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**EFL Students' Attitudes towards the Impact of Google Translate on
their Writing Quantity and Quality**

**The Case of Students at the Department of English at
Mohammed Seddik Ben Yahiya University**

**Thesis submitted in partial fulfillments of the requirements for the degree of Master in
Didactics**

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Declaration

I hereby declare that the substance of this dissertation is entirely the result of my investigation and that due reference or acknowledgement is made, whenever necessary, to the work of other researchers.

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Dedication

In the name of the almighty God, the Most Gracious, the Most Merciful, all praises to Allah for the strengths and His blessing in completing this thesis.

This humble work is wholeheartedly dedicated to:

*My beloved “**parents**” who believed in me and constantly supported me throughout my life journey;*

*My dear “**siblings**” who continually encouraged me;*

*My lovely niece “**Alaâ**” and my beloved nephew “**Loai**” for being the source of my joy and happiness;*

*My partner “**Iman**”, for her continuous support and her great efforts that were expended to finish this work;*

*My colleague and friend “**Khadidja**”, for her help in the completion of this work;*

*Lastly, my kindest and sincerest friends “**Manel**” and “**Fatous**” whom I consider as my sisters, for their unlimited encouragement and emotional support that gave me strength to never give up.*

Khaoula

Dedication

*In the name of the almighty God, the Most Gracious, the Most Merciful, all praises to **Allah** for the strengths and His blessing in completing this thesis.*

I dedicate my thesis to:

*My beloved “**parents**” and my “**parents-in-law**” for their encouragement;*

*My sisters “**Soraya**”, “**Fatma**”, “**Fayza**”, “**Djahida**”, “**Warda**”, “**Rym**” and “**Safa**” for their continuous encouragement;*

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Abstract

The popularity of Google Translate is increasing and users are implementing this giant search engine for different purposes. This paper addresses EFL students' attitudes towards the use of Google Translate in writing. Therefore, the aims are to investigate further the practice of Google Translate in EFL writing and its role in language learning, as well as students' familiarity with it. The study was conducted at the University of Muhammed Seddik Ben Yahia, Department of English. The investigation involved a total of 35 university English major students. This study was completed relying on a mixed-approach design, for the data were collected and analyzed both qualitatively and quantitatively. Two instruments were used; a writing test was given for each respondent and then followed with a questionnaire adapted from Cohen and Brooks-Carson (2001) with some modifications. The data collected from the writing task were assessed and analyzed by identifying and classifying the errors, while the responses on the questionnaire were calculated based on statistical measures. The findings showed that Google translate did not help student beyond the spelling errors, as its use depends greatly on the students' language proficiency. In addition, the findings revealed that students' had negative attitudes towards using GT as a complementary tool

Keywords: Google Translate, EFL writing quantity and quality, students' attitudes

List of Abbreviations

ALPAC: Automated Language Processing Advisory Committee

CBMT: Corpus-based Machine Translation

DA: Direct Approach

EFL: English as a Foreign Language

EXA: Example-based Approach

FL: Foreign Language

GT: Google Translation

L1: First Language

L2: Second Language

MT: Machine Translation

NMT: Neural Machine Translation

RBA: Rule-based Approach

SL: Source Language

SMT: Statistical Machine Translation

TL: Target Language

List of Tables

Table 1: Frequency of Errors in Task 1

Table 2: Frequency of Errors in Task 2

Table 3: Frequency of Changes in the Translation Outputs

Table 4: Frequency of Purposes of Changes in the Translation Outputs

Table 5: Students' Attitudes towards Writing in Language Learning

Table 6: Students' Attitudes towards Writing Tasks

Table 7: Students' Attitudes towards Writing in English

Table 8: Degree of Difficulty when Writing in English

Table 9: Students' Use of Translation in Writing

Table 10: Degree of Difficulty when Translating from Arabic into English

Table 11: Students' Opinion about Expressing Ideas in Arabic while Writing

Table 12: Students' Opinion about Thinking in English while Writing

Table 13: Students' Degree of Satisfaction about the Organization of the English

Table 14: Frequency of Use of GT

Table 15: Frequency of Use of GT in Writing

Table 16: Frequency of Post-Editing

Table 17: Students' Post-Editing Strategies

Table 18: Frequency of Pre-Editing

Table 19: Students' Process of Writing

Table of Contents

Declaration.....	2
Dedication.....	3
Dedication.....	4
Acknowledgment.....	5
Abstract.....	6
List of Abbreviations.....	7
List of Tables.....	8
Table of Contents.....	9
1. Introduction.....	14
2. Statement of the Problem.....	18
3. Research Questions.....	18
4. Hypotheses.....	18
5. Significance of the Study.....	19
6. Research Methodology.....	20
7. Organization of the Study.....	20
Chapter One: Machine Translation and Google Translate.....	22
1.1. Section One: Machine Translation.....	22
Introduction.....	22

	10
1.1.1. Definition of Machine Translation.....	22
1.1.2. History of Machine Translation.....	23
1.1.3. Machine Translation Approaches.....	26
1.1.3.1. Rule-based Approach.....	26
1.1.3.1.1. Direct Approach.....	26
1.1.3.1.2. Interlingua.....	27
1.1.3.1.3. Transfer Approach.....	27
1.1.3.2. Corpus-based Approach.....	28
1.1.3.2.1. Statistical Approach.....	28
1.1.3.2.2. Example-based Approach.....	29
1.1.3.3. Neural Machine Translation.....	29
Conclusion.....	30
1. 2. Section Two: Google Translate.....	31
Introduction.....	31
1.2.1. Google Translate.....	31
1.2.2. Google Translate Approach.....	33
1.2.2.1. Google Translate as a Statistical Machine Translation.....	34
1.2.2.2. Google Neural Machine Translation.....	34

	11
1.2.3. Google Translate: Strengths and Weaknesses.....	35
1.2.4. Google Translate in the Academic Context.....	36
Conclusion.....	39
Chapter Two: Translation and Writing.....	42
2.1. Section One: The Concept of Translation.....	42
Introduction.....	42
2.1.1. The Concept of Translation.....	42
2.1.2. Writing in EFL Context.....	43
2.1.3. Translation as a Writing Process.....	45
Conclusion.....	47
Chapter Three: Research Methodology and Data Analysis and Interpretation.....	49
3.1. Section One: Research Methodology.....	49
Introduction.....	49
3.1.1. Research Paradigm.....	49
3.1.2. Settings.....	50
3.1.3. Population and Sampling.....	50
3.1.4. Data Collection Procedures.....	51
3.1.4.1. Preliminary Stage.....	51

3.1.4.2. Implementation Phase.....	52
3.1.5. Data Analysis Procedures.....	53
3.1.5.1. Error Analysis of English Writing Compositions.....	54
3.1.5.2. Analysis of Changes in the Translation Task.....	55
3.1.6 Limitations of the Study.....	55
Conclusion.....	56
Section Two: Data Analysis and Interpretation.....	58
Part One: Data Analysis.....	58
Introduction.....	58
3.2.1.1. Analysis of Quantity and Quality of Writings.....	58
3.2.1.2 Analysis of Post-editing of the Translation Outputs.....	61
3.2.1.2. Questionnaire Analysis.....	63
Conclusion.....	74
Part Two: Discussion and Interpretation of the Findings.....	75
Introduction.....	75
3.2.2.1. The impact of Google Translate on Writings.....	75
3.2.2.2. Students' Attitudes towards the Google Translate.....	77
Conclusion.....	79
Pedagogical Recommendations.....	79

General Conclusion.....80

References.....82

Appendices

Résumé

ملخص

1. Introduction

The origin of translation goes back to the human demand for communication since language can be a barrier for people to be able to understand the information if they did not master the language. Since the birth of Grammar Translation Method in the mid nineteenth century, researchers have long investigated the use of translation as a methodology for learning language skills such as reading, writing, grammar and vocabulary (Richards, 2001). However, the translation theory has been neglected after all due to its negative effect on the field of foreign language teaching.

The advent of new electronic tools has profoundly transformed earlier methodologies, providing both language learners and teachers with new avenues to explore in the field of language learning (Tabatabaei & Gui, 2011; Roche, 2010). Some scholars believe that due to the needs and realities of the current globalized world there is a revival of translation approaches to language learning and teaching (Dagilience, 2012; Cook, 2010). One of the most famous translation tools that is assumed to be widely used is Google Translate.

Google Translate (GT) is the most commonly used automatic translation tool, which is why in our study focuses on GT rather than other MT tools. Students in EFL classes might use it when writing as it provides instant and rapid translation. The issue caught much of Foreign Language instructors off guard, with reactions ranging from cautious, optimism to suspicion. Therefore, few researchers have explored the advantages and potentials of this Machine Translation tool for language (Groves & Mundt, 2015; Jin & Deifell, 2013; Garcia & Pena, 2011).

2- Background of the Study

In order to conduct effective and efficient action research, it is necessary to gather what information has already been studied and analyzed on any topic. To identify what has already been discovered about the attitudes, both positive and negative, towards the use of Machine Translation and to discover what has not yet been explored, a review of recent studies will follow.

Positive Attitudes

The demand for MT is increasing; therefore, it is important to investigate how MT can facilitate students' language learning and its potential benefits. In a study conducted by Kol, Schcolnik, and Kohen (2018), it was concluded that MT could be a useful tool for language learners at all levels, particularly, because it is continuously improving the translation. MT can assist EFL students in assessing their writing in classroom by themselves through providing a list of alternative translations with their meanings (Kol, Schcolnik & Kohen, 2018). Furthermore, MT focuses on lexico-gramatical errors, which helps students detect their own errors and fix them. By doing so, MT promotes self-directed learning and students acquire independent learning skills. (Godwin-Jones, 2015; Wong & Lee, 2016; Bernardino, 2016; Garcia & Pena, 2011). Likewise, Correa (2014) supported the claim that post-editing helped students develop metalinguistic awareness and contributed to the writing process by improving the outcome. MT can further facilitate students' writing by increasing lexical fluency (Chen et al. 2015). Ali and Alireza's study (2014) revealed that MT helped students write faster and produce more fluent and natural writing with fewer errors, especially in orthography and syntax. Most important, MT contributes in increasing the amount of vocabulary as well as providing students with resource for producing unfamiliar vocabulary. In addition to vocabulary, MT software also provides

students with the proper spelling of a word. From an affective perspective, MT lowers language anxiety and increases motivation and confidence through creating a nonthreatening learning environment (Bahri & Mahadi, 2016; Jin, 2013; Kliffer, 2008; Niño, 2008, 2009). In comparison with traditional dictionaries, it was concluded that MT performs better in term of technical jargon, phrases, and collocations than traditional dictionaries. (Bahri & Mahadi, 2016; Frodesen, 2008). Jin and Deifell (2013) (as cited in Herlina, Dewanti & Lustyantje, 2019) conducted a study concerning Online Translation software and printed dictionaries; they found that the time consumed in looking up for words in dictionaries resulted in a decrease in the comprehension of texts. In contrast, the speed of Online Translation allowed learners to get the overall meaning of the text.

Negative Attitudes

Although Online Translation has many benefits to offer, studies have also reported some drawbacks. Before its use as a language learning resource, users, particularly students, need to be informed on its inabilities. Some major pitfalls of MT are erroneous sentences, incorrect lexis, and inaccurate grammar. Therefore, the output needed to be post-edited. Majority of research shows that MT software are not entirely capable of facilitating translation between two languages that do not share a common language (Costa-jussà, Farrus, & Pond, 2015; Sheppard, 2011). Thus, Online Translation suffers heavily when to translate Between English and non-Roman or non-Germanic languages, as well as languages that vary in syntactic structure from English (Groves & Mundt, 2015). Consequently, the output requires extensive post-editing and users would need at least average language skills to spot errors and correct them. In the task of post-editing, “every error has to be spotted by the editor (. . .). Every lexical and structural change has to be done by retyping” (Hutchins & Somers, 1992, p. 152).

In addition, Shei in her studies (2002a, 2002b) pointed out that grammatical errors in MT outputs is due to insufficiencies of MT grammar as well as an ill-formed language input. Pre-editing involves checking for foreseeable problems to the system, such as grammatical categories of homographs, imbedded clauses, or unknown words...etc., and trying to replace them with less problematic ones. MT may involve the reformulation of the text, or the so-called "controlled language" (Hutchins & Somers, 1992). Hence, the use of MT requires the user to be competent and knowledgeable of the source language features as well. Furthermore, language pair, size, text type, and subject area are dependencies of the quality of the output (Godwin-Jones, 2015; Niño, 2009).

According to Fredholm (2015), MT cannot handle the translation of complex verbs and moods. For instance, auxiliaries in English can result in a non-corresponding translation when translating into languages that use auxiliaries differently. Similarly, the use of gerund both as a verb and as a noun can cause compilation in transition, especially when used as isolated words; in this case, Online Translation is unable to predict the intended meaning by the user. In addition, MT cannot handle idiomatic speech and figurative language (Groves & Mundt, 2015). Since idioms are related to the cultural aspect of language, MT finds it hard to deal with them because of the lack of cultural knowledge. In some cases, idioms may not have an equivalent in the target language. Therefore, the system is unlikely to correctly interpret the idioms; instead, it produces a literal word-for-word translation.

MT performance depends greatly on the user's technological knowledge about the system. According to his study, Fredholm (2014) found out that students used GT in ways that did not align with the strength of the tool. Therefore, training on strategic instruction for the users of OT is required. However, little instruction is afforded.

In a nutshell, the analysis and review of studies on MT systems, particularly GT, was found that the most of the studies have examined and evaluated GT through experimental design, however, few have focused on students' perceptions of GT. Google Translate is widely and increasingly used by students. Accordingly, studies are needed to explore students' attitudes towards GT accuracy, shortcomings and usefulness. Subsequently, the present study is an attempt to approach both EFL students' attitudes towards GT performance and their proficiency in using the service, in addition to the role of Google Translate as a writing tool.

3. Statement of the Problem

With the growth of technology, students take advantage of it so they can improve their language learning in general and writing skills in specific. Among the technological tools widely used is Google Translate. As writing is considered a main skill in language learning, students still find it a difficult task to complete; therefore, with the ease of access, students benefit from Google Translate software in their writing assignments despite the number of issues it encounters. Hence, it is highly important to address and assess students' awareness and attitudes towards this MT tool. The study aims to identify the role of Google Translate and to what extent it affects the quality and the quantity of EFL learners' writing.

Consequently, since research on the use of Google Translate in academic context, and in academic writing particularly, is limited, the current study is an attempt to bridge the gap through exploring EFL learners' attitude and investigating the impact of Google Translate on the quality and quantity of the end product in writing.

4. Research Questions

The following questions are the guidelines for this study, which the researchers aim to answer:

- What is the attitude of EFL learners at Mohammed Seddik Ben Yahia University towards the use of GT in their writing tasks?
- To what extent does GT affect the quantity and quality of EFL learners' writing?
- To What extent are EFL learners at the University of Mohammed Seddik Ben Yahia familiar with Google Translate?

5. Hypotheses

The above stated research questions led to the formulation of the following hypotheses upon which the researchers will attempt to confirm and verify their validity.

- H1: if EFL students use Google Translate properly their writing skills will improve.
- H2: EFL students express a positive attitude towards Google Translate.
- H3: EFL students are not familiar with Google Translate.

6. Significance of the Study

As technology evolves over the years, it becomes a widely used whether in academic or non-academic context for it serves as an aid in different aspects. From which, translation tools are considered to help in part of communication within this globalized world. Furthermore, translation tools assumed to play a crucial part in supporting learning as they provide quick and cheap translation. It happened that these tools, precisely GT, meet the needs of Foreign Language learners. Consequently, they tend to use translation software, precisely GT as the most used among them”, to develop and enhance their language skills, writing in particular. Even though Google Translate is well advanced and its translation is refined over time, yet machine translation is deemed inaccurate. Significantly, this study aims further explore students’ attitudes and perceptions towards the MT

software, for they may become dependent on it in their language learning. In addition, it might provide FL instructors with a new motivating technique for approaching language teaching.

7. Research Methodology

For this study, the researchers have collected both qualitative and quantitative data to assess the attitudes of students towards the use of Google Translate when writing in English. The researchers collected three writing assignments; two were in English, one with the use of Google Translate and one without, and the third one was in their L1, the latter was translated with Google Translate. Students were first asked to write a paragraph directly in English; then they wrote another one in their L1; at last, they were asked to translate the L1 paragraph into English with the use of GT. Finally, the researchers concluded the study with a student questionnaire designed to discover students' beliefs and opinions on the use of Google Translate in writing.

8. Organization of the Study

The current study is composed of three chapters, two for the theoretical part and a one for the practical part, in addition to a general introduction and conclusion. The first chapter, of the theoretical part, will be divided into two sections. The first section provides a general overview about machine translation concept, whilst the second section presents a comprehensive review on Google Translate. The second chapter of the theoretical part will also consist of only one section. The section will be devoted to review the notion of translation and its use in the process of writing, specifically, in the task of second language academic writing. The third chapter will be concerned with the methodology of research. The methodology chapter will also be divided into two sections. The first section explains the methods followed for data collection, the subjects of the study, and the overall settings. The second section summarizes the data analysis and later discusses and interprets data gathered in the investigation.

Chapter one: Machine Translation and Google Translate

1.1. Section One: Machine Translation

Introduction

1.1.1. Definition of Machine Translation

1.1.2. History of Machine Translation

1.1.3. Machine Translation Approaches

1.1.3.1. Rule-based Approach

1.1.3.1.1. Direct Approach

1.1.3.1.2. Interlingua

1.1.3.1.3. Transfer Approach

1.1.3.2. Corpus-based Approach

1.1.3.2.1. Statistical Approach

1.1.3.2.2. Example-based Approach

1.1.3.3. Neural Machine Translation

Conclusion

Chapter One: Machine Translation and Google Translate

Section one: Machine Translation

Introduction

The first chapter of the literature review is concerned with reviewing the major theoretical aspects related to machine translation and Google Translate. Being divided into two sections, the first section is devoted to the notions related to machine translation (MT). In an attempt to study this phenomenon, it is necessary to first explore what this concept stands for. The section begins with some definitions of MT introduced by leading figures in the field, followed by a summary of its historical development. Then, it tackles the different approaches of MT.

1.1.1. The Concept of Machine Translation

In this day and age, digital tools, such as online dictionaries, spelling and grammar checkers and search engines are of an importance and can aid the process of writing. Automatic translation or machine translation is also a digital tool. "Machine translation is the process of changing a text from one language into another using a computer." (Cambridge English Dictionary online).

MT is a sub-field of computational linguistics, which investigates the use of software for translating text or speech from one language to another (Sinhala & Gupta, 2014). According to the European Association of MT (as cited in Quah, 2010), "MT is the application of computers to the task of translating texts from one natural language into another." (pp. 8-9). According to Alhaisoni and Alhasyony "MT is the process by which computer software is used to translate and [is] compatible with PC systems and smartphone systems." (2017, p.73).

However, some researchers disagreed on the aforementioned definition since the human involvement is being neglected as a part of MT. Machine Translation research main goal was to develop fully automated translation systems. Nevertheless, the literature of MT evidenced that a fully automated high quality translation is a difficult task for computer software to perform (Trujillo, 1999; Hutchins & Somers, 1992; Somers, 2003). Therefore, researchers such as Hutchins and Somers (1992) put forward that MT is the use of computer systems and software to translate from a source language into a target language, with or without human interference. They claimed that the output of machine translation is often supported by human revision and post-editing.

In brief, machine translation, commonly known as MT, can be defined as transferring the meaning of text segment from one natural language (source language) to another language (target language) using computerized systems and, with or without human assistance (Hutchins and Somers,1992).

Although the definition of MT is questionable, today millions of words are being translated into different languages by people using computers every day, and this number is anticipated to increase exponentially in the near future, as MT is an available online service.

1.1.2. History of Machine Translation:

The use of mechanical dictionaries to overcome the linguistic barriers and obstacles can be traced back to the 17th-century ideas of universal and philosophical languages. However, it was until the 20th century that the first concrete suggestions were made. In 1933, two patents were granted in France and Russia. George Artsrouni, the French Armenian, designed a storage device on paper tape, which he referred to as "Mechanical Brain," to be used for the translation

of words from a language into another. Later in 1937, a prototype of the device was exhibited. Within the same year of 1933, the Russian Peter Smirnov-Troyanskii made a proposal for MT in which he envisioned a three-stage model for mechanical translation: first, a native speaker of the source language was to analyze and pre-edit the input in terms of forms and syntactic functions of words; second, the machine was to translate the input into the equivalence in the target language; finally, another native speaker of the target language was to post-edit the output (Hutchins and Somers, 1992). The invention of Troyanskii made it possible to translate from Russian into several other languages; however, it failed to outspread due to the lack of support.

The possibility of using computers for translation was a dual approach between Warren Weaver of the Rockefeller Foundation and Andrew.D. Booth, a British crystallographer. Booth explored the mechanization of a bilingual dictionary and focused on the production of word-for-word translation of scientific abstracts. Hence, the field of "Machine Translation" was first adopted by Weaver (1947) in his memorandum in July 1949. Weaver (1947) suggested several methods: the use of cryptography techniques, statistical information, Shannon's Theory and universal features of languages.

In 1951, following the early attempts for developing a fully automated translation systems, research had begun at the University of Washington, at the University of California in Los Angeles and at Massachusetts Institute of Technology. Yehoshua Bar-Hillel from MIT was the first researcher to write a report on MT. The next year in 1952, MIT called for the first conference on mechanical translation under the leadership of Bar-Hillel. During 1954, in collaboration with IBM, Georgetown University research team developed a MT system, which could translate 49 Russian sentences into English using a restricted vocabulary of 250 words and

6 grammar rules (Hutchins, 2007). Georgetown-IBM experiment was a starting point for MT research projects to take off.

The expansion of research continued with much optimism during the following years. There was a concentration on hardware and computer techniques improvement with the availability of financial funding. There had been no change in the basic ideas leading to automatic translation. After approximately a decade of studies, the American Government set up the ALPAC (Automatic Language Processing Advisory Committee) in 1964 to study possibilities and perspectives for developing a fully automated high quality translation (FAHQT). Issued in 1966, the ALPAC report concluded that MT was slower, less accurate and twice more expensive than human translation. The results of the report had a negative impact on MT and led to the reduction of financial funding for MT research.

Although widely condemned as biased and shortsighted, the ALPAC report brought a virtual end to MT research in the US for over a decade and had a great impact elsewhere in the Soviet Union and in Europe. However, research did not stop completely in Canada, France and Germany. The 1970s witnessed some revival on MT research. In the US, the Systran system was installed for use in 1970 to translate Russian scientific and technical documents. The Meteo system was developed in Canada in 1976 for translating weather forecasts (Hutchins, 2005). In France, a system for translating Russian Mathematics and Physics texts into French was designed. In Asia, Hong Kong University developed a Chinese-English MT system called CULT. During the 1970s, different countries showed interest in MT for different needs, which marked a turning point of MT research. Then, from the 1970s onwards, MT came to a worldwide availability with the first translation software for personal computers. Subsequently, in 1990

appeared the first translator workstation, and MT has become an online service available on the Internet. (Hutchins, 2005).

1.1.3. Machine Translation Approaches

Many approaches have been used to develop MT systems. Each of these approaches has its ups and downs. MT systems can be classified according to how translation is processed. Under this classification, two main paradigms are found: the rule-based approach and the corpus-based approach.

1.1.3.1. Rule Based approach:

Rule-Based Machine Translation (RBMT), also known as Knowledge-Based Machine Translation and Classical Approach of MT, is a general term that refers to machine translation system which makes use of many bilingual dictionaries for language pairs as well as a variety of linguistic and grammatical rules. The linguistic rules are based on the morphological, syntactic and semantic information about both the source and target language. The objective of RBMT is to convert source language structures into target language structures with perseverance of the unique meaning. The translation process consists of three phases, namely analysis, transfer, and generation. The methodology of translation can be categorized into three sub-approaches: Direct, Interlingua and Transfer-based approach. (Tripathi & Sarkhel, 2010; Sumita, Iida, & Kohyama, 1990)

1.1.3.1.1. Direct Approach

DMT approach is considered to be the oldest and less popular approach. In Direct method, the translation is made at the word level. Systems utilizing this approach translate directly from source language (SL) into target language (TL) without passing through an

additional/intermediary representation. Only a little syntactic and semantic analysis needed to process the translation with the use of bilingual dictionaries. Therefore, DMT is a word-for-word translation with some grammatical adjustments. (Okpor, 2014)

1.1.3.1.2. Interlingua Approach

Interlingua is a combination of two Latin words “Inter” and “Lingua” which means between/intermediary language respectively. In this approach, source language is transformed and translated into an intermediary language, which is independent of any of the languages involved in the translation. This intermediary language is a representation for the necessary syntactic and semantic regularities for the generation of the target language. Hence, the translation process goes through two main steps. First, the source language input is analyzed and transformed into an Interlingua representation. Then, out of this auxiliary representation, the target language output is derived and synthesized (Hutchins, 1986).

1.1.3.1.3. Transfer Approach

Because of the shortcomings of the Interlingua approach, another approach called Transfer-based Approach was developed. Transfer-based machine translation is similar to Interlingua machine translation in term of processing translation through an intermediate representation that indicates the meaning of the source language sentence. Unlike Interlingua approach, the transfer approach system can be broken down into three stages: analysis, transfer and generation. In the first stage, the source language text is converted into an abstract, neutral language representation. The second stage is transferring the source language representation into an equivalent target language representation. Finally, the target text is generated from the target language representation. In this approach, three dictionaries are used to complete the translation

task: a source language dictionary, a bilingual dictionary, and a target language dictionary (Quah, 2006).

1.1.3.2. Corpus-based approach:

Corpus-Based Machine Translation, also referred as data driven machine translation, is an alternative approach for machine translation to overcome the shortcomings of rule-based machine translation. CBMT acquires knowledge for the new translations from a bilingual parallel corpus, a large amount of raw data of translated texts and sentences. Corpus-based approach is classified into two sub approaches: Statistical MT and Example-based MT.

1.1.3.2.1. Statistical MT Approach

Statistical machine translation (SMT) is based on statistical models derived from the analysis of bilingual text corpora using Bayes Theorem as the initial model (Kohen, 2010). The essence of this approach is the alignment of phrases, words of the parallel text; then it calculates the probabilities of correspondence of words to other words aligned in the other language (Somers, 2008). Furthermore, the output is rearranged and reordered according to word-for-word translation frequencies in the target language. Therefore, an SMT system is modeled as three separate parts: a language model (LM) and translation model (TM) and a decoding algorithm. The translation model ensures the MT system a target language segment corresponding to the source language segment. While, the language model ensures the grammatically correct and error-free output. The bottom line is that statistical MT system uses a large data set of good translations, a corpus of texts, which have already been translated into multiple languages, and then those texts are used to automatically produce a statistical model of translation. That

statistical model is then applied to new texts to make a guess as to a reasonable translation. (Okpor, 2014)

1.1.3.2.2. Example-based Approach

Example-based translation, also known as Memory-based translation, is based on the concept of "translation by analogy," introduced by Makoto Nagao in 1981. Example-based approach benefits from access to large data banks of text corpora. The essence of this paradigm is to translate the source sentence by discovering how this source sentence or some similar phrase has been translated before. Thus, example-based MT system is given analogy examples of the language pair, which are used to translate similar type of source sentences to the target language. In other words, EBA is based on the process of selecting the equivalent phrases or word groups from a database of parallel bilingual texts. Furthermore, the system uses an algorithm to calculate the possible example of the language pair to match the source language segment with the target language segment (Arnold, Balkan, Meijer, Humphreys and Sadler, 1994, p.188).

The major issue for this paradigm is the rearrangement and recombination of the selected target language examples to produce an error-free output. Nevertheless, the EBA out do the RBA since that the examples are extracted from a data bank of translations provided by expert translators.

1.1.3.3. Neural Machine Translation:

Neural machine translation is a relatively new approach proposed by Kalchbrenner and Blunsom in 2013. The NMT was developed to increase the fluency and accuracy of translation

and to have more adequate humanlike translations of a high quality compared to the traditional approaches.

The neural machine translation model is based on artificial neural networks, which are trained to learn overtime from millions of examples and to create a better and more natural translation. The artificial neural networks consist of an encoder and a decoder. The encoder reads the input sentence and extracts a fixed-length vector (encoded words) representing the meanings of all the words in the input sentence. Whereas, the decoder generates the correct and most adequate translation from the representation of the encoded word (Kalchbrenner and Blunsom, 2013; Sutskever et al., 2014; Cho et al., 2014).

Despite the noticeable success in the improvement of translation quality, NMT still encounters some issues. According to a study conducted by Cho et all (2014), NMT fails to generate correct translation for longer sentences due to fixed-length vector. Furthermore, the limited vocabulary size makes is difficult for the neural machine translation model to deal with rare words (Bahdanau, Cho & Benjio 2015).

Conclusion

In the above section, main points about the field of MT has been dealt with. Various definitions have been provided and discussed. Light has been shed on the main events that marked the evolution of automatic translation throughout history together with its major approaches

Section Two: Google Translate

Introduction

1.2.1. Google Translate

1.2.2. Google Translate Approach

1.2.2.1. Google Translate as a Statistical Machine Translation

1.2.2.2. Google Neural Machine Translation

1.2.3. Google Translate: Strengths and Weaknesses

1.2.4. Google Translate in the Academic Context

Conclusion

Section Two: Google Translate

Introduction

After the introduction of key points in the field of MT. The second section is entirely devoted to highlight major aspects about Google Translate (GT). First, it provides a brief introduction of GT. Next, it explains its functionalities and main approaches, namely: statistical approach and Neural MT. Afterwards, it highlights some of the strengths and weaknesses of this multilingual machine translation service. Lastly, the section presents a brief discussion about the implication of GT in classroom settings.

1.2.1. Google Translate

Nowadays, various online (MT) resources are available for second language learning, such as Translator Online, Foreign Word, Web Trance, Prompt and Google Translate (Hampshire and Salvia, 2010). As translation software have become more popular, they have also evolved and improved. Part of the reason such software have become popular is because of the ease and speed of having a translator right readily available.

One of the most used and well-known translation system is Google Translate. GT is a complementary free multilingual translation service developed by Google in April 2006. It is one of the most common online resources for translation. It translates multiple forms of texts and media such as words, phrases, images, webpages and real-time video from one natural language into another. Google Translate is efficient and compatible with PC systems and smartphone systems, and these features have made it very popular among users. The progress of GT is visible. As of August 2020, Google Translate supports 109 languages at various levels, and as of

April 2016, claimed over 500 million total users worldwide, with more than 100 billion words translated daily.

Hampshire and Salvia (2010) evaluated the quality of free online machine translators (FOMTs) including GT. First, they developed a ranking system and then ranked ten free online machine translators. They found that GT was the most common and popular MT system among users. As becoming a popular translation tool for language students, many students, even college students appear to use GT to help them in learning foreign languages due to its special features of being free, easy to access with quick translation process. This tool tends to help the students to get the translation quickly and easily (Kumar, 2012).

1.2.2. Google Translate Approach

In the last ten years, GT has grown from supporting just a few languages to more than 100. To make this possible, Google engineers needed to build and maintain many different systems in order to translate between any two languages. MT systems such as GT have mostly used a "phrase-based" approach of breaking down sentences into words and phrases to be independently translated. However, Google began experimenting with deep learning technique, called Neural Machine Translation that can translate entire sentences without breaking them down into smaller components. That approach eventually reduced the number of GT errors on many language pairs in comparison with the older phrase-based approach. Although, Google deployed a new system called neural machine translation for better quality translation, there are languages that still use the traditional translation method called statistical machine translation (Wikipedia).

1.2.2.1. Google Translate as a Statistical Machine Translation

Originally, Google Translate was launched in April 2006 as a statistical machine translation service. It is a rule-based translation engine that utilizes a statistical model to determine the translation of words. Rather than translating languages directly, it first translates text to English and then into the target language. This was considered a mandatory step that it had to be taken. When processing the translation, GT searches different documentaries to find the most appropriate translation pattern between translated texts by humans. The system calculates the probability of words by comparing sentences translated from the source language into the target language. This helps to decide on which words to select and how to arrange them in accordance with the target language. Consequently, the quality of translation provided by GT depends on the number of human translated text searched by GT (Karami, 2014) (as cited in Ghasemi & Hashemian, 2016). Since SMT uses predictive algorithms to translate text, its grammatical accuracy has been criticized and ridiculed. Translating isolated words means decontextualized the meaning since isolated words do not carry enough information about the context to ensure correct translation, which leads to making mistakes and reduce translation accuracy.

1.2.2.2. Google Neural Machine Translation

In September 2016, Google developed a new approach, the Google Neural Machine Translation system (GNMT) to increase fluency and accuracy in Google Translate. In November, it was announced that Google Translate would switch from the phrase-based approach to Neural Machine Translation. Unlike SMT, GNMT is an approach that uses Artificial Intelligence; the machine mimics cognitive functions that humans associate with the human mind to learn from millions of examples (Russel & Norvig, 2009). The new method goes beyond sentence-by-

sentence translation. In lieu of fragmenting the original into chunks, GNMT takes the whole text and context into account to find out the most relevant translation, and then rearranges and adjusts the text to make it human-like speaking with proper grammar. GNMT was only enabled for a few languages in 2016. As of August 2020, GNMT was enabled in all 109 languages in Google Translate, with the exception of English and Latin language pair. After following GNMT, the quality of translation improved over SMT in some instances. This is due to the use of the example-based machine translation (EBMT) method in which GT looks for the adequate translation from several examples (Turovsky, 2015; Quoc & Schuster, 2016).

1.2.3. Google Translate: Strengths and Weaknesses

Google Translate has plenty of features. It has a free online access, users only need to open the website in a browser or download the application. It is also characterized by an instant and quick translation. Mostly, GT is multilingual; it provides translation for various languages. One feature that has been developed recently on GT mobile application is photo recognition; the user only needs to take a picture of words or text, then GT will translate it (Medvedev, 2016). Despite its so many benefits, GT still has some drawbacks. Below are some of the listed and most discussed of them:

- Google Translate is unable to generate an error-free translation for longer sentences or text because it usually provides word-for-word translation (Medvedev, 2016; Santoso, 2010).
- GT cannot handle the translation of idioms and figurative language (Santoso, 2010).
- The length of the text determines the quality of translation; the shorter the text, the better the output (Santoso, 2010).

- Bozorgian and Azadmanesh (2015) claim that subject-verb agreement is still a main disadvantage for GT due to the fact that GT does not know the rule of agreement.
- Gt does not have a grammatical function; therefore, Jin and Deifell (2013) defined it as a complementary tool.
- Medvedev (2016) stated that GT may "cause some misunderstanding in the choice of words" (p. 185) due to the translation in context issue. GT lacks in terms of translating words according to the context.

1.2.3. Google Translate in Academic Context

The literature on the use of MT in language learning and especially academic writing is very limited. Machine translation is not widely used in the academic context due to concerns regarding its reliability to create accurate translation. However, with the noticeable improvement of grammatical and lexical accuracy after the development of MT systems as well as its free online availability on both PCs and smart phones, it has become increasingly widespread in various settings, mainly because of convenience, multilingualism, immediacy, efficiency and free cost (Alhaisoni & Alhasyony, 2017; Niño, 2009; Sukkhwan & Sripetpun, 2014).

Undoubtedly, students are increasingly using MT for diverse academic purposes as well as on a daily basis. According to Alhaisoni and Alhasyony (2017), students tend to use MT as a supplementary tool for language learning, mostly for vocabulary learning, translation, reading comprehension, and writing assignments. As GT is considered to be the easiest and most accessible MT tool since it offers quick and almost accurate translation, students developed a habit of using GT more often inside and outside the classroom. However, this has become a debatable issue whether this application can be applied in language learning. Regarding this

matter, several research projects have been conducted to assess GT output, as well as exploring students and teachers' attitude towards this MT tool.

A study conducted by Jin & Deifell (2013) (as cited in Herlina, Dewanti & Lustyantje, 2019) showed that Google Translate is the second most online tool used by language learners because of its ease. The findings of their studies confirmed students' positive attitude toward Google Translate, stating that it accelerates their reading and writing skills in foreign languages while reducing their learning anxiety. However, the researchers stated that GT failed, first, to provide clear explanations because it does not have a grammatical function, and, second, to translate according to the context. The final results were similar to the ones of Clifford et al (2013) which minimized the role of MT to a dictionary used to learn new vocabulary. Josephson's (2011) (as cited in Herlina, Dewanti & Lustyantje, 2019) study appeared not to contradict the others. He perceived GT as a supporting tool for students to get a quick and accurate translation. In regard to reading comprehension, GT succeeded in providing students with the general meaning of texts. However, he found that Google Translate was less useful for providing grammar solutions. In a study related to writing, Garcia and Peña (2011) (as cited in Herlina, Dewanti & Lustyantje, 2019) found out that novice students with low language proficiency could benefit from MT more than those who have high fluency. The findings showed that Online Translation helped beginner students to be more fluent when communication. The conclusion drawn by Fredholm (2015) is opposed to Garcia and Peña (2011) that students with high level of linguistic knowledge are more likely to spot errors in MT output; therefore, the use of Online Translation is best left to the advanced students rather than beginners.

Meanwhile, as new technologies emerge with potential classroom applications, they are met with excitement, skepticism, and in some cases hostility by educators (Clifford, Merschel, &

Munné, 2013). It is important for teachers to carefully consider the impact and value of these technologies in the classroom. According to some studies, many teachers expressed their doubts and forbid the use of GT in classroom settings due to its complete inaccurate translation (Clifford, et al., 2013; White & Heidrich, 2013; Davis, 2006; Watkins, 2004). On the other hand, other teachers believe that Online Translation can be useful for students; however, they do not instruct students on how to use it. They claim that since students are born in the age of technology, they are already aware about the appropriate use of technology. In spite of being "digital natives" students, as described by Prensky (2001), some students do not grow with access to technology devices. Furthermore, students are not born with knowledge of how to use technology. Other research projects has also found that teachers forbid the use of Online Translation because it impedes language learning by creating a shortcut that encourages cheating and plagiarism (Pritchard, 2008; Stapleton, 2005). Pritchard (2008) stated that although faculty are doubtful about Online Translation and its impact on language learning, they do not consider it as a threat on the profession (p. 116).

On the other hand, teacher as well lack in training on the use of every digital tool. It has been agreed on by many researchers that both students and teachers need to be trained in the use of Online Translation in order to have a successful and positive impact (Fredholm, 2014; Fredholm, 2015). In order for teachers to be able of providing a proper instruction and guidance for their students, they must first become proficient in using it themselves. Besides, by studying how OT functions and to what extent it can be well, teachers can make use of it to improve their teaching. One point emphasized by Zanettin (2009) is that sufficient time must be allocated to ensure that students know how to properly make use of GT in order to guarantee the usefulness of it.

The most worrisome part of Online Translation is when students easily use it to copy someone else's writing from elsewhere on the Internet, paste it into the translator, and claim it as their own (Stapleton, 2005). Stapleton (2005) stated that teachers should stress "the unethical and damaging nature of translators and electronic 'lifting'" (p. 187) as Foreign Language learners find it easier to plagiarize by copying text from other sources and paste it into the translator. Many researchers problematized the use of MT when students attempt to use it to translate longer text because they believed that this could be considered a form of cheating. In a survey carried out by Correa (2011), he found out that out of 20 activities that could be considered as cheating, the use of MT ranked 14 in seriousness and was claimed as an academic dishonesty. Somers, et al. (2006) also treated the implication of MT in language classroom as a form of plagiarism. He sought for ways to detect MT use by spotting and focusing on errors, which MT would possibly commit and could not be out of a human.

Despite the noticeable improvement of Online Translation programs, research has focused on the shortcomings and limitations of these programs (White & Heidrich, 2013). The focus on the negative impact often leads to the prohibition and punishment on the use of Online Translation in classroom setting. Even when Online Translation is forbidden, students still find ways to hide their use of it. However, according to Stapleton (2005), "Awareness of the possibilities and pitfalls of this environment by both teachers and learners can lead to an improved product." (p. 188).

Conclusion

This section has been devoted to overviewing important points about Google Translate. It first introduced the software, explained its functions and features, but also listed its limitations. Then, it explained the impact of integrating Google Translate in the academic context for language learning.

Chapter Two: Translation and Writing

2.1. Section One: The Concept of Translation

Introduction

2.1.1. The Concept of Translation

2.1.2. Writing in EFL Context: Problems and Challenges

2.1.3. Translation as a Writing Process

Conclusion

Chapter Two: Machine Translation and Writing

Section One: The Concept of Translation

Introduction

After the introduction of both the concept of MT and GT in the first chapter, the second chapter is exclusively concerned with providing a comprehensive review about Translation and Academic Writing. The section presents a review on the notion of translation, its definition, process and requirements. In addition, this section provides a review on second language academic writing as well as an overview of the challenges involved in this activity. Finally, it covers the implication of translation as a means in the process of writing.

2.1.1. The Concept of Translation

Translation is an interdisciplinary subject and text-bound activity. By its very definition, translation is the process of transferring the meaning and content of a text from a one language into another (Shastri, 2012). Hutchins (1997) defined translation as a two-stage process: first, the interpretation of a linguistic meaning of a source text; second, the production of an equivalent text in the target language. Thus, the goal of translation is to interrelate the content of the source text and the target text. Catford (1995) puts forward that the definition of translation is “the replacement of a textual material in one language by equivalent textual in another language.” (p. 20). The aforementioned definitions are all concerned with written language; however, some distinction is made between written language and spoken language, the first is what is defined as translation whereas the latter is referred to as interpretation.

The role of translation is not limited exclusively to give equivalent meaning in the target language, but rather it interrelates different cultures speaking different languages. The process of

translation undergoes three main stages: first, decoding the source text; second transferring linguistic and cultural elements meaning into the target language; finally, encoding the text into the new language and context (Napitupulu, 2017). During the process of translating, there should be no loss or change in both the style and context of the original source text; the style and context should be reproduced with respect to the target language writing conventions. Good writing skills are needed in each of the three mentioned stages in order to perform a good translation. Therefore, translation is considered to be the fifth skill alongside the four language skills: writing, reading, speaking and listening. “Translation holds a special importance at an intermediate and advanced level: in the advanced or final stage of language teaching, translation from L1 to L2 and from L2 to L1 is recognized as the fifth skill and the most important social skill since it promotes communication and understanding between strangers” (Ross, 2000, pp. 61-66).

2.1.2. Writing in EFL Context: Problems and Challenges

Every student's aim is to produce a good writing when given a writing assignment; however, the skill of writing is considered to be a hard task to acquire. On the top of the complex vocabulary of academic English, Starkey (2004) explained the reasons why effective writing is difficult for EFL students by the different components that the skill requires for students to master: organization, clarity, word choice, and mechanics. Organization refers to the logical arrangement and sequence of ideas so that the end product is coherent and the reader is capable of following the writer's stream of ideas. Clarity is related to making the writing readable and understandable for the reader (Hamadouche, 2010; Souhila, 2015). Word choice refers to students' appropriate choice of words and diction to express their own ideas and deliver their message (Starkey, 2004). Word choice is strongly related to vocabulary repertoire that is the

words needed for students to convey ideas and meaning (Alqahtani, 2015). Lastly, mechanics in writing are related to grammar and spelling: grammar is the knowledge for language rules; while spelling is how to write words correctly. Spelling is considered an important element in writing because instructors tend to make it a basis to evaluate their students' writing (Hamadouche, 2010). In addition, spelling mistakes can give the reader a negative impression towards the writer (Starkey, 2004). Englander (2011) approached the subject of Second Language Writing in his survey; he asked students to rate the difficulty, the dissatisfaction, and the anxiety to write academic papers in English. The final results showed that all the three aspects were high rated. Hence, the study confirms that EFL academic writing can be both a challenge and a burden.

Other researchers elaborate on other reasons why writing can be challenging for students. According to Belkhir and Benyelles (2017) first language transfer can be one of the causes that hinder students from producing an accurate writing. This can be explained by the students' use of their first language to express their ideas and then translate into the target language. Some students do not notice or ignore the differences in grammar and style between the first language and the second language. Consequently, the more the difference is vague, the more the writing is inaccurate. Salem (2007) stated that the limited vocabulary and idioms as well as less experience with second language are other reasons why students find writing difficult. Furthermore, developing writing skills involves other skills of planning, drafting and revising so that the end product is appropriate to both the purpose of the writing and the intended readership. Besides, writing is a difficult and tiring activity and usually needs time for reflection and revision, plus a peaceful environment, none of which are generally available in the classroom (Kavaliauskienė, 2004).

2.1.3. Translation as a Writing Process

Translation was an important part of English language teaching and learning, particularly during the era of the grammar-translation method, but it was abandoned since communicative methods became dominant. The value of translation as a language learning and assessment activity has been a topic of much debate by language practitioners. Nevertheless, translation was never fully banned from Foreign Language classroom (Cook, 2007). Duff (1989) stated that teachers and students have started the use of translation as a means of English language teaching and learning decades ago. According to Hayes and Flower's model (1988), translation is considered one of the four main cognitive processes in writing (planning, translation, review, and revision). Even though translation is a real-life and a natural activity used by learners on a daily basis; yet, teachers do not encourage its use. Majority of university students encounter difficulties in transferring meaning from one language into another, which is a result of their limited knowledge in the basics of writing rules and ignorance of the differences in grammar and style between languages (Muayad & Awadalbari, 2015). They think that each word and structure in English have a correspondence in their L1. Therefore, Atkinson (1993) emphasized on raising students' consciousness of the non-parallel nature of languages, which may allow them to think comparatively. In other words, discussion of the differences and similarities between languages help the students to understand the problems caused by their native language, and reduce first language interference. Students would be able to evaluate similarities and differences between writing styles in different languages by carrying out a contrastive analysis on this parallel texts. Furthermore, writing skills can be enhanced through the use of written commentaries where students write about the difficulties they faced when translating, and about the strategies used in order to deal with them (Muayad & Awadalbari, 2015). Students should become familiar with

different styles of writing and principles of editing and punctuation in both the source and target languages in order to improve the quality and readability of the translation (Razmjou, 2002) (as cited in Muayad & Awadalbari, 2015).

Writing in L2 and translation into L2 are of no much difference; both cases require a production of writing piece in a foreign language. In a written composition, students mentally translate their ideas and concepts into a language they do not fully master as their own native language. Writing in L2 includes a conscious or subconscious mental translation as well on the part of students. If this mental translation activity is externalized, then students can be taught how to control it and by highlighting differences between L1 and L2 language features learners can better remember mistakes and learn from them (Muayad & Awadlbari, 2015). Meanwhile, in-depth knowledge of the Foreign Language features, such as grammar, style, conventions and culture, is necessary in translation to L2. It also requires the use of grammar books and dictionaries, whether general, specialized, monolingual or bilingual. Students can be uncertain and doubtful about the translation since some problems may occur. One of the major problems is lexical choice appropriateness as in some languages, such as English for instance, one word, be it a noun or a verb, may have more than one meaning according to the context in which it is used. Collocations, idioms, fixed expressions and proverbs may also pose some inconveniences for L2 learners either in translation or in writing in L2.

To recapitulate, translation as a teaching tool needs to take into account a number of different aspects, such as grammar, syntax, collocation and connotation of languages. Uncritical use of translation may give learners insufficient, confusing or even inaccurate information about target language.

Conclusion

Concluding what has been discussed above; the first section has been wholly devoted to explore both the concept of translation and the activity of Foreign Language Academic Writing. It also demonstrated some of the considerable challenges related to Academic Writing. Finally, it ended with attitudes towards the use of translation as a fundamental process in writing.

Chapter Three: Research Methodology, Data Analysis and Interpretation

Section One: Research Methodology

Introduction

3.1.1. Research Paradigm

2.1.2. Setting

2.1.3. Population and Sampling

2.1.4. Data Collection Procedures

2.1.4.1. Preliminary Stage

2.1.4.2. Implementation Phase

2.1.5. Data Analysis Procedures

2.1.5.1. Error Analysis of English Writing Compositions

2.1.5.2. Analysis of Post-editing of the Translation Task

2.1.6. Limitation of the Study

Conclusion

Chapter Three: Research Methodology, Data Analysis and Interpretation

Section One: Research Methodology

Introduction

While the previous chapters cast light on the theoretical aspects of machine translation field and provided a comprehensive review about Google Translate and its integration as a writing tool, the present chapter is concerned with the practical framework, which aims to investigate students' attitudes towards Google Translate, as well as its impact on the writing product. It is basically composed of two sections: the research methodology and the data analysis and discussion. The research methodology section includes the research paradigm, the setting, the population and sampling, the research procedures involved in data collection, the methods followed in data analysis, along with research limitations.

3.1.1. Research Paradigm

In an attempt to explore the impact of Google Translate on the final product, as well as students' attitudes toward the MT tool, the current study has adhered to an experimental research design, as it is viewed to be the most appropriate method to identify a cause-effect relationship (Nunan, 1992). The present study requires one group as the experimental group rather than two groups, for it depends only on carrying a pre-test and a post-test on the group. Accordingly, the criteria of the study led the researchers to follow a sub-type of the experimental design known as Pre-experimental design: One-group Pretest-posttest Research Design. It is a design that combines both a post-test and a pre-test study by carrying out a test on a single group before the treatment is administered and after the treatment is administered. The need for a control a group is not necessary, since it depends on the comparison between the pre-test and post-test to test the

effect of the treatment. Considering Google Translate as the treatment in this study, the participants in this study undergo a writing test before being allowed to use Google Translate service, then another test with the permission of using GT. The investigation will finish with a questionnaire to elicit extra information. In order to verify the hypotheses, the results from the pre-test and the post-test will be compared to each other.

For data collection and analysis, the researches adopted both quantitative and qualitative approaches. Qualitative approach explains the phenomenon by collecting numerical data that are analysed using mathematically based methods, statistics in particular (Apuke, 2017). Whereas qualitative method uses non-numerical data and describes the results in words rather than numbers (Creswell, 2009). Accordingly, the reason behind the use of a mixed approach is that the researchers aim not only to explore students' attitudes and efficiency when using Google Translate, but also to identify how much GT affects their writing in terms of quantity and quality

3.1.2. Setting

The investigation with EFL second year students was carried out at the English Department of Mohammed Seddik Ben Yahia University in Jijel. Since the study required the use of computers with access to Internet for a successful implementation, it was carried out at language laboratories. However, due to the unexpected and unfortunate events concerning the COVID-19 pandemic outbreak, the study with the rest of the levels (first year, third year, master one and master two) was carried out online through social media, namely, Facebook and Gmail.

3.1.3. Population and Sampling

The participants of the study are a total of 35 English majors at the Department of English of Mohammed Seddik Ben Yahia. Since the aim of generalizability is intended in this research, the researchers adopted a random sampling. Seven students from each level were

chosen based on their accessibility, availability, and willingness to participate in this study. The rationale behind selecting participants of the sample from all levels is that the researchers' interest is to identify the attitude regardless of the level, since GT is used by both beginners and advanced students.

3.1.4. Data Collection procedures

The process of collecting data was carried out through two main stages: the preliminary stage, which is devoted to the design of the study, followed by the implementation phase, wherein the researchers put the work into practice to test the research hypothesis.

3.1.4.1. The Preliminary Phase

As a way to find convincing answers to the stated research questions and at the same time to test the earlier stated hypotheses, the researchers selected the topic of studying abroad as the theme of writing. The rationale behind choosing this topic is twofold:

- First, since one of the main drawbacks of Google Translate is the inability to translate figurative speech, the topic is considered decent, as it does not require much use of figurative language or ambiguous words, which may cause mistranslation when translating from Arabic into English.
- Second, the topic is one that students have knowledge about and the terminology is simple; therefore, they will not encounter much trouble during the writing process.

The writing test was constructed as follows:

- First, the participants were asked to write a paragraph directly in English describing the reasons why Algerian students prefer to study abroad.

- Then, they were asked to write another paragraph in L1 (Arabic) discussing the same topic.
- Lastly, they were asked to translate the L1 paragraph into English with the use of Google Translate. Within the last paragraph, the participants were asked to revise the raw translation in order to produce the final version in English. **(See Appendix A)**

On the completion of the study, a student questionnaire was designed to help elucidate students' beliefs and attitudes towards Google Translate as a source of writing. The questionnaire was adapted from Cohen and Brooks-Carson (2001) with some modifications being made to suit the current study. The questionnaire was divided into three sections. Section one was devoted to writing in English. The second section was for the use of translation in the writing process. Finally, the last section was devoted to the questions on the use of Google Translate in writing. The questions vary as close-ended questions and open-ended ones to help extract the needed and appropriate answers. **(See Appendix B)**

3.1.4.2. The Implementation Phase

Practically, the participants were informed of the purpose of this study. Additionally, the students were ensured that their identities and answers would be kept confidential. This is in line with research ethical principles, to ensure that the participants' rights are not violated.

Second year License students were called to the language laboratories to do the writing test. They were provided with the test paper, which consisted of three writing tasks on the topic of studying abroad. During the first assignment, students were asked to write a paragraph directly in English without the use of Google Translate. Meanwhile, in the second one, the paragraph was to be written in Arabic (L1). Last, the third assignment was a translation of the Arabic paragraph into English where the use of GT was allowed. The researchers made sure to explain each of the

three questions, especially the third one in which the participants were supposed to review the translation and correct the mistakes that might occur. The time set for finishing the writing task was an hour and half. The writing session was conducted once only because of the limited time the respondents had; therefore, the researchers could not set separate sessions for the writing of each of the two English paragraphs (the one with the use of google translate, and the one without).

After the submission of the writing samples, participants were provided with the questionnaire as a completion for the study, which served as a student self-reflection of use of Google Translate. The questionnaire covered all the three writing tasks, namely, writing in English, translation in writing, and the use of Google Translate as a support. The questionnaire incorporated closed questions to measure students' opinions, frequency of use, and free response questions designed to elicit additional information.

The study that was conducted online with the rest of the sample, the researchers contacted the participants via social media, Facebook and Gmail. The participants were dealt with individually, and were informed about the same instructions. The test and the online questionnaire were e-mailed, noting that they were provided with online questionnaire after they submitted their versions of the writing task. The researchers could not set a limited time for the task because the timing contradicted with the students' schedule and they were late to send back the writing pieces.

3.1.5. Data analysis procedures

The present study employed a mixed method, which included quantitative and qualitative text analysis of all the versions of the students' writings and their responses on the questionnaire. The research questions aim at investigating the impact of Google Translate on students' writing

product, and students' attitudes towards the software. More precisely, it aims at investigating the quality and quantity of the writing composed by the students and to what extent students are familiar with GT. Therefore, to explore these research questions, all the students' writing versions were analysed using error analysis method.

3.1.5.1. Error Analysis of English Writing Compositions

In order to test the first hypothesis of the positive impact of Google Translate on writing composition, the researchers asked a teacher of English to assess the English writing samples. Based on this assessment, the researchers calculated and categorized the errors appeared in the writing versions. The texts were analysed in two dimensions, quantity and quality.

Quantity of writing: the number of words in each piece of writing was calculated. Then, the researchers compared the average number of words in the two writing tasks.

Quality of writing: to assess the quality of writing, the researchers considered the errors produces in each piece. Errors classification is based on keshavarz's (1999) model of error analysis (lexical errors, tense errors, word order, misuse of prepositions), in addition to grammar errors (subject-verb agreement errors, part of speech), spelling, misuse of articles, capitalization, sentence structure, punctuation and the use of informal language. The current study used error analysis to measure how much the students' L2 writing improved with the help of MT. The errors were treated in terms of occurrence, if one error is repeated in one paragraph it is counted only once. The frequency of each error type in the two writing tasks was calculated and tabularised. The proportion of each error type were converted into percentages on the basis of the ratio of the number of errors students made, out of the total number of words they wrote.

3.1.5.2. Analysis of Changes in the Translation Task

The L1 writing were analysed in terms of content and meaning to check the overall quality, as well as the structure and logic of sentences since they can influence the quality of translation (Godwin-Jones, 2015; Ruiz & Frederico, 2014).

The researchers compared the raw translations provided by Google Translate with the students' final versions from task 2. This step aims to investigate the changes made by the students, and to identify the level and purpose of the changes. Level refers to symbols, words, phrases, clauses/sentences, or paragraphs. Purpose indicates the reason for the change: mechanics corrections, word use corrections, grammatical corrections, changes to better expression with the same meaning, and changes in content (Lee, 2019)

3.1.6. Limitation of the Study

No research is meant to escape criticism and imperfections. Based on this assumption, the researchers acknowledge that the present study confronted some obstacles that hindered its successful implementation and resulted in certain limitation.

- The small size of the sample is one limitation for this study. The Generalizability of the results was intended, thus the sample should have been large. Yet due to students' reluctance, the researchers had no choice but to decrease the number of participants from 60 to only 35.
- Sticking with the sample, the first intended sample was Second year students; however, because of the unfortunate events as well as researchers' inability to gather the sufficient number of the subjects, the researchers extended their sample to students from all levels.

- The participants should have undergone an awareness task on GT errors, as well as providing them with instruction on the capabilities of the program, and how to minimize the potential of errors in the output.
- One weakness is that the writing samples should have been corrected by a university teacher, but due to the difficulty to contact them and time constrains the researchers could not fulfil this step.

Conclusion

Overall, this section explained briefly the methodology followed in this research. It described the research paradigm, the setting, the population and sampling as well as the methods adopted for data collection, analysis, and interpretation. Finally, this section shed light on a number of limitations of the current research.

Section Two: Data Analysis and Interpretation

Part One: Data Analysis

Introduction

3.2.1.1. Analysis of Quantity and Quality of Writings

3.2.1.2 Analysis of Post-editing of the Translation Outputs

3.2.1.2. Questionnaire Analysis

Conclusion

Part Two: Discussion and Interpretation of the Findings

Introduction

3.2.2.1. The impact of Google Translate on Writing

3.2.2.2. Students' Attitudes towards the Google Translate

Conclusion

Recommendations

Section Two: Data Analysis and Interpretation

Part one: Data Analysis

Introduction

The current section is devoted to the analysis of the data yielded from the experimental study and the questionnaire. The data gathered are carefully analysed and interpreted. The purpose of this section is to answer the questions and to verify the hypotheses. The section is divided into three sub-stages. The first stage is mainly concerned with the analysis of quantity and quality of writing tasks. The second stage aims at investigating the post-editing process of the translation outputs. The last stage is devoted to the analysis of responses gathered from the questionnaire. Therefore, the results are presented in the same order as they were conducted.

3.2.1.1 Analysis of Quantity and Quality of the Writing Tasks

Quantity Analysis

The analysis of the quantity was based on calculating the average of vocabulary used in the two tasks. The average number of words in the task 1 was 113.6 and in task 2 was 118.08. The results showed that the students wrote slightly more words in task 2 with the use of GT than in task 1.

Quality Analysis

Table 1:

Frequency of Errors in Task 1

Type of Errors	Frequency of Occurrence	Percentage	Mean
Lexical Errors	18	6.47%	1.8
Grammar	71	25.54%	7.1
Word Order	5	1.8%	0.5
Prepositions	16	5.75%	1.6
Spelling	41	14.75%	4.1
Articles	13	4.68%	1.3
Capitalization	19	6.83%	1.9
Punctuation	83	29.86%	8.3
Informal Language	4	1.44%	0.4
Sentence Structure	5	2.88%	0.5
Total	278	100%	

As mentioned in the methodology part, the researchers conducted an error analysis to check on the quality of the writing. The total errors in task 1 was 278 out of a total number 3976 words with a percentage of 7% and accuracy of 93%. Out of the total errors, punctuation and grammar errors marked the highest percentages with 29.86% and 25.54%, respectively, followed by spelling errors (14.75%). While the rest of the errors were ranging from 1.44% to 6.83% (lexical errors 6.74%, word order 1.8%, misuse of prepositions and articles 5.75% and 4.68%, capitalization 6.83%, sentence structure 2.88% and the use of informal language as the least with 1.44%)

Table 2:

Frequency of Errors in Task 2

Type of Errors	Frequency of Occurrence	Percentage	Mean
Lexical Errors	24	10.53%	2.4
Grammar	59	25.88%	5.9
Word Order	5	2.9%	0.5
Prepositions	16	7.02%	1.6
Spelling	9	3.95%	0.9
Articles	6	2.63%	0.6
Capitalization	23	10.09%	2.3
Punctuation	68	29.82%	6.8
Informal Language	3	1.31%	0.3
Sentence Structure	15	6.58%	1.5
Total	228	100%	

Meanwhile in task 2, the total number of errors identified amounted to 228 out of 4133 words written, with a percentage of 5.52% and accuracy of 94.48%.

Similar to task 1, punctuation and grammar errors are the most frequent, with 29.82% and 25.88%, respectively. Lexical errors (10.53%) and capitalization (10.09%) were ranked third and four. Word order errors, spelling, misuse of prepositions and articles, sentence structure and the use of informal language ranged from 1.31% (informal language) to 7.20% (misuse of prepositions)

3.2.1.2. Analysis of Post-editing of the Translation Outputs

In order to check the changes in the post-edited versions of the translated task, first, the researchers checked the overall quality of the L1 texts in terms of content and sentence structure and logic. This step aims to investigate the reasons that may cause plausible errors in translation. The analysis of the texts showed that the overall quality was decent for a translation, even though some students used few of ambiguous words and expressions that were mistranslated by the system.

Table 3:

Frequency of Changes in the Translation Outputs

Level of Change			Percentage
	Symbol	No changes	
	Word	71 (16 wrong)	45.51% (22.53% wrong)
	Phrase	47 (7 wrong)	30.13% (14.89% wrong)
	Clause/ Sentence	38 (17 wrong)	24.36% (44.74% wrong)
	Paragraph	No changes	
Total		156 (40 wrong)	100% (25.64%)

Among 35 participants, 6 of them did not post-edit the translation provided by GT. They kept the same paragraph as it is. Table 3 shows that there are 156 changes in the translation outputs, divided on different levels. The average number of changes that the students made when post-editing the translation provided by GT was 0.03. There were 71 attempts at the word level (45.51%), followed by the phrase level, which has 47 attempts (30.13%), then changes on the

sentence level, as the least with 38 attempts (24.36%). No changes were found at the symbol and paragraph levels.

However, it was noticeable that the changes that students made were not necessary correct.

Among 156, 40 (25.64%) changes turned out wrong, with 16 out of 71 (22.53%) at the word level, 7 out of 47 (14.89%) changes on the phrase level, and 17 out of 38 (44.74%) on the sentence level.

Table 4:

Frequency of Purposes of Changes in the Translation Outputs

Purpose of change	Mechanics corrections	6	6.13%
	Word use corrections	26	26.53%
	Grammatical corrections	7	7.14%
	Better expression	59	60.20%
	Content	No changes	
Total		98	100%

With regard to purpose, noting that the wrong changes were not included when analysing the purpose of the change. Replacing expressions appeared the most frequently with 59 attempts (60.20%), and fixing vocabulary with 26 changes (26.53%), followed by editing grammar and mechanics corrections with 7 (7.14%) and 6 (6.13) respectively. The students did not make any change for content in the final version.

3.2.1.3. Questionnaire Analysis

Section One: Writing Paragraphs

Q1. Do you think that writing is important for your study?

- a. Yes
- b. No
- c. I don't know

Table 5:

Students' Attitudes towards Writing in Language Learning

<u>Option</u>	<u>N</u>	<u>%</u>
a.	35	100
b.	0	0
c.	0	0
Total	35	100

The results displayed in the table above show that all the respondents agreed that writing is important for their studies.

Q2. Is writing, regardless of the language used, an enjoyable task?

- a. Yes
- b. No
- c. I don't know

Table 6:

Students' Attitudes towards Writing Tasks

<u>Option</u>	<u>N</u>	<u>%</u>
a.	27	77.1
b.	4	11.4
c.	4	11.4

Total	35	100
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The great majority of students (77.1%) considered writing as an enjoyable task. Whereas, four students assumed that it is not. 11.4 % of the students were neutral; they neither agree nor disagree.

Q3. Is writing in English an enjoyable task?

- a. Yes
- b. No
- c. I don't know

Table 7:

Students' Attitudes towards Writing in English

<u>Option</u>	<u>N</u>	<u>%</u>
a.	31	88.6
b.	4	11.4
c.	0	0
Total	35	100

As it is plainly shown in Table 3.3., the majority of students regard writing in English as an enjoyable task, while four of them (11.4%) said that its not an enjoyable one.

Q4. From the scale of 1 to 5, how do you rate the degree of difficulty when you write directly in English?

Very Difficult ○ ○ ○ ○ ○ Very Easy

Table 8:

Degree of Difficulty when Writing in English

<u>Option</u>	<u>N</u>	<u>%</u>
Very Difficult	0	0
Difficult	3	5.7
Neutral	21	60
Easy	10	31.4
Very Easy	1	2.9
Total	35	100

The results displayed in the table above show that 60% of the respondents were neutral about the average degree of difficulty when writing directly in English; whereas, 31.4 % of them believed that it is an easy task. In addition to three students who assumed that writing directly in English is a difficult task while one student considered it a very easy task.

Q5. When writing your paragraph in English, do you first think in Arabic then translates into English?

a. Yes, I first think in Arabic

b. No, I think in English

Table 9:

Students' Use of Translation in Writing

<u>Option</u>	<u>N</u>	<u>%</u>
a.	10	31.4
b.	25	68.6
Total	35	100

The results of this question reveal that the majority of students (68.6%) think in English when they write their paragraphs, while 31.4% of them they first think in Arabic then translate into English.

Section Two: Using Translation in Writing Paragraphs

Q6. When you translated the paragraph from your first language into English, to what extent did you find it difficult to translate your ideas from Arabic into English?

- a. Completely
- b. Quite a bit
- c. Moderately
- d. A little
- e. Never

Table 10:

Degree of Difficulty when Translating from Arabic into English

<u>Option</u>	<u>N</u>	<u>%</u>
a.	1	2.8
b.	8	22.9
c.	14	40
d.	12	34.3
e.	0	0
Total	35	100

Of the total respondents (N=35), 40% of respondents chose “moderately” to express the difficulty of translation from Arabic into English. While 34.3 % of the respondents chose the option “A little”. The other 22.9% revealed that they find it “Quite a bit” difficult

Q7. Do you find it easier to express your ideas more clearly in Arabic rather than directly in English?

- a. Yes
- b. No

Table 11:

Students' Opinions about Expressing Ideas in Arabic while Writing

<u>Option</u>	<u>N</u>	<u>%</u>
a.	20	54.3
b.	15	45.7
Total	35	100

The majority of the informants of the students revealed that expressing their ideas in Arabic is much easier than in English.

Justifications:

Most of the respondents prefer to think in English during the process of writing. They claimed that it is better to think in the language they write in. They claimed that practicing writing requires the use of the language you are working on to develop in order to avoid the interference of mother tongue. They also stated that writing directly in English help them to express the meaning a simple way without the need for mental translation.

Some of the respondents prefer thinking in Arabic than English because they find it easier to express their thoughts using their native language. They said that they feel free to discuss any subject using their mother language while they find a difficulty in expressing their ideas at different subjects using English. According to them, this is mainly due to the lack of intensive practice of writing in English and the structure of the language, which totally differs from that of English. They also said that lack of vocabulary is one of the reasons that prevent them from expressing their ideas freely.

Q8. Do you feel that thinking in English during the whole process of writing is better than translating?

a. Yes

b. No

Table 12:

Students' Opinions about Thinking in English while Writing

<u>Option</u>	<u>N</u>	<u>%</u>
a.	32	91.4
b.	3	8.6
Total	35	100

As demonstrated in the table above, 91.4% of the students viewed that thinking in English is better than translating when writing, while only 8.6% believe in the opposite.

Explanations:

Some students believed that it would be better to think directly in English during the writing process, while others assumed that translating from the mother tongue language into the target language is much easier.

Different reasons lead students to think directly in English rather than translating from the mother tongue language. They believe that it improves the writing skill and precede the English language development particularly at the level of lexis. It also prevents the students from making mistakes and producing incoherent paragraphs because they said that the translation of ideas is an error-laden process. They also avoid the use of translation from Arabic into English because it is a time consuming process and requires effort. They relate this argument to the fact that there are no Arabic equivalences for some words in English, which may in turn leads to de-contextualizing the content of their paragraphs. Moreover, some students believe that

translation obstruct their progression and adaptation of the target language because it relies more on the mother tongue language.

Few students, who had responded to this questionnaire, considered translation as an easy task when writing compared to thinking directly in English. They relate it to the fact that ‘the language limits intellect’ in that if your repertoire in the target language is poor you cannot come up with a content of good quality and quantity unless you choose to use translation.

Q9. To what extent are you satisfied with the organization of the English paragraph after translation?

- a. very satisfied
- b. Satisfied
- c. neutral
- d. Dissatisfied
- e. Very dissatisfied

Table 13:

Students' Degree of Satisfaction about the Organization of the English

<u>Option</u>	<u>N</u>	<u>%</u>
a.	2	5.7
b.	13	37.1
c.	13	37.1
d.	5	14.3
e.	2	5.7
Total	35	100

37.1% declared that they were satisfied and neutral. 14.3% of the respondents were dissatisfied. Whereas, both very dissatisfied and very satisfied were selected by 5.7%.

Section three: Using Google translate in writing paragraphs

Q10. Have you ever used Google Translate (GT)?

- a. Yes
- b. No

Table 14:

Frequency of Use of GT

<u>Option</u>	<u>N</u>	<u>%</u>
a.	32	91.4
b.	3	8.6
Total	35	100

The majority of students (91.4%) use Google translate, while only 8.6% they do not use it.

Q11. If yes, how often do you use Google translate in your writing tasks?

- a. Always
- b. Often
- c. Sometimes
- d. Rarely
- e. Never

Table 15:

Frequency of Use of GT in Writing

<u>Option</u>	<u>N</u>	<u>%</u>
a.	1	2.9
b.	4	11.4
c.	15	42.9
d.	10	28.6
e.	5	14.3
Total	35	100

57.2% of the students frequently use Google translates when accomplishing their writing tasks. However, ten students, noted by the percentage of 28.6 %, rarely use GT when writing and only 14.3 % of the informants do not use GT at all.

Q12. Do you post-edit (make corrections) the translated text provided by Google

Translate?

a. Yes

b. No

Table 16:

Frequency of Post-Editing

<u>Option</u>	<u>N</u>	<u>%</u>
a.	32	91.4
b.	3	8.6
Total	35	100

The majority of students 91.4% edit the translated text provided by Google translate, while only 8.6% of them do not made the correction.

Q13. If yes, do you:

a. Edit it by yourself

- b. Ask someone's help
- c. Use dictionaries
- d. Others, using applications

Table 17

Students' Post-Editing Strategies.

<u>Option</u>	<u>N</u>	<u>%</u>
a.	22	62.8
b.	1	2.9
c.	1	2.9
a.+c.	2	5.7
a.+b.+c.	1	2.9
others	4	11.4
Total	8	100

The results in Table 3.11 indicate that 22% of the students replied that correct the translation by themselves. Whereas, 11.4% of the remaining students answered that they look for other ways to post-edit the outputs, such as the use of other translation tools.

Q14. Do you purposely simplify your Arabic text in order to make it easier for GT to translate it into English?

- a. Yes
- b. No

Table 18:

Frequency of Pre-Editing

<u>Option</u>	<u>N</u>	<u>%</u>
a.	15	42.9
b.	20	57.1
Total	35	100

57.1 % of the respondents confirm that they do not simplify the Arabic texts in order to make it easier for GT to translate into English; on the contrary, 42.9% of them simplify the Arabic text to reach the aforementioned purpose.

Q15. How do you find using GT as a support in writing tasks?

Most of the answers to this question showed that students are not satisfying with the use of GT in writing tasks. They stated that GT is not always beneficial for many reasons. The participants claimed that GT provides a lot of mistakes and confusions, weakens the writing style of EFL students and most importantly it does not provide the exact meaning of words because of the lack of contextualization. Some participants agreed to some extent with the use of GT in writing tasks mainly because they think that GT is helpful to save time for those who know how to make the best of it. They also support using GT only for getting the synonyms of words.

Q16. Choose the best alternative: I like to write

- a. Directly in English
- b. Translating from Arabic into English
- c. Using Google translate as a support

Table 19:

Students' Process of Writing

<u>Option</u>	<u>N</u>	<u>%</u>
a.	30	85.7
b.	3	8.6
c.	2	5.7
Total	35	100

The table above reveals that the majority of the respondents (85.7%) like to directly write in English, while 8.6 % of them write by translating from Arabic into English. However, the other 5.7% of the informants opted for the use of Google Translate as a supportive tool for their writings.

Conclusion

This part has taken as its major concern the analysis of data collected during the experiment. Firstly, the analysis of both the writing tasks and the comparison between the two in terms of quality and quantity by conducting an error analysis. Then, the texts that were written with the use of GT were compared to the raw translation outputs to check the changes made by the students. Lastly, the responses on the questionnaire were analysed both qualitatively and quantitatively

Part Two: Discussion and Interpretation of the Findings

Introduction

The current section sets out the essence of the research; it focuses on the interpretation and discussion of the overall data drawn from the analysis. Essentially, it answers the research questions that were raised at the outset of the current study. Furthermore, based on the results, the researchers will confirm or reject the hypotheses that were set prior to the experiment. As a reminder, the present investigation sought to answer the following questions:

- ✓ What is the attitude of EFL learners at Mohammed Seddik Ben Yahia University towards the use of GT in their writing tasks?
- ✓ To what extent does GT affect the quantity and quality of EFL learners' writing?
- ✓ To what extent are students at Mohammed Seddik Ben Yahia familiar with GT?

In what follows, each research is answered according to the results obtained.

3.2.2.1. The Impact of Google Translate on Writing

The results obtained from the analysis indicates that there was, to a certain degree, an improvement in some aspect of the writing, as the total number of word and the significant decrease in the total of errors . However, the error analysis conducted showed that some the error type increased in task 2, whereas, some of them significantly deceased.

The students committed more lexical errors in the second task when using GT compared to the first task. This can be explained by students' use of some ambiguous words that were mistranslated by GT. Since Google Translate fails to translate according to the context, especially when it comes to words with multiple meanings. Another explanation is related to students post-editing the translation outputs. Students tended to change words and expressions

that were unfamiliar to them, even though most of them were correct, with others, which were inaccurate. Likewise, the same can be said on the grammatical errors that show a slightly difference between the two tasks. It is said that GT does not have a grammatical function (Jin & Deifell, 2013); nevertheless, this tool seems to have a grammar capacity to help the students in a particular state, such as the plural form.

In addition to the previous categories, the frequency of punctuation showed no difference, as in task 1 the frequency was 29.86% and in task 2 was 29.82%. The explanation of this matter lies behind students' use of inaccurate punctuation in their L1, which accordingly was not corrected by GT. Even accurate, GT did not convert the punctuation from Arabic to the correct one in English. Therefore, students conserved the same punctuation. As it can be seen from task 1, students lack knowledge in the writing rules. Thus, in order to show a proficient use of the translation tool the user should be aware of both the rules of the source and the target languages. Concerning capitalization errors, most of them occurred due to students' misuse of punctuation. About sentence structure errors, the second task resulted in more errors. Even when students can produce quite good writing in their L1, like those in the current research, inauthentic expressions are detrimental to their English writing.

Compared with their first writing task, the number of errors in spelling decreased dramatically in task 2 with the use of GT. Errors in spelling that appeared in task 2 are not produced by Google Translate. Consequently, they are the result of either students copying words incorrectly, students' incorrect post-editing, or students not checking their work. The current study shows that GT greatly improved the quality of student English writing in terms of orthography. Similarly, there was a significant decrease in the misuse of articles.

Moreover, the increase in the errors is also related to the changes that the students made, which were not always correct. As GT may not be perfectly accurate yet, it is hard for students with low language proficiency to properly use it. As Lee (2014) stated, students at the intermediate and lower levels are challenged by various lexical and grammatical errors in their English writing, which often lower the quality of their writing.

Even though some of the error categories showed an increase, yet the overall quality of the writing was acceptable. In addition, the content was comprehensible. Therefore, it can be concluded that GT did not affect the content of the writings.

3.2.2.2. Students Attitudes towards Google Translate

Based on the data from the analysis of the writing tasks, it is clearly that students have deficiencies in both English language and the translation tool. Students are not aware of what kind of error that may occur in the raw translation, which indicates that they scarcely know the limitations of the software. Evidently, the students committed more grammar mistakes, lexical errors and punctuation. However, this cannot determine that GT did not positively affects the writing compositions because some of the errors that occurred were due to the fact that most of those students are ignorant of the basic rules of writing skills, and how to write well in English using the fundamental skills. It was noticed that some learners do not care about the differences in grammar and style between languages when they translate from the source language into the target. Therefore, to make good use of GT, users must have at least an average language proficiency to help post-edit the raw translation.

Questionnaire Analysis

The analysis of the students' responses on the questionnaire shows that they are quite enjoying writing and considered it as an easy task to complete. They reported that they mainly use English as the cognitive language when writing. However, when it comes to using translation as a cognitive process for writing students were in between in expressing the difficulty of transmitting ideas from Arabic into English. Although, the majority revealed that they express their ideas more clearly in Arabic, yet the respondents reported that they prefer to think in English during the process of writing. They claimed that it helps in the development of their writing skills. On the other hand, according to those who prefer Arabic, they claimed that Arabic is their mother tongue so they are more familiar with the language.

Concerning the use of translation, the result of the analysis revealed that students frequently use GT when completing their writing tasks. Most of them engage in the process of post-editing the outputs. However, less of the student would engage in the process of pre-editing the source text. The students' answers about the use of Google Translate as a support of writing shows that most of them are skeptical about it. They believe that GT is most of the time inaccurate. The findings revealed that few of the students use GT as a complementary tool when writing, for they think that it weakens the writing style. Moreover, they mentioned that GT provides more disadvantages than advantages, and the quality of translated texts has a lot of errors. On the other hand, some students admitted that GT had some positive impacts on their writing, such as saving them time. As a sum up, students expressed negative attitudes towards using GT as a writing support

Conclusion

This section aimed to discuss the major findings that yielded from the data analysis. Primarily it gave a detailed picture of the impact of Google Translate on the writing products. Then, it explained students' attitudes and beliefs towards the use of GT. Lastly, the section ended up with a suggestion of some pedagogical recommendations for other researchers to follow.

Pedagogical Recommendations

From the analysis of the data, several themes emerged pointing to the limitations of using Google Translate, notably, the students' lack of familiarity with the tool, and the students' lack of familiarity with the English language. The results of the current study propose that recommendations for successful pedagogical responses to the reality of GT use by students should take into consideration the fact that students lack training in the use of this tool, noting that they use it quite frequently. In addition to the fact that they are confident in their accuracy and reliability. As found in Zanettin's (2009) and Jin and Deifell's (2013) research, it is imperative that both the teacher and the students have a thorough understanding of the tool before using it. Instructors should familiarise themselves with the intended purposes, features, strengths and weaknesses of GT so that they are better equipped to it. Without knowing what Google Translate cannot do, teachers will be unable to design meaningful activities, and students are more likely to accept the translator output as valid. Taking into consideration student behaviours and views, instructors should determine when to prohibit or allow the use of GT in a given class, or even for certain types of assignments.

General Conclusion

This study aims to investigate attitudes of EFL students at Mohammed Seddik Ben Yahia towards the use of GT in writing as well as its effect on the final product. Thus, it aims to confirm or reject the hypotheses, which state that students express positive attitudes towards using GT in their writing tasks. In addition, Google Translate has a positive effect on writing and enhance the quality and quantity. To fulfil the study's objectives, the researchers investigated students' use of GT to improve their writing quality and reducing their errors through the assessment and comparison of the two writing tasks produced by students, which one of them was with GT and the other without. Then, they explored the students' attitudes by analyzing their responses on the questionnaire provided at the end of the writing test.

The thesis is divided into three section; two for the theoretical part and one as the practical part. The theoretical part reviews the general aspects of machine translation concept and a comprehensive review on Google Translate in the first chapter. The second chapter is devoted to review the notion of translation and its use in the process of writing, specifically, in the task of second language academic writing in addition to the positive and negative attitudes of the implication of machine translation in writing. The third chapter elucidates the practical part of this research. The methodology chapter is divided into two sections. The first section explains the methods followed for data collection, the subjects of the study, and the overall settings. The second section summarizes the data analysis and later discusses and interprets data gathered in the investigation.

As regard for the main finding, the results of the writing test reported that Google Translate enhanced the quality of writing in term of reducing spelling errors and misuse of articles. However, students did not benefit from GT in the lexical and grammatical aspects.

Nevertheless, the language proficiency of students is considered a crucial point as it helps to identify the error in the translation outputs and in the post editing process. As seen from the changes made, students did not make a perfect post editing, since some of them were wrong. Yet, Google Translate had no effect on the content of the writings. In addition, those students expressed negative attitudes towards the use of GT as a writing tool.

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Appendices

Appendix A

You have probably heard about it, studying abroad is a life changing experience for many students. According to you, what are the reasons that make Algerian students decide to study abroad?

Answer the above question by:

- 1- Writing a paragraph directly in English.
- 2- Writing a paragraph in Arabic discussing the same question.
- 3- Translate the paragraph you have written in Arabic into English using Google Translate (revise and edit the translated paragraph).

Appendix B

Questionnaire after the second writing task:

1- Which level are you?

Section 1: Writing paragraphs

1- Do you think that writing is important for your study?

Yes No I don't know

2- Is writing, regardless of the language used, an enjoyable task?

Yes No I don't know

3- Is writing in English an enjoyable task?

Yes No I don't know

4- From a scale of 1 to 5, how do you rate the degree of difficulty when you write directly in English?

5=Very Difficult 4=Difficult 3=Neutral 2=Easy 1=Very Easy

5- When writing your paragraph in English, do you first think in Arabic then translate into English?

Yes, I first think in Arabic No, I think in English

Section 2: Using translation in writing your paragraph

1- When you translated the paragraph from your first language into English, to what extent did you find it difficult to translate your ideas from Arabic into English?

Completely Quite a bit Moderately A little Never

2- Do you find it easier to express your ideas more clearly in Arabic rather than directly in English?

Yes No

Why?.....

3- Do you feel that thinking in English during the whole process of writing is better than translating?

Yes No

Explain.....

4- To what extent are you satisfied with the organization of the English paragraph after translation?

Very Satisfied Satisfied Neutral Dissatisfied Very Dissatisfied

Section 3: Using Google Translate in writing paragraphs

1- Have you ever used Google Translate (GT)?

Yes No

2- If yes, how often do you use Google Translate in your writing tasks?

Always Often Sometimes Rarely Never

3- Do you post-edit (make corrections) the translation text provided by GT?

Yes No

If yes, do you:

Edit it by yourself

Ask someone's help

Use dictionaries

Others

4- Do you purposely simplify your Arabic text in order to make it easier for GT to translate it into English?

Yes No

5- How do you find GT as a support in writing tasks?.....

.....

6- Chose the best alternative:

I like to write....

Directly in English

Translating from Arabic into English

Using GT as a support

Résumé

La popularité de Google Translate augmente et les utilisateurs mettent en œuvre ce moteur de recherche géant à des fins différentes. Par conséquent, cet article présente les résultats d'une étude sur les attitudes à l'égard de l'utilisation de Google Translate (GT). Plus précisément, cet article traite des attitudes des étudiants EFL à l'égard de l'utilisation de Google Traduction par écrit. Les compétences rédactionnelles sont considérées comme difficiles pour certains étudiants en raison d'un vocabulaire limité ainsi que de faiblesses grammaticales. Par conséquent, les objectifs ultimes sont d'étudier plus avant la pratique de Google Traduction dans l'écriture EFL et son rôle dans l'apprentissage des langues, ainsi que la familiarité des élèves avec ce dernier. L'étude a été menée à l'Université de Muhammed Seddik Ben Yahia, Département d'anglais. L'enquête a impliqué un total de 35 étudiants de la majeure anglais. Cette étude a été réalisée sur la base d'une approche mixte, car les données ont été collectées et analysées à la fois qualitativement et quantitativement. Deux instruments ont été utilisés ; un test d'écriture a été donné à chaque répondant et suivi d'un questionnaire adapté de Cohen et Brooks-Carson (2001) avec quelques modifications. Les données recueillies lors de la tâche d'écriture ont été évaluées et analysées en identifiant et en classant les erreurs, tandis que les réponses au questionnaire ont été calculées. Les résultats ont montré que Google Traduction n'aidait pas les étudiants au-delà des fautes d'orthographe, car son utilisation dépend grandement de la maîtrise de la langue des étudiants. De plus, les étudiants ont exprimé des attitudes négatives envers l'utilisation de GT comme un support d'écriture.

ملخص

ازدادت شعبية تطبيق "ترجمة غوغل" بشكل ملحوظ، بحيث أصبح يتم استخدام محرك البحث لمختلف الأغراض. بالتالي يلخص هذا التقرير نتائج دراسة علمية حول المواقف تجاه خدمة "ترجمة غوغل". بتعبير أدق، تتناول هذه الدراسة مواقف طلاب اللغة الإنجليزية كلغة أجنبية تجاه استخدام الترجمة الآلية عند الكتابة. يجد الطلاب صعوبة في اكتساب مهارات الكتابة، إما بسبب ضعفهم في قواعد النحو أو الضعف اللغوي. انطلاقاً مما سبق، تهدف هذه الدراسة إلى إجراء بحث معمق عن استخدام الطلاب للترجمة الآلية المقدمة من طرف خدمة غوغل ودورها في تعلم اللغات، بالإضافة إلى مدى إمام الطلبة بإيجابياتها وسلبياتها. أجريت الدراسة بجامعة محمد الصديق بن يحيى قسم اللغة الإنجليزية حيث شملت 35 طالب متخصص بقسم اللغة الإنجليزية. اعتمدت الدراسة على تصميم مقارنة مدمجة اد تم جمع البيانات وتحليلها من حيث الكمية والنوعية. خلال هذه الدراسة تم استخدام كل من اختبار كتابي و استبيان مستعار من كوهن و بروكس كارسون (2001) تم تعديله ليناسب الدراسة الحالية. تم تقييم وتحليل البيانات التي تم جمعها من الاختبار الكتابي من خلال تحديد الأخطاء وتصنيفها حسب نوعها. أما فيما يخص أجوبة الاستبيان فقد تم حسابها بالاعتماد على مقاييس إحصائية. أظهرت النتائج النهائية أن الترجمة الآلية لم تحسن من أداء الطلبة، ماعدا الأخطاء المتعلقة بالتهجئة، اد أن الاستعمال الصحيح يتطلب مستوى مناسب فيما يتعلق بالمعرفة اللغوية للطلاب. كما أن النتائج أظهرت أن الطلبة اتخذوا موقفاً سلبياً تجاه استعمال الترجمة الآلية كوسيلة للكتابة