# READING AUTONOMY AND TRANSLATION ABILITY: UNFOLDING THE ELEMENT OF TEXTS FOR ESP STUDENTS

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**Abstract**

The present study mainly aimed to investigate the extent to which ESP students employ the elements of text analysis for translation and examine if knowledge of text analysis enhances the reading autonomy of ESP students. In so doing, a sample of 34 homogeneous ESP university students studying Computer Engineering participated in this study based on convenient sampling, and six students were selected to participate in the interview phase of the study based on data saturation methods. The researchers taught the elements of text analysis for translation suggested by Nord (1991) to the students in the experimental group, helping them to analyze the texts and become independent in interpreting the texts and translating the texts more naturally. The study results confirmed that translation students could employ the elements of text analysis in their translations following the treatment phase. The results obtained from one-way ANCOVA revealed a significant difference between the control and experimental groups concerning their reading autonomy scores, with the latter having scores. Finally, the results of the interviews revealed that students were satisfied with the text analysis elements, and it was a novel experience for them. ESP students should know that they should not only gain knowledge of text structure but also resort to other elements such as presupposition and visual images like diagrams and pictures to create good translation.

**Keywords:** Text analysis, reading autonomy, translation ability, ESP students.

## INTRODUCTION

In the modern era, translation has emerged as a growing profession. Hatim and Munday (2004) state that the previous two decades have seen the growth of Translation Studies as an academic area. Similar to how Snell-Hornby (1990) described Translation Studies as "a sub-discipline of applied linguistics," the concept of translation strategy quickly became central to the field. Until the twentieth century, Western Europeans argued about whether or not literal or figurative translation was preferable (Munday, 2016). Finding differences between aspects of each language in the translating process is one of the keys that may unlock doors toward research on the translation of all languages. Therefore, the connection between linguistic competence and translation is one of the most essential insights in Translation Studies. Reading is a separate and crucial ability in this respect (Bakker et al., 1998). Scholars generally agree, as Pang (2008) points out, that reading is essential for second language learners. Reading, as Nuttal (1996) points out, is both the "most researched" and "least understood" educational process. Although most people agree that reading is essential, there are many different perspectives on what reading is. The current literature acknowledges the potential for translation to help students increase their vocabulary and reading comprehension (Jalilzadeh et al., 2020; Rouhani & Modarresi, 2023).

Precisely, the ability to create and re-construct meaning from texts using various skills and knowledge constitutes reading comprehension (National et al., 2000; Blachowicz & Ogle, 2001). Although English-medium education presents hurdles to ESP (Zhang & Chan, 2017), ESP students often learn English for academic or professional goals, requiring extensive reading. There is no denying that the importance of translation as a teaching tool has grown in recent years in language classrooms (Duff, 1994). According to Beeby (1996), many of the writing community is vocally advocating for a return to translation practice in second language education, particularly in ESP reading classes.

Ross (2000) argues that translation is the ultimate social ability since it fosters understanding and communication. Effectively moving from the early efforts of learning to read to the later purpose of reading is a natural progression for readers as they develop their comprehension abilities (Yovanoff et al., 2005). Although the use of translation in ESP classrooms has been on the wane among language professionals, students continue to find value in the practice. There has been debate concerning the efficacy of using translation as a teaching tool in the second language teaching/learning process for quite some time now (Celce-Murcia, 2001). Furthermore, recent research (Modarresi, 2019; Khakshour et al., 2018) demonstrates a link between translation and participation and vocabulary usage.

Both instructors and students may benefit significantly from using translation in ESP classes. There are better approaches than distributing a material and then having students translate it (Dagiliene, 2012). English as a Second Language (ESL) classes might benefit from using translation methodologies by introducing their students to the academic processes involved in translating materials. Strategies may be overt and covert, mental and physical, conscious and unconscious (Séguinot, 1991). The phrase has specific, intended connotations in this analysis. The process of translation may provide scaffolded reading comprehension instruction. According to Leonardi (2007), before attempting to translate a text, students should analyze it closely to establish what it is about.

When translating from English into Persian, students studying fields related to engineering need help with producing a natural and fluent translation because they are unaware of translation strategies and believe that translation is simply a matter of selecting equivalences from their specialized dictionary. Their lessons do not emphasize reading the content in its original language and translating it into another language, even though this is the key to producing a competent translation. They need to learn how to examine the material or what method to use. Little is known about how text analysis for translation might help second-language learners.

The present study makes a significant contribution to ESP courses by emphasizing the significance of translation strategies for students majoring in Engineering disciplines, which can help them learn how to analyze the text before doing translation, motivate them to become autonomous in their reading skills, and produce more natural translations. For ESP students to take ownership of their work and improve their translations, it is essential to foster an environment of independence (Ross, 2000). Regarding reading and translation, Fener and Newby (2000) claim that independence eliminates comprehension issues. According to them, genuinely autonomous ESP students challenge themselves to grow in their capacity for reflective self-management of their educational processes.

Several factors affect a person's reading comprehension, say Sweet and Snow (2003). Learner autonomy is one such factor, despite being a method of interaction between the writer and reader rather than the end objective of reading itself. According to Zarei and Ghahremani (2010), few researchers have concentrated on establishing autonomous reading, which is one of the severe gaps in the literature on reading comprehension and learner autonomy. Although Rivers (1987) states that reading comprehension is the most critical skill for any language, there will always be students who need help to read independently and extensively (Pang, 2008).

From the standpoint from which they examine the word (Vinay & Darbelnet, 1958; Nida & Taber, 1969; Newmark, 1981; Baker, 1992; House, 1997; Pym, 2009), practitioners and researchers in the field of Translation Studies have defined and classified the term translation strategies in various ways. Honig (1991) divides tactics into micro-, rules-, and macro-level approaches. To paraphrase what Palumbo (2009) calls "the transfer operation that translators conduct on a specific structure or concept present in the source text," a translation strategy is the process through which the translators do this. Séguinot (1991) examined how translators adapt a text into another language. Still, the author looked into methods different from what most translation theorists had considered before (even though they were very similar to methods developed by scholars in second language acquisition and interlanguage communication; cf. Faerch & Kasper, 1983). The methods included using a dictionary to check up each word, writing a rough copy, and highlighting key phrases. Suppose instructors and educators are well-versed in text analysis and assessment. In that case, they may give their pupils a more precise measure of their ability to read specialist literature in the target language (see Modarresi et al., 2021; Khoramy & Modarresi, 2019).

**Theoretical Framework of the Study**
Researchers used text analysis and understanding methods established by Nord (1991) and translated them into English. Product translation, which is also known as documentary translation, and process translation, also known as instrumental translation, are the two primary categories of translation that Nord (1991) initially distinguishes. Content, assumptions, non-verbal aspects, lexicon, and syntax were all considered in this study, as indicated by Nord (1991) as parts of text analysis used in translation. According to Nord (1991), analyzing texts helps students develop into independent readers who can read and comprehend independently, improving their ability to interpret texts effectively and naturally. Lexis includes general meaning and specialized meaning; sentence structure includes simple sentences, complex sentences, dependent and independent clauses, and voices; non-verbal elements include pictures, charts, and diagrams; content includes citations, conjunctions, and paraphrasing; and sentence presuppositions include omissions of references to other works.

**Purpose of the Study**
The primary purpose of this study was to investigate whether or not ESP students could apply the principles of text analysis for translation according to the recommendations made by Nord (1991) and to do so, researchers taught the students how to analyze texts. The questionnaires administered before and after the intervention allowed us to evaluate another aim of the study to see whether text analysis might improve the reading autonomy of ESP students. The research also aimed to see whether there was a correlation between ESP students' level of reading independence and their ability to translate into computer science. Finally, the research investigated the students' perspectives on how their exposure to text analysis aspects affected their translation work.

**Research Questions**
Therefore, the team of researchers set out to respond to the following four queries:
1. To what extent do ESP students employ the elements of text analysis in their translations?
2. Does text analysis enhance the reading autonomy of ESP students?
3. Is there any significant relationship between reading autonomy and the translation ability of ESP students?
4. What do ESP students think of being exposed to elements of text analysis in translation practice?

## METHOD

**Research Design**
This study combined qualitative and quantitative approaches by using a comparative descriptive study, descriptive statistics, and inferential statistics (Dörnyei, 2007) to provide more nuanced results.

## Participants

A pool of 34 Computer Engineering students from the Engineering University of Technologies in Quchan, in northeastern Iran, comprised the sample based on convenient sampling. The students had previously completed General English for three credits and were now enrolling in the advanced English Language course. The student body was vast and diverse. For this study, we randomly assigned 16 students to the experimental group and 18 to the control group. Initial language proficiency homogeneity across students allowed researchers to choose only students whose results were one standard deviation below or above the mean. Participating students had NELSON scores between 32 and 18, one standard deviation above and below the mean. Therefore, 34 students continued from the original group of 39. Moreover, six students were selected to participate in the interview phase of the study based on data saturation methods. The sample size seemed to be adequate since, according to (Dörnyei, 2007), an interview study with a sample size of six to 10 might work well.

## Instrumentations

The study utilized six instruments to gather the relevant data. The first instrument was the NELSON proficiency test, including 50 items (Fowler & Coe, 1978). The test is in multiple-choice format, consisting of cloze passages, vocabulary, structure, and pronunciation. The reliability estimate of the test is quite acceptable (r=.82) (Hashemian et al., 2012). The scoring procedure is marked out of 50; one score is allocated to each question.

The second instrument was a test of translation used to measure students' translation ability before the treatment phase. The test was taken from the students' textbook "Special English for Students of Computer" compiled by Haghani (2015), which is used as the primary source in the Specialized Language Course as a two-credit course. The text had more than 400 words since the minimum number of words for a text to be evaluated by translation assessment rubrics should be 400 (Kim, 2009). The pre-test of translation was composed of 428 words.

The third instrument was a test of translation used to measure students' translation ability following the treatment phase. The test was taken from the students' textbook "Special English for Students of Computer" compiled by Haghani (2015), which is used as the primary source in the Specialized Language Course as a two-credit course. The text, again, had more than 400 words since the minimum number of words for a text to be evaluated by translation assessment rubrics should be 400 (Kim, 2009). The tests had the same text difficulty and content—the post-test of translation is composed of 418 words. The Flesh test was employed to determine the level of text difficulty. The formula uses metrics to determine a text difficulty level. In this formula, a result of 7.1 means that the text has difficulty; that is to say, below 7.1, the text is regarded as an accessible text. The researchers applied this formula to the texts and came up with a result of 6.73, indicating that the texts were not complicated or straightforward.

The fourth instrument was the Reading Autonomy Questionnaire, adapted and modified by Sariçoban and Alyas (2011). The questionnaire's reliability coefficient (Cronbach's Alpha Analysis) is 92.1%. The questionnaire consists of 35 close-ended Likert-type questions ranging from one to five. The questions are related to students' autonomy in ESP reading, and students are asked to indicate the degree of autonomy in reading English materials on a five-point scale, that is: Never: 1; Rarely: 2; Sometimes: 3; Often: 4; and Always: 5 (Appendix D).

The fifth instrument was the assessment rubric developed by Beeby (2000), which was used to measure students' translation abilities. In her model, each translation task is calculated out of 20: 10 points are allocated to 10 specific translation problems elicited from the text, 10 points are allocated to language problems, and marks are deducted from grammar mistakes. One point is subtracted for incorrect syntax, tense, agreement, and word order, and 0.5 points for incorrect articles, prepositions, and spelling. The 10

points specified for measuring translation ability are Point 1, representing the successful translation of the headline or title of the text; Point 2, representing typographical differences, for example, capital letters in English and not in other languages. Point 3 for transfer competence. The other point is for discourse competence. The next point is for syntactic differences, and the other is for splitting long sentences. Point 7 is for exploitation and clarifying the implicit information where necessary. Point 8 is for lexical errors due to excessive faith in a dictionary. Point 9 represents cultural transfer and point 10 represents extra-linguistic knowledge.

The last instrument was semi-structured interview questions designed by the researchers to explore the students' perceptions of the text analysis in improving their reading autonomy and translation ability. The content validity of the items was checked by two experts in the field of Translation Studies who had been teaching translation courses at the Islamic Azad University of Quchan. Having obtained the feedback from the experts, the researchers modified the questions in terms of their content validity.

## Data Collection Procedure

The researchers' methodology for collecting data and carrying out the investigation was as follows:

*Week One*. To ensure that their sample was representative of the population as a whole, researchers handed out homogeneity tests at the first meeting. Having leveled the playing field regarding students' baseline linguistic competence, they considered only those with scores one standard deviation above or below the mean. Of the pupils, 39 participated since their test results were within the desired range for uniformity. There were 18 pupils in the control group and 16 in the experimentation group.

*Week Two*. A researcher in this study with extensive experience teaching ESP classes at the university level gave the pre-translation exam to the students in the next session. The students' performance on the exam was based on material from the textbook "Special English for Students of Computer" by Haghani (2015), which served as the primary reading material for the students in the two-credit course "Specialized Language."

*Week Three to Week Five*. Throughout the following three sessions, the instructor guided the students in the experimental group through the steps of text analysis for translation, as outlined by Nord (1991), so that they could study the texts on their own and translate them with confidence. The five pillars on which the model rested were content, assumptions, non-verbal cues, lexicon, and sentence structure. The instructor helped the students with the texts and instructed them on using these techniques in their translations. Classes were held every Monday from 14:00 to 16:00 throughout the treatment period (April 16-30, 2018).

*Week Six*. The students' "Special English for Students of Computer" textbook concluded with a post-session translation exam, which their instructor gave.

*Week Seven*. The instructor handed out the reading independence survey at this time. They read the instructions and described the survey's aim to the pupils. Names and fields of study were among the personal data collected in the questionnaire. Students were instructed to read the questionnaire items thoroughly and reply accurately, and researchers were available to answer any questions arising from this process.

*Week Eight*. The instructor interviewed six students in this session to get their perspectives on how text analysis has helped them become more independent readers and better translators. In order to get ESP students' perspectives on how knowledge of text analysis affects their independent reading and translation performance, the teacher followed the recommendations made by Dörnyei (2007) and used a simple semi-structured interview question consisting of four open-ended statements. Participants were encouraged to record as many justifications as possible and reflect on what they learned throughout therapy. After that, the researchers sorted through the data and understood it all.

## RESULTS

The results obtained from the study are reported in four distinct sections to provide answers to each of the research questions.

### The Elements of Text Analysis Employed by ESP Students

To find the answer to the first research question of the study regarding the extent to which ESP students employed elements of text analysis, the researchers scrutinized the translations created by the students on their post-test of translation following the treatment. The elements that the researchers analyzed included the five elements of text analysis that ESP students could employ in order to translate the specialized texts. The results of descriptive statistics yielded the frequency and percent of the elements elicited by the researchers from the students' translations.

**Table 1.** The frequency and percent of text elements employed by the students.

|  |  | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Presupposition | 13 | 27.7 | 27.7 | 27.7 |
|  | Lexis | 11 | 23.4 | 23.4 | 51.1 |
|  | Content | 9 | 19.1 | 19.1 | 70.2 |
|  | non-verbal elements | 8 | 17.0 | 17.0 | 87.2 |
|  | sentence structure | 6 | 12.8 | 12.8 | 100.0 |
|  | Total | 47 | 100.0 | 100.0 |  |

As shown in Table 1, ESP students applied the translation elements in their translations from the most to the least as follows: (1) presupposition (27.7%), (2) lexis (23.4%), (3) content (19.1%), (4) non-verbal elements (17%), and (5) sentence structure (12.8%). The students could employ the presupposition and lexis more than the other elements. The analysis of the students' translations on the pre-test and the observations by the teacher during the treatment phase showed that the students knew nothing about the translation strategies, and there were cases in which they used translation strategies in their translations not consciously but unconsciously. However, the students applied translation strategies considerably and consciously following the treatment.

Indeed, concerning presupposition, the students could relate their understanding of the text to their previous knowledge. As for the lexis, the students could cope with the understanding of specialized words more than that of general words. Students could also better translate the passage's content, especially concerning the punctuation. The analysis of the translations revealed that students knew that punctuations may function differently from one language to another since they could employ this strategy in their translations, translating the punctuations accurately. Regarding the non-verbal elements, they could translate charts and pictures more clearly and render images to texts, if necessary. Finally, since students already became familiar with the different sentence structures in English during the treatment phase, they could break long or complex sentences into smaller phrases or clauses to understand the original text better so that they could yield more natural translations.

### The impact of Text Analysis on Reading Autonomy for ESP Students

To find the answer to the study's second research question concerning whether text analysis could enhance ESP students' reading autonomy, the researchers used one-way ANCOVA since the data were interval. Reading autonomy was measured employing the Reading Autonomy Questionnaire, and since the questionnaire consisted of 35 items, the scores were calculated between 35 and 175. The minimum score on the test was 35, and the maximum score one could obtain on the test was 175. The relevant questionnaire was distributed to the students of both groups before and after the treatment. Before performing one-way ANCOVA, some assumptions were met, entailing linearity for each group, the homogeneity of regression

slopes between the covariate and the dependent variable for each group, and the assumption of equality of variance.

The general distribution of scores for both groups showed that there appeared to be a linear (straight-line) relationship for each group. Indeed, there had been no sign of a curvilinear relationship. The relationship was linear, so there was no violation of the assumption of the linear relationship. Moreover, the significant level for the interaction was .48, so there was no violation of the assumption of homogeneity of regression slopes since the value was more significant than .05. This supported the earlier conclusion obtained from examining the scatter plots for each group. Finally, Levene's test of equality of error variances was checked, and the results showed no violation of the assumption of equality of variance because the significant value was .10, immensely more excellent than the cut-off value of .05.

Following this, the results of the Descriptive Statistics showed that the control group had a mean of 84.61 and a standard deviation of 12.11, and the experimental group had a mean of 97.37 and a standard deviation of 19.31. Finally, one-way ANCOVA was run to see if the two groups differed significantly regarding their reading autonomy scores.

**Table 2.** Test of ANCOVA for reading autonomy.

| Source | Type III Sum of Squares | df | Mean Square | F | Sig. | Partial Eta Squared |
|---|---|---|---|---|---|---|
| Corrected Model | 5571.16[a] | 2 | 2785.58 | 22.12 | .00 | .58 |
| Intercept | 53.31 | 1 | 53.31 | .42 | .52 | .01 |
| Pre-test | 4191.16 | 1 | 4191.16 | 33.29 | .00 | .51 |
| Group | 855.15 | 1 | 855.15 | 6.79 | .01 | .18 |
| Error | 3902.86 | 31 | 125.89 | | | |
| Total | 288667.00 | 34 | | | | |
| Corrected Total | 9474.02 | 33 | | | | |

a. R Squared = .588 (Adjusted R Squared = .561)

As shown in Table 2, the significant value was less than .05 (here, it was .01); thus, the groups differed significantly. Therefore, there was a significant difference in the ESP students' reading autonomy scores after controlling for their scores on the pre-test before the treatment phase. The experimental group outperformed the control group. Following the treatment phase, knowledge of text analysis enhanced the translation ability of ESP students.

**The Relationship between Reading Autonomy and Translation Ability**
As for the third research question of the study concerning the significant relationship between reading autonomy and translation ability of ESP students, the researchers opted for the Pearson Correlation Coefficient. Reading autonomy was measured utilizing the Reading Autonomy Questionnaire, and since the questionnaire consisted of 35 items, the scores were calculated between 35 and 175. The translation ability of the students was measured through a translation test, which was calculated out of 20 following the evaluation rubrics developed by Beeby (2000).

Initially, the researchers checked the skewness and kurtosis values, and since they were between +2 and _2 for the variable, there was no violation of the assumptions of normality. The results of Descriptive Statistics showed the means and standard deviations of the scores on reading autonomy (Mean=90.61; Std.Dev.=16.94) and on translation ability (Mean=13.32, Std.Dev.=1.51). Finally, the Pearson product-moment correlation coefficient was run to determine the relationship between ESP students' reading autonomy and translation ability.

**Table 3.** Correlation between reading autonomy and translation ability.

|  |  | Post-test scores on reading autonomy | Translation ability |
|---|---|---|---|
| Post-test scores on reading autonomy | Pearson Correlation | 1 | .56** |
|  | Sig. (2-tailed) |  | .00 |
|  | N | 34 | 34 |
|  |  |  |  |
| Translation ability | Pearson Correlation | .56** | 1 |
|  | Sig. (2-tailed) | .00 |  |
|  | N | 34 | 34 |

\** Correlation is significant at the .01 level (2-tailed).

As indicated by Table 3, there was a significant, positive correlation between reading autonomy and translation performance [$r$= .56, $n$=34, $p$<.05], with higher scores on reading autonomy associated with higher scores on translation performance, based on the guideline suggested by Cohen (1992): r=.10 to .29 small; r=.30 to .49 medium; and r=.50 to 1.0 large. Indeed, the results revealed that reading autonomy is made possible when the students can examine a text and know the text features, and this is the main inseparable feature of specialized texts to which the students may be exposed; otherwise, they would run into some mistranslations or misunderstandings on the part of the translators during the act of translation. A significant issue is the extent to which ESP students gain mastery over the source text. The current study examined the significant relationship between reading autonomy and translation ability of ESP students majoring in Computer Engineering. The study confirmed that translation activities can provide effective practices for ESP students, provided that they will be introduced purposefully into ESP courses.

### Results Emerged from the Interviews

Six Students were interviewed to learn more about their reactions to being taught how to analyze the specialized texts using text analysis elements, which pertained to the study's final research question about the students' perspectives of exposure to the elements of text analysis in translation practice. The researchers reviewed the transcribed interviews twice, highlighting the most salient elements. They started by having each pupil say their name. Next, individuals had to provide information about their schools and fields of study. In order to test the hypotheses, we took a random sample of four students from the experimental group. This section reports on the most salient themes identified in the students' replies.

Students interviewed after being introduced to translation strategies for text analysis expressed surprise at first at how much more there was to understand a text than just knowing the right words or having a good dictionary. To be more precise, this was the first time they had seen the five-part translation procedures proposed by Nord (1991). A student commented, "I have always thought of translating the text as a combination of word knowledge and content knowledge, but during the treatment, I found out that a good translation is the result of correct comprehension of the text, and text comprehension is not just a matter of reading and looking up the unknown words." I picked up some helpful reading strategies, such as constantly engaging prior information while reading the material.

One of my classmates misunderstood my definition of text analysis as a literal word-for-word or sentence-for-sentence translation of the text. Nonetheless, I learned that just five components need a text analysis after the therapy. She explained, "I came across a tree diagram in lesson two, and when I paid attention to the diagram, I found that I could understand the text better; furthermore, I discovered that general vocabulary was harder than specialized vocabulary in understanding a text since the former required the context to be understood and translated accurately, whereas the latter has a closed list, and each word has only one meaning and this."

Another student said that when working on the text with the instructor, he discovered that the sentence structure of the text is a significant problem, even more so than vocabulary, in some circumstances. He said, "When reading, understanding, and translating the material, I had trouble separating the phrases and sentences. For example, I overlooked adjective clauses without subject and auxiliary verb." After our instructor showed us how to break down complicated words, I felt confident reading and comprehending literature independently.

At the end of the interview, the final student said, "I learned throughout my therapy that translating is a talent that requires knowledge of techniques and also practical practice." He remarked, "I like sharing my translations of the original articles with my students very much." After three sessions and some home practice, I translated a paragraph, paying attention to the presupposition, content, visuals, lexis, and sentence structure. In contrast, I could not do these things in the first session. It would become second nature with practice, allowing me to rely less on external cues for text comprehension.

One theme from the students' replies was their appreciation for the newness and effectiveness of the text analysis tools they used in class. They also gained inspiration when they realized they were advancing their learning and improving their translations, and they discovered that broad lexis would cause them more trouble than specialized lexis. They all concluded that text analysis is essential for accurate translation and that text analysis skills may be taught using translation's building blocks.

## DISCUSSION, CONCLUSIONS, and RECOMMENDATIONS

According to the study's findings, text analysis significantly contributes to translation quality, and the more students are familiar with text aspects, the more accurately they will translate specialist materials. The findings showed that the students had the most success using the principles of translation: presupposition and lexis. The pupils could already connect what they read and what they already knew. The present study confirmed that engaging in the translation process would activate the students' minds to pay attention to various factors and elements while engaged in the translation task, thus supporting the emerging label of translation process studies (Basile, 2005).

The study's findings showed that students' reading autonomy scores varied significantly, with the experimental group doing much better than the control group. By prior research ideas (Baker, 1992; Muoz, 2012), this study explores the under-researched yet crucial function of translators' mental processes in translation. Baker (1992) offered translators a methodical way to deal with the many issues that arise during translation by using targeted tactics. Similar findings from the ESP students' answers to the interview questions confirmed that text analysis is necessary for accurate translation and may be honed using translation components. This research shows that student autonomy increases as they get more involved with the content. Similarly, recent research suggests that students actively participating in class can improve their language skills (Modarresi, 2022; Farsad & Modarresi, 2023).

The study's authors conclude that as ESP students become acquainted with text elements, they become accustomed to sentence structure and try to master the various structural patterns, such as the distinction between a simple sentence, a complicated phrase, and a compound sentence. Modarresi (2021) emphasized the usefulness of this information in enhancing ESP language skills in terms of correctness, complexity, and fluency. Since the list of specialized words is closed, and the students are informed that the specialized words have just one meaning, they learn that the main difficulty is not with the specialized lexis but with the general words that make problems for them when engaging in translation. Students understand that most words have more than one meaning and that sometimes, the best equivalency is the dynamic equivalence that is not in the dictionary.

Students who participated in the interview believed their inability to analyze the texts made translation difficult. However, once they learned to analyze the texts, they realized that text analysis made the task of reading, and thus the task of translating, more manageable. The students admitted that they first saw text analysis as challenging due to the complexity and variety of text structure and lexical options. In practice, however, they discovered that recognizing text characteristics allowed for more fluid and natural translation. They started caring more about reading the texts, focusing more on text qualities, and looking for ways to simplify translation.

Incorporating translation into regular lessons may help students with reading comprehension, grammatical understanding, and vocabulary acquisition. When students translate their papers from Persian into English for publication in top international journals, they can use what they have learned in ESP classes to improve their reading and writing skills in the target language.

English as a Second Language (TESL) teachers should focus on developing their translation abilities and reading the relevant specialist materials. To better their reading comprehension and vocabulary, ESP students may discover their strategies and get more motivated to work on translations as they advance in their abilities. When translating a complex scientific text rather than a simple one, ESP students who have acquired a deeper understanding of text features can better take responsibility for the translation's quality and apply the most effective translation strategies, resulting in a more natural translation.

In conclusion, ESP students majoring in Computer Engineering should not rely solely on dictionaries when translating but should strive for more natural, less forced expressions. Moreover, since the receptor language is of utmost importance during translation, such expressions should have the same effect on readers as the source text message. If the translations were precise and natural, I would be more interested in learning about computers and gaining specialized expertise. Also, both the translator's role as a reader and the translator's perspective are considered alongside the intrinsic objective variables of the text.

The research has real-world consequences for those working in teaching and translation. Teachers of English as a Second Language should be familiar with a variety of translation methodologies and translation models to share with their students. When planning reading comprehension lessons for ESP students, educators should remember that students will benefit significantly from hands-on experience with text aspects. They may increase the number of texts available to pupils, enhancing their ability to learn from them and produce more accurate translations. The research also has implications for educators who want to motivate their pupils to use effective translation techniques and to self-evaluate their progress. Self-evaluation strategies are helpful for students and language instructors who want to encourage student independence.

The findings of this research also aid ESP students in becoming self-directed, independent translators by enabling them to track their development, identify areas where they need improvement, and take responsibility for their education. Also, translation students should only approach the process if they were doing a word-by-word lookup in a dictionary to prepare for the next set of words. They should be aware that translation is a question of reading comprehension, that text and sentence structure knowledge assist them in grasping the material better, and that they should also resort to other aspects, such as presupposition and visual visuals like diagrams and drawings.

**Recommendations**

Finally, it is recommended that ESP course material developers equip students with tasks and activities that will allow them to discover the text features in terms of lexis and structure, as well as the distinction between general and specialized vocabulary, rather than focusing on specialized vocabulary alone. They may create activities where students use text-analytical skills to deepen their understanding of the material.

## Ethics and Conflict of Interest

The researchers of the current study declare that the data were collected in accordance with the ethical rules during the research process and they acted in accordance with all ethical rules. They also declare that there is no conflict of interest.

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