

## **An Investigation on the Use of Google Translate in Studying English Language: A case study in a university at Pathumthani Province**

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### **Abstract**

This study aimed to investigate the use of Google Translate to enhance English language skills in vocabulary, reading and writing of fourth-year engineering students. The participants were 92 fourth-year engineering students of Rajamangala University of Technology Thanyaburi in the second semester of academic year 2021. A five-point Likert Scale questionnaire and structured interview were used as research instruments. Data was analyzed using frequency distribution and percentage by the Microsoft Excel program. Results showed that almost all students used GT. For vocabulary skill, students used GT to enhance their vocabulary skills in finding the meanings of the general words, technical terms, the pronunciation of vocabulary, and the parts of speech, respectively. For reading skill, students used GT to read the labels, research and experiments, articles, signs, games rules, English textbooks, English novels, English news, and magazines. For writing skill, students used GT to check grammatical errors, chat with foreign friends; write English captions on social media, resumes, emails, English essays and English reports. Moreover, students used GT to enhance their learning of the vocabulary skill, reading skill, and writing skill the most, respectively.

**Keywords:** *Google Translate, behaviors, engineering students, English language skills*

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### **1. Introduction**

Even though the use of translation in language teaching and learning has been frequently discussed, it could not be ignored that translation is a useful pedagogy which is integrated into language classroom activities (Dagilienè, 2012). In translation pedagogies, a dictionary is a crucial tool for students. According to Sarigül (2016), dictionaries are beneficial for language learners and the learner who is able to take advantages of a dictionary could continue autonomy learning outside the classroom. It is mentioned that “dictionary training should be an integral part of any syllabus” (p.157).

A dictionary has been using to look up the meanings of unknown words in the target language for a long time. Using traditional dictionaries, second language learners (L2)

sometimes have challenges in interpreting the meaning, and it is time-consuming (Alhaisoni & Alhaysony, 2017).

At present, internet users and language learners can choose various online Machine Translation (MT) services which are available such as Google Translate (GT), Baidu Translate, Microsoft Translate, Amazon Translate, Bing Translator, and Yahoo Babelfish. GT has been accepted and placed in the second ranking among the most popular MT services (Sukkhwan, 2014; Rushing, 2020). Furthermore, GT provided users with over two hundred billion words in more than 100 languages. This feature made it popular among EFL learners (Komeili et. al, 2011).

GT is a better tool compared to the traditional dictionary. It especially supports online learning because it is quick and its accuracy in modern words and collocations. More students aware of this translation tool and apply the tool into their own learning processes (Josefsson, 2011).

GT is not only used by English major students, but the program is also used by students in other fields to learn English. For example, engineering students use GT to search for technical terms and to enhance their English language skills.

In addition, Bahri & Mahadi (2016) studied GT as a supplementary tool for learning Malay at University Sains Malaysia. The findings pointed out that most of the students used GT as a tool for learning the vocabulary, writing, and reading skills.

According to the literature review, it was found that there was a research related to the use of GT as a supplementary tool for helping international students at Universiti Sains Malaysia (USM), but there were a few researches on the use of GT to enhance English language skills in vocabulary, reading, and writing of engineering students. Therefore, this study aims to investigate the behaviors of using the GT Program in terms of searching for vocabulary, reading and writing of fourth-year engineering students of Rajamangala University of Technology Thanyaburi.

## **2. Objectives**

To investigate the use of GT to enhance English language skills in vocabulary, reading and writing of fourth-year engineering students of Rajamangala University of Technology Thanyaburi.

## **3. Research Questions**

3.1 How do fourth-year engineering students of Rajamangala University of Technology Thanyaburi use GT to enhance English language skills in vocabulary, reading, and writing?

3.2 Which language skills do fourth-year engineering students of Rajamangala University of Technology Thanyaburi use GT to enhance their learning the most?

## **4. Literature Review**

In this section, English language skills including listening, speaking, reading, writing and vocabulary skill are introduced. A review of theoretical study and previous study related to English language learning method is mentioned. The definitions of

translation, and also the information related to Google Translate, advantages and disadvantages of Google Translate are provided.

### **English language skills**

In accordance with the system theory, communication processes are related to the flow of information, and everything is interconnected (Bertalanffy, 1968). In communication, there are processes of linguistic comprehension and linguistic production which participants send out message, obtain feedback, and adjust their actions all parts are linked. This means participants in a communication are related in psychological, cognitive, and information transfer processes. Linguistic comprehension includes listening skill and reading skill while linguistic production includes speaking skill and writing skill. The crucial factors in a communication process includes vocabulary, semantic schema, cognitive ability and contexts. In accordance with the language acquisition theory of psycholinguistics, linguistic comprehension precedes linguistic production since adequate understanding could enhance effective expressions. Moreover, linguistic production could enhance linguistic comprehension (Nan, 2018).

### **Listening skill**

Although listening skill is critical in communication process, it is rarely taught in schools. Most English language curriculums focus on speaking, reading, and writing skills; there are a few courses of listening. When people aim attention to what they are saying or what they are going to say; therefore, they miss some information in the communication process.

Listening skill is essential in language learning, for listening skill is developed in the first state of a child's learning of language. Listening skill is a natural process in acquiring any new languages. Similar to a child learning a mother language, a new language learner needs to start his or her language learning from listening skill at the initial stage (Buck, 2001). According to Underwood (1989), a child needs to enlarge verbal input through listening before developing speaking, writing and reading skills.

### **Speaking skill**

Speaking skill is an important part in language teaching (Luoma, 2009). Speaking is one of four skills that should be mastered in learning English. Like writing, speaking is a productive language skill which pass the mental process which is called a process of thinking. When people aim to say something to transmit information, they need communication. Speaking skill, as an international means of communication, is necessary for effective interactions amongst people across the world where people use language represent their purposes (Susanto et. al, 2017).

Speaking skill is very important in second language learning. (Clifford, 1987). Nunan (1995) mentioned that learning the speaking skill is one of the most important aspects of learning a second or foreign language and success learners can be assessed based on the ability to perform a conversation in the language.

### **Reading skill**

Bojovic (2010) mentioned that reading skill is a cognitive ability which a person is able to use when interacting with the written text. Reading is considered to be a receptive skill which helps the learners improve their spelling, vocabulary, grammar and also writing. The techniques of skimming and scanning foster the language learners in reading the desired text effectively and quickly. Then they could comprehend the text and draw conclusions about it. The learners need to familiarize with different types of texts and jargons as well (Rao, 2019).

Reading skill is considered as the ultimate skill to be used in collaboration at school and lifelong learning. According to Anderson et. al (1985), reading is a vital life skill, which ensures a child's success in school and even throughout his or her life. Moreover, English is often used as the medium of instruction in higher education. For English language learners, reading materials in English is mandatory when they look for information and obtain knowledge (Sultana 2014).

### **Writing skill**

Writing is a complex process. According to Gautam (2019), it is described that “Writing is a productive skill which writers require the simultaneous psycho-physical (between brain and limbs) co-ordination”. Writing is one of four skills of English that language learners need to be acquired in order to efficiently communicate with others. There are four main stages in the writing process – planning, drafting, editing, and producing final version (Sa’adah, 2020).

Writing skills are specific abilities which writers put their thoughts into words in a meaningful form to create a message sending to readers (Harmer, 2007:33). In addition, Noor (2020) mentioned that writing is a critical thinking process that is a part of problem solving as the writer needs to use metacognition to analyze, evaluate, synthesize and apply information before writing any texts.

### **Vocabulary skill**

The importance of vocabulary is related to communication as it supports the speaker in communication. Rasouli & Jafari (2016) defines vocabulary as “knowledge of words as well as explanations of meanings of words”. However, TESOL International

Association (n.d.) defined vocabulary as “the words of a language, including single items and phrases or chunks of several words which convey a particular meaning, the way individual words do” (p.2). English language learners need sufficient vocabulary size to understand others or express their ideas (TESOL International Association, n.d.). It is believed that learning vocabulary is one of the most important skills which is necessary for learning English language. According to Nation’s study (2014) lots of input is required to gain enough words of English for learning to occur.

### **English Language learning**

Thanasoulas (2002) describes that English language teaching and learning has been developed through time. During 17<sup>th</sup> to 19<sup>th</sup> centuries, foreign language teaching and learning focused on grammatical rules, syntactic structures, remembrance of vocabulary and translation of texts. This method is known as the Grammar Translation Method which aimed to apply grammatical rules in the process of translating from one language to another language. Even though the Grammar Translation Method is called “old-fashioned” method, it is still one of language teaching approaches used today.

### **Translation**

Catford (1965, p.1) mentions that “translation is an operation performed on languages: a process of substituting a text in one language for a text in another.” Translation consists of different processes. The translator starts from reading the source language text to understand and analyze the lexicon meanings, the grammatical structures, the communication situations, and the cultural contexts of the text. Then, the text in the receptor language is reconstructed with the same meaning using the appropriate lexicon and grammatical structures in the target cultural context (Larson, 1984).

Al-Musawi (2014) defines translation as an activity that aims to facilitate the communication process by interpreting the information received in one language (L1) into another language (L2), and vice versa. The basic function of translation is to transmit appropriate meaning of a word or a sentence linguistically, semantically, and pragmatically. (p.1)

Dagilienė (2012) reveals that translation activities could be integrated as pedagogical tool into language learning to develop the learners’ reading, listening, writing, and vocabulary skills.

However, Vermes (2010) mentions using translation as a means of teaching a foreign language has been deliberated.

## **Google Translate**

### **Definitions of Google Translate**

Google Translate is one of free machine translating programs. Zulkifli (2019) defines Google Translate as a free language translating machine provided by Google Company for internet users to translate from source languages to target languages. While ElShickh (2012) describes Google Translate Service that it is “one of the most popular computer aided translation services” (p.58). In addition, Greene (2016) explained that “Google Translate is the world’s best-known free tool for machine translation”. It uses statistical techniques to match texts from one language with plausible texts on another language.

### **Development of Google Translate**

Google Translate was founded by Sergey Brin who is the co-founder of Google. Furthermore, Google Translate was launched on April 28, 2006, as a “statistical machine translation service” (SMT) (AiiotTalk, 2019).

In 2010, Google created applications for Android and iOS and released them into the browser to serve people in searching and translating faster. Google Translate could translate text in a language into more than 40 languages using statistical machine translation methods based on bilingual text corpora (Segev, 2010).

In 2014, Google used Word Lens to help translate languages from spoken voices and from photos taken with smartphone cameras.

In 2016, Google developed an AI called Neural Machine Translation (NMT) to help collect data by learning from humans. The result is to make translations more natural.

In 2020, Google translate is constantly evolving; it added 5 languages which are Kinyarwanda, Odia (Oriya), Tatar, Turkmen and Uyghur. In addition, it has added some new updated features (damnotspock, 2020).

As it has been continuously developed, in 2022 Google Translate is able to translate 133 languages at different levels (Google Inc., 2022).

### **Features of Google Translate**

Google Translate provides many features which includes store languages offline, type to translate, write to translate, speak to translate, instant camera translation, save common phrases, and tap to translate (Keeley, 2018).

Elshiekh (2012) describes three stages of a machine translation system that consists of: analysis of the texts in the source language, conversion of structure of the text in the source language to the structure of the text in the target language, and synthesis of the text in the target language.

Google Translate is a useful language facility for users to understand and learn other languages. It could be used when traveling abroad or when the users are not familiar with the language that is on the sign, the menu, etc. It can translate words immediately by bringing the mobile phone with the Google Translate program to scan into the target language (Google Translate, 2019; Ulatus, 2020).

### **Advantages and disadvantages of Google Translate**

Price (2016) points out that there are advantages and disadvantages of Google Translate. Even though, Google Translate is free and it could be used easily and fast (Sitorus, 2020; Zulkifli, 2019; Yanti, M. & Meka, L.M.C.,2019), it sometimes produces inaccurate translation because of the lack of context and its limited online database (Vidhayasai et al., 2015). In addition, it lacks of quality control so that the users could not be assured whether the translation results are acceptable or not.

#### **Advantages of GT**

Based on the result of a study of machine translation, Google translate is the most famous applicable translation machine in recent years (Aziz, Sousa, &Specia, 2012; Karami, 2014; Komeili, Farughi & Rahimi, 2011). Zulkifli (2019) mentions about the ease of using GT that users are able to access the program anywhere and anytime using smartphones or computers. In addition, the access of Google translate is free and able to translate text, speech, images, also sites, and real-time videos from one language to another (Alhaisoni & Alhaysony, 2017).

The impressive benefit of GT is that it provides correct translations for fixed phrases like titles, or names of organizations and famous people (Vidhayasai et al., 2015). Moreover, GT is beneficial in academic field. According to Sitorus (2020) and Yanti, M. & Meka, L.M.C. (2019), students prefer using GT because it is quicker and easier than a print dictionary. Students claim that GT helps translating English texts into a native language, and this supports them in remembering the contents of English materials. While Sukkwan (2013) points out that students use GT as a convenient and fast tool for translating texts. Most of them, especially the poor English learners, mention that they gain a lot of vocabulary knowledge in using GT. They also admit that using GT is more reliable than their own translation. In addition, GT speaker button is useful for pronunciation practice.

### **Disadvantages of GT**

There are researches indicates the disadvantages of Google Translate – mostly in incorrect translations. In the comparative study of Google Translate Translations, ElShiekh (2012) states the problems on the lexical, syntactic, morphological or semantic levels of GT translations. Some types of ambiguity in lexical and syntactic are often found. Furthermore, GT translation of colloquial expressions and specialized technical terms could be problematic because the program is designed for general users.

Vidhayasai et al. (2015) pointed out that GT translation errors are mostly found in lexical levels because of its limited lexical sources. The errors include the incorrect translations of words and idiomatic expressions due to the nonequivalent meanings of the source language and target language. Moreover, ungrammatical translations are identified as a result of the program limited grammatical sources. Some of the translated texts are not understandable and these errors are at a discursive level. The study commented that GT tends to provide the word-for-word translation rather than the sense-for-sense translation.

According to Sukkwan's study (2013), most students reported some problems using GT that it could not translate all the words contextually and accurately, especially in long sentences or long texts. Some of them mentioned that GT sometimes translates inaccurate or inappropriate word or sentence meaning. Moreover, when Thai texts are translated into English, GT has a problem of word order.

Zulkifli (2019) supported that the problems related to technology of GT consist of inability to accurately translate English slangs and idioms, low grammar accuracy, and the limited number of words and file sizes for translating. Even though, GT provides a speaker button, there are no facilities to set the GT speaker speeds.

### **5. Relevant Research Studies**

Chayanuvat et al. (2020) studied students' perceptions of digital technology, their use of digital technology in learning, and their strategies of using digital technology in their master's level at a Thai private university. It revealed that students used current digital technology to support their learning. They aware of using digital technology for the right purposes while surfing the Internet. The most common IT gadgets students used included mobile phones and laptops. Furthermore, they often use Google browser, Chinese websites and some applications the most. It was found that the students' learning strategies of using digital technology included group discussion, reading literature (theories and books), and watching YouTube videos.



Bahri & Mahadi (2016) studied Google Translate as a supplementary tool for learning Malay at University Sains Malaysia. The findings suggested that most of the participants of the study chose to use Google Translate for learning the vocabulary, writing, and reading skills.

Kate-Phan & Sripetpun (2016) explored attitudes, behaviors, and problems of English major students in using Google Translate. This survey aimed to investigate 2<sup>nd</sup> to 4<sup>th</sup> year students' attitudes, behaviors, and problems in approaches to overcoming difficulties in using Google Translate. The participants included 123 students majoring in English. The study indicated that most students agreed that GT was an important language translator. GT was also viewed as a time-saving translation tool and it enable them to complete the work in a timely manner. Furthermore, the students had a positive attitude toward the role and importance of GT.

Sukkhwan (2014) explored the English major students' use of Google Translate for enhancing their English learning. It was found that the students did not often use GT. However, when they used GT, they used it most frequently to find out the meanings of words, to write their tasks, to read English textbooks, and to translate idioms and proverbs. Moreover, the students had positive attitudes toward the use of GT.

## **6. Research Methodology**

The population included 1,064 fourth-year engineering students of Rajamangala University of Technology Thanyaburi in the second semester of academic year 2021. The students from the faculty of engineering are selected since they rarely use English in their daily life. Furthermore, the engineering students have some experiences in using GT in vocabulary, reading and writing at the university and in their internship. The sample group for survey data collection, selected using convenience sampling, consisted of 92 fourth-year engineering students at Rajamangala University of Technology Thanyaburi in the second semester of academic year 2021. From 92 participants, 5 participants from different fields who reveal that they often use GT are selected using purposive sampling as a focus group for structured interview. However, there are 3 students who are available at the time of interview.

### **Research instruments**

#### **Questionnaire**

The questionnaire was divided into 3 parts: Part I – General information of the respondents consisted of three questions; it was designed to gain the information from the participants regarding gender, field of study, and other general information. Part II –

Behaviors of using GT was divided into 3 subparts: Part 1 vocabulary included 4 items, Part 2 reading included 9 items, and Part 3 writing included 6 items. Part III – The language skills that the participants use GT to enhance their learning the most. The scale used in the questionnaire was based on the Likert Scale. The questionnaire was created in Thai in order to reduce reading difficulties.

### **Interview**

The interview was a structured interview with 5 questions. The questions were about the use of GT to enhance English vocabulary, reading and writing skills: 1) How do you use GT to enhance your English vocabulary skills? 2) How do you use GT to enhance your English reading skills?, 3) How do you use GT to enhance your English writing skills?, 4) Which language skills, vocabulary, reading and writing do you use in GT the most? And 5) In your opinion, what are the benefits of using GT to enhance your English vocabulary, reading and writing skills? The interview questions were created in Thai language in order to reduce errors in responses to the questions.

### **Data collection**

Due to the pandemic situation of COVID - 19, it was not convenient to collect the data on site in the university. The data were collected online by sending a Google Form questionnaire to the participants. The questionnaire was submitted via the LINE application on January 24-28, 2022.

The interview questions were prepared in advance. The questions were prepared as an interview format for the researchers to use in interviewing all the samples with the same set of questions. The interviewees were met via Microsoft Teams on February 1-4, 2022. All of the samples' responses were recorded and the audio clips were transcribed into text for analysis.

### **Data analysis**

The collected data were analyzed using descriptive statistics including frequency distribution and percentage. Moreover, the data were analyzed using Microsoft Excel program. The data obtained from the interview were collected and categorized. Consequently, the data was analyzed and summarized on various issues to answer research questions.

## **7. Definition of Terms**

Google Translation refers to a machine translation program provided by Google that can translate words, sentences, and contents.

Behaviors refers to the students' behaviors in using GT to enhance English language skills in vocabulary, reading and writing.

Engineering students refers to fourth-year engineering students of Rajamangala University of Technology Thanyaburi in the second semester of academic year 2021.

## **8. Results and Discussion**

### **8.1 The use of GT to enhance English language skills in vocabulary**

The number of participants who used GT for searching general words all the time was 41(44.6%). In addition, 36 (39.1%) participants used GT for searching general words very often. 14 (15.2%) participants often used GT for searching general words and 1 (1.1%) participant sometimes used GT for searching general words, respectively.

The number of engineering students who used GT for searching technical terms all the time was 36 (39.1%). Moreover, 38 (41.3%) participants used GT for searching technical terms very often, 13 (14.1%) participants often used GT for searching technical terms, 4 (4.3%) participants sometimes used GT for searching technical terms, and 1(1.1%) participant hardly ever used GT for searching technical terms, respectively.

The number of students who used GT for searching parts of speech of words all the time was 33 (35.9%). Furthermore, the same number of students, 33 (35.9%) participants, used GT for searching parts of speech very often. There were 17 (18.5%) participants who often used GT for searching parts of speech, 7 (7.6%) participants used it sometimes, and only 2 (2.2%) participants hardly ever used GT for searching part of speech.

The sample groups used GT for searching pronunciation of words all the time were 36 (39.1%). In addition, 34 (37%) participants used GT for searching the pronunciation of words very often. 17 (18.5%) participants often used GT for searching pronunciation, 3 (3.3%) participants sometimes used GT for searching pronunciation, and 2 (2.2%) participants hardly ever used GT for searching pronunciation, as shown the table 4:

**Table 4**

*The use of GT to enhance English language skills in vocabulary*

| Vocabulary          | All the time |      | Very often |      | Often |      | Sometimes |     | Hardly ever |     |
|---------------------|--------------|------|------------|------|-------|------|-----------|-----|-------------|-----|
|                     | N            | %    | N          | %    | N     | %    | N         | %   | N           | %   |
| 1.1 General Words   | 41           | 44.6 | 36         | 39.1 | 14    | 15.2 | 1         | 1.1 | 0           | 0   |
| 1.2 Technical Terms | 36           | 39.1 | 38         | 41.3 | 13    | 14.1 | 4         | 4.3 | 1           | 1.1 |
| 1.3 Parts of Speech | 33           | 35.9 | 33         | 35.9 | 17    | 18.5 | 7         | 7.6 | 2           | 2.2 |
| 1.4 Pronunciation   | 36           | 39.1 | 34         | 37.0 | 17    | 18.5 | 3         | 3.3 | 2           | 2.2 |

In addition, the results from structured interviewed showed that two out of three interviewees used GT very often to find the meaning of general vocabulary, and one interviewee used GT to find the meaning of technical terms all the time.

### **8.2 The use of GT to enhance English language skills in reading**

The results showed that the number of engineering students who used GT for reading English textbooks all the time was

33 (35.9%). Moreover, 37 (40.2%) participants used GT for reading English textbooks very often. 14 (15.2%) participants often used GT for reading English textbooks. There were 7 (7.6%) participants who sometimes used GT for reading English textbooks, and there was only 1(1.1%) participant who hardly ever used GT for reading English textbooks.

The data showed that 35 (38.0%) engineering students used GT for reading research and experiments all the time, Furthermore, 32 (34.8%) participants used GT for reading research and experiments very often. 18 (19.6%) participants often used GT for reading research and experiments. 6 (6.5%) participants sometimes used GT for reading research and experiments. There was 1 (1.1%) participant who hardly ever used GT for reading research and experiments.

The number of students who used GT for reading games rules all the time was 34 (37.0%). Besides, 35 (38.0%) participants used GT for reading games rules very often. There were 14 (15.2%) participants who often used GT for reading games rules. 8 (8.7%) participants sometimes used GT for reading games rules. There was 1 (1.1%) participant who hardly ever used GT for reading games rules.

The data showed that 30 (32.6%) engineering students used GT for reading magazines all the time. In addition, 31 (33.7%) participants used GT for reading magazines very often, 13 (14.1%) participants often used GT for reading magazines, 14 (15.2%) participants sometimes used GT for reading magazines and 4 (4.3%) participants hardly ever used GT for reading magazines, respectively.

There were 31 (33.7%) engineering students who used GT for reading English news all the time. Moreover, 29 (31.5%) participants used GT for reading English news very often, and 19 (20.7%) participants often used GT for reading English news. There were 11 (12.0%) participants sometimes used GT for reading English news, and there were 2 (2.2%) participants hardly ever used GT for reading English news.

The participants who used GT for reading articles all the times were 35 (38%). Besides, 31 (33.7%) participants used GT for reading articles very often. 15 (16.3%) participants often used GT for reading articles. 7 (7.6%) participants sometimes used GT for reading articles. 4 (4.3%) participants hardly ever used GT for reading articles.

The number of participants who used GT for reading English novels all the time was 32 (34.8%). Furthermore, 32 (34.8%) participants used GT for reading English novels very often. 12 (13.0%) participants often used GT for reading English novels. 9 (9.8%) participants sometimes used GT for reading English novels. 7 (7.6%) participants hardly ever used GT for reading English novels.

The number of students who used GT for reading label all the times was 39 (42.4%). In addition, 27 (29.3%) participants used GT for reading label very often. 15 (16.3%) participants often used GT for reading label. 7 (7.6%) participants sometimes used GT for reading label. 4 (4.3%) participants hardly ever used GT for reading label.

There were 35 (38%) participants who used GT for reading signs all the time. Moreover, 29 (31.5%) participants used GT for reading signs very often, and 15 (16.3%) participants often used GT for reading signs. There were 8 (8.7%) participants who

sometimes used GT for reading signs, and 5(5.4%) participants hardly ever used GT for reading signs, as shown the table 5:

**Table 5**

*The use of GT to enhance English language skills in reading*

| Reading                   | All the times |      | Very often |      | Often |      | Sometimes |      | Hardly ever |     |
|---------------------------|---------------|------|------------|------|-------|------|-----------|------|-------------|-----|
|                           | N             | %    | N          | %    | N     | %    | N         | %    | N           | %   |
| 2.1 English textbooks     | 33            | 35.9 | 37         | 40.2 | 14    | 15.2 | 7         | 7.6  | 1           | 1.1 |
| 2.2 Research/ Experiments | 35            | 38.0 | 32         | 34.8 | 18    | 19.6 | 6         | 6.5  | 1           | 1.1 |
| 2.3 Games rules           | 34            | 37.0 | 35         | 38.0 | 14    | 15.2 | 8         | 8.7  | 1           | 1.1 |
| 2.4 Magazines             | 30            | 32.6 | 31         | 33.7 | 13    | 14.1 | 14        | 15.2 | 4           | 4.3 |
| 2.5 English News          | 31            | 33.7 | 29         | 31.5 | 19    | 20.7 | 11        | 12.0 | 2           | 2.2 |
| 2.6 Articles              | 35            | 38.0 | 31         | 33.7 | 15    | 16.3 | 7         | 7.6  | 4           | 4.3 |
| 2.7 English novels        | 32            | 34.8 | 32         | 34.8 | 12    | 13.0 | 9         | 9.8  | 7           | 7.6 |
| 2.8 Labels                | 39            | 42.4 | 27         | 29.3 | 15    | 16.3 | 7         | 7.6  | 4           | 4.3 |
| 2.9 Signs                 | 35            | 38   | 29         | 31.5 | 15    | 16.3 | 8         | 8.7  | 5           | 5.4 |

In addition, the results from the structured interview showed that two out of three interviewees often used GT to listen to the pronunciation of the vocabulary which they couldn't pronounce, and one interviewee sometimes used GT to read engineering textbooks.

### **8.3 The use of GT to enhance English language skills in writing**

The data showed that 40 (43.5%) participants used GT for writing English essays and reports very often, and 28 (30.4%) engineering students used GT for writing English essays and reports all the times. Moreover, 19 (20.7%) participants often used GT for

writing English essays and reports. There were 5 (5.4%) participants who sometimes used GT for writing English essays and reports. None of them hardly ever used GT for writing English essays and reports.

The number of students who used GT for correcting grammatical errors all the time was 35 (38.0%), and 32 (34.8%) participants used GT for correcting grammatical errors very often. Besides, 17 (18.5%) participants often used GT for correcting grammatical errors. 6 (6.5%) participants sometimes used GT for correcting grammatical errors. 2(2.2%) hardly ever used GT for correcting grammatical errors.

There were 33 (35.9%) participants who used GT for writing resumes all the times. Furthermore, 38 (41.3%) participants used GT for writing resumes very often. 18 (19.6%) participants often used GT for writing resumes. 2 (2.2%) participants sometimes used GT for writing resumes. There was only 1 (1.1%) participant who hardly ever used GT for writing resumes.

The number of sample groups who used GT for chatting with foreign friends all the time was 35 (38%), and 32 (34.8%) participants used GT for chatting with foreign friends very often. In addition, 15 (16.3%) participants often used GT for chatting with foreign friends. There were 7 (7.6%) participants sometimes use GT for chatting with foreign friends, and 3(3.3%) participants hardly ever used GT for chatting with foreign friends.

The number of participants who used GT for searching general words all the time was 41(44.6%), and 36 (39.1%) participants used GT for searching general words very often. In addition, 14 (15.2%) participants often used GT for searching general words. There was 1 (1.1%) participant who sometimes used GT for searching general words.

There were 32 (34.8%) engineering students who used GT for writing emails all the times, and 33 (35.9%) participants used GT for writing emails very often. Besides, there were 20 (21.7%) participants who often used GT for writing emails, and 7 (7.6%) participants sometimes used GT for writing emails.

There were 35 (38%) students who used GT for writing English captions on social media all the time, and there were 33 (35.9%) participants who used GT for writing English captions on social media very often. Moreover, the number of participants who often used GT for writing English captions on social media, sometimes used GT for writing English captions on social media, and hardly ever used GT for writing English

captions on social media was 15 (16.3%), 4 (4.3%), 5 (5.4%), respectively, as shown in the table 6:

**Table 6**

*The use of GT to enhance English language skills in writing*

| Writing   | All the time |      | Very often |      | Often |      | Sometimes |     | Hardly ever |     |
|---|--------------|------|------------|------|-------|------|-----------|-----|-------------|-----|
|   | N            | %    | N          | %    | N     | %    | N         | %   | N           | %   |
| 3.1 English Essays/<br>English Reports  | 28           | 30.4 | 40         | 43.5 | 19    | 20.7 | 5         | 5.4 | 0           | 0   |
| 3.2 Correcting grammatical errors   | 35           | 38.0 | 32         | 34.8 | 17    | 18.5 | 6         | 6.5 | 2           | 2.2 |
| 3.3 Resumes   | 33           | 35.9 | 38         | 41.3 | 18    | 19.6 | 2         | 2.2 | 1           | 1.1 |
| 3.4 Chat with foreign friends   | 35           | 38.0 | 32         | 34.8 | 15    | 16.3 | 7         | 7.6 | 3           | 3.3 |
| 3.5 Emails  | 32           | 34.8 | 33         | 35.9 | 20    | 21.7 | 7         | 7.6 | 0           | 0   |
| 3.6 English captions on social media (Facebook, Line, Instagram, Twitter, etc.) | 35           | 38.0 | 33         | 35.9 | 15    | 16.3 | 4         | 4.3 | 5           | 5.4 |



According to the structured interview, two out of three interviewees used GT to write present participle forms of verbs in sentences and check the spelling of vocabulary. One interviewee sometimes used GT to check grammatical rules.

#### **8.4 The language skills which the participants use GT to enhance their learning the most**

There were 52 (56.5%) participants who used GT the most in vocabulary skill. Moreover, the number of participants who used GT to enhance reading skill, and writing skill was 24 (26.1%) and 16(17.4%), respectively, as shown in table 7.

**Table 7**

*The language skills which the participants use GT to enhance their learning the most*

| <b>Language Skills</b> | <b>Number</b> | <b>%</b> |
|------------------------|---------------|----------|
| Vocabulary             | 52            | 56.5     |
| Reading                | 24            | 26.1     |
| Writing                | 16            | 17.4     |

The data from the structured interview showed that each interviewee used GT to enhance his or her learning in different skills. The first interviewee revealed that he used GT to enhance writing skill. While the second interviewee used GT to enhance reading skill, and the third interviewee used GT to enhance vocabulary skill. In their opinions, GT was beneficial for them as it could quickly translate vocabulary, sentences, and texts. Furthermore, they claimed that GT enhanced their learning because it helped them understand their texts easier, fast, and uncomplicatedly.

#### **Conclusion**

Results of the present study showed that:

1) Most fourth-year engineering students used GT to enhance their vocabulary skill in finding the meanings of the general words (44.6%), the meaning of the technical terms (39.1%), the pronunciation of vocabulary (39.1%), and the parts of speech of vocabulary (35.9%), respectively. Furthermore, the finding from the interview supported the same result since two out of three interviewees pointed out that they used GT to find the meaning of vocabulary, and one of them used GT to find the meaning of technical terms.

In reading skill, the fourth-year engineering students used GT all the times to read the labels (42.4%), research and experiments (38.0%), articles (38.0%), signs (38.0%), games rules (37.0%), English textbooks (35.9%), English novels (34.8%), English news (33.7%), and magazines (32.6%), respectively. Moreover, according to the interview, two out of three interviewees used GT to listen to the pronunciation of vocabulary that they couldn't pronounce, and one interviewee sometimes used GT to read engineering textbooks.

The students used GT to enhance their writing skill to check grammatical errors (38.0%), and chat with foreign friends (38.0%). They used GT to write English captions on social media (38.0%), resumes (35.9%), emails (34.8%), English essays and English reports (30.4%), respectively. In addition, the interviewees pointed out that they used GT to write present participle form of verbs in sentences, check the spelling of vocabulary, and check grammatical rules.

2) The language skills which fourth-year engineering students used GT to enhance their learning the most was the vocabulary skill (56.5%). Furthermore, the students used GT to enhance their learning in reading skill 26.1% and writing skill 17.4%. According to the interview, different interviewees used GT to enhance their learning in different skills.

### **Discussion of the Study**

The result of the present study showed that the majority of students used GT as a tool to enhance their vocabulary skill in finding the meanings of the general words all the time. This study could further support Kate-Phan & Sripetpun's study finding (2016) that students used GT to find the meaning of general words the most compared to other objectives. Furthermore, this research could also assist Sukkhwan's study (2014) that students used GT for finding meaning of vocabulary and used it for reading and writing assignments in an English course as well as for communication purposes, such as online chatting. According to the study results, the students used GT mostly to enhance their English language learning in vocabulary, reading, and writing skills. The findings consistent with many studies (Sukkhwan, 2014; Bahri & Mahadi, 2016; Alhaisoni & Alhaysony, 2017; Yanti, M. & Meka, L.M.C., 2019; Chayanuvat et al., 2020) reporting that GT was beneficial for students. It could be claimed that GT could help in students' English learning.

Almost all students perceived GT as a good learning tool, even though it sometimes produced inaccurate or inappropriate meanings of words (Sukkhwan, 2013; Yanti, M. & Meka, L.M.C., 2019). The issues of the effectiveness and efficiency of Google Translate made students concern more when using the machine translation too. It would be beneficial if students learn and practice their grammar skill and translation skill from

the errors and inappropriate word order produced by Google Translate (Vidhayasai et al., 2015; Yanti, M. & Meka, L.M.C., 2019).

However, some students did not fully use Google Translate to enhance their vocabulary skill. As in Sitorus's research (2020), it was reported that most of the students used google translate to find the meanings of words rather than using it to learn the word pronunciation or synonyms. Sukkwan (2013) and Yanti, M. & Meka, L.M.C. (2019) supported that some students use GT only to get the meaning of the text, but they did not pay much attention on learning knowledge of new vocabulary; so using this machine translation program was not beneficial for them in enriching their vocabulary knowledge.

Google Translation could help students in translating words in an informal communication at ease. Nevertheless, in a formal or academic situations, they needed to concern how to use GT correctly; for the translations were not always correct or appropriate. It is important that students should understand the working system of GT before using it. Elshiekh (2012) explained that a machine translation system usually consists of linguistic descriptions of the source and target languages (automatic vocabularies and formal grammars at all levels) and an algorithm (instructions for using the vocabularies and grammars, oriented only to their form), on the basis of which the translation itself is performed. (p. 57)

When the data of linguistic descriptions of the source and target languages are limited, it tended to be mistakes in translation that could lead to misunderstanding. Sitorus (2020) and Yanti, M. & Meka, L.M.C. (2019) presented some students' efficient technics of using GT in learning English. In a word level, after entering the vocabulary one wanted to translate, the translations had to be manually checked with the consideration of grammar, and word choices. In a sentence level, it was recommended that searching for meanings of unknown words should be done first, then the word would later be combined with attention to grammar rules. The use of a dictionary or other resources to confirm the appropriate meaning of words was essential; GT users need to re-check the translation results with the context.

In translation, words in two languages never have the exactly same meanings as Seleskovitch (1989) mentioned that "The word in a speech, whether in simple, everyday conversation or part of a solemn address, do not convey the same general meaning as when in isolation" (p. 66). Moreover, Nida (1991) pointed out that "Words never occur without some added paralinguistic or extralinguistic features" (p. 26). Students need to concern this crucial point in using a dictionary and machine translation. As machine translation mostly provides the word-for-word translation, teachers should provide students with knowledge and skills related to machine translation working systems, its

advantages and disadvantages in advance so that the students could use Google Translate in learning English effectively.

In the future, when the data sources of machine translation programs are larger with variations of vocabulary, idioms, expressions and slangs, Google Translation will become more effective tool in language learning.

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## **10. Limitation of the Study**

The participants of the research were fourth-year engineering students of Rajamangala University of Technology Thanyaburi. Hence, the population was a specific group; therefore, the findings cannot be generalized unless using in similar research contexts. Moreover, according to the pandemic situation, the number of interviewed participants and the interview time are limited regarding health and safety policies.

## **11. Recommendations of Further Study**

1. The sample for the interview should be increased so that the information obtained from the interviews could answer the research questions more clearly.

2. Since younger students – primary or secondary students – also use applications on smartphones for their online learning, the use of GT in studying English language in those population groups should be observed to compare with the undergraduate students.

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