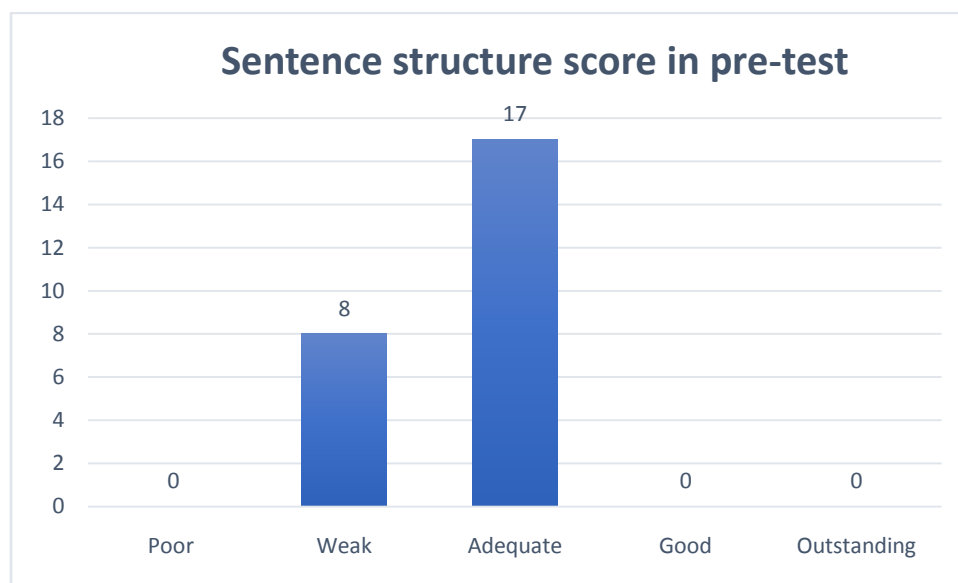
Figure 6. Sentence structure score in pre-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.3.5 Vocabulary

Vocabulary was also a critical category in the pre-test. As shown in the figure 7, all the students had mid-low scores, 32% weak and 68% adequate scores. It means that they had not received the appropriate teaching assistance to improve their vocabulary. The development of vocabulary requires, on the one hand, to use language for communicative purposes in authentic social situations, and on the other, to have teaching language supports. Automated language software devices are considered excellent tools to help to solve those problems.

Vocabulary score in pre-test

| Poor | Weak | Adequate | Good | Outstanding |
| 0 | 7 | 18 | 0 | 0 |
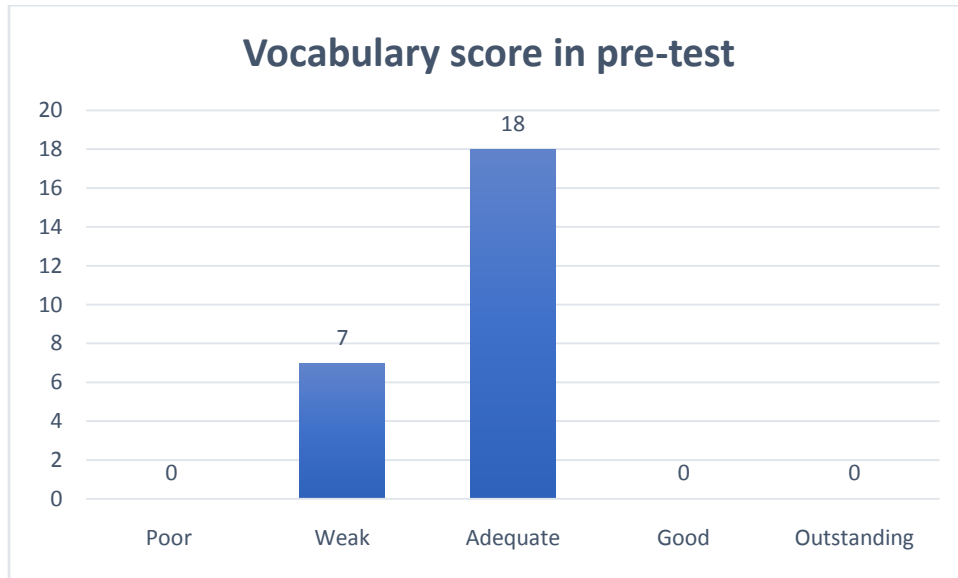
Figure 7. Vocabulary score in pre-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.3.6 Style

 Like the previous categories, style was also a critical category in the pre-test. As shown in the figure 8, all the students had mid-low scores, 32% weak and 68% adequate scores. The academic writing style require much language interaction with authentic academic genre, language use in context, to see prototypical examples. An appropriate teaching assistance is also essential to improve the academic writing style. Automated language software, like grammar checkers, include tools that identify styles errors, analyze the error and provide alternative solutions to the problem.
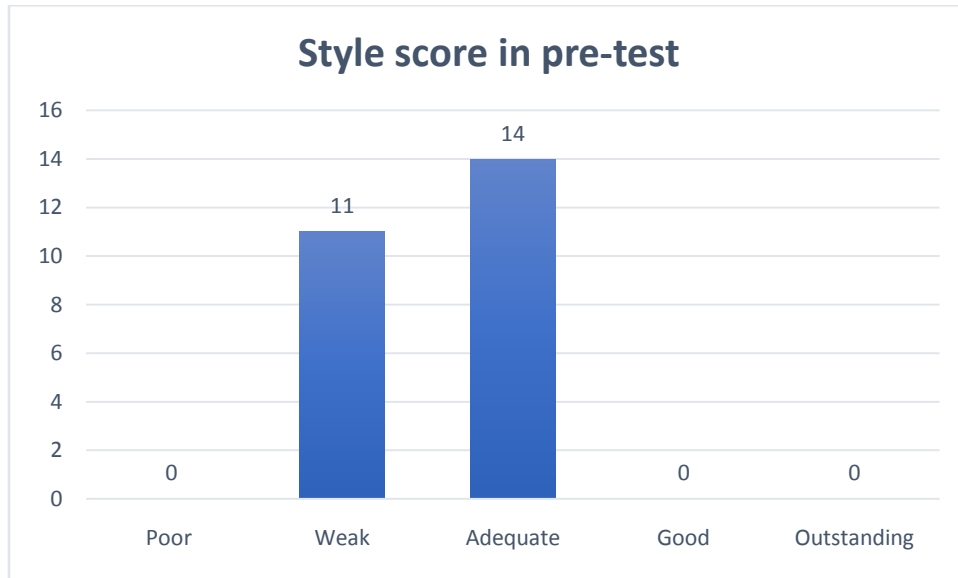
Figure 8. Style score in pre-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.3.7 Plagiarism

Finally, plagiarism results, shown in figure 9, indicate the need to change the English academic writing teaching practice. Like the six previous categories, plagiarism has a critical score in the pre-test. As shown in the figure, all the students had middle-low scores, 32% weak and 68% adequate scores. Avoiding plagiarism is a crucial practice in academic writing. The revision stage in the writing process permit to identify and correct plagiarism practices. To that purpose, the teacher should read the waring assignments as many times as necessary. It means that they had not received the appropriate teaching assistance to improve their vocabulary. As the teacher has neither time to read, teaching experience nor writing experiences in academic writing, grammar checkers, anti-plagiarism software are excellent tools to help the students avoid plagiarism practices.

Plagiarism score in pre-test

	Poor	Weak	Adequate	Good	Outstanding
	0	7	18	0	0
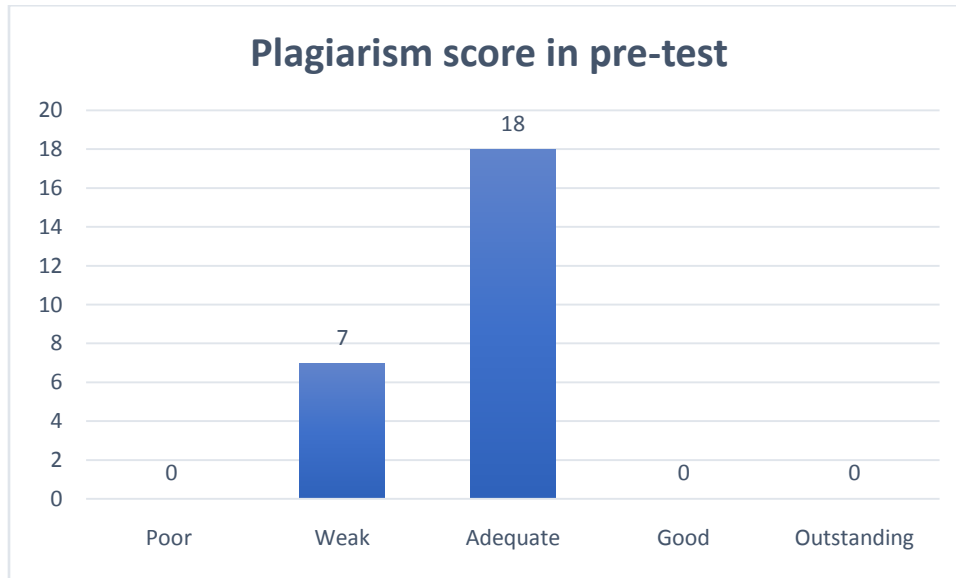
Figure 9. Plagiarism score in pre-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.3.8 Synthesis of the results of pre-test

A synthesis of results of the pre-test can be seen in table 4. As can be seen, results of the pre-test revealed that students commit errors in the different categories analyzed. The error types contained spelling, article, subject and verb agreement, tense and verb form, sentence fragment, punctuation, run-on sentences, word choice, preposition, relative clause, word order, conjunction, word form, the use of gerund vs. infinitive, the conjugation of the verbs in the third person singular, the use of prepositions and the passive voice. Besides, they also have difficulties when using the definite and indefinite articles and the third person singular verbs.

Results show that all the students were classified as having weak performances. They also reveal that all the categories are classified as weak.

Results suggest that the students need to be aware of their grammatical errors because this affects the text quality. They consider that they have studied enough grammar in the

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previous educational levels. It should have been enough to learn the main grammatical rules to write appropriately.

So, students need to learn how to identify and correct their writing errors. They need to find tools that could explain them the errors and show the different options.

Table 4. Student performance in the pre-test

Student	Spelling	Grammar	Punctuation	Sentencestructure	Vocabulary	Style	Plagiarism	Average	Assessment
S1	6	5	4	4	4	5	4	4,57	Weak
S2	5	4	5	5	5	4	6	4,86	Weak
S3	5	4	6	4	5	4	5	4,71	Weak
S4	6	5	5	6	6	5	6	5,57	Weak
S5	5	6	4	5	5	5	5	5,00	Weak
S6	6	4	5	5	6	6	6	5,43	Weak
S7	6	5	5	4	5	5	4	4,86	Weak
S8	5	4	4	5	4	4	5	4,43	Weak
S9	7	5	5	4	5	6	6	5,43	Weak
S10	4	4	3	5	5	4	4	4,14	Weak
S11	5	6	6	4	4	5	5	5,00	Weak
S12	5	5	7	5	6	4	6	5,43	Weak
S13	5	7	5	6	6	4	4	5,29	Weak
S14	5	4	4	5	4	5	5	4,57	Weak
S15	6	4	6	6	5	4	6	5,29	Weak
S16	4	6	5	5	5	5	4	4,86	Weak
S17	6	5	4	4	6	4	5	4,86	Weak
S18	6	4	5	4	4	6	6	5,00	Weak
S19	5	5	7	5	5	5	4	5,14	Weak
S20	5	4	4	6	4	4	4	5,14	Weak
S21	6	4	3	6	6	5	5	5,00	Weak
S22	5	4	5	4	5	4	5	4,57	Weak
S23	6	6	4	5	5	5	5	5,14	Weak
S24	5	5	6	6	4	4	6	5,14	Weak
S25	5	4	5	5	5	5	5	4,86	Weak
Average	5,36	4,76	4,88	4,92	4,96	4,68	5,04		
Assessment	weak	weak	weak	weak	weak	weak	weak	weak	

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.4 Analysis of the results of the post-test

After having participated in the six sessions of the proposal, the students were asked to write another like those they wrote in the pre-test, according to the characteristics before mentioned for the pre-test evaluation: a short essay written in English on a free topic of about 1000 words length.

The texts were also read and then analyzed using the rubric (see appendix 3), in which the different written language aspects associated with the academic writing considered in the pre-text were evaluated: spelling, punctuation, grammar, sentence structure, vocabulary, style, and plagiarism.

The types of errors of these texts were identified, coded and classified. After coding the error types, the frequency of errors was counted for each assignment and assessed. The type of errors was quantified and categorized manually and using the software Grammarly™.

First, results from the analysis of each category are reported. Next, a synthesis of the results is presented.

4.4.1 Spelling

Figure 10 shows that students obtained a mid-high score. 68% got an outstanding score, 28%, good, and 4%, adequate; no one had a poor or weak score. When comparing with the pre-test results in the same category, it indicates that the students have improved their spelling ability in their academic texts. This improvement could be associated to the change of the teaching strategies. The use of the Grammarly grammar checker can improve spelling because it is one of its main functions.
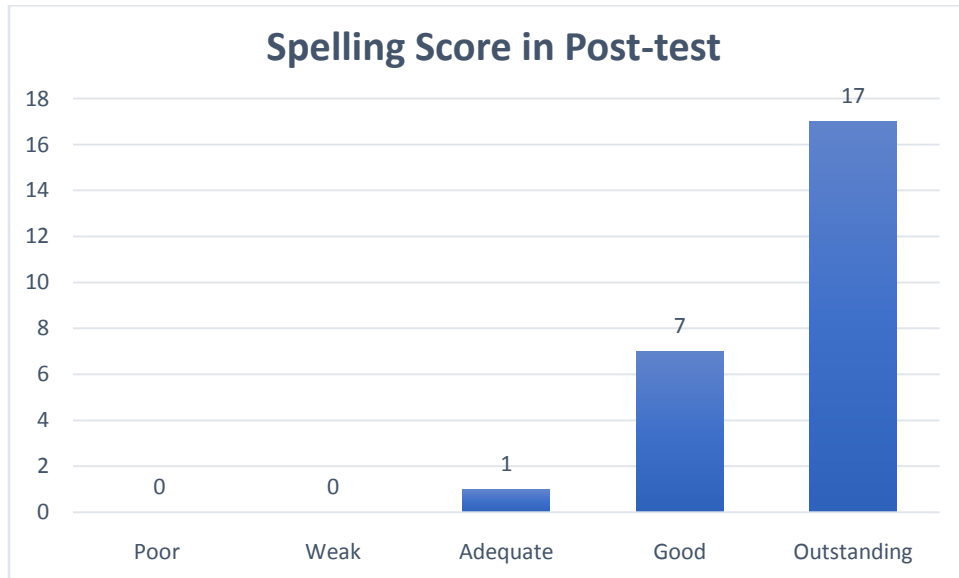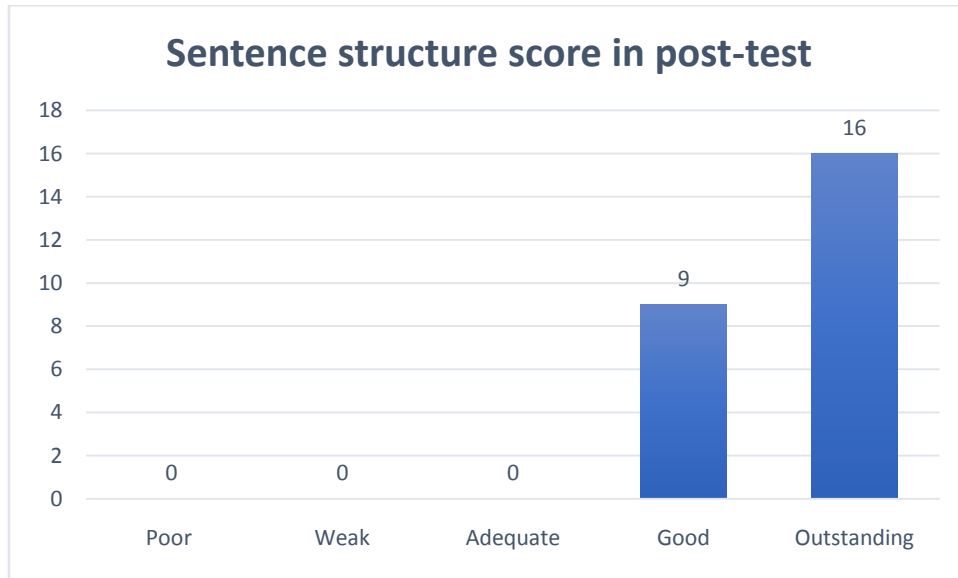
Figure 10. Spelling score in post-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.4.2 Grammar

Figure 11 shows grammar score in post-test. As can be seen, all the students obtained a mid-high score. 60% got an outstanding score, 40%, good. No one had an adequate score or lower. When comparing this result to those they obtained in the pre-test in the same category, it shows a significant enhancement. They have improved the use of grammar rules when writing academic texts in English. The use of Grammarly has been found to be effective to check and correct grammatical errors.
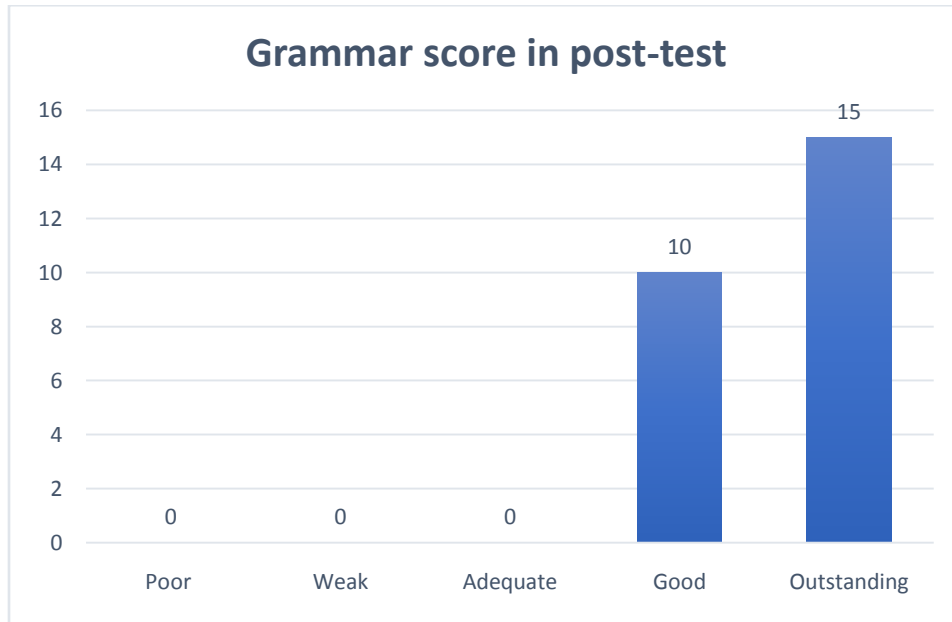
Figure 11. Grammar score in post-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.4.3 Punctuation

As shown in the figure 12, the students' punctuation score in post-test is mid-high. 60% got an outstanding score, 40%, good. None of them had an adequate score or lower. This result was compared to the pre-test score in the same category. It indicates that they experienced a significant improvement. The use of punctuation when writing academic texts in English is better than before. Grammarly grammar checker is good to identify and correct errors; moreover, it explains the error and gives suggestions. Therefore, itenhancesacademicwritingcompetence.
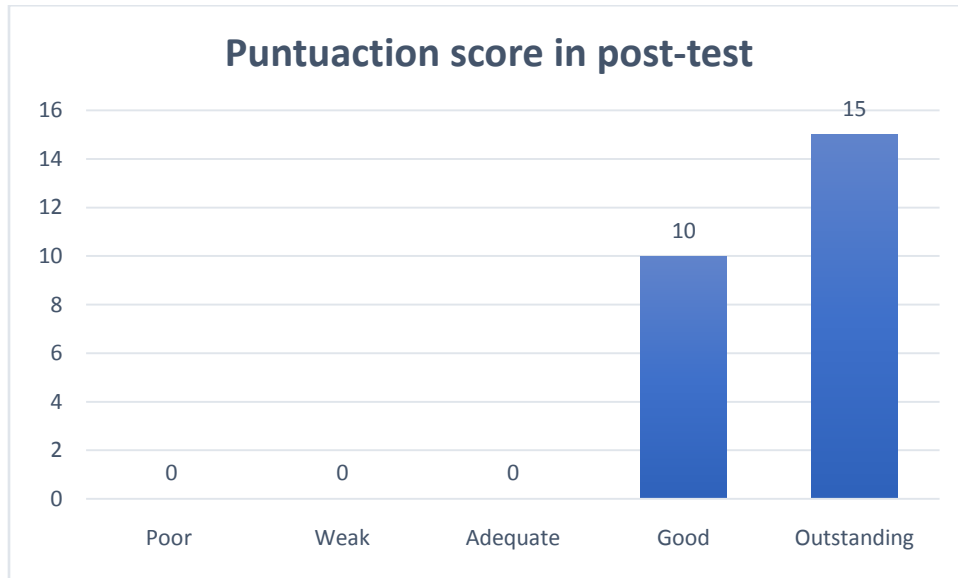
Figure 12. Punctuation score in post-test

4.4.4 Sentence structure

Results of sentence structure score in post-test are shown in figure 13. The students' score was high. 64% have an outstanding score, 36%, good. None of the students got an adequate, weak or poor score. Results of sentence structure scores in the pre-test and post-test were compared. It was found that the students have improve their knowledge and use of sentence structure when writing academic texts in English. Ordinarily, sentence structure errors are difficult to identify and correct. Therefore, this result could be associated to the use of Grammarly grammar checker because its apps are good in identifying and correcting this kind of errors; apart from that, Grammarly also give explanations of this error and offers suggestions.

Figure 13. Sentence structure score in post-test

4.4.5 Vocabulary

Figure 14 reports the results of vocabulary score in post-test. It was found that the students' score is high. 60% have an outstanding score, 40%, good. None of the students got an adequate, weak or poor score. When compared with pre-test results, it was found a great improvement in the development of vocabulary when writing academic texts in English. This result could be due to the use of Grammarly grammar checker because this software identifies and corrects vocabulary errors; it also explains why it is considered an error and give word suggestions.
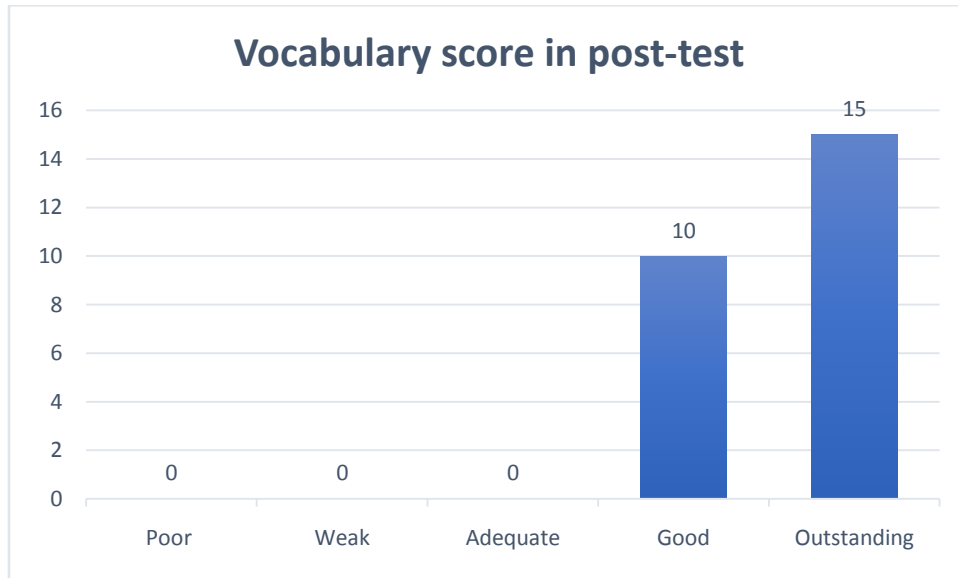
Figure 14. Vocabulary score in post-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.4.6 Style

Style also reports improvement. As shown in figure 15, the results of style score in post-test are high. 52% have an outstanding score, 48%, good. Like previous results, none of the students got an adequate, weak or poor score. The improvement in the use of academic style when writing in English texts could be related to the use of Grammarly grammar checker. Being style a critical aspect of academic writing, this program is capable of, on the one hand, identifying and correcting potential styles errors, and on the other, giving explanations and suggestions.

Style score in post-test
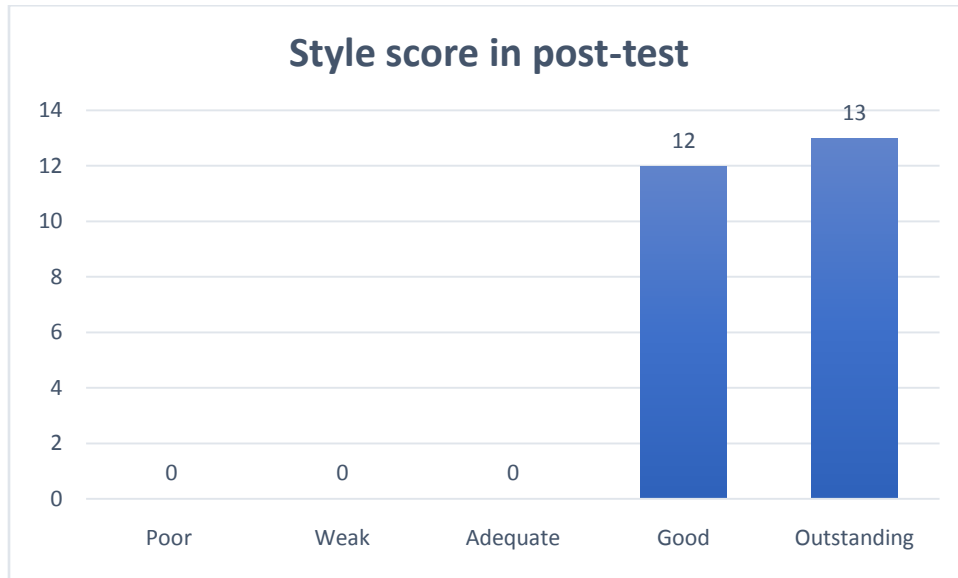
Figure 15. Style score in post-test

4.4.7 Plagiarism

Finally, plagiarism also showed improvement. As shown in figure 16, the results of plagiarism score in post-test tend to high. 64% have an outstanding score, 32%, good, and 4% adequate. Like previous results, none of the students got a weak or poor score. This result was compared to those the students had in pre-test. It indicates that there has been improvement in avoiding plagiarism when writing in English academic texts. It could be associated to the use of Grammarly grammar checker. This program includes a plagiarism checker function, which identifies plagiarism by comparing the texts to more than twenty million academic web pages. In this way, having identified the plagiarism, it is easier to paraphrase it.
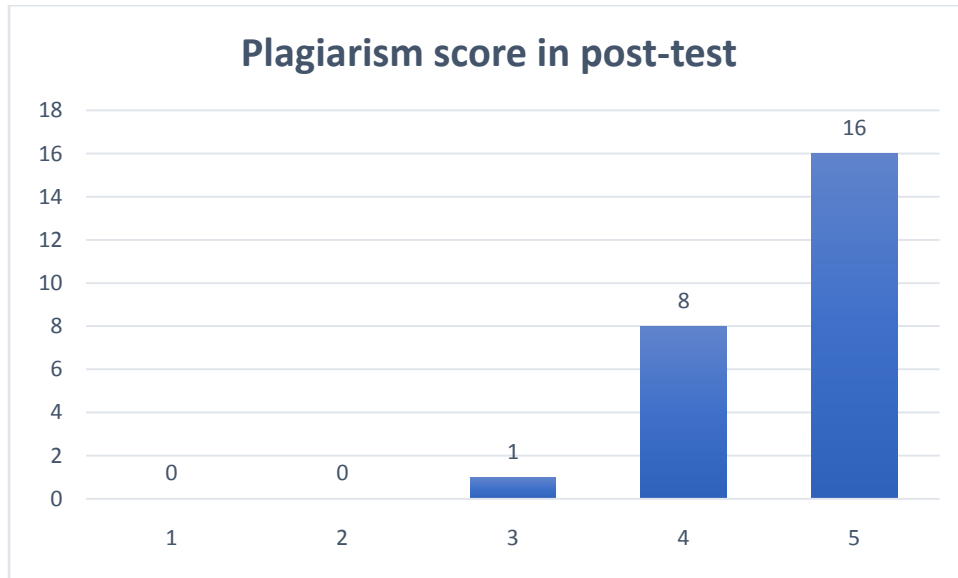
Figure 16. Plagiarism score in post-test

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.4.8 Synthesis of the results of the post-test

A synthesis of the results of the post-test are shown in table 5. They revealed that students commit fewer errors in the different categories analyzed than in the pre-test. The students were classified as having good and outstanding performances. 36% was classified as outstanding, and 64% were assessed as good.

The results indicate that all the categories are classified as good. So, the students could identify and correct their writing errors and, consequently, improve their academic writing skills.

Results suggest that the implementation of the teaching proposal based on the use of the virtual writing tutor software Grammarly™ develop the English academic writing skills was effective.

Table 5. Student performance in the post-test

Student	Spelling	Grammar	Punctuation	Sentence structure	Vocabulary	Style	Plagiarism	Average	Assessment
S1	9	9	10	10	9	9	7	9,00	outstanding
S2	7	10	9	8	9	8	9	8,57	good
S3	8	9	8	7	8	7	8	7,86	adequate
S4	7	8	10	9	9	9	7	8,43	good
S5	9	10	9	8	7	8	6	8,14	good
S6	10	10	9	9	10	10	9	9,57	outstanding
S7	6	9	8	10	8	9	8	8,29	good
S8	9	9	10	9	9	10	9	9,29	outstanding
S9	7	8	8	8	8	9	9	8,14	good
S10	9	10	8	9	9	8	8	8,71	good
S11	10	8	8	8	8	7	7	8,00	good
S12	9	9	8	10	7	10	7	8,57	good
S13	10	7	8	9	9	7	9	8,43	good
S14	9	8	9	8	9	9	10	8,86	good
S15	8	9	10	9	9	8	9	8,86	good
S16	10	7	8	8	8	7	9	8,14	good
S17	9	8	9	10	9	9	9	9,00	outstanding
S18	8	10	9	9	9	10	9	9,14	outstanding
S19	9	8	8	8	9	8	10	8,57	good
S20	10	9	8	10	10	9	9	9,29	outstanding
S21	9	8	10	9	8	10	9	9,00	outstanding
S22	9	9	9	9	7	10	9	8,86	good
S23	9	8	9	8	8	8	10	8,57	good
S24	9	9	10	9	9	8	9	9,00	outstanding
S25	8	10	9	9	10	8	7	8,71	good
Average	8,68	8,76	8,84	8,8	8,6	8,6	8,48		
Assessment	Good	Good	Good	Good	Good	Good	Good	Good	

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

4.5 Verification of the hypothesis

In this section of the investigation, the report of the verification of hypothesis is presented. To fulfill this task, we must bear in mind that a quasi-experimental design was selected with pre-test and post-test, so the measurement is carried out in two moments in the same sample: the pre-test, which was applied before the implementation of the proposal and a post-test, applied after this. Consequently, the following steps are presented next.

4.5.1 Hypothesis

H1: The use a virtual writing tutor software enhances the development of the English academicwriting skills in a group of Super-Intensive Level students at the Languages Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

H0: The use a virtual writing tutor software does not enhance the development of the English academicwriting skills in a group of Super-Intensive Level students at the Languages Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

4.5.2 Confidence level

The first thing that must be done is to establish a level of significance, with this alpha (α) of $\alpha = 0.05$, which corresponds to a 5% error, equivalent to 95% confidence. It should be noted that this level of significance is recommended for the execution of

4.5.3 Determination of the test for the corroboration of hypothesis

To establish the most effective hypothesis test, it is imperative to demonstrate that the data approve the assumption of normality, which shows that the distribution of the population is normal. Based on the above, the Shapiro-Wilk test was applied, which is considered appropriate to determine the normality of samples of less than 30 individuals, which coincides with the present study whose sample is 25 subjects. Based on this, it is established that the approval of the test is confirmed if $p \geq 0.05$.

In the following table (6), the results obtained in the Shapiro-wilk test are observed, which show the p-values of the pre-test and post-test, which are mostly less than p = 0.00. Based on a p≤0.05, it is evident that the scores obtained in the two measurement moments do not present a normal behavior; therefore, parametric tests (Student's T) cannot be developed. Consequently, a non-parametric test should be implemented, and we selected the Wilcoxon test because it is related samples.

Table6. Normality test

Criteria	Group	Shapiro-wilk		
		Statistics	Gl	Sig.
Spelling	Pre-test	0,833	25	0,001
	Post-test	0,861	25	0,003
Grammar	Pre-test	0,796	25	0,000
	Post-test	0,877	25	0,006
Punctuation	Pre-test	0,916	25	0,041
	Post-test	0,795	25	0,000
Sentencestructure	Pre-test	0,811	25	0,000
	Post-test	0,866	25	0,004
Vocabulary	Pre-test	0,813	25	0,000
	Post-test	0,867	25	0,004
Style	Pre-test	0,778	25	0,000
	Post-test	0,878	25	0,006
Plagiarism	Pre-test	0,809	25	0,000
	Post-test	0,844	25	0,001
Average	Pre-test	0,969	25	0,621
	Post-test	0,979	25	0,857

Source: Results of pre-test y post-test
Elaborated by Mario Tacoamán (2019)

4.5.4 P value estimation

The following table (7) shows the results obtained in the Wilcoxon test, which yielded the following results in each criterion: Spelling a value of Z = -4,230 with a p = 0.000; Grammar a value of Z = -4.309 with a p = 0.000; Punctuation a value of Z = -4,399 with a p = 0,000; Sentence structure a value of Z = -4.443 with a p = 0.000; Vocabulary and a value of Z = -4.404 with a p = 0.000; Style a value of Z = -4.419 with a p = 0.000; Plagiarism a value of Z = -4.401 with a p = 0.000 and in Average a value of Z = -4.375 with a p = 0.000.

Taking into consideration that the values of Z are negative and the p values obtained are less than 0.05, it is inferred that the differences between the scores obtained in the pre-test

and post-test are significant. That is to say, between the scores of the pre-test and the post-test an increase of the scores was presented and this is statistically significant.

The hypothesis corroboration test shows that the use of a virtual writing tutor improves the development of academic writing skills in English in a group of super intensive students at the Language Institute, Espe-Inca, Universidad de lasFuerzas Armadas, Quito, Ecuador. It indicates rejection of the null hypothesis and acceptance of the research hypothesis (see next graphs).

Table7. Wilcoxon test analysis

	Post-test - Pre-test Spelling	Post-test - Pre-test Grammar	Post-test - Pre-test Punctuation	Post-test - Pre-test Sentence structure	Post-test - Pre-test Vocabulary	Post-test - Pre-test Style	Post-test - Pre-test Plagiarism	Post-test - Pre-test Average
Z	-4,230	-4,309	-4,399	-4,443	-4,404	-4,419	-4,401	-4,375
Sig. asintót. (bilateral)	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Source: Results of pre-test y post-test
Elaborated by Mario Tacoamán (2019)

4.5.5 Hypothesis test graphs

The graphical representations of the two-tailed Wilcoxon rank sum test under the approximation of the standard normal distribution are shown below. In this, the critical value, for these conditions, the two-tailed test, a level of significance of 5% was selected, that is, $\alpha = 0.05$. As in the standardized tables of the standard normal, we have that $Z\_c\alpha = 1.96$.

Spelling

In the figure 17, it can be seen the value of the test $Z = -4,230$ this value is not contained in the interval of $Zc = -1,96$ and $1,96$, which indicates that the value obtained from Z is contained in the Rejection zone because it is smaller $Zc = -1,96$, the obtained results allow to reject the H0 and accept H1 for the Spelling criterion.

66
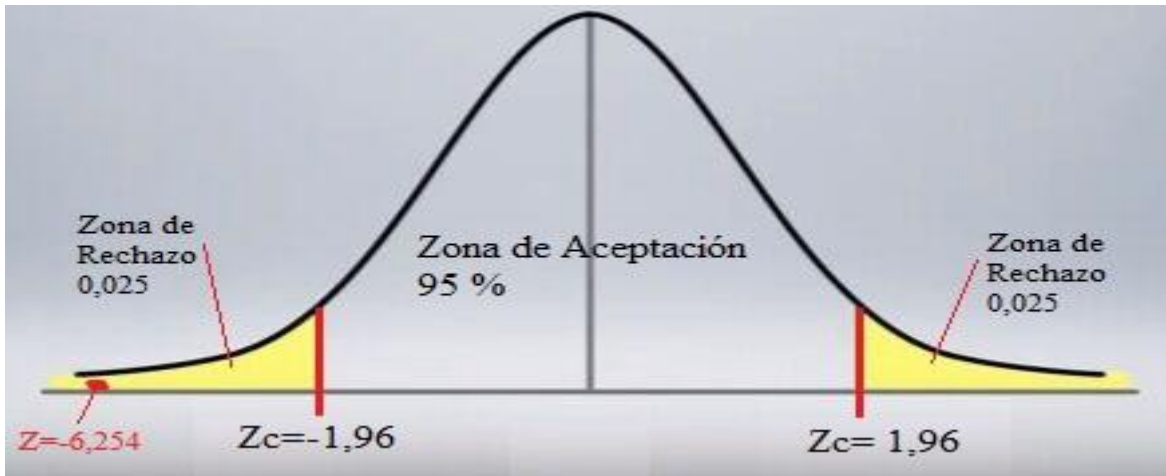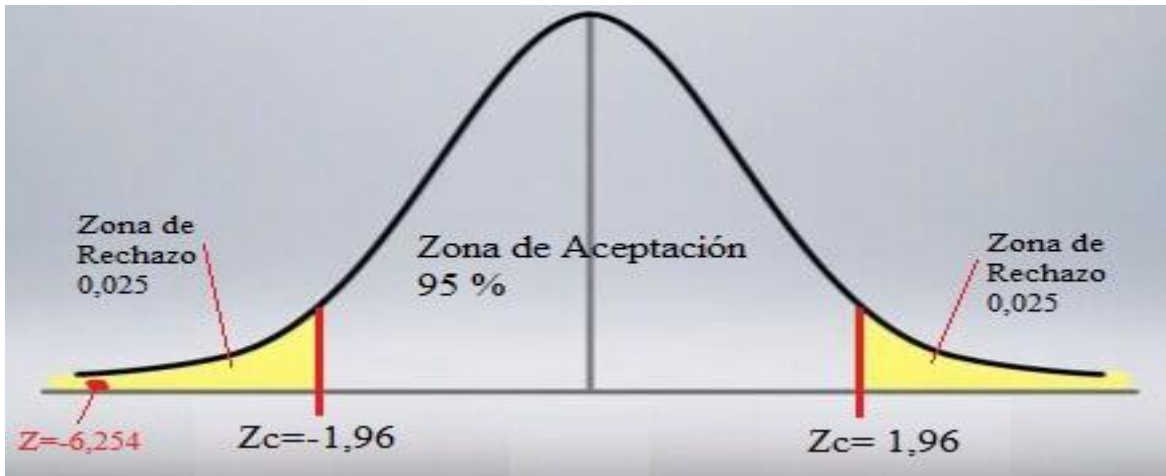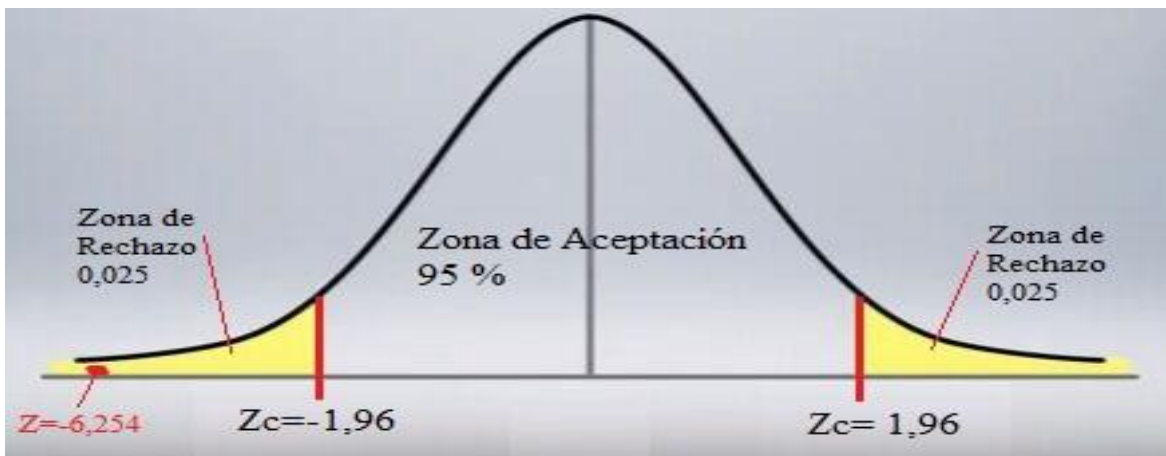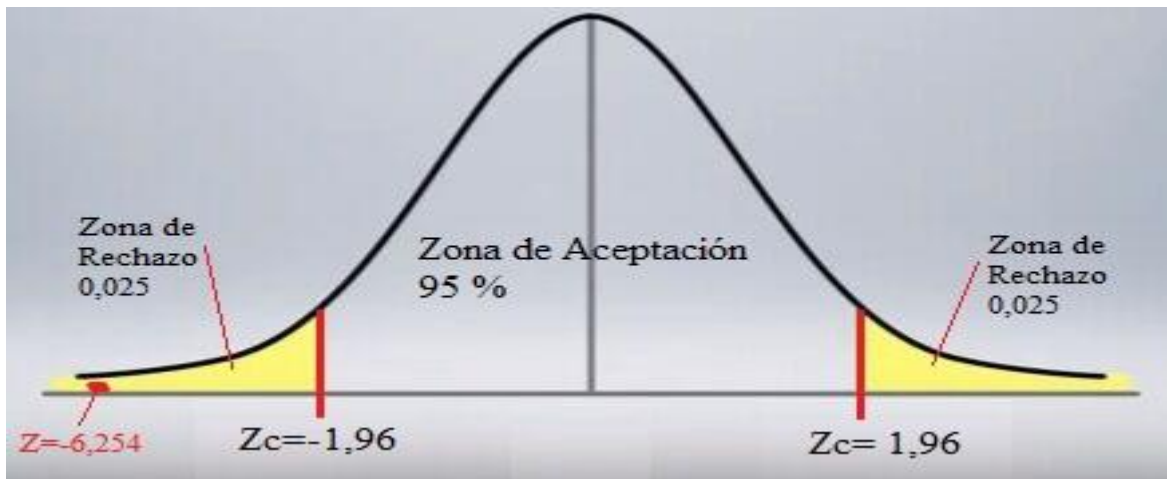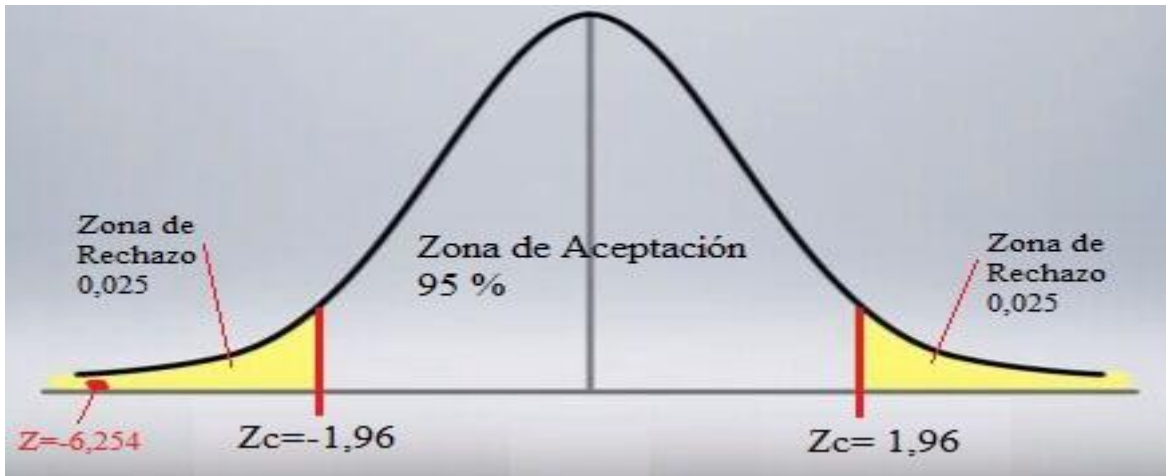
Figure 17. Graph decision rule for the Wilcoxon test for the Spelling criterion

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

Grammar

In the figure 18, it is observed that the value of the test is a $Z = -4.309$ this value is not contained in the interval of $Zc = -1.96$ and 1.96, which indicates that the value obtained from Z is contained in the rejection zone because $Zc = -1,96$ is lower, the results obtained allow rejecting H0 and accepting H1 in the Grammar criterion.
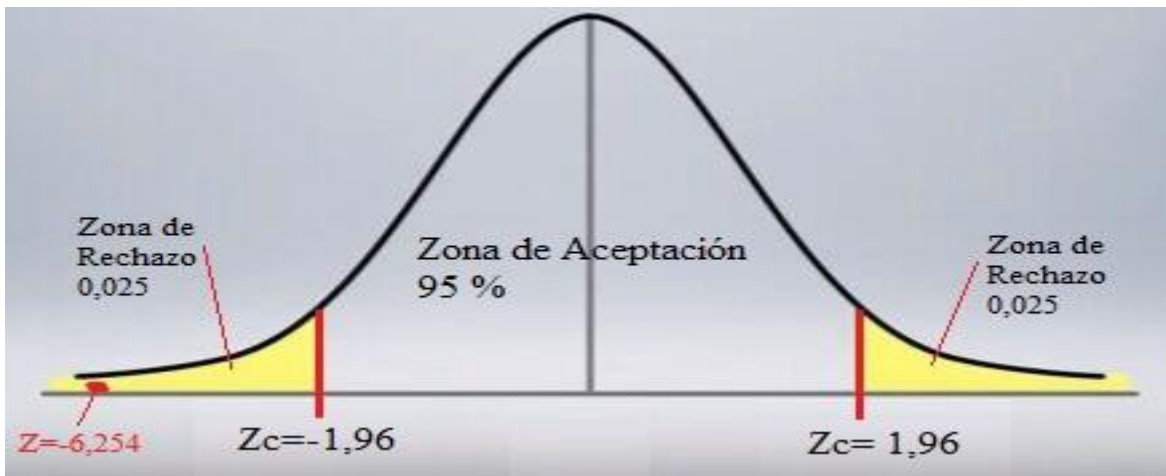
Figure 18. Graph decision rule for the Wilcoxon test for the Grammar criterion

Source: Results of pre-test y post-test

Punctuation

In the figure 19, it is indicated that the value of the test is Z = -4,399 as the value obtained is not contained in the interval of Zc = -1,96 and 1,96, which allows evidence that the value obtained from Z is contained in the rejection zone because it is smaller Zc = -1,96, the obtained results allow to reject the H0 and accept H1 in the Punctuation criterion.
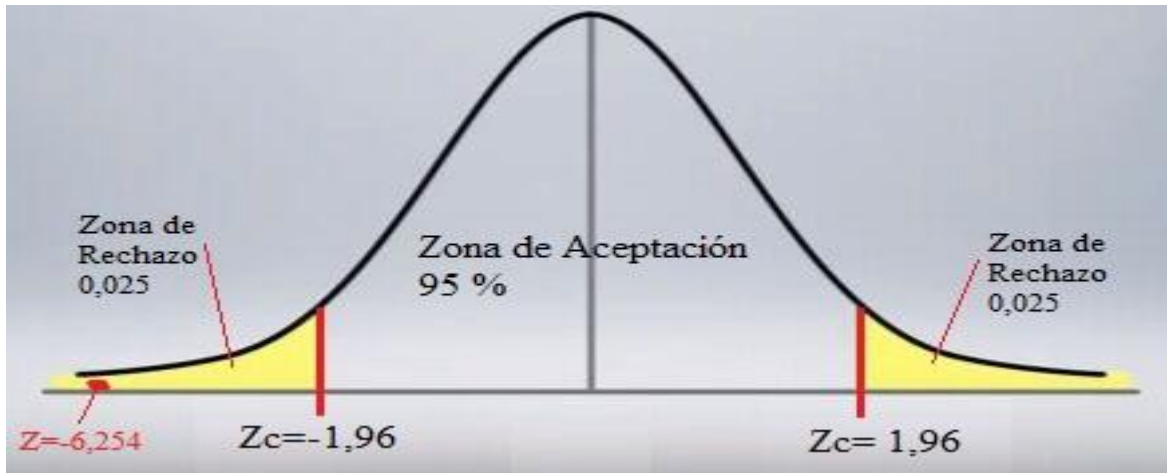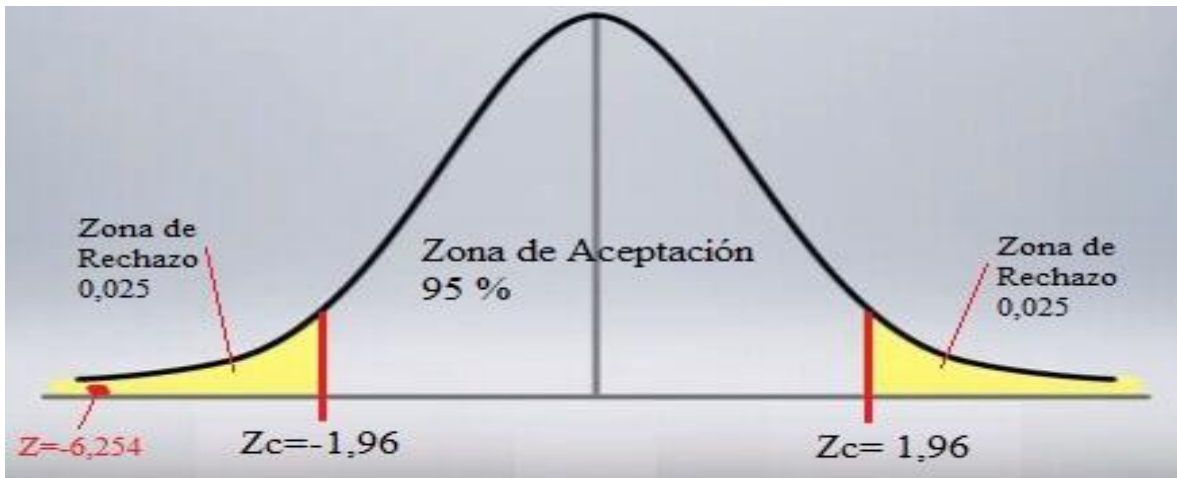

Figure 19. Graph decision rule for the Wilcoxon test for the Punctuation criterion

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

Sentence structure

Also, in the figure 20, it is observed that the value of the test Z = -4.443 as this value is not contained in the interval of Zc = -1.96 and 1.96, it is inferred that there is sufficient statistical evidence that shows that the value obtained from Z is contained in the rejection zone because it is smaller Zc = -1,96, the results obtained allow rejecting H0 and accepting H1 in the Sentence structure criterion.

Figure 20. Graph decision rule for the Wilcoxon test for the Sentence structure criterion

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

Vocabulary

The figure 21 indicates that the value of the test is $Z = -4.404$ as the value obtained is not contained in the range of $Zc = -1.96$ and 1.96, which allows evidence that the value obtained from Z is content in the rejection zone because it is smaller $Zc = -1,96$, the obtained results allow to reject the H0 and accept H1 in the Vocabulary criterion.

Figure 21. Graphic decision rule for the Wilcoxon test for the Vocabulary criterion

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

Style

In the figure 22, it is observed that the value of the test is Z = -4.419 as this value is not contained in the range of Zc = -1.96 and 1.96, it is inferred that there is enough statistical evidence that shows that the value obtained from Z is contained in the rejection zone because it is smaller Zc = -1,96, the results obtained allow rejecting H0 and accepting H1 in the Style criterion.

Figure 22. Graphic decision rule for the Wilcoxon test for the Style criterion

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

Plagiarism

Figure 23 shows that the value of the test is Z = -4.401 since this value is not contained in the range of Zc = -1.96 and 1.96, it is inferred that there is enough statistical evidence to show that the value obtained from Z is contained in the rejection zone because it is smaller Zc = -1,96, the obtained results allow to reject the H0 and accept H1 in the criterion Plagiarism.

Figure 23.Graph decision rule for the Wilcoxon test for the Plagiarism criterion

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

Average criterion

Figure 24 shows that the value of the test is $Z = -4.375$, since this value is not contained in the range of $Zc = -1.96$ and 1.96, it is inferred that there is enough statistical evidence to show that the value obtained from Z is contained in the rejection zone because it is smaller $Zc = -1,96$, the obtained results allow to reject the H0 and accept H1 in the Average criterion.

Figure 24. Graphic decision rule for the Wilcoxon test for the Average criterion

Source: Results of pre-test y post-test

Elaborated by Mario Tacoamán (2019)

CHAPTER V
CONCLUSIONS AND RECOMMENDATIONS

5.1. Conclusions

This research was aimed to analyze the influence of the virtual writing tutor software Grammarly™ on the development of the English academic writing skills in a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador. Afteranalyzingtheresults, thefollowingconclusionswereobtained:

- The use of the virtual writing tutor software Grammarly™ enhances the development of the English academic writing skills because the students are familiarized with the technology, feel motivated to write and to learn writing skills. They feel comfortable because they can work with virtual writing tutor software Grammarly™ in and out the classes.They can alsoworkindependently.

- The use of the virtual writing tutor software Grammarly™ is essential for the Academic English class because it helps students to learn English grammar, spelling, academic styles and to avoid plagiarism.

- The software Grammarly™ is beneficial to write grammatically correct academic texts and to learn how to do it. Therefore, students will be aware of identifying their errors and mistakes, and they will be able to correct them.

- Academic English teachers can use virtual writing tutor software Grammarly™ to teach and evaluate academic writing skills during the class. It easy to use, free, open access and can be used everywhere, with the teacher and in an independent way.

5.2 Recommendations

- As the virtual writing tutor software Grammarly™ showed to be effective to develop academic writing skills, teachers and students can use it in an active way in and outside the class. English academic writing teachers should design teaching activities with these online tools.

- It is highly recommended to promote the use of the virtual writing tutor software Grammarly™ in everyday written communication: text messages, emails, written homework.

- To use it, academic English classes should be carried out in computer laboratories where students could write on the computer with internet access, so they could use the software Grammarly™ in every writing task.

- Finally, more research is needed on the use of other virtual writing tutor software, grammar checkers, or automated language evaluation tools.

CHAPTER VI
THE PROPOSAL

TOPIC: Teaching guide for developing English academic writing skills using the virtual writing tutor software Grammarly™.

6.1. Informative Data
Name of the Institutions:

TheLanguageInstitute, Espe-Inca Branch, Universidad de las Fuerzas Armadas, Quito, Ecuador

Location:

Quito, Pichincha – Ecuador

Beneficiaries:

25 Super-Intensive Level students

Estimated execution time:

From January 3$^{rd.}$ to February 15th (6 weeks)

The person in charge:

Lcdo. Mario Tacoamán

6.2 Background of the proposal

This proposal surges from a quasi-experimental study on the incidence of the virtual writing tutor software Grammarly™ on the development of the English academic writing skills in a group of Super-Intensive Level students at the Language Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

As previous studies suggest, writing is an essential skill in the educational process. At the university, academic writing skills are crucial for students. They facilitate to success both in the academic disciplinary context and in the professional settings after graduating.

In the English language learning process, writing skills are also imperative. At the university level, all English language students should be competent writers, especially in academic settings. They need to read and write in English in disciplines. Moreover, because it is a difficult skill, students have many problems when writing academic texts; so academic writing should be taught formally from the very beginning of the educational process.

It was found that English language students from the Universidad de lasFuerzas Armadas-ESPE, Quito, Ecuador, have writing problems, commit many errors when writing academic texts (López, 2015; García Flores & Jiménez, 2017). According to the English professors of the English Institute, most English language Students have grammatical, syntactical, punctuation and stylistic problems when producing written academic texts. They also usually commit plagiarism.

 The consequence of having these problems is that students are not able to properly communicate when writing academic texts. Apart from that, due to the teaching approach used, students are not motivated to write, correct errors or learn how to correct them. Therefore, strategies for the solution of these problems should be designed, proposed and developed.

In this context, it is necessary to propose innovative teaching strategies to teach academic writing. As previous studies have found that the use of ICT can improve the teaching of writing and, as a consequence, the students´ writing skills (Simonok, 2016; Buyse, 2014; Wollscheid, Sjaastad, & Tømte, 2016; Fattah, 2015), this proposal offers a teaching guide for developing English academic writing skills using the virtual writing tutor software Grammarly™.

The results of this study have shown that when the teaching of academic writing includes virtual writing tutor software, students are motivated and develop their writing skills properly. These effective results are reflected in the results of the students' tests and proofed by the statistical analysis comparing pre-test and post-tests. So, this study has proved that

English teachers need to include ICT tools to encourage learners to improve their writing skills.

6.3 Justification

The rationale of this proposal is that it incorporates an innovative teaching strategy to develop writing skills; it includes the use of the virtual writing tutor software Grammarly™. The inclusion of ICT motivates the students and allows them to take advantage of ICT.

In the context of this proposal, the teaching of academic writing needs to be changed, because students have some deficiencies when writing English academic texts. They face many problems, such as punctuation, grammar, spelling, capitalization. They need to be solved.

Moreover, teachers and students have experience and knowledge of ICT; they have internet access at home and in school. So, to implement a teaching proposal that includes the virtual writing tutor software Grammarly™ to enhance the students writing skills could motivate teachers and students.

Moreover, there are free virtual writing tutor software, automated language tools, grammar checkers, websites and apps in the web whose access is effortless. Students and teachers can be used in class and outside the class independently. It can enhance their academic writing skills.

As can be seen, several arguments support this proposal that promotes the use of virtual writing tutor software Grammarly™ to improve the English academic writing skills: grammar, spelling, punctuation, sentence structure, academic styles, and to avoid plagiarism.

6.4 Objectives
General objective

To improve the English academic writing skills using the virtual writing tutor software Grammarly™ in a group of Super-Intensive Level students at the

Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

SpecificObjectives

- To identify the appropriate online tutorials to learn how to use the virtual writing tutor software Grammarly™.

- To incorporate the virtual writing tutor software Grammarly™ in the English academic writing class to help students to improve their writing skills.

- To evaluate the effectiveness of using the virtual writing tutor software Grammarly™ in the English academic writing class to improve students' writing skills.

6.5 Feasibility analysis

The implementation of the current proposal is considered feasible based on the following arguments:

Technical: The person in charge is a graduate English Teacher with experience in academic writing. Moreover, he has a solid foundation in the use of virtual writing tutor software, grammar checkers and automated language evaluation tools. To complement, during the implementation of the proposal the researcher received assistance from the classroom teachers, both in teaching and assessment.

Administrative: Before this proposal was implemented at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador, it was approved by the institute authorities, including the head, teachers, and students. They all supported the implementation of the proposal because they considered that this would improve the teaching writing process, the students' writing skills, that is, it will better the learning and teaching processes of the English language.

Economic: The implementation of this proposal does not require any additional economic or financial resources, that could impede the fulfillment of the proposal' goals. The

researcher compensates any cost required for the elaboration and application of this proposal.

6.6 Proposalfundamentals

6.6.1 Theoreticalfoundations
Teaching guide

According to the University of Alicante (2018; 2019), the teaching guide is a document designed to support the teaching process, which could be read and studied by students to help them to understand and learn the contents given in class. It presents a series of activities for the class and the conditions to be carried out. Usually, itisorganizedintothreeparts:

- An introductory section, which includes institutional and background information of the proposal, its rationale and objectives; it also contains the viability analysis and the theoretical basis of the proposal.

- The proposal development, which describes the contents, activities, resources required.

- The evaluation, which consists of the application of the assessment instruments to determine the incidence of the proposal on the students' knowledge and competencies.

Writing skills

The writing process implies the use of different skills to communicate ideas, thoughts, and opinions efficiently. In the academic writing context, most of the time, they should be taught, trained and learned.

a) GrammarSkills

For Richards, Platt, and Weber (1985), grammar is the description of the organization and structure of the language. It includes how words joint to generate sentences and phrases in the language. As highly conventionalized and arbitrary, grammar skills should be formally

taught. It includes syntactical rules, word formation processes, punctuation, spelling, capitalization, academic style.

b) Discourseskills

Discourse genres have distinctive features, linguistic, textual, socio-cognitive and disciplinary characteristics that differentiate them from one another (Swales & Feak, 2004; Paltridge, Starfield, & Tardy, 2016; Hyland & Jiang, 2017). For Swales (1990, pág. 58), these features should be taught at the university level so that the students could succeed in the academic contexts and future professional settings (Bhatia, 1993).

It also includes the abilities to know what to say, when, how, and to whom in order to accomplish the communicative writing purposes (Swales & Feak, 2004).

c) Rhetoricalskills

They consist of the knowledge to communicate appropriately according to the institutional and social context. As part of these skills, writers select the appropriate choice of language to accomplish his purposes. As citation is different from a discipline to another; that is, scholars cite differently according to the discipline they belong to, the differences of these practices should be taught (Swales, 1990).

d) Text structureskills

Discourse genres have a different rhetorical organization. It depends on the genre itself, the discourse community, or the language. For example, research papers follow the IMRaD format, which includes specific rhetorical sections constituted by distinctive elements (Swales, 1990; Holmes, 1997). Similarly, these have a modified IMRD format that consists of an introduction, literature review, methods, results, discussion, and conclusion. Like research papers, each of these sections includes different elements that distinguish them (Swales & Feak, 2004; Paltridge, 1997).

e) Text formal presentation and organization skills

Scholars and scientists write for publication, to be read. The organization on the final draft will depend on the journal instructions for authors, publishers, institutions (Faculties,

doctoral programs, research funding, institutions). They usually consist of a very specific, detailed, precise directions, which usually differentiate one another even in the same area. Acceptance for publication requires to follow the established instructions (Swales & Feak, 2004; García Flores & Jiménez, 2017).

Computer Assisted Language Evaluation

The computer-assisted language evaluation is a software tool used to guide and help language users to learn the best way to speak, write, read and listen. It consists of a series of applications that teachers and learners can use as a teaching and learning strategies using computers and the internet in and outside the classroom. It is used as an evaluation tool to help the teachers to evaluate the language use objectively (Cáceres, 2018).

Among other functions, it analyzes the language uses and identifies misuses, errors, and mistakes, explains them, proposes alternative solutions (Carrera, 2015; Castillo, 2015; Cáceres, 2018; Ranalli, Link, & Chukharev-Hudilainen, 2017). They use syntax-based, rule-based and statistical-based approaches to identify language problems (Sharma, 2016). This computer tool also reports the performance evaluation statistics of each activity carried out (Carrera, 2015; Castillo, 2015; Cáceres, 2018; Ranalli, Link, & Chukharev-Hudilainen, 2017).

Grammar checker

The grammar checker is a widely used app design to be used in PCs, tablets, smartphones. It can be downloaded or use online in the main languages around the world. It checks spelling, capitalization, punctuation, grammar, sentence structure, vocabulary, style, and plagiarism. Nowadays, they are trendy. Word processors include a basic grammar checker for free and a premium version for a subscription (Microsoft Office 365, for example). Moreover, online grammar checker applications can be added to the computer normal functions (Carlberger, Domeij, Kann, & Knutsson, 2004; Sañudo, 2015; Yang, 2018; Cavaleri, 2016).

The specific grammar checkers are designed to check for grammatical and stylistic problems that a simple PC editor do not do. Most online grammar checkers are free. However, there are different plans in their premium versions that can be got for monthly or annual subscriptions (Godolakis, 2013; Sañudo, 2015).

It has been suggested different approaches to design and run grammar checkers:

- Syntax-based checking. In this approach, the text is divided into sentences; each of these is analyzed based on the syntactical tree structure. Sentences that do not match with the traditional syntactical structure are considered incorrect (Naber, 2003).

- Statistics-based checking. In this approach, an *ad hoc* corpus is created to build a word, and word sequence list of the most common expression found in authentic texts. Based on the selected sequences, those expressions that coincide with those in the corpus will be considered correct (Singh, y otros, 2016; Bhirud, Bhavsar, & Pawar, 2017; Naber, 2003).

- Rule-based checking. It is like the statistics-based approach. According to this, a list of language rules is established based on the grammar handbooks. The text is automatically compared with a set of predefined rules. Those inconsistencies are considered errors (Singh, y otros, 2016; Bhirud, Bhavsar, & Pawar, 2017; Naber, 2003; Sharma, 2016).

- Hybrid grammar checker. It implies the combination of the statistical-based and the rule-based checking approaches. It is considered more effective (Bhirud, Bhavsar, & Pawar, 2017).

Grammarly

Grammarly is an online software developed to check, spelling, grammar, and to detect plagiarism. This app is programmed to detects language grammatical, syntactical, punctuation, semantic, lexical and stylistic problems automatically in writing (Grammarly, 2019).

The app highlights or underlines the errors gives and explanations in each case and offers corrections for the writer to correct them immediately. It also detailed reports all the problems to correct them at the end (Grammarly, 2019).

This program considers the following features(Grammarly, 2019):

- Checks contextual grammar and spelling, punctuation, sentence structure, gives vocabulary improvement proposals.

- Checks writing style.

- Identifies plagiarism.

- Offers alternative synonyms.
- Adds words to personal dictionaries.
- Explains grammar rules.

6.6.2 Methodologicalfoundations

The writing skill is critical in the learning process of English as a foreign language. The literature review suggests that the use of virtual writing tutor software, grammar checkers and automated language evaluation tools in the English class improve the students´ writing skills. As most of the schools, teachers, and students have internet access, it seems to be practicable to implement teaching proposal that includes these tools to enhance the students writing skills. Moreover, there are plenty of free writing tools and grammar checker websites and apps whose access is effortless. These can be used in class and outside the class. Consequently, students can develop their academic writing skills.

Therefore, the implementation of this proposal to improve academic writing skills using a virtual writing tutor software supposes a change of the traditional writing teaching approach. Teaching a foreign language, like English, requires necessarily to consider the students' needs, interests, previous experiences, capacities, competencies. This proposal is founded in their interests and capacities by using in class technologies to which they have access and know how to use. The activities proposed in this teaching guide will promote the development of the writing skills using the virtual writing tutor software Grammarly™.

The activities contained in this Teaching guide include exercises to identify, develop awareness, correct errors in spelling, punctuation, grammar, sentence structure, vocabulary, style, and plagiarism. These aspects of academic language were selected from those considered by the virtual writing tutor software Grammarly™.

The teaching guide is divided into three sections:

- The induction stages, in which the students receive the training to use correctly the virtual writing tutor software Grammarly™. As part of this, the students should create their account to use the app.

- The practice stage, in which the students write and use the virtual writing tutor software Grammarly™ to identify errors, learn the right choices and correct their texts.

- The evaluation stage, in which the students' writing skills are evaluated after participating in several teaching activities.

6.7 Proposal development

With the implementation of the proposal, students are expected to improve their English academic writing skills. The activities proposed in each lesson are focused on the improvement of specific skills such as spelling, punctuation, grammar, sentence structure, vocabulary, style, and plagiarism.

Before the virtual writing tutor software Grammarly™, the researcher will give the students a tutorial on how to use the app. Then, students will create their account in Grammarly™.

The proposal will be implemented at the Languages Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

A pre-test and a post-test were applied before and after the implementation of the proposal:

1. The pre-test was applied on January the $3^{rd.}$, 2019, in the first session of the proposal.

2. During the next four weeks, the academic writing activities using the virtual writing tutor software Grammarly™ were carried out.

3. The post-test was applied on February $15^{th.}$ During the last session of the proposal.

In table 2, the operating model of the proposal is described in detail.

Table8. Proposaloperatingmodel

Phases	Objectives	Activities	Resources	Person in charge	Time
Sensibilization	To communicate to the authorities of the Institutions the proposal to improve the Super-Intensive Level students´ academic writing skill.	To write and submit a permission letter to the head of the Institute.	**Human:** Researcher, teacher, institute´s authorities **Materials:** Letter.	Mario Tacoamán	1 hour January 3rd.
Planning	To introduce the proposal "Teaching guide for developing English academic writing skills using the virtual writing tutor software Grammarly™" and to explain how they can apply it in class.	To consign a copy of the proposal and show the different activities students will do to improve their academic writing skills.	**Human:** Researcher, teacher. **Materials:** The software Grammarly™, Theteaching guide	Mario Tacoamán	One week: From Jan. 4th to Jan. 9th
Application	To apply writing activities using the virtual writing tutor software Grammarly™ to develop the students' writing skills.	To train the use of the virtual writing tutor software Grammarly™", then the students write essay texts on a free topic and run them through the program.	**Human:** Teacher, researcher, students **Materials:** Essays, The software Grammarly™, The teaching guide	Mario Tacoamán	Four weeks: From Jan. 10th to Feb. 14th
Evaluation	To evaluate the effectiveness of the use of the virtual writing tutor software Grammarly™" to develop the students' writing skills.	To apply a post-test to prove the effectiveness of the use of the virtual writing tutor software Grammarly™.	**Human:** Researcher,teacher, students **Materials:** Pre-test, post-test	Mario Tacoamán	One week: Feb. 15th (post-test application)

Elaborated by: Tacoamán, Mario(2019)

"Teaching guide for developing English academic writing skills using the virtual writing tutor software Grammarly™"

Session 1

Pre-test application

Objective

To write individually a like-essay text of about 1000 words length on a free topic to be evaluated as part of the pre-test.

Procedures

1. The first class will take place in the computer laboratory. The pre-test will be carried out in this first session; the students will be required to write a like-essay text of about 1000 words length on a free topic. They should write it using Microsoft Word, which is available in the computers of the lab.

2. They will receive no assistance from the teacher on the writing process, grammar, spelling, punctuation or stylistic corrections or any other recommendations.

3. The students cannot talk to each other.

4. They may not access to any web page to get language or content support.

5. When having finished, the students should upload the text in the Share Point of the class.

6. Texts will be evaluated using a rubric. They will be run through the Grammarly program to identify, codify and classify the errors.

Duration:

90 minutes
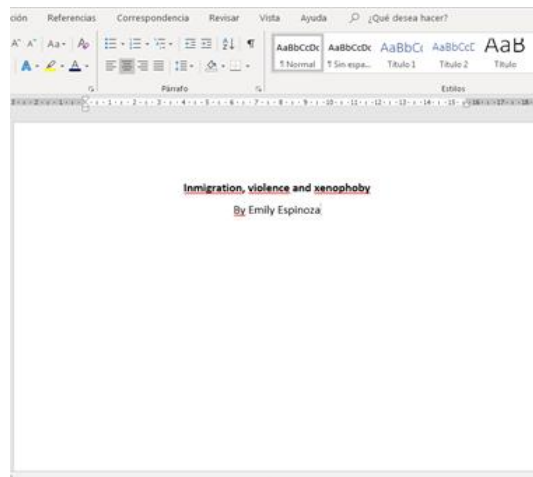
Session 2

Training class to learn how to use the Grammarly program

Objective

To learn how to use the Grammarly program, how to install it in Microsoft Office and Google Chrome and to create an account.
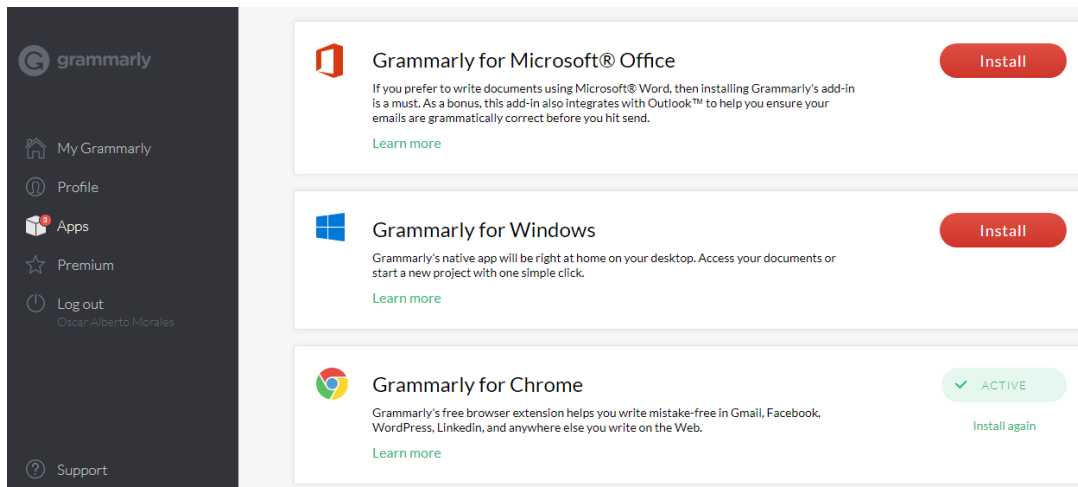
Procedures

- First, the students will be asked to search for the Grammarly web page
  www.grammarly.com/

- In there, they should create their account.

- Then, the students participated in a training session that aimed to learn how to access and use the different features of Grammarly grammar checker.
- After that, the students will be asked to access to YouTube web page and search for the tutorial: Grammarly tutorial 2018: easily check grammar with Grammarly. They should wat it individually. They could stop, go forward or backward whenever they what. They can alsoclarifydoubtswiththeteacher.
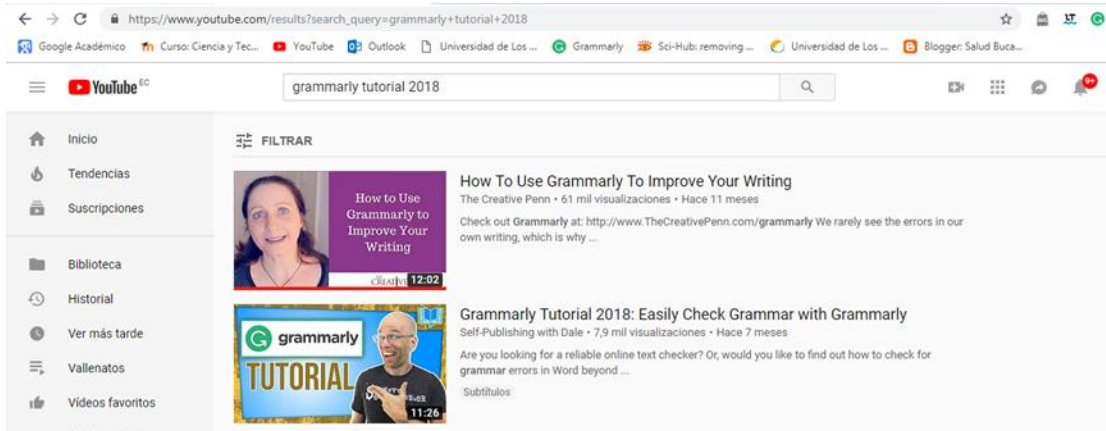
- Next, they watch another tutorial: How to use Grammarly to improve writing.
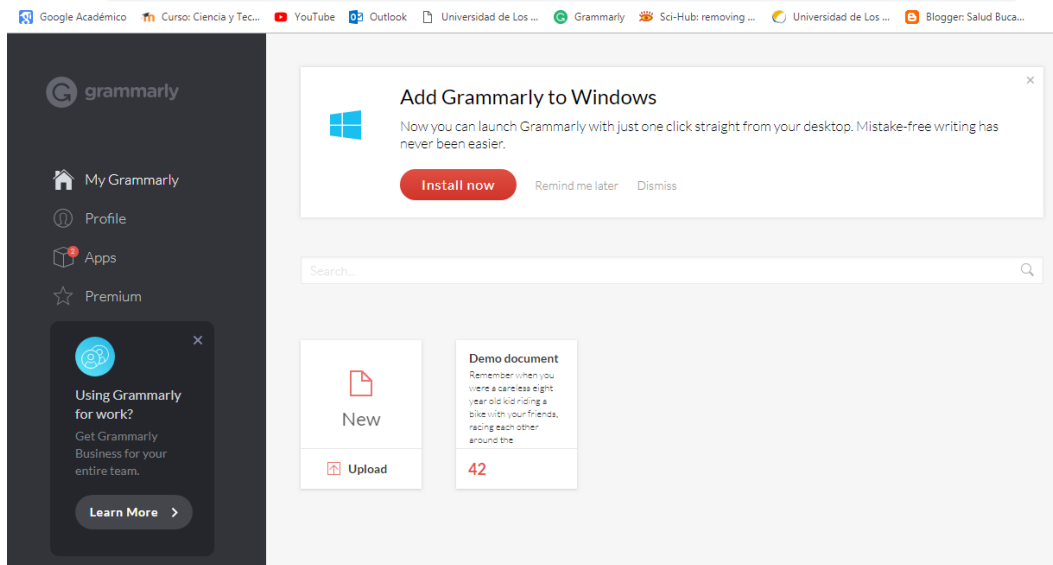
- When they consider they know how to use the app, they go to the Grammarly site and access to their account.
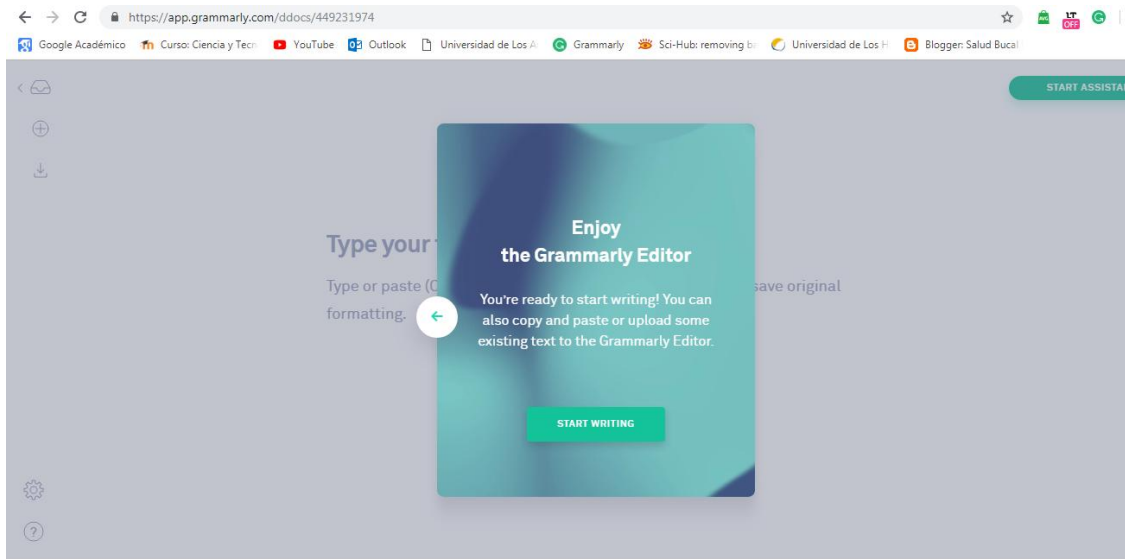
- Students can also consult the Grammarly assistant.
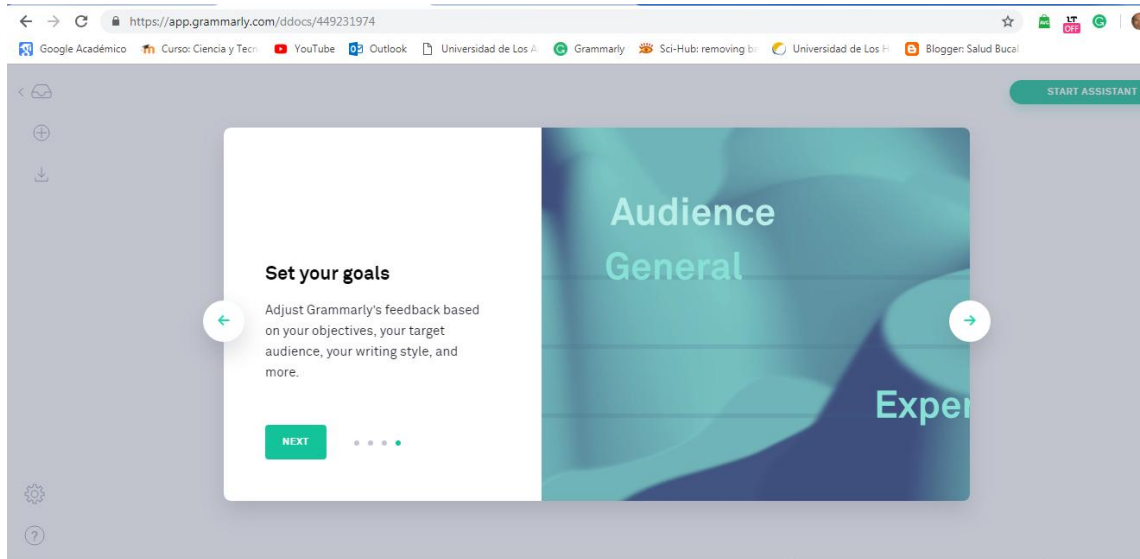
- After the Grammarly training, the students practice finding and editing grammar errors with the sample texts provided by the teacher-researcher.
- Users can click the suggested correction to apply it to the text or click "ignore" to move on. Users can also just read through the feedback without needing to accept or ignore each comment. Before reviewing the text, it also asks users to select a paper type such as essay, dissertation, presentation, blog, business document or creative writing to improve the accuracy of the feedback.

- By hovering the mouse over an underlined word to see suggestions, the students can apply a suggestion with one click or expand it to learn more. Byclickingtwiceonthewords, synonyms are suggested.
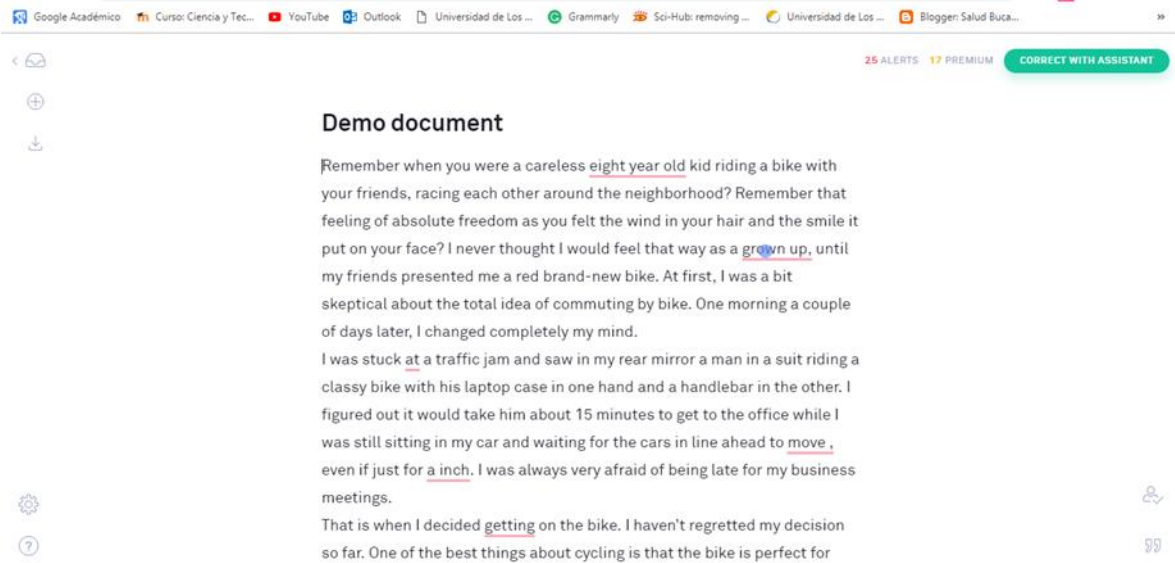
Duration

90 minutes

Session 3

Strategy 1

Checking spelling with Grammarly

Objective

To learn to check contextual spelling using Grammarly

To learn to correct spelling errors using Grammarly

Procedures

- First, the teacher gives the students a short sample text to check spelling in Grammarly.

- Before starting the exercise, the students set the goals of the assignment.
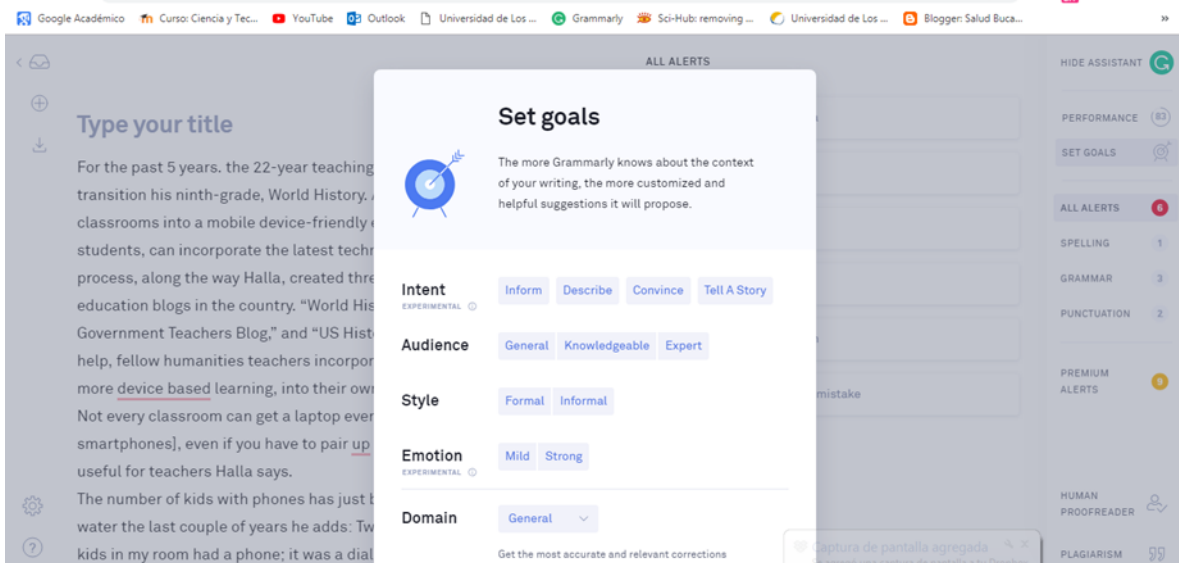
- Then, the students should identify and correct the spelling errors considering the explanations given by Grammarly.
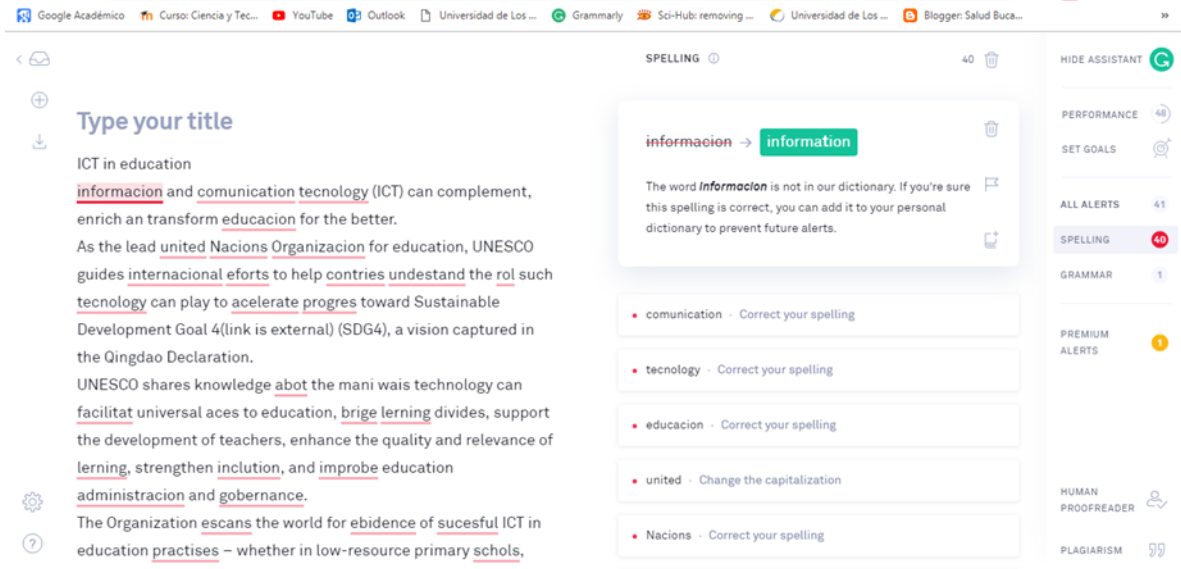
- Then, the students are asked to write an essay-like text on a free topic. They can write it directly into the input box in the Grammarly web site, write in word, copy the text and paste it a text into the input box or upload a document to save the original formatting.
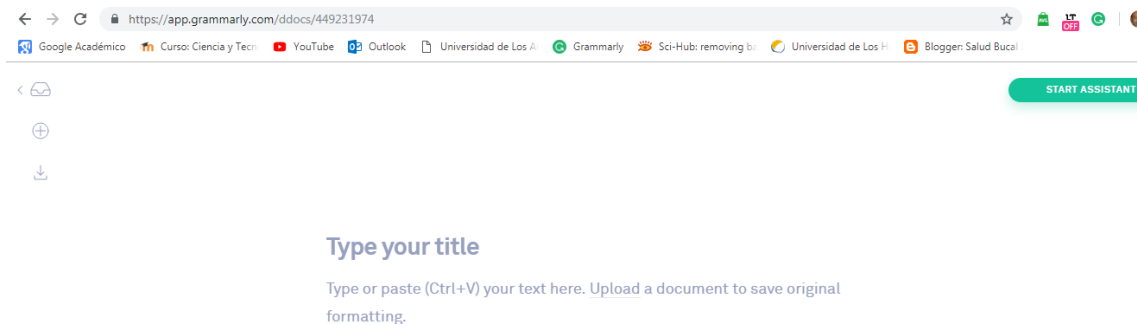
- Over the session, the students can write the number of drafts they want and check for spelling errors the number of times they want. They were not allowed to use other resources, such as online dictionaries or other websites.
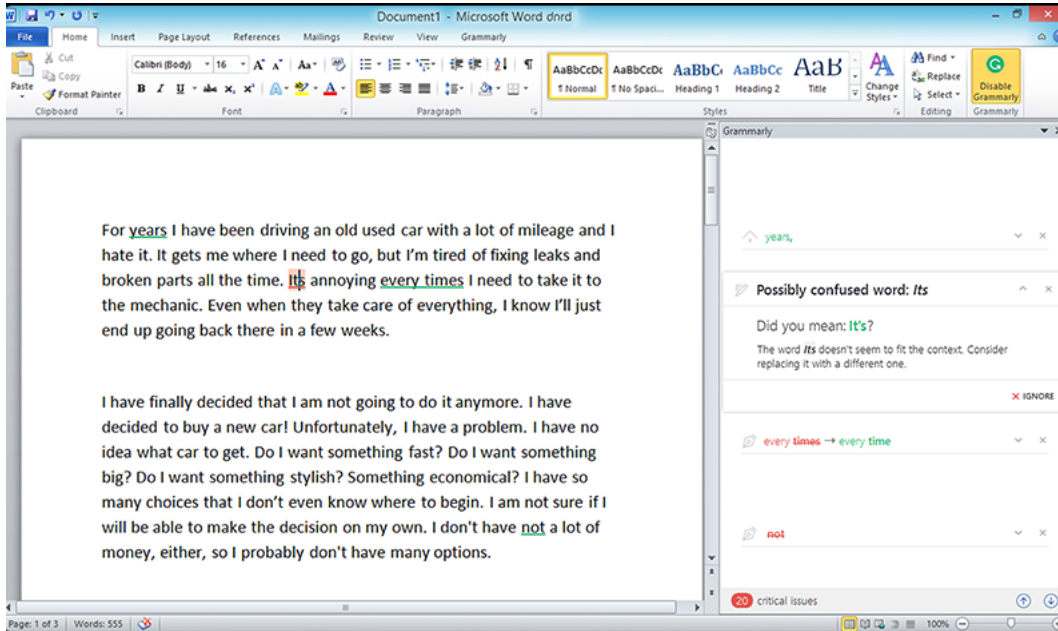
- They then downloaded the detailed Grammarly performance report.
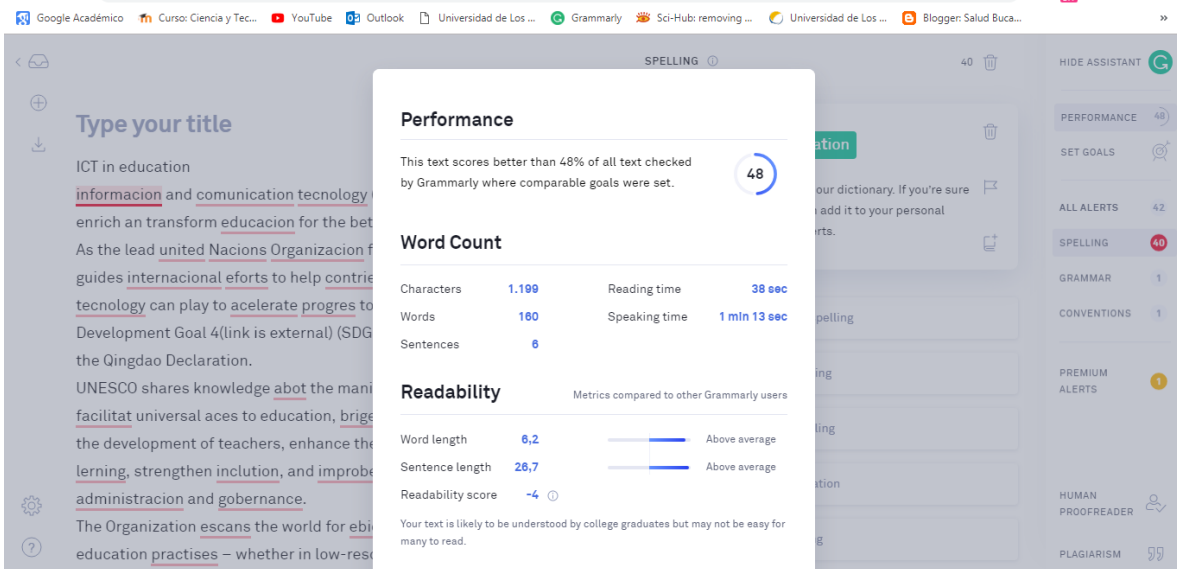
Duration

90 minutes

Session 4

Strategy 2

Checking punctuation with Grammarly

Objective

To learn to check punctuation using Grammarly

To learn to correct punctuation errors using Grammarly

Procedures

- First, the teacher gives the students a short sample text to check punctuation.

- Then, the students should identify and correct the punctuation errors considering the explanations given by Grammarly.

- Then, the students are asked to write an essay-like text on a free topic. They can write it directly into the input box in the Grammarly web site, write in word, copy the text and paste it a text into the input box or upload the document.

- Over the session, the students can write the number of drafts they want and check for errors the number of times they want. They were not allowed to use other resources, such as online dictionaries or other websites.

Duration

90 minutes

Session 5

Strategy 3

Checking grammar with Grammarly
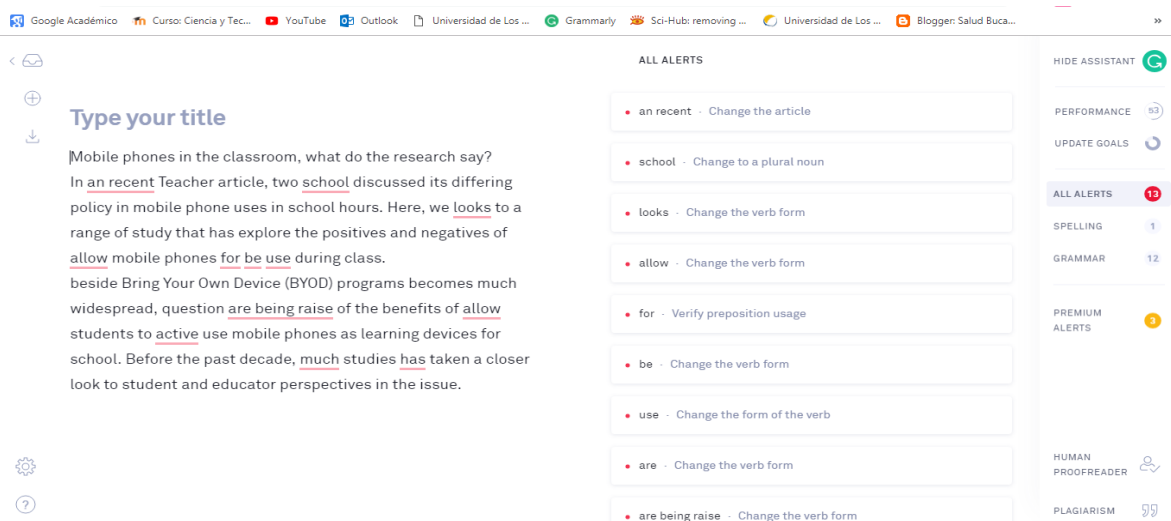
Objective

To learn to check grammar using Grammarly.

To learn to correct grammar errors using Grammarly.

Procedures

- First, the teacher gives the students a short sample text to check grammar.

- Then, the students should identify and correct the grammatical errors considering the explanations given by Grammarly.

- Next, the students should write an essay-like text on a free topic. They can write it directly into the input box in the Grammarly web site, write in word, copy the text and paste it a text into the input box or upload the document.

- Over the session, the students can write the number of drafts they want and check for errors the number of times they want. They were not allowed to use other resources, such as online dictionaries or other websites.

Duration

90 minutes

Session 6

Strategy 4

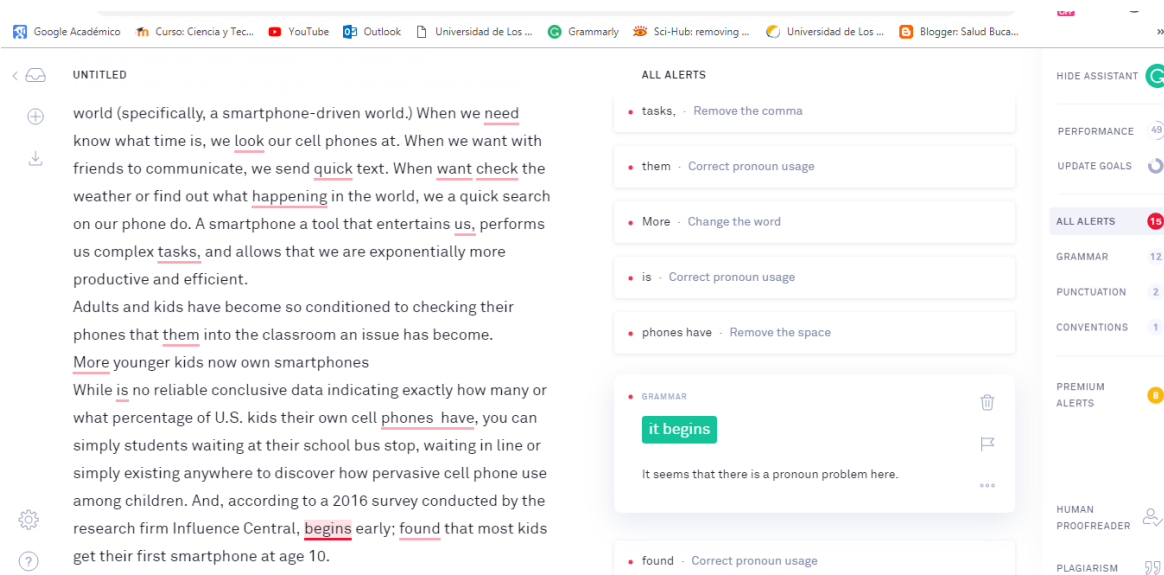## Checking sentence structure with Grammarly

Objective

To learn to check sentence structure using Grammarly.

To learn to correct sentence structure errors using Grammarly.

Procedures

First, the teacher gives the students a short sample text to check grammar in Grammarly

- Then, the students should identify and correct sentence structure errors considering the explanations given by Grammarly.

- Next, the students are asked to write an essay-like text on a free topic. They can write it directly into the input box in the Grammarly web site, write in word, copy the text and paste it a text into the input box or upload the document.

- Over the session, the students can write the number of drafts they want and check for errors the number of times they want. They were not allowed to use other resources, such as online dictionaries or other websites.

Duration

90 minutes

Session 7

Strategy 5

Checking academic style with Grammarly

Objective

To learn to check academic style using Grammarly.

To learn to correct stylistic errors using Grammarly.

Procedures

First, the teacher gives the students a short sample text to check style in Grammarly

- Then, the students should identify and correct style errors considering the explanations given by Grammarly.

- Next, the students are asked to write an essay-like text on a free topic. They can write it directly into the input box in the Grammarly web site, write in word, copy the text and paste it a text into the input box or upload the document.

- Over the session, the students can write the number of drafts they want and check for errors the number of times they want. They were not allowed to use other resources, such as online dictionaries or other websites.

Duration

90 minutes

Session 8

Strategy 6

Checking vocabulary with Grammarly
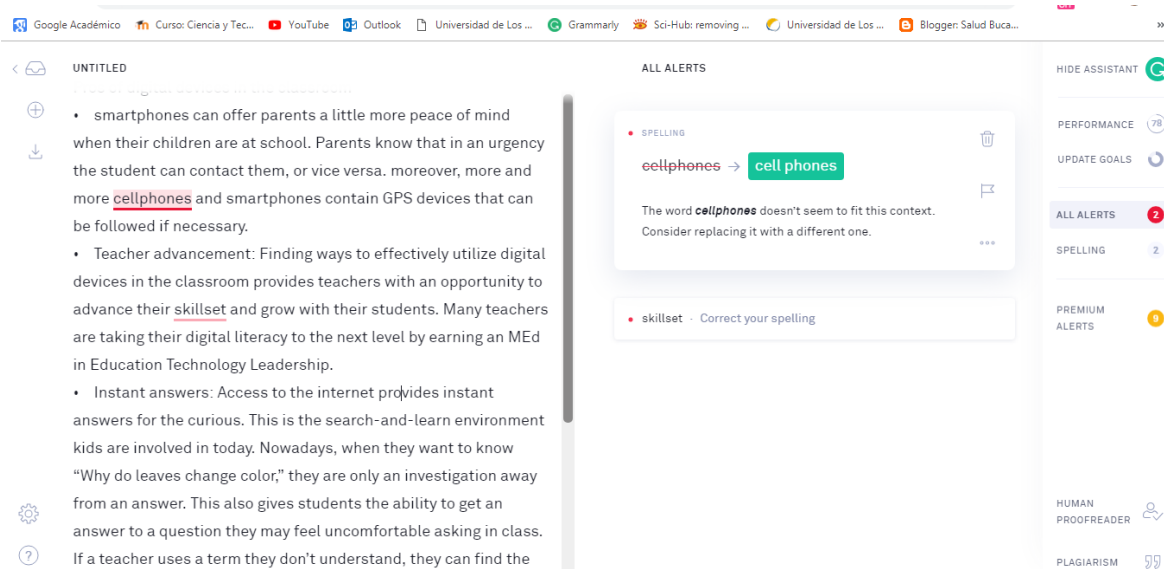
Objective

To learn to check vocabulary using Grammarly.

To learn to correct vocabulary errors using Grammarly.

Procedures

First, the teacher gives the students a short sample text to check vocabulary in Grammarly.

Then, the students are asked to write an essay-like text on a free topic. They can write it directly into the input box in the Grammarly web site, write in word, copy the text and paste it a text into the input box or upload a document to save the original formatting.

Over the session, the students can write the number of drafts they want and check for errors the number of times they want. They were not allowed to use other resources, such as online dictionaries or other websites.

They then downloaded the detailed Grammarly report with feedback across the six categories: contextual spelling, grammar, punctuation, sentence structure, style, and vocabulary enhancement.

Contextual Spelling — 10

Misspelled Words	5
Mixed Dialects of English	4
Confused Words	1

Grammar — 17

Determiner Use (a/an/the/this, etc.)	10
Faulty Subject-Verb Agreement	3
Incorrect Noun Number	2
Wrong or Missing Prepositions	2

Punctuation — 8

Comma Misuse within Clauses	5
Misuse of Semicolons, Quotation Marks, etc.	2
Punctuation in Compound/Complex Sentences	1

Sentence Structure — 3

Misplaced Words or Phrases	2
Incomplete Sentences	1

Style — 9

Wordy Sentences	6
Improper Formatting	3

Vocabulary enhancement — No errors

Duration

90 minutes

Session 9

Download the smartphone Grammarly version

Objective

To learn how to use the Grammarly app, how to install it on iOS and Android smartphones.

Procedures

- First, the students will be asked to search for the Grammarly Support web pagein their phones. Then, they should follow the directions to download the app.

- Grammarly can be used in smartphones across the Internet for free. Students can improve their writing everywhere they type on sites like Facebook, Gmail, Twitter, LinkedIn, Instagram, WhatsApp and many more social networks and apps.

- On the phone, suggestions are displayed along the top of the keyboard. They can apply a suggestion with one click or expand it to learn how to correct the errors.
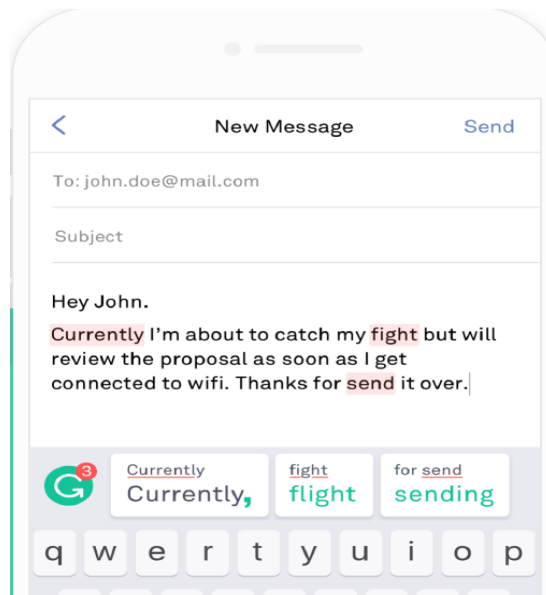
Duration

90 minutes

Session 10

Post-test: Written text assessment

- At the end of the course, the post-test will be administered in the classroom. The students are asked to write individually a like-essay text of about 1000 words length on a free topic to be evaluated as part of the post-test.

- They should write it using Microsoft Word, which is available in the computers of the lab.

- They will receive no assistance on the writing process, grammar, spelling, punctuation or stylistic corrections or any other recommendations.

- The students cannot talk to each other.

- They may access to Grammarly web page to get language support.

- When having finished, the students should upload the text in the Share Point of the class.

- Texts will be evaluated using the same rubric of the pre-test. They will be run through the Grammarly program and read manually to identify, codify and classify the errors. Then, texts will be assessed according to the same scale used for the pre-test:

  - Poor: 1-2 points
  - Weak: 3-4 points
  - Adequate: 5-6 points
  - Good: 7-8 points
  - Outstanding: 9-10 points

Evaluation: It depends on the numbers of errors.

Duration:

90 minutes

6.8 Administration of the proposal

This proposal consists of a "Teaching guide for developing English academic writing skills using the virtual writing tutor software Grammarly™". It is addressed to the Super-Intensive Level students at the Languages Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

The academic writing activities were administered during the English class by the researcher and were supported by the classroom teachers. The proposal is designed to be carried out for six weeks. It was implemented from January 3rd to February 15th. Those teachers who wish to apply the proposal in their writing classes can contact the author (researcher) and set up a workshop to receive an orientation about the booklet and how to use it.

Before implementing the proposal, a pre-test was conducted. During the teaching activities of the proposal, students were observed and asked to respond to a questionnaire. In the end, in the last session of the proposal, a post-test was also administered. They were conducted to analyze the incidence of the virtual writing tutor software Grammarly™ on the development of the English academic writing skills in a group of Super-Intensive Level students.

6.9 Proposal Evaluation

To analyze the incidence of a virtual writing tutor software on the development of the English academic writing skills in a group of Super-Intensive Level students, the proposal must be evaluated. So, the following diagram presents some basic questions that could be considered in the evaluation of the proposal:

What?

The implementation of the proposal

Why?

To assess the feasibility

What for?

To validate the proposal efficacy

Who?

The researcher and the teachers

When?

During and after the implementation of the proposal

How?

Pre-test and post-test

With which instrument?

Rubric
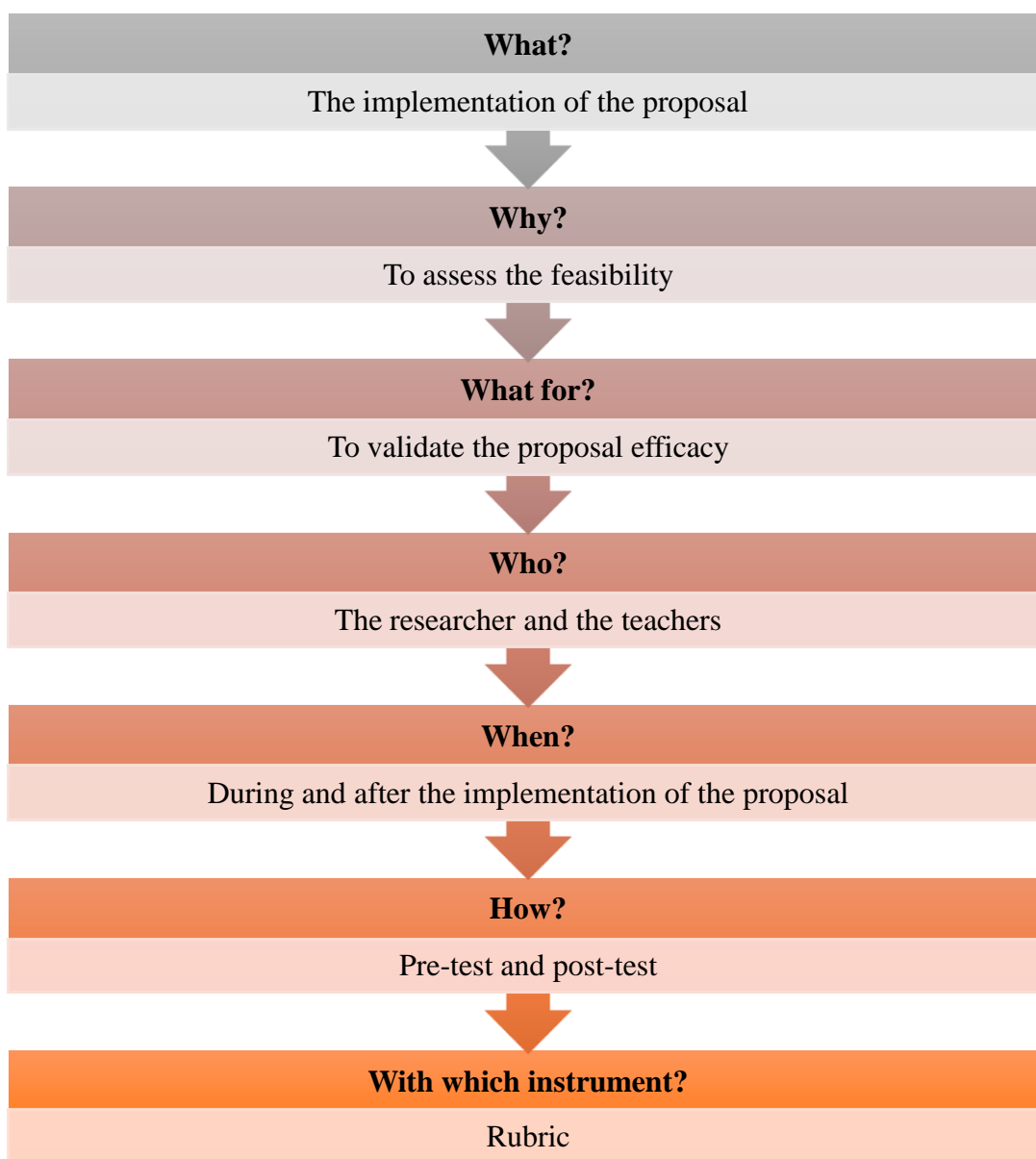
Figure 25. Evaluation of the proposal

*Elaborated by: Tacoamán, Mario (*2019)

REFERENCES

Afrin, S. (2016). Writing problems of non-English major undergraduate students in Bangladesh: An observation. *Open Journal of Social Sciences, 4*(3), 104-116.

Ajow, A. (2016). *The Role of Direct Method in Teaching English as a Foreign Language A case study of English teachers in El-Imam EL-Mahdi University, at the White Nile State.* Doctoral dissertation, UNIVERSITY OF El-IMAM El-MAHDI.

Akçayır, M., Dündar, H., && Akçayır, G. (2016). What makes you a digital native? Is it enough to be born after 1980? *Computers in Human Behavior, 60*, 435-440.

Alameddine, M., & Mirza, H. (2016). Teaching Academic Writing for Advanced Level Grade 10 English. Procedia-Social and Behavioral Sciences, 232,. *232*, 209-216.

Alfaki, I. (2015). University students' English writing problems: diagnosis and remedy. I. *nternational Journal of English Language Teaching, 3*(3), 40-52.

Ali, S. (2018). Community Language Learning. . In *The TESOL Encyclopedia of English Language Teaching* (pp. 1-5). London: Wiley Online Library.

Alicante, U. d. (2018, 12 27). Retrieved from Teaching guide: https://si.ua.es/en/manuales/uacloud/guiadocente/teaching-guide.html

Alicante, U. d. (2019, 02 01). *Normativa per a l'elaboració i aprovació de les guies docents* .Retrieved from https://www.boua.ua.es/pdf.asp?pdf=4135.pdf

Arjomad, M. (2015). The effect of listening to music on the pronunciation of lower intermediate. *International Journal of Education and Research, 3(3)*, 101-112.

Asamblea Nacional. (2016). *Ley Organica de Educación Intercultural.* Quito.

Asher, J. (1969). The total physical response approach to second language learning. *The modern language journal, 53*(1), 3-17.

Bada, S., & Olusegun, S. (2015). Constructivism learning theory: A paradigm for teaching and learning. *Journal of Research & Method in Education, 5*(6), 66-70.

Bagheri, M., & Riasati, M. (2015). EFL graduate students' IELTS writing problems and students' and teachers' beliefs and suggestions regarding writing skill improvement. . *Journal of Language Teaching and Research, 7*(1), 198-209.

Balkır, N., & Topkaya, E. (2017). Synectics as a prewriting technique: Its effects on writing fluency and lexical complexity. *Eurasian Journal of Applied Linguistics, 3*(2), 325-347.

Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory.* Englewood Cliffs.

Barzola Tigrero, J. (2016). *The use of an electronic portfolio for increasing writing skills to tenth grade at EBG José Pedro Varela, La Libertad, province of Santa Elena, 2015-2016.*Universidad Estatal Península de Santa Elena, La Libertad.

Beltrán, I., & Alejandra, J. (2018). *Audiocomics and the listening skill development of the English language.*Thesis, Universidad Técnica de Ambato., Ambato.

Bhatia, V. (1993). *Analyzing Genre. Language Use in Professional Settings.* London: Longman.

Bhirud, N., Bhavsar, R., & Pawar, B. (2017). Grammar Checkers for Natural Languages: A Review. *International Journal on Natural Language Computing, 6*(4), 1-13.

Biber, D. (1989). A typology of English texts. . *Linguistics, 27*, 3-43.

Bogdan, R., && Biklen, S. (1997). *Qualitative research for education.*Boston, MA: : Allyn & Bacon.

Buyse, K. (2014). Una hoja de ruta para integrar las TIC en el desarrollo de la expresión escrita: recursos y resultados. *Journal of Spanish Language Teaching, 1*(1), 101-115.

Bygate, M. (1987). *Speaking.* Oxford: Oxford University Press.

Cáceres, L. (2018). *Automated language evaluation tools and the development of grammar skills.* thesis, Universidad Técnica de Ambato, Ambato.

Canale, M. (2014). From communicative competence to communicative language pedagogy. In *Language and communication* (pp. 14-40). London: Routledge.

Candlin, C., & Hyland, K. (1999). *Writing: Texts, processes and practices.* London: Routledge.

Carlberger, J., Domeij, R., Kann, V., & Knutsson, O. (2004). The development and performance of a grammar checker for Swedish: A language engineering perspective. *Natural Language Engineering, 1*(1).

Carrera, M. (2015). *Software de autocorrección ortográfica y gramatical y su incidencia en la aplicación de normas de escritura y ortografía en los estudiantes de la Facultad de Ciencias Jurídicas, Sociales y de la Educación.* Thesis, UNIVERSIDAD TÉCNICA DE BABAHOYO, BABAHOYO.

Castillo, M. (2015). *Estrategias de Corrección de errores y el desarrollo de la destreza de escritura del Idioma Ingles en los Estudiantes de los Octavos de Educación Básica Paralelos A y B de la Unidad Educativa Joaquin Lalama De la Ciudad de Ambato.* Bachelor´s Thesis, Universidad Técnica de Ambato, Ambato.

Cavaleri, M. (2016). You want me to check your grammar again? The usefulness of an online grammar checker as perceived by students. *Journal of Academic Language & Learning, 10*(1), 223-236.

Celce- Mauricia, M. (1996). *Teaching Pronounciation. A reference for Teachers of English Speakers of other languages.* Cambridge : University Press.

Chamba, T., & Susana, E. (2018). *The use of english pronunciation app and the english pronunciation in the third semester from pedagogía de los idiomas nacionales y extranjeros*

from Ambato Technical University, Tungurahua province. thesis, Universidad Técnica de Ambato, Ambato.

Chaplain, R. (1995). Stress and job satisfaction: A study of English primary school teachers. *Educational Psychology, 15*(4), 473-489.

Chois, P., & Jaramillo, L. (2015). a investigación sobre la escritura en posgrado: estado del arte. *Lenguaje, 2*, 227-259.

Chomsky, N. (1957). *Syntactic Structures.* . Mouton: The Hague.

Chomsky, N. (1981). Knowledge of language: Its elements and origins. *Phil. Trans. R. Soc. Lond. B, 295*(1077), 223-234.

Chomsky, N. (2013). *Topics in the theory of generative grammar.* New York: Walter de Gruyter.

Chung, S. (2017). A communicative approach to teaching grammar: theory and practice. *The English Teacher, 18*, 33-50.

Crystal, D. (2012). *English as a global language.*Cambridge : Cambridge University Press.

Cuesta, P. (2017). *Informe Académico del Área de Inglés.* Ambato-Ecuador: Distrito 2.

Daniels, H. (2016). *Vygotsky and pedagogy.* London: Routledge.

De Smedt, F., & Van Keer, H. (2014). A research synthesis on effective writing instruction in primary education. *Procedia-Social and Behavioral Sciences*, 693-701.

Ecuador, A. N. (2010). *Ley Orgánica de Educación Superior.*Quito. Retrieved 01 11, 2019, from https://www.educacionsuperior.gob.ec/wp-content/uploads/downloads/2014/03/LEY_ORGANICA_DE_EDUCACION_SUPERIOR_LOES.pdf

Edo, N. (2014). Pronunciation and comprehension of oral English in the English as a foreign language class: Key aspects, students' perceptions and proposals. *Journal of Language Teaching and Research, 5(2)*, 262-273.

Education, M. o. (2014). *National Curriculum Guidelines.*Ecuador.

Education, M. o. (2016). *EGB Superior curriculum.*Ecuador.

EF Education First. (2018). *EF English Proficiency Index.* Quito: EF Education First.

Elbow, P. (1998). *Writing with power: Techniques for mastering the writing process.* .New York: Oxford University Press.

Escobar, N. (2017). *El uso del facebook y el deterioro de la ortografía de los estudiantes de la Unidad Educativa Eloy Alfaro Delgado del cantón Ambato.* Bachelor's thesis,, Universidad Técnica de Ambato, Ambato.

Espinal, C., Andrés, D., & Gurumendi, D. (2015). *The influence of a blog as a technological tool to improve the writing of paragraphs in english applied to seventh grade students at monte Tabor Nazaret.*Bachelor's thesis, Universidad Laica Vicente Rocafuente, Guayaquil.

Estrella Crespo, A. (2018). *Didactic strategies in english pronunciation in second bachillerato students at unidad educativa sofos in Guayaquil during the school year 2017-2018.* Thesis, Guayaquil.

Estupiñán, B. (2017). Common Written English Grammatical Mistakes in the Students from the Applied Linguistics School at PUCE, Esmeraldas Campus. . *In International Congress on the Didactics of the English Language, 2*(1).

Fajariyah, D. N. (2009). *Improving students'speaking proficiency using games (A Classroom Action Research on the Eight Grade Students of SMP Negeri 2 Baki Sukoharjo 2008/2009 Academic Year).* Jawa Tengah, Indonesia: (Doctoral dissertation) Universitas Sebelas Maret.

Fangzhi, C. (1998). *The teaching of pronunciation.*

Fareed, M., Ashraf, A., & Bilal, M. (2016). ESL learners' writing skills: Problems, factors and suggestions. *Journal of Education and Social Sciences, 4*(2), 81-92.

Fattah, S. (2015). The Effectiveness of Using WhatsApp Messenger as One of Mobile Learning Techniques to Develop Students' Writing Skills. *Journal of Education and Practice, 6*(32), 115-127.

Flattum, J. (2004, 09 27). *The muse's muse*. Retrieved 03 15, 2018, from What is a song: http://www.musesmuse.com/00000742.html

Foster, D. (2017). *Writing and learning in cross-national perspective: Transitions from secondary to higher education.*London: Routledge.

García Flores, J., & Jiménez, J. (2017). *Tutoría asistida por computador para la redacción de artículos científicos mediante el procesamiento de lenguaje natural.* Bachelos' thesis, Universidad de las fuerzas Armadas, Quito.

Ghofur, A., Degeng, I., Widiati, U., & Setyosari, P. (2017). The Effect Of Communicative Language Teaching And Audio-Lingual Method On English Speaking Skill Across Different Learning Styles. *KnE Social Sciences, 1*(3), 1-7.

Gilakjani, A. (2012). The significance of pronunciation in English language teaching. *English Language Teaching*, 96.

Giménez, A., Luque, J., López-Zamora, M., & Fernández-Navas, M. (2015). A self-report questionnaire on reading-writing difficulties for adults. *Anales de Psicología/Annals of Psychology, 31*(51), 109-119.

Gisbert, M., & Esteve, F. (2016). Digital Leaners: la competencia digital de los estudiantes universitarios. *La cuestión universitaria, 7*, 48-59.

Godolakis, C. (2013). Study of the use of spell and grammar checkers in texts by SLA students in Sweden. *Revista Hispanista Escandinava, 3*(3).

Gorard, S. (2001). *Quantitative methods in educational research: The role of numbers made easy.* New York: A&C Black.

Gotti, M. (2005). *Investigating specialized discourse.* Berlin: Peter Lang.

Grabe, W., & Kaplan, R. (2014). *Theory and practice of writing: An applied linguistic perspective.* London: Routledge.

Graham, S., & Hall, T. (2016). Writing and Writing Difficulties From Primary Grades to College: Introduction to the Special Issue. *Learning Disability Quarterly, 39*(1), 3-4.

Graham, S., Harris, K., & Chambers, A. (2016). Evidence-based practice and writing instruction. In *Handbook of writing research* (pp. 211-226.). Whashington : Guilford Publications.

Grammarly. (2019, 1 3). *Automated grammar checker*. Retrieved from https://www.grammarly.com/

Gregg, L., & Steinberg, E. (2016). *Cognitive processes in writing. .* London: Routledge.

Griffiths, B. (2004). *Integrating pronunciation into classroom activities*. Retrieved 03 15, 2018, from British Council & BBC.: https://www.teachingenglish.org.uk/article/integrating-pronunciation-classroom-activities

Guachichullca, C. (2015). *Design of the Administrative Methodology for the assurance of quality applied in the phases of Analysis, design and development for the prototype of the Academic Management System of the University of Guayaquil.* Ecuador.

Hammad, E. (2016). Palestinian University students' problems with EFL essay writing in an instructional setting. . In *Teaching EFL Writing in the 21st Century Arab World* (pp. 99-12). London: Palgrave Macmillan.

Hancock, M. (2012, 09 24). *Pronunciation as a listening skill.* Retrieved from Hancock McDonald English Language Teaching: http://hancockmcdonald.com/sites/hancockmcdonald.com/files/file-downloads/PRONUNCIATION%20AS%20A%20LISTENING%20SKILL.pdf

Handayani, N., & Johan, M. (2018). Correlation between problem faced in grammar and writing ability of efl university students. *JEE-Journal of English Education, 4*(2), 108-120.

Holmes, R. (1997). Genre analysis and the social science: An investigation of the structure of the research article discussion sections in three disciplines. *English for Specific Purposes, 16*(4), 321-337.

Hung, B., & Van, L. (2018). Depicting and Outlining as Pre-Writing Strategies: Experimental Results and Learners' Opinions. *International Journal of Instruction, 11*(2), 451-464.

Hyland, K. (2002). *Teaching and Researching Writing.* London: Longman.

Hyland, K., & Jiang, F. (2017). Is academic writing becoming more informal? *English for Specific Purposes, 45*, 40-51.

Hymes, D. (1972). On communicative competence. sociolinguistics. *269*, 53-73.

Ien, L., Yunus, M., & Embi, M. A. (2017). Build Me Up: Overcoming Writing Problems Among Pupils In A Rural Primary School In Belaga, Malaysia. *5*(1), 1-7.

Isaacson, S. (2017). Instruction that helps students meet state standards in writing. In *Students Who Are Exceptional and Writing Disabilities* (pp. 39-54). London: Routledge.

Israel, H. (2013). Language learning enhanced by music and song. *Literacy information and computer education journal (LICEJ), 2(1)*, 1360-1366.

Jackendoff, R. (1994). *Patterns in the mind: Language and human nature.* New York: Basic Books, Harper Collins.

Jenkins, J. (2004). Research in teaching pronunciation and intonation. *Annual review of applied linguistics, 24*, 109-125.

Joaquin, A., K. S., & Shin, S. (2016). Examining Prewriting Strategies in L2 Writing: Do They Really Work? *The Asian EFL Journal Quarterly, 18*(2), 156-170.

Klein, P., & Boscolo, P. (2016). Trends in research on writing as a learning activity. *Journal of Writing Research, 7*(3), 311-350.

Knapp, K. (2015). English as an international lingua franca and the teaching of intercultural communication. . *Journal of English as a Lingua Franca, 4*(1), 173-186.

Krashen, S., & Terrell, T. (1983). *The natural approach: Language acquisition in the classroom.* London: Prentice Hall Europe.

kusumawardhani, R., & Sulistyanto, H. (2017). A comparative study between teaching vocabulary using total physical response and direct method: the case of the fourth grade students of sd n 04 karangbrai bodeh pemalang. *ETERNAL (English Teaching Journal), 4*(1).

Lai, C. (2015). Modeling teachers' influence on learners' self-directed use of technology for language learning outside the classroom. *Computers & Education, 82*, 74-83.

Lasagabaster, D., Doiz, A., & Sierra, J. (2014). *Motivation and foreign language learning: From theory to practice.* London: John Benjamins Publishing Company.

Lechon de la Cruz, M. (2017). *The exploration of the information and communication technologies in the development of reading comprehension skill of english language with the students at primer año de bachillerato "a" at unidad educativa combatientes.*Tesis, Universidad Nacional el Chimborazo, Riobamba.

LNS, D. E. (2016). *Mi primer diccionario escolar.* Cuenca: Don Bosco.

López, M. (2015). *The incidence of flipped learning in the development of the writing skill of senior english learning groups at johannes Lepler High School, 2014-2015 year.* Thesis, Universidad de las fuerzas Armadas, Quito .

Lu, D. (2002). Phonetic symbols: A necessary stepping stone for ESL learners. *English teaching forum*, 36-39.

Lu, Z., Fan, M., Wang, Y., Zhao, J., Annett, M., & Wigdor, D. (2019). InkPlanner: Supporting Prewriting via Intelligent Visual Diagramming. IEEE transactions on visualization and computer graphics, 25(1),. *25*(1), 277-287.

Łuczak, A. (2018). ELP Teachers as Researchers. On the Benefits of Conducting Needs Analysis. *STUDIES IN LOGIC, GRAMMAR AND RHETORIC, 53*(1), 177–193.

Macazaga, A. (2014). *Observation as a Research Strategy to Build Contexts of Learning and Promote Participatory Processes. National University of Distance Education.* España.

Magallanes, M. (2018). *Dificultades específicas en la escritura y su incidencia en el proceso de aprendizaje en los estudiantes del subnivel básica elemental de la escuela de educación General Dr. José Luis Tamayo.* Universidad Central de Acuador, Quito.

Marlina, R., & Giri, R. (2014). *The pedagogy of English as an international language: Perspectives from scholars, teachers, and students.* Berlin: Springer.

Martinez, D., & Olsen, L. (2015). Online writing labs. . In *Foundational practices of online writing instruction* (pp. 183-210.). Colorado: The WAC Clearinghouse and Parlor Press.

Matías, R., & Alexandra, K. (2016). *Digital games to improve english basic vocabulary skills to students of eighth grade at unidad educativa La Libertad, La Libertad, Santa Elena province, 2015-2016.* thesis, La Libertad.

McDonough, J., & McDonough, S. (2014). *Research methods for English language teachers.* London: Routledge.

McLaughlin, B. (1987). *Theories of second language learning.* London: Edward Arnold.

Merkle, B. (2019). Writing Science: Transforming Students' Science Writing by Tapping into Writing Instruction Scholarship and Best Practices. *Bulletin of the Ecological Society of America, 100*(1), 1-6.

Merkur, B. (2000). *Synchronous chorusing and human origins.* Cambridge: The MIT Press.

Ministry of Education. (2014). *ACUERDO-052-14.* Quito.

Ministry of Education. (2014). *National curriculum guidelines.* Quito.

Ministry of Education. (2016). *EGB superior curriculum.* Quito.

Morley, J. (1991). The pronunciation component in teaching English to speakers of other langauges. *TESOL quarterly, 25(3)*, 481-520.

Murray, D. (2018). The world of English language teaching: Creating equity or inequity? *Language Teaching Research, 1*, 1-11.

Naber, D. (2003). *A Rule-Based Style and Grammar Checker.* Technische Fakultät, Universität Bielefeld, Denmark. Retrieved 12 19, 2018, from http://www.danielnaber.de/languagetool/download/style_and_grammar_checker.pdf

Nelms, B. (2017). Writing for publication: your obligation to the profession. *Journal of Pediatric Health Care, 31*(4), 423-424.

Nuraeningsih, R. (2018). Improving Students' Vocabulary Mastery through TPR Storytelling. *IJELTAL (Indonesian Journal of English Language Teaching and Applied Linguistics, 1*(1), 49-61.

Oxford University Press ELT. (2011, 05 11). *Oxford University Press English language teaching global blog*. Retrieved 03 15, 2018, from Why should songs be used more in the Young Learners classroom?: https://oupeltglobalblog.com/2011/05/11/why-should-songs-be-used-more-in-the-young-learners-classroom/

Paltridge, B. (1997). *Genre, Frames and Writing in Research Settings.* . Philadelphia: John Benjamins.

Paltridge, B., Starfield, S., & Tardy, C. (2016). *Ethnographic perspectives on academic writing.* . Oxford: Oxford University Press.

Pennycook, A. (2017). *The cultural politics of English as an international language.* .London: Routledge.

Peñafiel, G., Valencia, E., Meza, H., Coello, D., Pérez, G., García, R., & Pontón, Y. (2017). Vicios de redacción y problemas de escritura común - científica en la. *International Journal of Humanities and Social Science Invention, 6*(5), 35-42.

Perez, S. G. (2002). *Qualitative research.* Madrid: La Muralla SA.

Potter, R., & Fuller, D. (2018). . My new teaching partner? Using the grammar checker in writing instruction. *English Journal, 98*(1), 36-41.

Ranalli, J., Link, S., & Chukharev-Hudilainen, E. (2017). Automated writing evaluation for formative assessment of second language writing: investigating the accuracy and usefulness of feedback as part of argument-based validation. *Educational Psychology, 37*(1), 8-25.

Rashtchi, M., & Khani, P. (2010). Improving EFL learners' oral proficiency through metacognitive strategy instruction. *JELS*, 137-156.

Rehman, A., Bilal, H., Sheikh, A., Bibi, N., & Nawaz, A. (2014). The role of motivation in learning English language for Pakistani learners. *International Journal of Humanities and Social Science, 4*(1), 254-258.

Richards, C. (2017). DO THE ALTERNATIVE METHODS OF SUGGESTOPEDIA AND THE SILENT METHOD HAVE APPLICATION FOR INTRODUCING INTERACTIVE APPROACHES TO SECOND LANGUAGE TEACHING IN RESISTANT EFL CONTEXTS? *The English Teacher, 8*, 1-8.

Richards, J., & Rodgers, T. S. (2014). *Approaches and methods in language teaching.* Cambridge: Cambridge University Press.

Richards, J., Platt, J., & Weber, H. (1985). *Longman Dictionary of Applied Linguistics.* Hong Kong: Longman Group Limited.

Ritchey, K., & Coker Jr, D. (2014). Identifying writing difficulties in first grade: An investigation of writing and reading measures. *Learning Disabilities Research & Practice, 29*(2), 54-65.

Rodgers, T., & Richards, J. (1986). *Approaches and Methods in Language Teaching.* Cambridge: University Press.

Røkenes, F. M., & Krumsvik, R. (2016). Prepared to teach ESL with ICT? A study of digital competence in Norwegian teacher education. *Computers & Education, 97*, 1-20.

Roscoe, R., Snow, E., A. L., & McNamara, D. (2015). Automated detection of essay revising patterns: Applications for intelligent feedback in a writing tutor. *Grantee Submission, 10*(1), 59-79.

Santacruz Fajardo, B., & Aguilar Aguilera, J. A. (2016). *Use of the CLIL method (content and language integrated learning) in the English language reinforcement in the teaching of Ecuadorian history in the octavo año¨A¨ at Unidad Educativa Capitan Edmundo Chiriboga of Riobamba city, Chimborazo Province.*Tesis, Universidad Nacional del Chimborazo , Riobamba.

Sañudo, M. (2015). *La enseñanza de la gramatica y el uso del corrector gramatical (grammar checker).*UNED, Madrid.

Savignon, S. (2018). Communicative competence. In *The TESOL Encyclopedia of English Language Teaching* (pp. 1-7). London: Wiley Online Library.

Scherer, R., Siddiq, F., & Teo, T. (2015). Becoming more specific: Measuring and modeling teachers' perceived usefulness of ICT in the context of teaching and learning. *Computers & Education, 88*, 202-214.

Schoepp, K. (2001). Reasons for using songs in the ESL/EFL classroom. *The internet TESL journal, 7(2)*, 1-4.

Schumann, J. (1986). Research on the acculturation model for second language acquisition. *Journal of multilingual & multicultural development*, 379-392.

Severino, C., & Prim, S. N. (2015). . Word choice errors in Chinese students' English writing and how online writing center tutors respond to them. *The Writing Center Journal, 34*(2), 115-143.

Sharma, S. (2016). Rule Based Grammar Checking Systems (A Survey). *International Journal of Computer Applications & Information Technology, 10*(1), 217-220.

Sharpe, A. (2018). What is in the bathwater of the audio-lingual method?: An evaluation of the audio-lingual method . *English Usage in Southern Africa, 21*(1-2), 93-105.

Shibani, A., Knight, S., & Shum, S. (2018). Understanding Revisions in Student Writing Through Revision Graph. In *International Conference on Artificial Intelligence in Education* (pp. 332-336). Berlin: Springer.

Shin, M. (2018). *Needs Analysis for Intensive English Program's Activity Program.* Northridge: California State University.

Simonok, V. (2016). Modern Approaches to Foreign Languages Teaching. Probs. *Legality, 32*, 215-230.

Singh, S., Kumar, A., Singh, L., Bhargava, M., Goyal, K., & Sharma, B. (2016). Frequency based spell checking and rule based grammar checking. In Electrical, Electronics, and

Optimization Techniques. *International Conference on Electrical, Electronics, and Optimization Techniques*, (pp. 4435-4439).

Skinner, B. F. (1987). *Skinner on behaviourism.* UK: Oxford University Press.

Smith, F. (2013). *Writing and the writer.* London: Routledge.

Smith, L. (2015). English as an international language: No room for linguistic chauvinism. *Journal of English as a Lingua Franca, 4*(1), 165-172.

Smith, L. (2017). *Necessary knowledge: Piagetian perspectives on constructivism.* London: Routledge.

Suryasa, I., Prayoga, I., & Werdistira, I. (2017). An analysis of students motivation toward English learning as second language among students in Pritchard English academy (PEACE). *International Journal of Social Sciences and Humanities, 1*(2), 43-50.

Suzuki, W., Nassaji, H., && Sato, K. (2019). The effects of feedback explicitness and type of target structure on accuracy in revision and new pieces of writing. . *System.* doi:https://doi.org/10.1016/j.system.2018.12.017

Swales, J. (1990). *Genre Analysis: English in Academic Research Settings.* Cambridge : Cambridge Unv. Press.

Swales, J., & Feak, C. (2004). *Academic writing for graduate students: Essential tasks and skills.* Ann Arbor: University of Michigan Press.

Syatriani, F., Susilawati, E., & Sari, D. (2013). IMPROVING VOCABULARY MASTERY THROUGH TOTAL PHYSICAL RESPONSE (TPR) METHODANDROLE PLAY. *Jurnal Pendidikan dan Pembelajaran, 3*(9), 1-18.

Tizian, S. (2016). *Listen and learn: an experiment on the effectiveness of songs in English L2 pronunciation.*Padova: Università degli Studi di Padova.

Vásconez, L. (2016). *Estrategias para el desarrollo del Writing en el aprendizaje del idioma inglés en los alumnos de Segundo de Bachillerato del Colegio Central Técnico en el año lectivo 2014-2015.* Bachelor's thesis, Universidad Central de Ecuador.

Villacreces, J., & Paul, J. (2014). *The effect of moodle in the learning process of business english at an Intermediate Level at Universidad del Pacífico (Master's thesis).*Master thesis, Universidad del Pacífico, Ecuador.

Villalobos, N. (2012). *Using songs to improve EFL students' pronunciation.* Costa Rica: Universidad Nacional.

Waugh, D., & Jolliffe, W. (2016). The pedagogy of teaching English in the primary school. In *English 5-11: A guide for teachers.* London: Routledge.

Weaver, C. (2018). Natural Approach. In *The TESOL Encyclopedia of English Language Teaching* (pp. 1-8). London: Wiley Online Library.

Webster. (1994). *New Webster Dictionary* .

Wollscheid, S., Sjaastad, J., & Tømte, C. (2016). The impact of digital devices vs. Pen (cil) and paper on primary school students' writing skills–A research review. *Computers & Education, 95*, 19-35.

Yang, H. (2018). Efficiency of Online Grammar Checker in English Writing Performance and Students' Perceptions. *Korean Journal of English Language and Linguistics, 18*(3), 328-348.

Yates, L. (2002). Fact sheet–what is pronunciation. *Adult Migrant English Program Research Centre*, 1-8.

Yates, L., & Zielinski, B. (2009). *Give it a go: teaching pronunciation to adults.*Sidney: Macquarie University.

APPENDIXES

Appendix 1
Observation Sheet

This form was completed during the observation of the English academic class after the implementation of the proposal. It is centered on the students' performance in class. It will be carried out in order to collect the necessary information to assess the incidence of the use of a virtual writing tutor software on the development of the English academic writing skills in a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

	Aspects	Never	Rarely	Sometimes	Often	Always
Students	Use the app					
	Discuss the doubts, problems, solutions in class					
	Ask for help when needed					
	Share his experience with other students and with the teacher					
	Participate in the writing activities spontaneously.					
	Save the exercises done in class					
	Work independently at home					
	Search for additional information					
	Feel comfortable in class					
	Feel motivate to do all the activities proposed					
	AdditionalComments					

Appendix 2

Questionnaire

In this form, the answers given by the students were registered. This questionnaire was administered after the implementation of the proposal. It is centered on the students' motivation to participate in the writing activities proposed. It was carried out in order to collect the necessary information to evaluate the incidence of the use of a virtual writing tutor software on the motivational levels toward developing the academic writing skills of a group of Super-Intensive Level students at the Languages Institute, Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

N°	Question	Yes	No	I do not know
1	You know how to use the Grammarly app			
2	It is practical to use the Grammarly app to correct your text			
3	It is easy to use the Grammarly app			
4	It is useful for university students			
5	You feel comfortable to use it in class			
6	You feel comfortable to use it in outside the class			
7	You will use it frequently			
8	You will recommend it to your partners			
9	The use of the Grammarly app motivates you to write			
10	The use of the Grammarly app improves your writing skills			
11	The use of the Grammarly app is an effective English academic writing teaching strategy			
12	You learn grammar using the Grammarly app			
13	You felt comfortable in that class			
14	You felt motivated to do all the activities proposed			

Appendix 3
Rubric

In this rubric, the performance of the students in the written task was registered. The texts were evaluated before and after the implementation of the proposal. It is centered on the correctness and grammaticality of the texts considering the six categories that the free Grammarly app included in the grammar checking process. It was carried out in order to collect the necessary information to evaluate the incidence of the use of a virtual writing tutor software on the academic writing skills of a group of Super-Intensive Level students at the Languages Institute Espe-Inca Branch, Universidad de lasFuerzas Armadas, Quito, Ecuador.

Categories	indicators	Outstanding 9-10	Good 7-8	Adequate 5-6	Weak 3-4	Poor 1-2
Spelling	Addition, repetition, omission, substitution, transposition of letters Capitalization					
Grammar	Use of the parts of the speech Word agreement Anaphoricreferences					
Punctuation	Comma between subject and verb. Comma' uses within the clauses. Colon, semicolon and comma in compound/ complex sentence.					
Sentence structure	Construction of sentence Incomplete sentences Formulaic sequence of words Lexical colocations					
Vocabulary	Word appropriateness Lexical cohesion Technical vocabulary Appropriate tone and word choice					
Style	Appropriate use of words, sentence, and paragraph, and essay development. Formal format and language					
Plagiarism	Use of quotation marks Direct quotation Indirectquotation Paraphrasing					