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Academic Writing with the Help of Technology: An Analysis of the Utilities of Software in Professional Text Creation

Treball de Fi de Grau/ BA dissertation

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Abstract

This dissertation analyses the main features that constitute English for Academic Purposes (EAP) to eventually examine whether the Artificial Intelligence-powered text editor Grammarly can be suitable for writers with different profiles. Text editors that analyse texts at orthographic or grammatical level, such as Microsoft Word, have been used for many years. However, they can only help with superficial matters. Grammarly is a program that claims to detect advanced issues, including grammar and orthography, clarity, engagement and message delivery.

This dissertation contains three sections. It first defines academic writing and its main features to establish a conceptual framework and definition to analyse Grammarly's comments on writing, dealing with microstructural and macrostructural aspects. The second part will introduce Computational Linguistics discipline and how computing can help human writing. Last, there will be a review of a study that compared Grammarly's corrections to the ones carried out by human experts. It will be followed by some fieldwork in which two BA dissertations from previous years will be analysed using the program under study. After investigating whether this piece of technology can be helpful for writing purposes, the current study will conclude that it is not recommendable yet for most people. The biggest problem is that it still does not have perfect accuracy and obliges the user to revise carefully every suggestion proposed since there are some wrong corrections. In conclusion, Grammarly will be worth using when it assures a perfect or almost perfect accuracy in their correcting outcomes.

Keywords: English for Academic Purposes, Artificial Intelligence, Computational Linguistics, English L2, text editor, Grammarly

1. Introduction

English for academic purposes (EAP) is a key factor to share the progress made in any professional field. In a world where researchers are connected all around the globe, the way how the different academics communicate in a common language, typically English (in its academic format), is gaining importance. For this reason, mastering academic English is an essential task for researchers.

Nonetheless, most people with a degree have not had EAP education, regardless of whether they want to focus their careers on academic research or not. In academic branches related to language, one might find course syllabus that include subjects dealing with EAP or similar fields. On the other hand, students of Engineering or Science degrees will not probably have the chance to access these kinds of courses.

Some works have attempted to act as a guide to learn EAP, such as María Rosa Alonso's 'Writing for Academic Purposes: A Handbook for Learners of English as a Second Language' (2009) or John Swales and Christine Feak's 'Academic Writing for Graduate Students' (2012). Even though these pieces of research are educative, especially for the non-advanced writer, academic writing can still be challenging. Unlike general writing, EAP is a complex task because the writer has to pay attention to many factors, both at macrostructural and microstructural levels.

In order to help English writers to upgrade their level, especially the non-native ones, Grammarly was created back in 2009. It is a software that can scan a text and give corrections and tips that can help the author improve his/her writing. This program can help people coming from either Language and Arts studies or scientific and technological courses, regardless of their level and experience with academic writing. Apart from

adapting to different genres and levels, it can analyse the writing-level issues faster than a human being, permitting its users to spend less time checking their writing.

Despite how promising this technology may seem, it is not as advanced as its creators wish. Computational Linguistics is a field between Linguistics and Computer Sciences, which consists of using computers to facilitate linguistic matters. It is a relatively young field created in the mid-20th century when the United States tried to automatically translate texts from foreign languages, mainly Russian.

The following sections will extend what has just been introduced. The first part will describe academic writing in English and some of its essential features. Then, there will be a description of Computational Linguistics and an analysis of some of its applications concerning EAP. Following, an analysis of Grammarly's features will be carried out following J. M. Dembsey's (2017) framework. In the last section, I will present results of some fieldwork and analysis that I carried out based on two BA dissertations rated as excellent, coming from different academic fields.

2. English for Academic Purposes (EAP)

English for Academic Purposes (EAP) is a variety of English used by researchers who share the results extracted from their studies. The basis of academic writing is to be objective. Therefore, the author's presence is placed in a secondary role, while the methodology, results, and discussions are the protagonists. In Sanchez's words, "there takes place an impersonation and detachment of the writer in order for the text to better attain objectivity" (2019: 10).

Apart from being impersonal, an academic text needs to be easy to read. While in some cultures the reader is supposed to interpret the author's complex way of expressing his/her thoughts (Japanese, Korean or Chinese), the reader has to receive an accessible

text in English. The text has to be clear and go straight to the point to achieve this objective. Thus, the economy of language is a pivotal point to write academically.

Furthermore, a tool that helps a text to be clear is the organisation. Good organisation can make a text easy to understand and "charming". To organise a text properly, one must consider macrostructural elements (e.g., paragraph structure) and microstructural elements (e.g., nominalisation, passive voice, reporting verbs). If an author can combine the previous elements properly, the text will progress fluidly from one concept to another. Nonetheless, it requires a perfect understanding of these concepts, according to Swales and Feak (2012).

2.1 From General to Academic Writing

Non-academic writers tend to let his/her culture, personal characteristics and interests influence the text. According to Purdue University, other factors that tend to affect general writers are age, experiences, gender, the location where the author is, political beliefs, the people who surround him/her (e.g., parents and peers) and education. In the same way, the audience can also be influenced by external factors, such as the ones mentioned before. Additionally, inexperienced writers can mix purposes such as entertaining, informing, shocking, persuading or educating. By contrast, academic writers should not be affected by anything, and they only have one intention, to inform. Hence, we could make a differentiation between the non-academic writer and the academic one.

On the one hand, non-academic writers tend to act impressionistically and subjectively, driven by their emotions and acting polemically. As a consequence, their tone might become conversational, personal and colloquial. Subsequently, their formations can be based on the use of contractions (e.g., it's, hasn't), the excessive use of phrasal verbs (e.g., look into, find out), the appearance of colloquialisms or slang

language (e.g., you know, lots), the use of personal pronouns (e.g., I, you, we) and the choice of vague words (e.g., thing).

On the other hand, the academic writer has an analytical, objective, intellectual and rational mentality. Unlike the general writer, his/her tone will be severe, impersonal and formal. Therefore, this type of writer will be characterised in that his/her texts will tend to apply the passive voice and contain impersonal pronouns and phrases. Also, this person will be used to write sophisticated texts that include complex sentence structures and specialised vocabulary. Thus, some of the author's foci are audience and purpose of the work, concise, fluid and unambiguous writing or giving importance to formality, as described before. These ideas come from the description by Oliver (2017) that are recalled from the PowerPoint on academic writing features. Nevertheless, the writer has other targets such as nominalisations and hedging, depicted in the following sections.

In addition, the University of Southern California (USC) has a section dedicated to advising on how to improve one's writing, which contains some tips worth mentioning. It first suggests that both actor and action of the sentence should be placed at the beginning. Then, it recommends avoiding long sentences and trying to split them into two or more sentences. However, they should not always be short (or long), finding balance in their length can provide elegance. Concerning sentence length, the USC recommends building paragraphs around an idea and avoid vague abstractions.

2.2 Formalisation, Nominalisation and Reporting Verbs

Formalisation, nominalisation and reporting verbs are three key issues of EAP that can help to differentiate an academic writer from the general one. The formalisation will provide neutrality to the article while differentiating it from general writings. Then,

nominalisation will help the text to be concise and thus make it cohesive. Finally, reporting verbs will be the tools to acknowledge someone else's investigation politely.

Formalisation is one of the most significant differences between general and academic English. As stated before, one of the important aspects of EAP is the use of formal language. The writer can use neutral expressions, which are used in everyday language. However, there have to be other expressions that are formal and are not common in normal communication. To exemplify, general English typically uses phrasal or prepositional verbs, while academic English employs single verbs, especially those ones of Latinate origin. For this reason, McCarthy & O'Dell (2008) cited in Sánchez (2019) advise that the writer should learn the differences between these 2 types of language.

Next, following Baratta's (2009) explanations, nominalisation consists of shortening the wording and packing information into clausal structures. It is helpful for academic writers because nominalisation provides cohesion to the text. In this sense, packing information is not the only function, it also removes the subject to make the text more impersonal and detached from the writer. Consequently, it helps to the claim that EAP focuses more on the action rather than the author.

Last, reporting verbs are used to acknowledge someone whose work has been used to carry out an investigation. There are several reporting verbs because they are used to create variation in the message. They tend to be used in the third person since they introduce another person's point of view. Because of the great importance of acknowledging other investigators, Swales and Feak (2012) advise being familiar with reporting verbs to indicate a positive, a negative or a neutral position towards the content presented.

2.3 Hedges

Hedges are socio-pragmatic phenomena that use ambiguous expressions in academic writing to be careful and cautious, as Sánchez (2019) cites from Swales and Feak (2012). They add that its objective is to minimise the (negative) effect that the explanation from a researcher may produce on the readers of the article. In addition, it is imperative to express caution in one's message, and, as a result, the writer has to learn how to express caution. To master a cautious way of writing "will allow the writer to qualify or moderate a claim and, therefore, indicate their stance toward such claims" (Swales and Feak, 2012, cited in Sánchez, 2019: 31).

A writer can express commitment to his/her claims by conveying caution and acknowledging other's views with hedging or by stressing his/her commitment and closing out alternatives through boosters, according to Hyland (2008). Some hedges are 'possible', 'might', 'likely', among others. They fully support any proposition they can be attached to, implying that a particular allegation is reasoned logically. On the other hand, boosters can be exemplified as 'certain', 'definitely' or 'demonstrate'. They authorise the writer to assert certainty in his/her words and, in addition, it gives a sense of involvement with the subject and empathises with the readers.

Last, Oliver (2017) classifies hedges into four groups. First, *shields* are used for protection in order to be politically correct. It can help avoid the boomerang effect so as the text does not provoke rejection in the readers. Some examples of *shields* are modal verbs and probability adjectives (e.g., seem to have). Secondly, *approximators* are a kind of hedge that is used to provide vagueness to the text. By using *approximators*, a writer might use adverbs of quantity, degree, time, etcetera (e.g., slightly). *Expressions of doubt and involvement* are the third hedge type, which expresses an interpersonal dimension. It

consists of conditional, subjunctive and person markers (e.g., most of what we know). The last category is *agentless strategies*, and they are used to provide protection and convention through passive voice and depersonalisation (e.g., have been reported).

2.4 Passive voice

Passive voice is an essential feature in EAP because allows the deletion of the subject in a sentence and semantically deemphasising the subject. It has some similarities with nominalisations (which will be described in the next section) because they both displace the focus from the agent, and then the action takes the central role. It also attempts to objectify the text, separating the writer and the text, resulting in compacted information.

Baratta (2009: 4) states that "passive voice can involve the deletion of the original subject deemphasising the subject within a long passive". This effect, according to this scholar, tends to be considered impersonal prose, as the agent is eliminated. An important reason to delete the subject is that if the object is the topic of discussion, there will be no need to maintain the subject in the sentence. It can additionally help to omit unnecessary subjects. In other words, "a passive might be used simply because the subject is implicitly understood in the first instance or is not important" (Baratta, 2009: 4)

To end this section, it can be interesting to say that passivation is discouraged by grammar checkers, even though one cannot deny that passive voice is a recurrent feature in EAP. It is essential because it helps to language optimisation and objectification. As reported by Swales and Feak (2012), passive voice allows the writer to maintain the target on something different from the agent, and it also allows to keep a good flow of the ideas. They conclude that passive constructions can be used in sections other than the ones where there is a description.

2.5 Macrostructural elements: genre, paragraph structure and linkers

The previous elements explained are part of the microstructure within EAP. On the other hand, there is the macrostructure, which contains other aspects of academic writing. The first item that will be analysed is genre. It is a concept that has been deeply studied by several professionals such as John Swales and Christine Feak. Then, paragraph structure's details will be exposed. It bears many similarities with genre, but it will be focused on a generic way regardless of the text's genre. Lastly, some insights about linkers and how they can make a text more attractive will be provided.

To begin, genre is defined by Swales (1990) as a class of structured communicative events driven by shared communicative purposes and performed by specific discourse communities. In other words, it is the different set of purposes that a text can have, and it connects the purpose of the text to a greater picture. According to Agudelo (2016), genre is a concept that groups texts together to represent the different ways writers have to use language depending on which class of text they are working on. This way, one can identify the different labels in which a text can be categorised and the circumstances in which they occur. That mentioned above in this paragraph has its basis on the belief that members of the same community can recognise, more or less easily, connections between texts they have already dealt with, developing into de creation of genre. What is more, it points out that certain conventions are used to organise the message so that the reader can follow it and recognise its purpose, these conventions can also be called 'moves'.

In figure 1, there is Swales and Feak's representation of network genres. It probably represents most of the existing academic and professional genres nowadays:

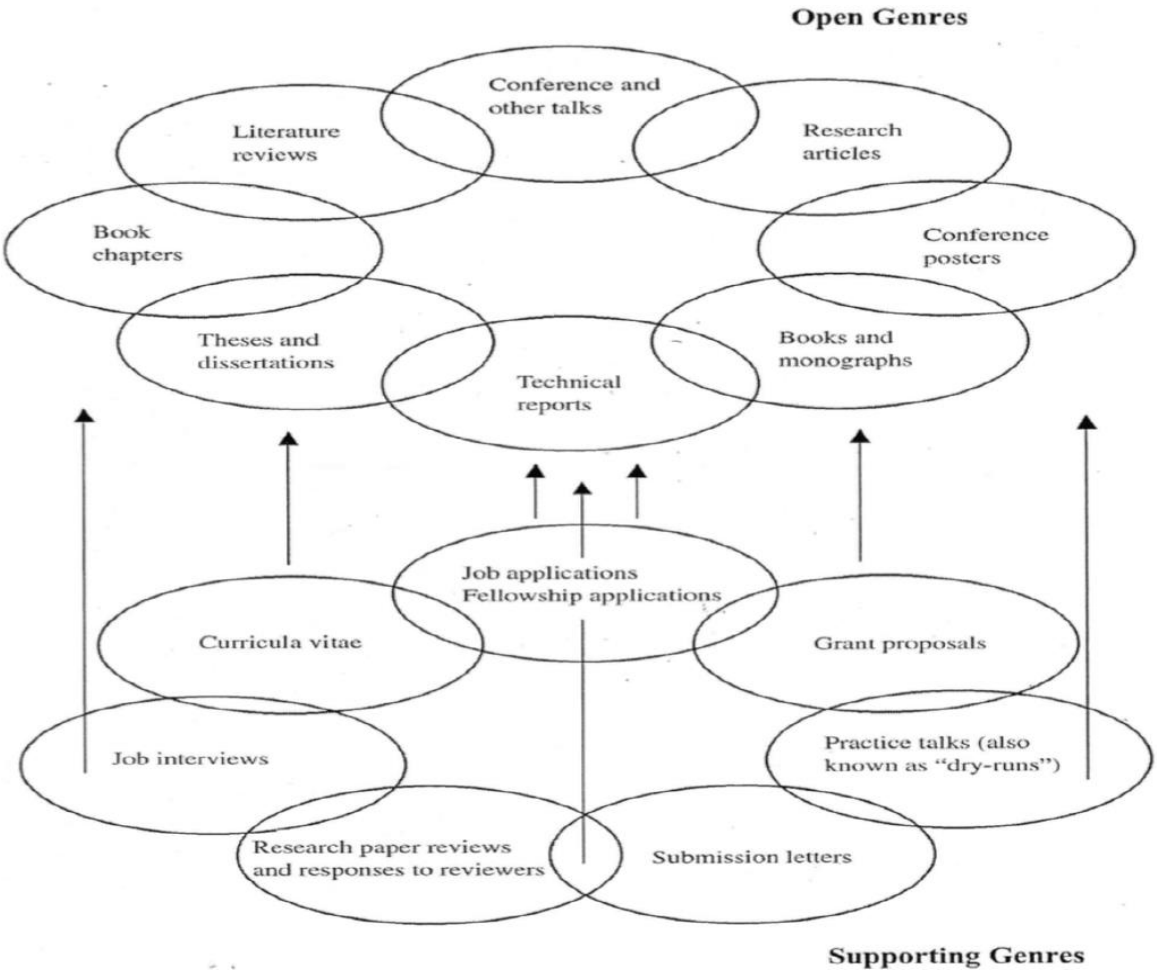

Figure 1. Academic Genre Network (Swales & Feak, 2009: x)

Vázquez and Hornero in Sánchez state that (2019: 8) "genres define the typology of text as well as how differently language will be employed in each". Then, they add that genre depends on the context and the culture. Additionally, Vázquez and Hornero argue that genres are not clearly distinguished, as a text can contain elements of more than one type of text.

Furthermore, the idea of community can help to interpret better and understand the use of genre, and it can also explain the differences in genre among different groups. The concept of community unifies some crucial aspects about the context that are highly important to produce and interpret oral and written language, such as the awareness of a

cultural situation, awareness of the world, and awareness of conventions for expressing certain words or phrases. Genre awareness can also involve grammar, vocabulary or content conventions that allow the writer to express himself/herself in a particular discipline.

Secondly, paragraph structure can make the difference between having an attractive text or not. First, paragraphs are composed of a topic sentence and supporting statements, although they may end with a concluding statement. The topic sentence brings the main idea of the paragraph "limit[ing] the scope of the paragraph and what can be discussed in the space of a single paragraph" (Oshima & Hogue, 2006 cited in Sánchez, 2019: 16). Moreover, its main objective is to anticipate the idea to the reader without unfolding all the details in the first sentence (Swales and Feak, 2012). Then, the supporting statements provide a development of the topic sentence, explaining the main idea and expanding on it. It is important both for the writer and the reader because it helps the writer know what has to be included or excluded and guides the reader through the main idea within the paragraph. Additionally, punctuation should be mentioned as a factor that helps to maintain a good paragraph structure. Oshima and Hogue (2006) in Sánchez (2019) state that good punctuation requires certain language dominance, which is one of the least known aspects of English for foreign speakers.

Also, linkers are a vital part of EAP for two main reasons presented in Sánchez (2019). First, they provide a visual separation of main points and allow a more precise reading of the information. In addition, thanks to them, the reading flows because linkers interconnect ideas so that they act as a bridge between parts.

3. Computational Linguistics

Once the main features of EAP have been described, this dissertation will analyse Computational Linguistics. It is essential to know this concept since with this knowledge, it will be easier to understand Grammarly's way of functioning. Therefore, this section is a bridge between EAP and the application object of the present study that will be analysed in the next part.

Computational Linguistics (CL) is an area of study ranging between Linguistics and Computer Science, supported by psychology and logic. Its objective is to simplify the treatment with linguistic issues using computers. CL can be interpreted as a synonym of automatic processing of natural languages, which is a field that creates computer programs to process natural languages.

Muwafaq (2007) argues that as linguistic theories have become so complex, linguists decided to simplify them using computers. This decision led to the cooperation between linguists and computational programmers, resulting in computational models for formal linguistic theories. Having Artificial Intelligence as its base, CL develops models of human language. The goal of CL is to create a program that can improve the interaction between humans and machines in a way that humans and computers manage to communicate efficiently.

To process natural language can be a difficult task for machines. While humans can analyse and understand language relatively easily, computers have a more complex process. The main fields that Muwafaq (2007) describes to be problematic for the machines are:

a) **Phonology and phonetics** are related to pronunciation. The issue that this field presents with computers is homophones since computers cannot

differentiate between two words with the same sound. E.g., “weak” and “week”.

b) Morphology is concerned with the inner structure of words, both in the written and oral language. Morphological analysers should have enough intelligence to identify basic word forms. However, CL has problems in doing advanced morphological analysis because the input is extensive.

c) Syntax deals with sentence structure. Machines may be sometimes misled by word order as in (1).

(1) The book covers the history of slaves *and* black people.

The conjunction “*and*” can be considered as conjoining the two nouns/noun phrases “*slaves*” and “*black people*”. However, it can also be considered to conjoin “*the history of slaves*” and “*black people*”. Therefore, there are some problems in analysing ambiguous sentences.

d) Semantics is the field that is related to the meanings of words, phrases and sentences. Yet, programs can get confused when a word has several meanings. For example, “*to cover*” can mean “*to hide*”, “*to spread over*”, or “*to deal with*”.

e) Pragmatics is related to the meaning of utterances depending on their context. Sometimes, the meaning of the words within a sentence is clear, but their interpretation is subject to the context. Example (2) can clarify what has been described.

(2) I will do it.

Example (2) can have different meanings depending on its context. It could be an ordinary statement, a promise or a threat. Nonetheless, for a computer

to decipher the pragmatic use of (2), it should be able not only to analyse the language but also to understand the meaning of a text.

3.1 Computational Linguistics' applications

Applied linguistic systems are vastly used in fields such as Science and Business for many purposes. Bolshakov and Gelbukh (2004) describe as the most important the following ones:

- **Text editing** is the field that relates to Grammarly and the one that will be extendedly described in sections 3.1.1 to 3.1.4. It can be divided into automatic hyphenation, spell checking and grammar checking, style checking and references to words and word combinations.
- **Information retrieval** is used in scientific, technical and business document databases.
- **Automatic translations** from one language to another
- **Natural language interfaces** to databases and other systems
- **Extraction of factual data** from business or scientific texts
- **Text generation** from pictures and formal specifications
- **Natural language understanding**
- **Optical character recognition, speech recognition, etcetera**

3.1.1 Automatic Hyphenation

For Bolshakov and Gelbukh (2004), hyphenation is the act of splitting words properly in natural language texts. Thus, the word is split and partially transferred to the next line. This process can only be done at specific positions within words, which are generally syllable boundaries. Nowadays, most text editors include hyphenation tools. The most popular example is Microsoft Word, which has the menu item *Hyphenation*.

Then, automatic hyphenation is “the system which splits long words properly which cannot fit within the accepted margin of the line” (Muwafaq, 2007). First, it was built on simple algorithms that split long words putting a hyphen after the third, fifth or seventh character of any word, but it derived into nonsensical breaks. E.g., “handkerchief” could be split into “han” and “dkerchief” or “handk” and “erchief”. To improve its quality, programs such as Microsoft Word began to use more linguistic information about morphology. In addition, Bolshakov and Gelbukh (2004) state that dictionary-based programs are the best software for automatic hyphenation.

3.1.2 Spell checking and Grammar checking

Spell checking is the process of finding out and correcting the errors that occurred while typing a particular text. Its objective is to detect and correct typographic and orthographic errors. The way it works is to point at the errors and then give suggested words that suit the context from which the user will choose. It first detects the strings that do not contain correct words. Most times, orthographic or typographic errors will occur because a non-existent word will be typed. However, sometimes there will be errors in typing that will make the writer type actual words that have no sense in the context due to the writer’s mistake, as in (3). Detecting these more complex errors will suppose a task requiring a much more complex tool than the ones used in most text editors.

(3) *I am bigger *then* you.

If the ungrammatical word is detected and highlighted by the program, the user will be able to correct the string manually or with the program’s help. While manually correcting it would consist of re-typing the word by oneself. Getting assisted by the program consists of being shown a set of grammatical words, relatively similar to the

word highlighted, and then choosing one of the options for the text without re-typing it manually.

Bolshakov and Gelbukh (2004) state that spell checkers are considered very helpful and have millions of users around the globe. Nevertheless, it is still necessary to establish a criterion for the computers to differentiate similar words and to make these programs have some presuppositions on the most typical typographic and spelling errors. Hence, there is a need for the machines to learn detailed knowledge of morphology to carry out a deeper analysis and detect problems to provide suitable corrections.

Then, a grammar checker performs the process of identifying and correcting grammatical errors. It can consider either the complete sentence or only the adjacent words to identify issues related to subject agreement with verbs, adjectives, adverbs, prepositions, among other issues. A grammar error is that which violates the syntactic laws. Therefore, a good grammar checker should undergo a complete syntactic analysis (also known as "parsing") in its system to be helpful actively. Nonetheless, there are still some simple grammar checkers whose grammar analysis is somewhat incomplete. Even if spell checking was a more or less complex task for computers, grammar checking could be considered a "much more difficult task for computational linguists and software developers" (Bolshakov and Gelbukh, 2004: 58).

As previously stated, for grammar checkers to work as they are expected, they should parse. The primary issue is that it has historically been a difficult task for computers, and therefore commercial grammar checkers have been relatively simple. In the last decade, this resulted in not giving as valuable assistance as the users would like to have when preparing a text, but nowadays, there are pretty solid programs as in the last years there have been meaningful improvements in grammar checkers. To exemplify,

Microsoft Word has shown to be a helpful grammar checker. However, Bolshakov and Gelbukh (2004) conclude that since the author is the only person who knows the meaning of what has been written, the final choice will rely on the user: to follow the grammar checker's advice or to keep the text as it was.

3.1.3 Style checking

Style checking has its origins in the need for differentiation between literary categories as each one has its writing style. For example, in the writing of official documents, slang language constructions should not appear. "The stylistic errors are those violating the laws of use of correct words and word combinations in language […] in a given literary genre" (Bolshakov and Gelbukh, 2004: 60). The style checker suggests the correct constructions depending on the purpose of the writing. To do so, it parses the text automatically to identify syntactic constructions that are wrong. Bolshakov and Gelbukh (2004) add that the style checker ought to use a dictionary of words supplied with their usage marks, synonyms, information non-proper use of prepositions, compatibility with other words, etcetera

There are some good grammar checkers for English texts, but they are in the laboratory version. Meanwhile, style checkers that are open to the public used to have rather primitive functions, especially in the 2000s. These open style checkers used to have very simple ways to assess style. They calculated the average length of words in the text, length of the sentences or length of the paragraphs and compared it to other texts within the same style. Present-day style checkers can assess deeper and more interesting properties than ten years ago, for example.

3.1.4 References to words and word combinations

The function of having references to words and word combinations allows the user to access a set of words that are semantically related to a specific one or words that can combine with the selected one. In other words, the primary function of this item is to allow the writer to find synonyms. Thus, the text will have more correctness and flexibility, and will be more idiomatic because the user will choose the most appropriate word for the text. In order to do so, this feature needs various complex operations, like "automated reduction of the entered words to their dictionary forms, search of relevant words in the corresponding linguistic database and displaying all of them in a form convenient to a non-linguist user" (Bolshakov and Gelbukh, 2004: 62)

4. The object of the study: Grammarly

Now that the main characteristics of CL have been described, Grammarly can be studied in a more comprehensive way. This part will cover a literary review of Janelle Dembsey's linguistic analysis of Grammarly from 2017 that is highly related to this dissertation's purpose since it deals with Grammarly and EAP. The following section will provide an analysis of the program's functionalities and a practical comparison between two real BA dissertations selected using it to provide a present-day vision of the current outcomes.

Before moving to the Grammarly review, it is essential to define this application beforehand. It is an Artificial Intelligence (AI) powered text editor that can analyse texts from a grammatical, syntactical, and stylistic point of view, among other functions that will be mentioned later. According to the company their AI:

> Not only corrects your grammatical mistakes but also makes your writing more understandable and helps you make the right impression on the reader based on your audience and goals. In addition, Grammarly is able to check the tone of your correspondence, provide synonym suggestions to make your text more readable and precise, and even check your documents for plagiarism. (Grammarly Support, 2021)

Hence, it may seem that Grammarly states to be able to upgrade texts to a high quality. Its claims seem to be particularly helpful for academic writing since most of the improvements it alleges are very much related to the previously mentioned issues of EAP.

4.1 Literature review: J.M. Dembsey (2017)

This part will review J.M. Dembsey's research about Grammarly and its implications in EAP. This article was published in 2017, so the application and the AI's quality might have changed over the years. However, Dembsey's work is focused on its language implications, and even if they have changed, it is still worth reviewing their functionality and comparing the machine's corrections with the ones made by humans.

Grammarly is becoming a popular service because it has two main selling points. According to Dembsey (2017), the most persuasive is its reachability to many students and the accessibility to writing services that it offers. The other factor is that it can expand writing services to take care of the sentence-level issues while the writer focuses on the content. Expanding on the first point, human correctors or writing teachers can only attend one person at a time, but software can be used simultaneously by millions of people at any moment.

Notwithstanding, Dembsey read online reviews on Grammarly and could find both positive and negative findings in users' reviews. While most of the positive reports dealt with Grammarly's interface, features and usability, the negative comments mostly criticised its corrections:

Positive Findings	Reviewer(s)
• Simple/easy design	(Shofner, 2014; vsellis, 2013)
• Quick turn-around time	(Pace, 2010)
• Ability to handle large texts	(Pace, 2010)
• Comprehensive comments	(Holdridge, 2012)
• Clear explanations	(Holdridge, 2012; Pace, 2010)
• Encouragement of active voice	(Holdridge, 2012)
• Increase in user grammar knowledge	(Holdridge, 2012)
• Categories for errors	(Orges, 2013)
• List of user's common errors	(vsellis, 2013)
• Custom grammar handbook	(vsellis, 2013)
Negative Findings	**Reviewer(s)**
• False positives[1]	(Carbone, 2012; Grammarist, 2012; Holdridge, 2012; Orges, 2013; Pace, 2010; R.L.G., 2012; Yagoda, 2012; vsellis, 2013)
• False negatives[2]	(Evans, 2012; Grammarist, 2012; Holdridge, 2012; Orges, 2013; Pace, 2010; R.L.G., 2012; Wright, 2012)
• Inconsistent findings	(Carbone, 2012; Grammarist, 2012; vsellis, 2013)
• Emphasis on formal rules	(Grammarist, 2012)
• Unclear explanations	(Carbone, 2012; R.L.G., 2012)
• Technical explanations	(Shofner, 2014)
• User knowledge/confidence required for applying feedback	(Holdridge, 2012; Pace, 2010)
• No rhetorical/ contextual awareness	(Evans, 2012; Grammarist, 2012; R.L.G., 2012; Wright, 2012)

[1] Detected errors that are not actual errors. [2] Missed errors.

Figure 2. Positive and Negative Findings from 2010-2014 Grammarly Reviews (Dembsey, 2017: 6)

After summarising what different users thought about Grammarly, a description of the comments that this service provides based on Dembsey's experience may help understand the opinions from figure 2. The comment's structure has different parts: the

heading tells what the student has to review; afterwards, 1 or 2 sentences are introducing the problem and giving a potential solution; then there are 2-4 sentences extending on the issue, followed by correct and incorrect examples with explanations; at the bottom, there is a suggested correction with a button to insert the change; in case the correction did not convince the user there is also the option of obtaining professional (human) proofreading services at an extra cost. These comments cover the fields of rewording, sentence combination, tone, stylistic rules, word choice and punctuation. After seeing these correction levels, Dembsey (2017) concludes that they are few and very generic as they cannot be adapted to a specific text because they always contain the same base. She also complains that Grammarly is not an active reader, and in an attempt to cover all potential grounds that might be relevant, it often provides more information than necessary.

4.1.1 Participants and Methodology

To test Grammarly's capacities, Dembsey carried out an investigation in which she compared the correction made by Grammarly (under its "Academic" document category of correction) of 3 essays with the same work done by ten online writing centre[1] consultants. The essays selected did not come from any specific person but were randomly assigned from students of a freshman writing course. Therefore, the study compared corrections and comments made for the three essays by the correctors in a regular writing centre situation and by the AI.

In order to recreate a regular online appointment, the consultants had 1 hour to correct each essay and received information about the student's course number, the stage

[1] It is a place in many American higher education institutions that provides students with free assistance on their papers, projects, reports, multi-modal documents, web pages, and so on from consultants.

in the writing process and a list of the main concerns. Each essay was randomly assigned a writing stage and areas needing assistance, as in figure 3.

	Essay 1	Essay 2	Essay 3
Writing Stage	early draft	revised draft	nearly done/ready to edit
Areas Needing Assistance	thesis statement topic sentences conclusion	organization clarity	grammar commas pronoun agreement

Figure 3. Assigned Writing Stages and Areas of Concern for Essays 1, 2 and 3 (Dembsey, 2017: 8)

4.1.2 Results

The results obtained provided some quantitative differences. While Grammarly averaged 39 comments per essay, the consultants made 17 comments per essay averagely. Nonetheless, Dembsey (2017) mentions that the consultants did not comment on some errors to avoid repetition because they did not want to mark the same error several times. It is furtherly exemplified in figure 4.

	Grammarly®	*Online Consultants (R1)*		
	Comments	Comments		
	Total	Average	Highest	Lowest
Essay 1 660 words	51	16	32	7
Essay 2 892 words	43	17	35	11
Essay 3 780 words	24	18	32	9
Totals	**118**	**51**	**92[1]**	**27[1]**

Figure 4. Number of Comments Provided for Each Essay (Dembsey, 2017: 10)

Additionally, there were qualitative differences. Grammarly provided many comments, but its comments were repetitive. There were only six levels of correction: 1) rewording, 2) sentence combination, 3) tone, 4) stylistic rules, 5) word choice, 6) punctuation. The distribution of the comments can be better understood with figure 5:

Rank	**Essay 1** thesis, topic sentences, conclusion		**Essay 2** organization, clarity		**Essay 3** grammar, commas, pronoun agreement	
	Issue	*Comments*	*Issue*	*Comments*	*Issue*	*Comments*
1	Rewording	15	Stylistic rules	22	Stylistic rules	8
2	Sentence combination	10	Rewording	7	Tone	4
3	Tone	9	Tone	5	Punctuation	4
4	Stylistic rules	8	Word Choice	5	Word choice	4
5	Word choice	7	Punctuation	2	Sentence combination	3
6	Punctuation	2	Sentence combination	2	Rewording	1

Figure 5. Issues Addressed by Grammarly in Each Essay (Dembsey, 2017: 13)

On the contrary, the consultants showed a smaller average number of comments, but they provided a wider variety. Their reports contained the same six categories previously mentioned, but they also provided ten different categories (e.g., introduction, development, conclusion, etc.). They can all be seen in the following figure 6:

Rank	Essay 1 thesis, topic sentences, conclusion		Essay 2 organization, clarity		Essay 3 grammar, commas, pronoun agreement	
	Issue	*# of Consultants*	*Issue*	*# of Consultants*	*Issue*	*# of Consultants*
1	Thesis	9	Development	9	Sentence combination	8
2	Conclusion	9	Organization	7	Rewording	8
3	Organization	9	Rewording	7	Punctuation	8
4	Topic sentences	8	Word choice	7	Capitalization	8
5	Development	7	Tone	6	Tone	7
6	Introduction	6	Topic sentences	4	Word choice	7
7	Tone	6	Transitions	4	Organization	5
8	Sentence combination	6	Thesis	3	Development	5
9	Rewording	6	Conclusion	3	Introduction	4
10	Idea repetition	3	Idea repetition	3	Stylistic rules	4
11	Punctuation	3	Punctuation	3	Conclusion	3
12	Word choice	3	Sentence combination	3	Transitions	3
13	Stylistic rules	2	Introduction	2	Thesis	2
14	Transitions	1	Stylistic rules	2	Topic sentences	2
15	Paragraph boundaries	1			Idea repetition	2

Figure 6. Issues Addressed by the Consultants in Each Essay (Dembsey, 2017: 15)

In the end, Grammarly provided more and faster comments than the correctors, but “its "instant" feedback created repetitious comments that were limited to the same issues regardless of student, context, or even genre” (Dembsey, 2017: 17). Contrarily, the consultants provided fewer comments while covering a wider range of issues. Even though the hour-long appointment allowed for overthinking and giving more feedback

than usual, there were fewer consultants' comments because they needed some time to type individually.

Admittedly, there is a lack of effectiveness in both approaches. Receive too much feedback can negatively affect the students. Also, if there are too many changes to make, "students may not even have the time to apply it all before their deadline" (Rafoth, 2009 cited in Dembsey, 2017: 17). According to Nancy Sommers (2013) cited in Dembsey (2017: 17): "An individual writer can learn only a finite set of lessons when revising a single paper".

On the one hand, writing centre consultants started with a big range of contextual knowledge, but consultants could learn to limit their comments, benefitting themselves and the students, because there would be fewer comments to type and fewer issues to take care of. On the other hand, Grammarly could not obtain as much contextual knowledge or change the number of comments. Furthermore, Grammarly cannot do anything apart from the correction, while writing centres provide face-to-face or online appointments. Thus, students using Grammarly cannot learn how external issues influence global issues and vice versa because "Grammarly treats each word and each sentence as self-standing parts without contribution to a whole" (Dembsey, 2017: 18).

After reviewing the general aspects of the investigation, especially the corrections provided by both parts, Dembsey added two sections that deepen the quality of the comments, technical language, and accuracy. The former contains an analysis of the language employed in their comments—meanwhile, the latter comments on the accuracy of the feedback received.

4.1.3 Technical language and accuracy in the corrections

Technical terms can complicate explanations and confuse students without prior knowledge. For this study, Dembsey divided the terms into defined[2] and undefined. Grammarly and the consultants provided 67 different terms in their feedback across the three essays related to grammar. Figures 7 and 8 show the terms labelled as defined and undefined by Grammarly's comment cards and the corrector's comments.

Grammarly®	*Online Consultants (R2)*
Total Terms Defined	**Terms Defined by At Least One**
Active voice	Adverb
Adjective	Comma splice
Adverb	Conjunction
Complex sentence	Interjectory phrase
Conditional verb	Nonessential element
Conjunction	Parallel(ism)
Conjunctive adverb	Parenthetical phrase
Coordinating conjunction	Pronoun (antecedent) agreement
Definite article	Run-on
Dependent clause	Verb
Impersonal pronoun	
Indefinite article	
Independent clause	
Infinitive	
Interrupter	
Introductory phrase	
Objective pronoun	
Passive voice	
Personal pronoun	
Preposition	
Redundant category	
Run-on	
Squinting modifier	
Subjective pronoun	

Figure 7. Defined Grammatical Terminology Used in Feedback Across All Three Essays (Dembsey, 2017: 20)

[2] Meaning that the term was provided with a definition or examples within the same comment.

Grammarly®	*Online Consultants (R2)*
Total Terms Undefined	**Terms Undefined by At Least One**
Categorical term	Abbreviation
Clause	Adjective
Comma splice	Clause
Compound object	Conjugation
Compound predicate	Conjunction
Compound sentence	Contraction
Compound subject	Coordinating conjunction
Conjunction	Elaborative phrase
Consonant	Fragment
Contraction	Independent clause
Determiner	Independent phrase
Direct object	Introductory clause
Faulty parallelism	Introductory phrase
Fragment	Noun
Helping verb	Object
Independent clause	Parallel(ism)
Main clause	Parenthetical phrase
Main verb	Past perfect tense
Modifier	Phrase
Noun	Present tense
Object	Pronoun
Passive voice	Pronoun (antecedent) agreement
Past perfect tense	Proper name/noun
Phrase	Referent
Predicate	Run-on
Prepositional Phrase	Simple past tense
Subject	Subject
Synonym	Verb
Verb	
Verb phrase	
Vowel	

Figure 8. Undefined Grammatical Terminology Used in Feedback Across All Three Essays (Dembsey, 2017: 21)

Both Grammarly and the correctors left most of their terms undefined. The former used 52 terms for all three essays, while the ten consultants combined used 20 terms less. The application contained feedback with advanced terminologies, such as conjunctive adverbs or squinting modifiers, although they were defined. However, it did not define 54% of the terms in any of the comment cards, including some other advanced concepts (e.g., determiners, direct objects, compound predicates). By contrast, the consultants had 32 terms cumulatively, and the average was ten terms per consultant, 70% of them undefined. Nonetheless, Dembsey (2017) considered that 9 out of 10 consultants attempted to describe concepts in accessible language rather than technical language. She also adds that all ten consultants occasionally used students' language to frame plain their suggestions.

Then, in an attempt to explain issues at a sentence level, both sides provided inaccurate feedback. It was considered inaccurate feedback that contained incorrect terminology, incorrect explanations, false positives or inserted errors. Grammarly provided 100 comments addressing sentence-level issues, and 41 of them contained some inaccuracy, showing a 41% margin of error. The application had 21 types of inaccuracies, most of which came from inexistent flagging errors and incorrect use of the terminology. Hence, its errors principally came from defects in the algorithms and not so much from pre-written content. In opposition, consultants showed four inaccuracies out of 41 comments, a 9.75% error margin. To illustrate inaccuracies, figure 9 extracted from Dembsey's research can help.

Table 8. Inaccurate Sentence-Level Feedback Provided Across All Three Essays

	Grammarly®	*Online Consultants (R2)*
	Total Inaccuracies	**Cumulative Inaccuracies**
Incorrect Use of Term (Term used referred to a different issue, concept, or part of speech)	Complex sentence Fragment Run-on	Clause Fragment Phrase Run-on Subject
Incorrect Explanation (Error exists, but reasoning for error/correction is inaccurate)	Comma splice Conjunction beginning sentence	Coordinating conjunctions Conjunctions in lists Comma with "which" clauses Conjunction beginning sentences Comma and conjunction between two independent clauses Incomplete sentences
False Positives (Error or situation did not exist)	Adverb placement Article use Comma use Infinitive use Parallelism Passive voice Squinting modifiers Unnecessary words Verb use Vocabulary replacement	Comma use Sentence combination Singular vs plural nouns Run-ons Verb use
Error Insertion (Suggested correction would create an error)	Article insertion Article omission Comma insertion Comma omission Infinitive omission Vocabulary replacement	Comma insertion Comma omission Verb insertion

Figure 9. Inaccurate Sentence-Level Feedback Provided Across All Three Essays (Dembsey, 2017: 23)

In sum, Grammarly attempted to address advanced grammar, but it resulted in heavily technical language, which was sometimes undefined. Also, Grammarly presented a high inaccuracy percentage due to its algorithms. On the other hand, consultants also

used undefined terminology. However, they described grammatical issues accessibly and used students' own words, helping to reduce their technical language. Dembsey (2017: 24) affirms that "scholars have advocated for avoiding advanced terminology whenever possible and defining terms when they are needed". For example, Dembsey (2017) paraphrases Hewett (2015), saying that she stresses providing feedback at the students' level to increase comprehension.

Moreover, another crucial fact to increase understanding is accuracy. Young (2005) cited in Dembsey (2017), warns that grammar checkers can be inaccurate and receive inaccurate feedback to increase errors instead of preventing them. Dembsey (2017) adds that while a consultant can understand the content correctly, the algorithms which fill grammar and spelling checkers cannot. Even if Grammarly's comment cards were rewritten to remove complex terminology, the cards still would not focus on the students' specific errors or apply individualistic reports. As a result, students who do not have a clear understanding of the clue factors in academic writing could struggle while using Grammarly and probably would not follow its clarifications.

To conclude, Grammarly could reach more users, but it could not provide the same services that a writing centre has, as it could not equal human quality in its analysis. Grammarly detected more errors than the humans, but some of them were false positives. Moreover, fewer areas were corrected, and the explanations sometimes contained advanced vocabulary without a description of the term. By contrast, writing centre consultants did not find as many errors as the program, although it was partly because they tried not to repeat themselves. They also differed from the machine in that they covered more fields of correction, and despite the fact they also included undefined advanced terminology in their corrections, they tried to make it easier to understand.

Therefore, in 2017 Dembsey proved that even if Grammarly seemed promising based on the company's claims, there is still room for improvement. It contained fascinating functions that can help the writer, but this person has to proofread himself/herself and understand Grammarly's comments to verify if they were wrong. Nonetheless, if Grammarly's engineers solved the AI's flaws, improved its contextual analysis, added new categories to analyse and made the corrections user-friendly, it could substitute a writing consultant (apart from the fact that one cannot have a face to face/online meeting to correct the text unless an extra amount of money is paid).

4.2 Analysis of two BA dissertations using Grammarly

After an extensive review of EAP, CL and an article on Grammarly, this section will describe a personal practical investigation which will let Grammarly analyse the writing of two BA dissertations from previous years graded as excellent by their correctors. One of these dissertations comes from a graduate in English Studies, and the other comes from two graduates in Electrical Engineering. The selection of these very different profiles had the aim to see whether the AI makes any difference, at a writing level, between a linguist's TFG and the one made by two engineers. Thus, one could consider the former to have fewer writing issues than the latter *a priori*.

4.2.1 Participants and methodology

The participants have very different profiles, a fact that can influence their results. To avoid revealing their identities, the volunteer who studied English Studies will be called 'participant A', and the two Electrical Engineering graduates who made a BA dissertation jointly, will be called 'participants B and C'. Before analysing their dissertations, they had to answer a questionnaire that I created about their English level and the writing process to contextualise their results. The questions asked for: 1) the

English level they had at the time they wrote the BA dissertation, 2) experience using English language, 3) tools used to help with language, 4) whether they had human help to write it, 5) their writing process, 6) time spent proofreading their work.

Participant A had a C2 (Proficiency) level on the Common European Framework of Reference (CEFR), and he was a fourth-year student of English Studies. He started to study English in primary school, but he started to integrate the language into his life in mid-high school for several purposes. He states that he played videogames in which players could chat with people around the world, had a sentimental relationship with someone who did not speak Spanish and had a friendship with someone from the UK, and they chatted daily (after some time knowing each other, he stayed one month in the UK visiting his friend). He adds that he has never attended a language school to learn English, but he has been an English teacher. Therefore, he learnt English in primary school and high school and integrated it into his life through videogames and friendships. Then, when writing the dissertation, he only used Cambridge Dictionary to help him with the language, and his process was quite complex. He first imagined, specified and structured his topic, followed by extensive research of information and extraction of notes. Afterwards, he wrote every section with subsequent proofreading at a macrostructural and microstructural level. He re-read the text several times before submitting the final version. The volunteer admits that he spent about 15 hours revising it, spread over three months.

Participants B and C had a B2 (First Certificate) level on the CEFR. They started to study English in primary school too, and participant B had spent one year and a half before submitting the investigation attending a language school to get a B2 certificate. In addition, they had used English in some projects previously done in their degree, but they

did not have subjects in English. At the moment of the writing, they used an online dictionary/translator and thesauri to help themselves with the English language, similar to participant's A tools, but they had a more straightforward process. They had a draft for every section, which was eventually revised at an orthographical and clarity level. They agreed that they wanted to take care of their English due to their lack of familiarity with English writing, so they spent about three weeks revising it.

The purpose of this section is to compare Grammarly's comments on both works. Participant A's research contains 36 pages, while the other dissertation has 179 pages. Accordingly, to compare both works entirely would mean that participants B and C would most probably have many more comments than participant A and it would be difficult to compare them fairly. Therefore, this section will only analyse the introduction and conclusion selections in both selections since they have similar length, and their length is similar to those in Dembsey's investigation. Thus, both essays will be tested by Grammarly pre-set to correct the following five goals that can be seen in figure 10: a) expert audience, b) formal language, c) academic domain, d) respectful tone and e) descriptive intention. Later, the results obtained will be analysed, and the potential differences between both profiles will be unmasked *a posteriori*.

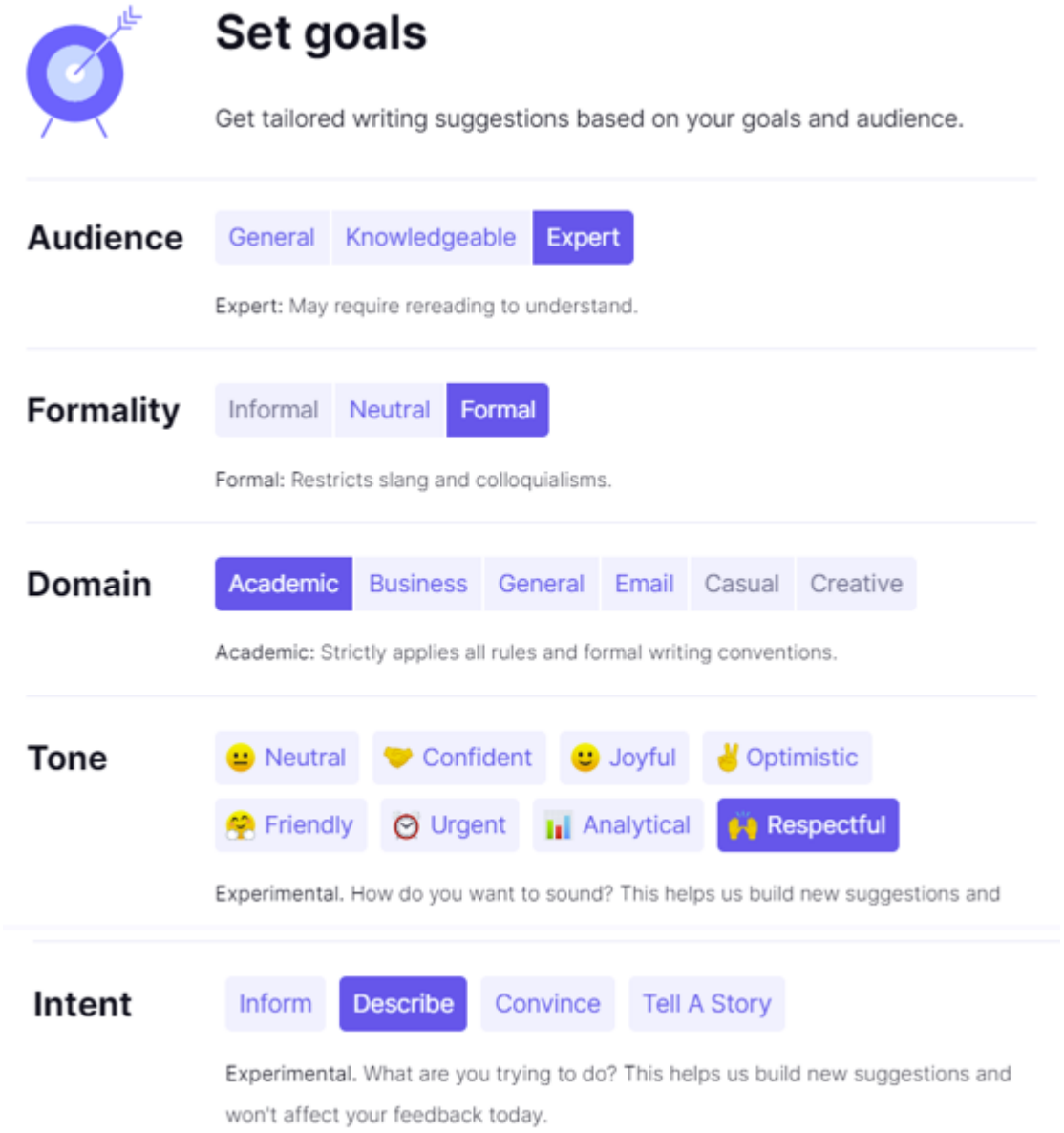

Figure 10. Pre-Set Goals in Grammarly: Audience, Formality, Domain, Tone and Intent

4.2.2 Results

Grammarly's text processing provides a count of the suggestions (1), an overall score[3] (2) (represented in figure 12) and the errors labelled in 4 different categories (3): correctness, clarity, engagement and delivery. Figure 11 provides an image of the

[3] It is based on statistical information about the word count, the readability and the vocabulary compared to other texts it Grammarly's database.

software showing the previous features. These factors will be considered to carry the comparison, apart from the appearance of inaccurate comments or too complex comments present in both corrections.

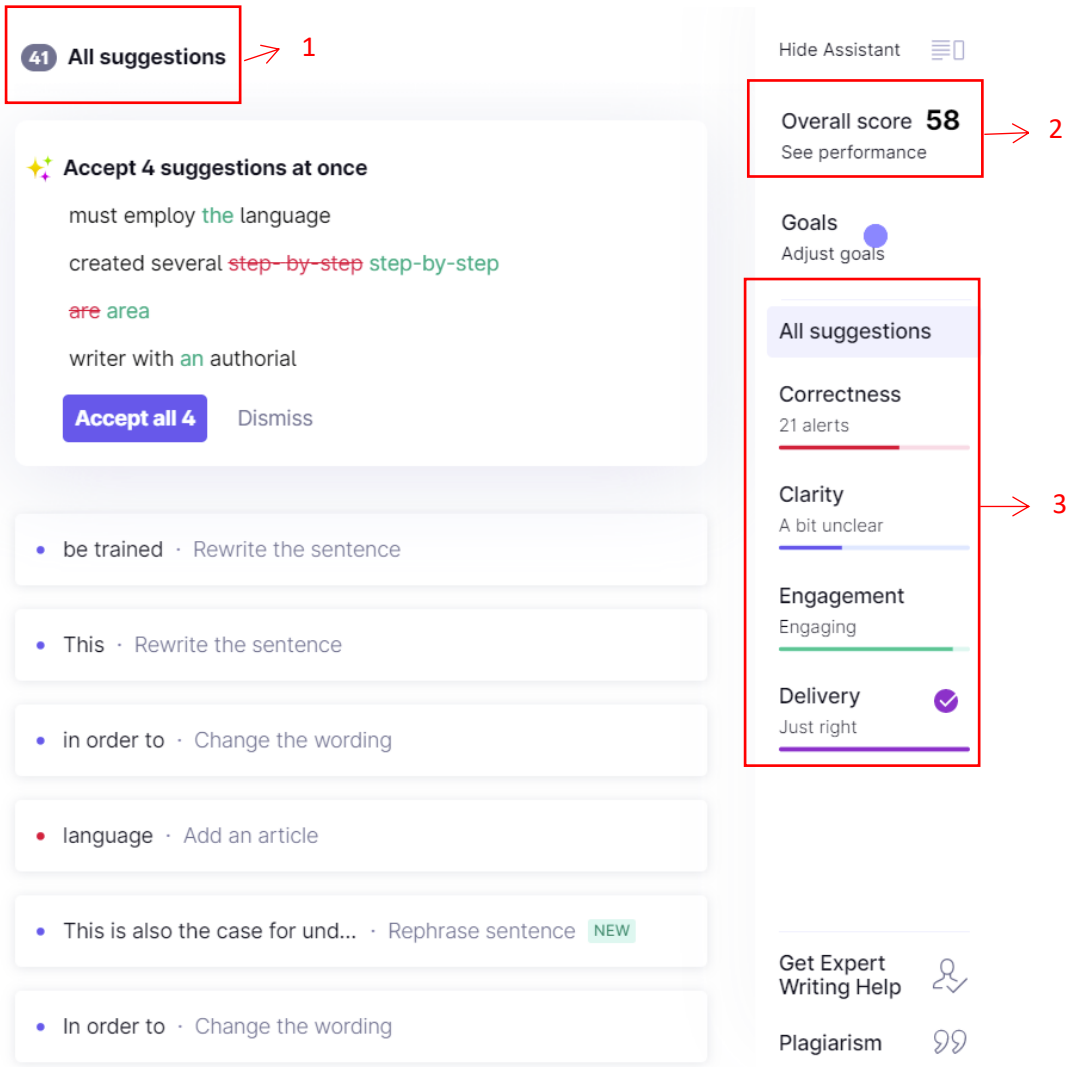

Figure 11. Grammarly's Page after Analysing a Text

Figure 12. Information on which Grammarly's Overall Score is Based.

First, Grammarly suggested 29 changes in Participant A's introduction and a score of 79 points, and the conclusion had 45 suggestions and 71 points. This left Participant A's extracts with 74 total suggestions and an average score of 73.5. Nonetheless, not all areas had the same amount of suggestions. Clarity contained almost half of the errors with 36 in total, followed by correctness with 31 in sum. On the other hand, engagement only had six suggestions, and delivery only presented one correction in the conclusion.

Therefore, according to Grammarly's analysis, Participant A might have had trouble with correctness and clarity since it even labelled his conclusion as 'unclear'.

For participants B and C, their introduction contained 34 reports and a score of 84, and the conclusion included 27 comments, and its mark was 81. Thus, there were 61 corrections, and the average mark was 82.5. Similar to the previous volunteer, participants B and C's errors were primarily accumulated in correctness and clarity, with 30 errors for clarity and 20 for correctness. However, participants B and C almost doubled participant A's engagement comments with 11 of them. To end, despite having more engagement errors, they did not have any delivery issue.

After reviewing the AI's corrections, the results could seem surprising. Participants B and C seemed to have better writing according to Grammarly's standards. In these results, even though they had no advanced formation on EAP, they could show excellent performance. Nonetheless, participant A's experience cannot be disregarded, as he possessed a proficient level in the language and was a student of English Studies Degree. A possible reason might be that Grammarly is not yet to be trusted since the algorithms could not cover all the components in EAP due to the fact of only having four levels of analysis. The four levels only covered the text at a word level or a sentence level at the most, but they did not cover macrostructural issues related to the whole text structure or even paragraph structure (e.g., it could not see whether there is a topic sentence or not). Additionally, it did not detect, analyse, or suggest hedges, which is another critical feature in academic writing that this program omits.

However, the main issue in this application might be false positives[4]. It is why people with no experience in EAP should not use it, as it is highly recommendable to overview and understand every comment provided by Grammarly. In a contrastive analysis, this study found a high rate of false positives. Participant A's comments contained 39 miscorrections, presenting a 52.7% error rate, and participants B and C's corrections contained 24 inaccuracies, a 39.34% error probability. Out of these algorithmic mistakes, Grammarly often offered miscorrections about passive voice, as this tool had a particular rejection toward passivation; overused words, attempting to provide synonyms for 'frequently used' words while they had been used once or twice; disregarding the use of 'this' at the beginning of the sentence; unnecessarily suggested the addition of an article, and suggested the wrong adjective some times. Other corrective mistakes appeared, but they were considered punctual flaws as they only occurred once.

In sum, Grammarly presents several attractive features, but they have to be used by the right hands. After reviewing its comments, this research has noticed that it does not cover every aspect of EAP, which would mean an excellent upgrade for this program. In addition, it has proven that it provides almost 50% of inaccurate comments. Therefore, people with a low English level or who do not know academic writing conventions should not use it because they could fall into a miscorrection. Thus, Grammarly can be a good tool to help advanced writers but needs to eliminate its miscorrections to be useful for every language learner.

[4]False positives are understood as comments that can either make the sentence lose its sense or that do not necessarily make any improvement.

5. Conclusion

In sum, this dissertation has provided an overview of academic writing, switched to a description of Computational Linguistics, and linked it to a literature review of Grammarly and an investigation about Grammarly's accuracy in its corrections. It started arguing that EAP is a valuable tool to share results because its features help depersonalise the text and focus on the content. Next, there has been a description of the computational utilities that process language, focusing on the written mode. It has concluded with the analysis, by J.M. Dembsey (2017) and this investigation, of an application that claimed to be capable of analysing language.

Thus, the first section offered a clear vision of academic writing, containing its main features at microstructural and macrostructural levels. The academic writer will always be different to any other writer because this person should be analytical, objective, intellectual and rational. Furthermore, he/she will be depersonalised from the text through different strategies such as passive voice, formalisation, nominalisation and reporting verbs. Also, other essential strategies like hedges help soften the language to make it more appealing to the reader, or macrostructural approaches help adapt the text to the targeted genre, maintain a good paragraph structure, and use linkers to make the content discourse flow smoothly.

Moreover, humans are not the only ones capable of analysing language, as humans have been training computers to understand languages since the 20th century. It started during the Cold War for spying purposes, but it may bring new opportunities to deal with machines and language in the future. One of these prospects could be the chance of having an AI corrector in everyone's computer at any time of the day, which would correct from orthographic errors to check style issues.

In section 4, Dembsey and this study have proved that Grammarly is an inefficient tool that cannot compete against human consultants yet, mainly due to its flaws and lack of context awareness. Having wrong corrections makes the app impossible to trust for the general population, the same way that most people would not trust a human corrector that gave back a text with several writing mistakes. However, the correct comments could help improve the text quality and avoid grammatical or structural mistakes. Hence, if this program was used by someone capable of seeing the false positives and judging Grammarly's comments, this could be a valuable tool to write academically.

To conclude, EAP can be a challenging area for both humans and computers. Also, AI and CL are fields that are growing, but they are relatively young. Thus, more time is needed to allow the software to become more intelligent and understand texts properly. Lastly, this investigation was relatively simple due to a lack of word extension, resources and participants. Nonetheless, more extensive investigations on the field of CL and AI-powered text editors (not necessarily Grammarly) would be highly beneficial for both Artificial Intelligence and Linguistics.

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Appendix

Questionnaire to the participants

Participant A

1. **Which was your level of English at the moment of making the TFG?**

C2

2. **Which was your previous experience with English? (number of years learning English, visiting English-speaking countries, study of generic or technical English: English for economics, English for engineering, English for tourism, etc.)**

I have been studying English since the 2nd course of primary school.

I started to integrate it in my life in the 3rd course of High School and I used it every day for these purposes:

- In Facebook there were games about farming, having a restaurant, building a city, etc. And I chatted with other players from around the world.
- I had a foreigner couple with whom I could only speak in English.
- Friendship in the UK with whom I chatted every day, who I met in a gaming platform on the internet.

I started to practice it every day. What I learnt came from the fact of chatting with my friend from the UK. I also visited her in the UK for a month.

I have never been in an Erasmus program, neither attended an English school.

At the beginning I wrote, and it was hard to create sentences, but then I started to improve.

I also have professional experience as an English teacher, teaching from children to businesspeople.

I mostly used English daily because of the videogames and my friendships in the UK.

3. **Which tools did you use to have help with your language? (dictionaries, web pages, programs such as Grammarly, etc.)**

Cambridge Dictionary for some words.

I mostly used as a reference for my language the TFM's about Academic English and the articles that I read.

4. **Did anyone help you write the TFG?**

No

5. **Which was your process when writing the TFG? (Write it straightforward, make several revisions, use of any grammar or orthography corrector such as Grammarly or similar)**

1. I first imagined the idea and the purpose.
2. Then I made the idea more specific
3. Create a table of contents to know how to structure it and what to add to every section
4. Read many TFGs, TFMs, articles
5. Underline possible quotes
6. Write it
7. Decide whether to paraphrase the quotes or to quote them directly
8. Write every section
9. Proofread the section microstructurally (is it visually attractive? Are there too many paragraphs? Are there language mistakes? Are there spare or unconnected sentences?)

10. Proofread the section microstructurally (is the text fluid? Are the ideas organised? Can the idea be understood? Can I express it in a simpler way? Do I quote or paraphrase? Does it answer to the purpose of the section?)
11. I repeat sections 6 to 10 until ending the TFG
12. When I ended writing, I waited 1 week and I revised it and repeated steps 9 and 10
13. I re-read it once again one day before handing it int and I made small modifications.

6. **Did you dedicate a lot of time to make sure that the writing in the TFG was as good as possible? How much?**

Yes, it was a priority for me, and I wanted to do it as good as possible.

I was methodical in the revision.

I would say that I spent about 15 hours in the revision in total, spread over 2-3 months of the bulk of the TFG (March-May)

Participants B and C

These will be answers by Participant B, speaking for both of them, because Participant C could not answer the questionnaire directly.

1. **Which was your level of English at the moment of making the TFG?**

We had the level of a First Certificate

2. **Which was your previous experience with English? (number of years learning English, visiting English-speaking countries, study of generic or technical English: English for economics, English for engineering, English for tourism, etc.)**

We had previously studied it in High School in the English subject. And we had also used English for some projects during the degree.

I had spent half a year in a language school preparing myself for the FCE.

3. **Which tools did you use to have help with your language? (dictionaries, web pages, programs such as Grammarly, etc.)**

We mostly used the translator and a dictionary of synonyms.

4. **Did anyone help you write the TFG?**

No, we did it entirely me and my mate.

5. **Which was your process when writing the TFG? (Write it straightforward, make several revisions, use of any grammar or orthography corrector such as Grammarly or similar)**

We mad previous versions with all the content we wanted to put in the TFG and we eventually made a couple of revisions to make sure that there were no orthographic mistakes and that the concepts that we wanted to highlights were made clear and were well defined.

6. **Did you dedicate a lot of time to make sure that the writing in the TFG was as good as possible? How much?**

Yes, as we were not familiar with English for projects, we dedicated quite a lot of time to its writing. If I am not mistaken, we spent between 2 and 3 weeks.