

## Original Research Article

# The Need to Use Translation Software in the Classroom: Perception of Chinese International Engineering College Students in Language Learning

### ABSTRACT

This study aims to analyze students' perception and usage of translation software for language learning. A survey questionnaire was administered to International Engineering College students to gather data on their attitudes, reasons, and experiences related to using translation software. The findings reveal that a significant number of students agree to strongly agree with the use of translation software in various language learning contexts, such as translating simple sentences, long paragraphs, unfamiliar words, and during English classes. The majority of students perceive translation software as a valuable tool for improving language skills and facilitating communication with foreign teachers. However, some students also express dissenting opinions, suggesting that translation software may not be the optimal method for learning and improving English proficiency. The discussion highlights the benefits and limitations of translation software, as well as the need for a balanced approach to its usage. While translation software can be a helpful resource in specific language learning tasks, it should not replace authentic language input and independent learning. The findings emphasize the importance of integrating translation software into language learning curricula and providing guidance to students on effective and critical use. This study contributes to the understanding of students' perceptions of translation software and provides insights for educators and learners on maximizing its potential for language learning.

**Keywords:** Engineering Students, International, Language Learning, Perception, Translation Software

### 1. INTRODUCTION

With the development of globalization, international exchanges and cooperation have become more frequent and closer. More people start learning a foreign language in order to adapt the change of society. As English is the most important common language in today's globalized world, the importance of English cannot be denied or ignored (Nishanthi, 2018). For International Engineering College students, English is not only the language of instruction for most of the courses, but also an indispensable learning bridge, because many professional courses are written in English, which means English learning is much more important. Moreover, second language learners still have difficulties in learning English as a tool to understand other courses (Sary, 2015) and in listening to lectures in English.

For this kind of language learning problem, there are many ways to help students learn better, such as listening to English songs and watching English movies. In the era of "Internet + education", college students' information technology and learning styles have become inseparable (Zhou, 2022). Translation is one of the most common and important methods of learning languages and learners at every level find translating very helpful (Allford, 2010). Nowadays, different translation technologies have been developed to help translation learners and professionals improve their performance in producing a high-quality translation. These technologies are now widely integrated into translation programs in different universities, institutes and training centers around the world for their usefulness and reliability in improving the performance of translation learners and professionals in the delivery of trustworthy and professional translation services (Omar et al., 2020). The extent and effectiveness of translation software in language learning and teaching have always been an ongoing heated issue.

Translation has been largely ignored as a valid activity for language practice and improvement where most language educators are completely against the use of translation in language classrooms, this perspective is changing (Karimian & Talebinejad, 2013). Translation software is becoming more normalized in the classroom as it brings many benefits and convenience. Some findings highlight the potentials of mobile devices to have a positive impact on the translation classroom activities and

underline the need for their systematic integration into the translation curriculum as part of the tools contributing to the development of technological competence (Bahri et al., 2016). Niu & Yang, 2022 believe that translation software is an important technical means to break through the language barrier.

The use of translation software can be like a double-edge sword. On the one hand, it can improve students' learning efficiency and provide convenience and accuracy for finding new words and translation. On the other hand, the effect of translation software on improving language ability is limited, it can only provide basic language conversion, and cannot replace the role of human teachers. At the same time, it sometimes has translation errors and makes students lazy to think and reduces their independent learning ability. Therefore, the way translation software is used is of great significance and students need to look critically at the application of translation software. For example, in English classes, students should focus on classroom learning and improve their English listening skills instead of using direct translations on mobile phones. Students should first try to understand the meaning of a word or a sentence when encountering an article that is difficult to understand and not relying too much on translation software. English learners must memorize the unfamiliar words and review them regularly after using translation software to look up English words. However, one of the most important things that English learners need to remember is that English translation software is only a learning tool, students must study carefully and hard if students want to improve English ability. Therefore, it is necessary to study the need for using translation software in class and use of translation software among students in international colleges, so as to better help English teaching and students' development.

### 1.1 Research Questions

The purpose of this study is to analyze the perception of students in the use of translation toward language learning. Particularly the study seeks to answer the following questions:

1. What is the perception of students in the use of translation toward language learning.
2. Why do college students need to use translation in language learning?
3. How do college students use translation in language learning?

## 2. LITERATURE REVIEW

Nowadays, more students are choosing to use translation software to learn a second language, and translation software has demonstrated many advantages to improve students' level in language. Klimova and Polakova (2023) presented that the research participants were mostly familiar with the machine translation (MT) applications, such as Google Translator (100%), DeepL (62%) and others (50%). Google Translator is the most commonly used application (87.5%) among students, followed by DeepL (25%). In addition, the main differences between these two applications are that DeepL is more accurate (69%) than the Google Translate, and it also provides different synonyms when translating (31%). It was also mentioned that DeepL offers more verb forms, and translates complex texts more comprehensibly. These results indicate that college students not only have a high demand for translation software, but also can flexibly and critically use this software.

Translation software also plays an outstanding role in correcting student errors. The study comprised preliminary work and a case study. The former included an awareness task to assess student awareness of GT mistakes, and a correction task to assess their ability to correct the mistakes identified. The awareness and correction tasks showed that intermediate students identified 54% of the mistakes, while advanced students identified 73% and corrected 87% of the mistakes identified (Kol et al., 2018). But we should also see the drawbacks of translation software for us. Despite the value and prevalence of MT in the translation market, it would be naïve to think that MT can be relied on without some level of post-editing with regard to both contextual and colloquial appropriateness as well as lingering lexical and grammatical errors. In fact, Lafeber's study indicates that familiarity with MT is not an essential skill for translators to work at inter-governmental organisations. (Liu et al., 2022).

Translation software is not just about using it alone to achieve the expected learning outcomes, but requires us to understand and apply it in order for translation software to play its maximum role. Urlaub and Dessein (2022) asserted that these interactional patterns are widely considered highly effective for language learner, because this repair-oriented process directs learners toward meaning-based as opposed toward grammar-based repair strategies. In order to optimize MT tools for

educational contexts, tools must engage with learners by providing them a meaningful interaction. Instead of providing a single translation that the learners have to accept, the output must provide the learners with options that they can critically evaluate and thus engage in a process of negotiation of meaning through a human-machine collaboration.

The past decades have seen vast changes in attitudes towards translation, both as an academic discipline and as a profession. The insights gained in recent years, particularly in the area of professional translator training, call for a reassessment of the role of translation in language teaching. In this time, the professional practice and training of translation has moved to a technological paradigm in which virtually all translation activities are computer mediated and this complex activity is conceptualized as human-computer interaction (Carreres & Noriega-Sánchez, 2017). Translation is therefore now inseparable from the physical computer, translation technologies, tools and resources found online and the interconnectedness provided by the Internet (Jiménez-Crespo, 2017). Furthermore, learners themselves have not ceased to use translation as a strategy in the process of language learning and learning to use their primary language as the basis for understanding and using an additional language to understand the context. This process can be likened to the task of translators as they seek to establish a relationship with another language and culture (Scarino, 2016). Translation software has become indispensable in today's foreign language learning.

Foreign language learning involves developing proficiency across many domains, including vocabulary, grammar, listening, speaking, reading, writing, and translation. Translation software tools have been developed to support learning in each of these areas and can be a great help for language learning, as it offers a variety of tools and features to help learners practice and learn a new language.

For vocabulary and grammar acquisition, dictionary software such as YouDao Dictionary provides essential functions. It allows learners to easily look up word translations, definitions, and example sentences to aid understanding (Xu & Wang, 2011). Many digital dictionaries also include audio pronunciations, images, and other multimedia supports to enhance memorization and context for new terminology.

Reading, writing, and translation training have benefited from gamified learning platforms. Duolingo is one example of a popular app that frames literacy development as a game-like challenge. Learners progress through levels by demonstrating growing reading fluency, writing accuracy, and translation abilities (Xu & Wang, 2011). The game mechanics and continuous assessment keep users engaged over longer practice periods.

Translation software can also be classified according to technical standards, application domains, and operating platforms. Machine translation tools including Google Translate provide automated text translation at a basic level for a wide array of languages (Turovsky, 2016) like specialized dictionaries serve medical, legal, scientific, and other professional fields with terminology relevant to those work contexts. Translation programs are available both as desktop applications, and via mobile-based apps such as YouDao Dictionary (Xu & Wang, 2011; Turovsky, 2016).

As electronic resources have proliferated, foreign language learners now favor online tools over traditional materials due to improved access and efficiency (Xu & Wang, 2011). Google Translate alone translates over 100 billion words per day, benefiting learners globally (Turovsky, 2016). Translation apps also aid teachers in communicating with students from diverse linguistic backgrounds, facilitating relationship-building and bilingual education support (Lake & Beisly, 2019).

In cognizant, translation software fills important educational niches for vocabulary, grammar, listening, speaking, reading, writing, and translation instruction. They provide standardized, specialized, and mobile-friendly resources to vast user communities. With the rapid development of new technologies, translation tools will likely continue enhancing language education through higher accuracy, additional features, and broader availability. Overall, translation applications represent a valuable supplement to traditional foreign language learning methods.

### **3. METHODOLOGY**

### **3.1 Research Design**

The current investigation employed a quantitative-descriptive design. The study is noted to be quantitative as it intended to appraise or measure the variables accounted in this current research (Kothari, 2004). In addition, the study is considered descriptive as it aimed to investigate the immediate status of a phenomenon or phenomena (Singh, 2006), relevant to the study which supported the objective of identifying the respondents' perception in the use of translation toward language learning. Moreover, the study involved the processes of data collection, tabulation, analysis and description which further justify its being a descriptive type of research (Calderon, 2006 cited in Rillo & Alieto, 2018). In addition, the study is noted to be population-based as it is directed towards specific members of a population (Buslon & Alieto, 2019).

### **3.2 Research Instrument**

For the purposes of this study, a questionnaire was devised to gather data. The items of the researcher-made questionnaire-checklist were carefully constructed based on existing literature. Revisions of the statements were made to fit the objectives of the study. To ensure relevance and accuracy of the instrument, it was subjected to validation. The research instrument was referred to experts and made further improvement. All suggestions and corrections were incorporated. Items found to be not relevant were omitted from the instrument and the items found ambiguous were revised according to the suggestions.

### **3.3 Validity and Reliability**

The survey questionnaire was constructed based on the research literature and problems of the study. As to the validity of the instrument, the prepared survey questionnaire was submitted to experts who independently validated its content in terms of relevance, suitability and appropriateness to the research problems, after consolidating the suggestions given by the experts, the research instrument was subjected for reliability testing. The researchers made sure that the participants are unaware of the desired outcome of the study, this is to ensure the most accurate data will be acquired. For the perception and translation software as variables, the research focus on the perception, reasons and manner of Engineering College Students toward the use of translation software in language learning. For the reliability testing of the research instrument, the questionnaire was subjected to pilot testing. The researcher administered to selected engineering students and the data were then subjected to Cronbach Alpha and a coefficient of 0.85 was obtained which is interpreted as "Good". Hence the instrument is considered reliable for the purpose of answering the problems of this study.

### **3.4 Data Collection and Coding Procedure**

An online survey with 20 statements was designed to collect the perceptions of the engineering students in Xi'an, Shaanxi, China relevant to the attitudes (5 items) and need (5 items) toward translation software, reasons (5 items) and the behaviours of using translation software (5 items) toward language learning. These students were approached through an online platform specifically QQdocs, a survey tool conveniently available, and the generated link was distributed using WeChat, the most popular social media app in China. The link was also shared personally to the contact list of researchers. Students were requested to participate voluntarily in the study. A pilot test was done with twenty engineering students before the final conduct of the online survey. The online survey was done for the duration of one week (October 29 to November 6, 2023). The gathered data from the research tools were coded to enable analysis through a statistical program. Furthermore, (one hundred or more) responses were analyzed using descriptive statistics specifically the mean percentage. The results were described using an adapted 4-point Likert scale presented as follows: 3.5-4.00 Strongly Agree (4), 2.5-3.49 Agree (3), 1.5-2.49 Disagree (2), 1.0-1.49 Strongly Disagree (1), while the responses for items with negative statements were reversely coded. A total number of two hundred eighty six (286) engineering students who are currently enrolled in International Engineering College of University situated in Xi'an, Shaanxi, China are the sample size in this study.

Ethical practices were carefully observed in the conduct of the study. There is no conflict of interest and the researchers are not inclined to influence the results of the study. Moreover, privacy and confidentiality of participant's information and responses were ensured and protected. The research did not involve vulnerable study population since respondents are all college students studying engineering at university. The said respondents are competent to grant assent. The participation is completely voluntary and no form of remuneration for involvement in the study is expected. The study was approached through an online platform and that the respondents may answer in their most convenient time. The researchers also ensure that participants can refuse to answer certain questions

or items, discuss certain topics or even refuse to answer the questionnaire without prejudice. Additionally, the researchers guarantee that the respondent can access the results of the study and have the right to access the data upon request.

#### 4. RESULTS AND DISCUSSION

The responses were descriptively treated using frequency, percentages, and mean to determine students' perception in the use of translation software toward language learning. A scale computed with the same intervals was created and used as the basis for the description of the mean scores. The following tables present the analysis:

##### **Learners' perception in the use of translation software toward language learning**

1. What is the perception of students in the use of translation toward language learning?

Table 1 – Responses per Item on Learners' Perception

Statements	SA	A	D	SD	M	D
Translation is always reliable.	72 (25.17%)	165 (57.69%)	32 (11.19%)	17 (5.94%)	3.02	A
Translation is always accurate.	55 (19.23%)	171 (59.79%)	43 (15.03%)	17 (5.94%)	2.92	A
Translation is a must in learning language.	110 (38.46%)	131 (45.8%)	31 (10.84%)	14 (4.9%)	3.18	A
Translation helps students learn English language better.	116 (40.56%)	136 (47.55%)	19 (6.64%)	15 (5.24%)	3.23	A
Translation is the best way to learn language.	58 (20.28%)	103 (36.01%)	95 (33.22%)	30 (10.49%)	2.66	A

Scale: 3.25-4.00– Strongly Agree (SA) 2.50-3.24 – Agree (A) 1.75-2.49 – Disagree (D) 1.00-1.74 – Strongly Disagree (SD)

Table 1 presents the perception of students in translation software. The majority of students express confidence in the reliability and accuracy of translations provided by translation software, with positive responses reaching 57.69% and 59.79% in that order. Impressively, about 45.8% of students consider the use of translation software as an indispensable tool for enhancing their English language learning experience. A notable portion of students (33.22%) holds the perspective that translation software may not be the optimal method for language learning. Despite this, the average score of responses suggests a positive attitude among students with the translation software, particularly regarding the reliability and accuracy of translations. This indicates a prevailing sentiment of contentment with the overall performance of the translation software.

A noteworthy discovery arising from this study is the widespread acknowledgment among respondents that translation software serves as a valuable aid in language learning. This aligns with González-Davies' (2017) assertion that the use of translation does not hinder language acquisition; instead, it fosters the development of multi-componential knowledge and various cognitive, meta-cognitive, and socio-affective learning strategies. This assertion resonates with our findings, emphasizing a positive correlation between translation software utilization and language learning.

Table 1.A – Responses per Item on the need to use Translation Software

Statements	SA	A	D	SD	M	D
I need to use translation software to talk to foreign teachers.	68 (23.78%)	115 (40.21%)	83 (29.02%)	20 (6.99%)	2.81	A
I am confident with my English sentences even without using translation software.	45 (15.73%)	86 (30.07%)	113 (39.51%)	42 (14.69%)	2.47	A
I need to use translation software to explain in English to foreign teachers.	83 (29.02%)	141 (49.3%)	49 (17.13%)	13 (4.55%)	3.03	A
I don't need translation software to improve my English Language.	41 (14.34%)	58 (20.28%)	129 (45.1%)	58 (20.28%)	2.29	A
I need the translation software to finish essay writing and report writing in English.	71 (24.83%)	154 (53.85%)	46 (16.08%)	15 (5.24%)	2.98	A

Scale: 3.25-4.00– Strongly Agree (SA) 2.50-3.24 – Agree (A) 1.75-2.49 – Disagree (D) 1.00-1.74 – Strongly Disagree (SD)

The result in Table 1.A shows that 40.21% of students agree that they need to use translation software to talk to foreign teachers, only 6.99% of students think they can talk to foreign teachers without translation software. There are 30.07% of students feels confident with their English sentences without translation software. Almost half of students agree that they need to use translation software to explain in English to foreign teachers, accounting for 49.3% of students, but 4.55% students strongly disagree about this statement. A great number of students disagree that they don't need translation software to improve their English Language with 45.1%. When students write their essay, over half of students accounting for 53.85% agree they need the help form the translation software, only 5.24% students strongly disagree about using translation software.

The result above shows that most of students cannot leave translation software in English study, especially in writing and speaking. This result supports the study of Almusharraf & Bailey (2023) Saudi and Korean students both reported translation tools were easy to use and useful for studying language. Students frequently use machine translation tools when learning English and plan to continue using them in the future. In terms of foreign language learning, the translation software plays a very crucial role.

### Reasons for using Translation software

2. Why do college students need to use translation in language learning?

Table 2 – Responses per Item on Reasons

Statements	SA	A	D	SD	M	D
Translation can help students better understand the meaning of the sentence.	119 (41.61%)	141 (49.3%)	14 (4.9%)	12 (4.2%)	3.28	SA
Translation makes it easier for students to read long paragraphs/texts.	110 (38.46%)	140 (48.95%)	23 (8.04%)	13 (4.55%)	3.21	A
Translation helps students to write sentences.	98 (34.27%)	133 (46.5%)	37 (12.94%)	18 (6.29%)	3.09	A
Translation gives confidence to students in learning language.	92 (32.17%)	141 (49.3%)	39 (13.64%)	14 (4.9%)	3.09	A
It is easy to learn English language with translation.	101 (35.31%)	148 (51.75%)	22 (7.69%)	15 (5.24%)	3.17	A

Scale: 3.25-4.00– Strongly Agree (SA) 2.50-3.24 – Agree (A) 1.75-2.49 – Disagree (D) 1.00-1.74 – Strongly Disagree

The result in Table 2 presents that students in IEC agree that translation software can make it easier to learn English language with positive responses reaching 51.75%, while only 5.24% of students strongly disagree. With a mean of 3.28, almost half of students agree that translation is able to help them better understand the meaning of the sentences. At the same time, the perspectives that translation can provide simple help for students to write sentences, and enhance their confidence in language learning are in agreement, with a mean score of 3.09. Additionally, there are 48.95% of students agreeing that translation can offer a more convenient way for them to read and comprehend long paragraphs. In general, the average score of 3.17 suggests a universal agreement among students with the use of translation software in language learning, particularly for understanding the meaning of sentences and long paragraphs. This indicates the reasons for students using translation focus on the convenience and easiness of understanding temporary language problems. This result was consistent with the statement of Omar et al. (2020), that this technological shift has a beneficial impact on students' motivation to pursue faster and more accurate translations of languages. In a single click, students can access and process vast amount of information without taking out the paper and consulting a heavy dictionary. This assertion resonates with our findings, pointing out that it is more convenient for students to use translation software to learn English conveniently in every regard.

### Using Translation software

3. How do college students use translation in language learning?

Table 3 – Responses per Item on Usage

Statements	SA	A	D	SD	M	D
Students use translation in simple sentences.	70 (24.48%)	103 (36.01%)	82 (28.67%)	31 (10.84%)	2.74	A
Students use translation in long paragraphs.	108 (37.76%)	132 (46.15%)	29 (10.14%)	17 (5.94%)	3.16	A

Students use translation to unfamiliar or new words.	143 (50%)	122 (42.66%)	11 (3.85%)	10 (3.5%)	3.39	SA
Students use translation in every English class.	69 (24.13%)	122 (42.66%)	70 (24.48%)	25 (8.74%)	2.82	A
Students take pictures of an English text and use translation.	85 (29.72%)	131 (45.8%)	47 (16.43%)	23 (8.04%)	2.97	A

Scale: 3.25-4.00– Strongly Agree (SA) 2.50-3.24 – Agree (A) 1.75-2.49 – Disagree (D) 1.00-1.74 – Strongly Disagree (SD)

The result in Table 3 shows that Students agree that they use translation software in simple sentences and long paragraphs with a mean of 2.74 and 3.16 respectively. With the mean score of 3.39, students strongly agree that they use translation to unfamiliar or new words. Students agree that they use translation in every English class with 42.66, contrary to 8.74% of students strongly disagree on the statement. A total of 45.8% of students agree that they take pictures of an English text and use translation to understand the concept. The result is similar to other study, according to Xu & Wang (2011), translation allows learners to easily look up word translations, definitions, and example sentences to aid understanding. The similarity suggests that most of students use translation when they meet some difficulty. The translation help English learners understand new words and the meaning of sentences.

## 5. CONCLUSION

This study set out to most students needing the support of translation software in the communication process with foreign teachers, classwork, and at the same time, to improve their foreign language proficiency. In the survey on perception with translation software, students highly agree with the accuracy, reliability and necessity of translation software, while also recognizing that long-term use of translation software is not an effective way to improve foreign language proficiency. At the same time, in terms of using translation software, students generally believe that translation software can better assist them in foreign language learning and deepen their understanding and application of knowledge.

Through the survey, it has been found that students are still in a state of high demand and recognition for translation software, and cannot leave its assistance in the process of foreign language learning. In daily learning, it does help students better understand difficult texts and promote their daily communication with foreign teachers. This study has identified translation software has become an indispensable part of students' learning.

Translation software is certainly user-friendly and convenient in the learning process, but we should still consider whether we can still rely on its help in continuous and in-depth learning. At the same time, translation software may develop more suitable software for different types of people's learning needs under continuous updates and iterations in the future. In essence, the role of translation software in supporting students' English language learning endeavors is seen as largely positive. However, there remains an opportunity for refinement and optimization. Educational institutions and schools can leverage these insights to enhance the overall user experience of translation software, thereby contributing to more effective language learning outcomes.

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