Research Article

Revisiting Mental Translation: A Potential to Promote Reading Comprehension in English for Specific and Academic Purposes Contexts

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Abstract

Although teaching English for Specific and Academic Purposes (ESAP) seems to be equivalent to teaching reading comprehension, Iranian graduated students having studied ESAP at BSc and MSc levels are not efficient readers and have a lot of problems in obtaining information from English materials related to their field of study via translation. Since mental translation is inevitable while reading English texts, the question is how to make the best use of this spontaneous strategy to promote reading comprehension. Sixty-six students majoring in midwifery, nursing and surgical technology at MSc level were selected based on convenience sampling. They were classified as lower-intermediate students by a standard placement test. Their translation practices and reading activities 000were investigated in an attempt to discover the strategies most frequently used by such learners. Through content analysis of these documented activities and interviews with the learners and observation of ESP classes, the common problems in reading comprehension as well as translation processes were identified. These problems originated from mental translation. These problems were addressed by using strategy-based instruction. The findings imply how to expliot mental translation as an efficient strategy through equipping learners with the prerequisite reading comprehension and translation skills and strategies.

Keywords: mental translation, reading comprehension, ESAP context, skills and strategies, ESP learners

Introduction

English for specific purpose (ESP) courses are designed according to learners' needs (Hutchinson & Waters, 1987). Reading comprehension is identified to be the most urgent need in ESP classes (Faraji et al., 2023). In ESP/EAP (English for academic purpose) courses, learners are prepared to read academic texts in English; however, many of them have problems in comprehending such texts. Different researchers have identified the reasons why learners encounter difficulties in dealing with ESP texts as lack of both reading strategy knowledge and necessary reading strategies as well as unfamiliarity with the use of English. In addition, they suffer from insufficient knowledge of specific

field of study and limited knowledge of language (Tran& Duong, 2018). In educational systems in Iran, learning reading comprehension is defined as the main part of the class syllabus. Since teaching reading skills and vocabulary learning strategies receive low attention and the method of teaching English is traditional, learners use reading comprehension translation and their mother tongue a lot. Translation is also very effective in the ESP context where exact equivalence is needed in authentic texts. It can also be used to strengthen grammar, to correct inaccuracies and show interference and negative transfer (Sheikhpour Ahandani & Khodareza, 2022). The relevant literature also revealed that it could contribute to reading comprehension process when used purposefully and meaningfully (Alaboud, 2022). In other words, reading ability is among the factors influencing the quality of translation (Sutopo & Prayitno, 2020) as reading level significantly influences the ability to translate texts into native language (Kovacs, 2018).

For years, various teaching methods for reading comprehension have tended to focus on the outcomes of comprehension while neglecting the process itself. They treat reading comprehension as mere interpretation rather than a process of constructing meaning, failing to equip students with strategies to sddress difficulties they encounter (Rodríguez Sua, 2021). Strategies-based instruction (SBI), as a learner-centered and participatory approach allows learners to be the center of attention and explicitly taught how, when, andwhy strategies can be used. It can be used to make learners more aware of the active nature of learning and more capable of employing problem-solving and trouble-shooting to enhance understanding. The most essential factor in strategy training might be the time; much time would be needed to achieve significant results on the effect of SBI on language learning (Ghahari & Ebrahimi, 2017).

Using one's native language as a special resource in reading texts in English may prove beneficial, at least at certain developmental stages in one's L2 reading comprehension ability (Dordick, 1998). The mutual connection between reading comprehension and translation programs does not appear to have been considered in the literature previously (Quezada & Westmacott, 2019). The rationale for investigating mental translation was the nature and frequency of problems ESP students often encountered in their classes, hindering the quality of reading comprehension. In order to explore how students exploit this potential strategy in academic studies and direct them to make fruitful efforts to understand academic texts while using this uncounciously available resource, this study was planned.

The staus quo

At MSc level, paramedical students' ESP courses are usually two consecutive two-credit courses which provide students with academic texts in

their specialty area in their first academic year. Health Ministry made this course compensatory which means students have to take this course but their final exam score is not incorporated in their GPA. Students do not have English courses after the first year of their studies and they continue to struggle with difficulties posed by complex English texts their professors assign them to study. Their native language is the language of teaching and the language used at clinical settings (i.e., Persian). Classes are crowded, teacher-centered, focusing on grammatical structures/rules, decontextualized vocabulary items and translation of texts and there is insufficient time to practice and master the required occupational and academic English skills. The class syllabus is based on the course book and the course book does not include strategy-based learning activities and heavily focuses on the examination.

In ESP classes, traditional tests, often consisting of multiple-choice items are commonly used,typically excluding the translation section of the coursebook. Great majority of ESP teachers are not trained as skillful innovative teachers and there is a significant gap between their theoretical beliefs and their practice. Almost no collaboration and integration exist between content teachers and English teachers and no integrated teaching methods among ESP teachers teaching a given ESP course. Some ESP courses lack instructional materials or are provided with outdated materials. Students get accustomed to simplified texts before tertiary education, but at university level, they are expected to read academic texts assigned to them in their syllabus. To comprehend these materials, EFL learners intensively use electronic bilingual dictionaries/google translate or ask their teachers' help. In the meantime, the translated version of some of their instructional materials or English references are available to them. At MSc level, ESP students are usually low-motivated, inactive students (Anbarshahi & Shabani Minaabad, 2021) with low to lower intermediate language proficiency and little work-life balance, having some time interval between their BSc graduation and their MSc acceptance. Many of these students are not satisfied with their ESP classes as they face serious challenges in their ESP courses (Hayati, 2008).

Literature Review

English as a foreign language (EFL) learners, in general, have had positive ideas that support the use of translation as a practice. More specifically, they believe that use of translation helps them in reading comprehension and understanding meaning of target vocabulary and memorizing it as well as understanding complicated features of grammar and memorizing grammatical rules. They also report using bilingual dictionaries and translating the text followed by its comprehension as their frequently used strategies (Calis & Dikilitas, 2012; Joyce, 2015). Most of the students have special notebooks for

writing down the Persian meanings of English words (i.e., bilingual lists). In addition, they transcribe English words using the Persian orthography to learn the pronunciation of the new words more easily. It seems that translation is closely related to reading process and performance (i.e., translation ability and critical reading skill) (Pham, 2017; Sriwantaneeyakul, 2018). In other words, As Pintado Gutierrez (2021) stated, the link between translation and language learning will never disappear and that all stakeholders should actively look for strategies through which this link can be utilized to create more positive effects on the language learning process. In a similar study, it was argued that because translation required a thorough and extensive comprehension of the passage, the students had higher comprehension scores on the sections they translated (Lee, 2013).

In ESP contexts at MSc level, students ultimately need to acquire the ability to read and translate the most recent English scientific texts in their field of study in order to write their dissertation (in Persian) and the article(s) derived from it either in their native language which is obligatory or in English which is optional. And they usually have to get their Persian articles translated into English by language experts. Therefore, they need translation as their fifth skill (Sheikhpour Ahandani & Khodareza, 2022). Reading scientific texts is very demanding as the texts are often informationally dense, syntactically complex, and linguistically and conceptually domain-specific (Abdul-Hamid & Samuel, 2012; 2013). The obstacles faced by these learners are those related to proficiency in L2 (Dordick, 1998; Algazo, 2018), in particular, vocabulary and complex long sentences and negative transfer from L1 (Simonet & Amengual, 2020). The belief in one-to-one correspondence between L1 and L2 may also bring about some problems (Akbari, 2017).

Additionally, due to their low proficiency, they frequently rely on using their L1 (Akbari, 2017) to make up for their insufficient knowledge in L2 to get their L2 jobs done. However, not all EFL learners can make intelligent use of their L1 to learn a new language (Liao, 2006). Translation method is also used by their teachers to lower their fear and anxiety about engaging with English texts. In other words, in a setting where the students share a common L1, first language can create a less threatening atmosphere (Solhi & Büyükyazı, 2011). However, these teachers do not train strategic learners equipped with the required translation skills.

There have been few studies investigating translation as a learning practice (Calis & Dikilitas, 2012; Lewicka-Mroczek & Wajda, 2017). It seems that EFL learners connect knowledge of the foreign language to that of their L1 through comparison and contrast, which is inevitable and they face a lot of problems when

they bring their presuppositions about L1 language system into L2 learning contexts and consider the two systems as counterparts (Akbari, 2017).

Mental translation may be one way in which readers of L2 make best use of their background information, including vocabulary and grammatical structures which are deeply rooted in their mental schema of language which they bring to a reading task (Dordick, 1998). Perhaps one of the reasons why very little research has been conducted on mental translation in the reading of L2 texts is due to the inherent difficulty associated with trying to detect mental processes normally hidden from view. It is extremely difficult to detect the occurrence of mental translation. Researchers need to work diligently to find a way to detect the use of mental translation as it is such a spontaneous and to some degree, unconscious act (Dordick, 1998).

As translation is mostly believed to be a debilitating device in EFL contexts, its potential as a cognitive resource (Luitel et al. 2023) and internally scaffolding device has not been fully investigated. In ESAP contexts, translation is considered a justifiable learning tool as it is highly required for comprehending academic texts and developing technical vocabulary and gains in grammar (Olivia, 2018) but its potentials need to be explored in order to be used most efficiently and put EFL learners on the right track in the process of foreign language acquisition (FLA).

From the beginning of the 20th century onwards, learning a foreign language in some countries was carried out through what was called the grammar-translation method. This way of studying a language was later applied to modern languages which concentrated on learning the grammatical rules of the target language and then carrying out a literal translation (Arffman, 2012). Translation exercises were considered to be a way of learning a foreign language or of reading a foreign language text. Later, the grammar-translation method lost its popularity with the appearance of the communicative approach in the late 1960s and early 1970s.

This new approach entailed the abandoning of the translation method in its classic form. In the second half of the 20th century, a new generation of scholars worked on the same target, that is, to establish a more systematic analysis of translation. All of them favored a closer linguistic approach. With the emergence of these new theories, a new discipline arose, that is, the theory of translation or translation studies. During the 1990s, increasing attention was given to process-oriented descriptive translation studies research, as termed in Fereydouni and Karimnia (2016), in which the mental activity of translating is studied.

There are some misconceptions originating from negative attitudes toward using translation. But related literature revealed that these conceptions were not supported by research and more empirical research is needed in this area. On the

whole, the current studies indicate towards lessening L1 interference rather than completely avoiding the use of the L1 from the L2 classroom (Luitel et al., 2023)

To get insights on the nature of mental translation and help learners make best use of mental translation as a natural tendency, the following research question was formulated:

1. How can mental translation be used to boost the reading comprehension learning experiences of EFL learners?

Method
Participants

The student population of this study was 66 male (N=9) and female (N=57) students majoring in midwifery, nursing and surgical technology at MSc level in Isfahan University of Medical Sciences. All the students studying in six groups (four groups, nursing students [n=22]; one group, midwifery students [n=12] and one group, surgical technology students [n=12]) were selected by means of census method. Their ages ranged from 29 to 34. The participants of the present study were ESAP students studying ESP I and ESP II (two credits each) in the first two consecutive semesters in the School of Nursing and Midwifery .

They studied reading comprehension (of their main texts) in ESPI and translation of their academic texts (for educational purposes) in ESP II while paying attention to different linguistic structures, contextual features and specialized and non-specialized vocabulary involved in their texts. Strategy-based instruction including reading comprehension strategies and translation strategies was used during ESP I and ESP II, respectively. Based on Oxford Placement Test (OPT) results and their English scores in MSc entrance exam (all of them below 30%), the English proficiency level of the participants was estimated to be lower intermediate, their scores ranging from 28 to 39. They had passed an ESAP course (two credits) at their BSc level. They were accepted at MSc level after 5 to 15 years from their BSc graduation. They had not attended any language institutes during this period. And they all have been working in the hospitals since their graduation. Since they had low language proficiency level, most students held highly positive attitudes towards and insistence on engaging in translation practice in reading comprehension of their academic texts.

Data Collection instruments and Procedures

The first instrument used was a 60 item OPT test that measured the participants' reading, grammar, and vocabulary in particular and their proficiency level as a whole.Its Cronbach Alpha was 0.78.

Readers often use their L1 resources automatically, and therefore are largely unaware of whether or not they have translated parts of the text into their native language. Consequently, they are unable to accurately inform the researcher whether or not they have used this strategy. So far, the use of think aloud protocols and conducting of in-depth interviews, though not flawless, have been the only recourses available to tap some of the otherwise hidden mental processes of readers (Dordick, 1998). However, in this study, the second source of data collection was classroom observation and field notes. Students were assigned written translation practices and reading activities in the classroom for which they performed the required pre-reading activities outside classroom. Their responses and interactions with each other and the teacher while doing reading tasks and translation tasks were recorded through field notes and simultaneously strategic reading and translation instruction was used to help them resolve their existing reading comprehension and translation problems.

To use the potentials of mental translation, the 'read and translate' directive to teach translation is probably as obsolete and unproductive as the Grammar-Translation Method is to teach a foreign language (Clavijo & Marín, 2013). Through the process of reading comprehension and doing translation, teachers should help students apply their linguistic knowledge into practical use and increase their awareness of the differences between both linguistic systems.

The use of reading strategies is one of the activities which improve reading comprehension skills in foreign language learning. Strategy training with an emphasize on comprehension monitoring can help students overcome their problems in reading. The researcher has provided reading awareness to the students by teaching reading comprehension strategies, and in this way, a meaningful reading experience for the students has developed (Sheikhpour Ahandani & Rahimy, 2021).

In ESPI and ESPII, language learners were required to do some reading tasks including reading short texts and answering comprehension questions while the teacher was tracing the reading comprehension strategies, vocabulary comprehension and learning strategies and grammatical points used by the learners. After recording the strategies used by learners and identifying the underlying problems, strategic reading instruction was used involving identifying units of meaning such as sentences, phrases or clauses and creating relationship between these units, asking wh questions from different parts of a sentence to identify the function of each unit of meaning, focusing on special meaning of the new words rather than their literal meaning, unerstanding the main idea of each paragraph and its relation to the title of the passage, understanding the meaning of each paragraph by tracing its contextual clues, word structures, derivations, synonyms, opposites and references of the words throughout the paragraph or

passage, conveying the meaning of sentences in simple words in English, using core vocabulary to learn the meaning of new words, using the entire information about each word entry in monolingual dictionaries including spelling, pronunciation, part of speech, different meanings, derivations and collocations as they are determinants of the exact meaning of the word in the context.

Simultaneously, learners were expected to do some translation tasks such as translating parts of these short texts into Persian while the teacher was recording the translation strategies used by the learners. After recording the strategies used by learners and identifying the underlying problems, strategic translation instruction was used involving conveying meaning rather than transfering the words, avoiding linear and literal translation by recognizing units of meaning and making relation between them, considering the sentence with its main components as subject and a verb rather than single words as the main unit of meaning, recognizing the function of units of meaning as subject, verb, object, adjective, and adverb rather than judging them based on their appearance or location in the sentence, using both knowledge of grammar and vocabulary as two rich toolboxes in both reading comprehension and translation activities.

In the two courses, various passages at appropriate levels of readability were selected by learners themselves from their modern English references (based on their field of study, interest in subjects, and their academic and occupational needs) as they did not have any published instructional materials. The researcher who was the English teacher in both courses investigated ESAP students' translation and reading process (especially the strategies employed by them during performing the translation and reading tasks) and the products (the problems they encountered while reading and translating) to investigate how mental translation works. Students were presented with opportunities to discuss and reflect on their reading comprehension tasks and translation products.

Data Analysis

To explore the participant students' common reading and translation strategies and their underlying problems, the qualitative methodology of content analysis was used. The field notes collected through observation of the learners' reading and translation activities in the classroom were analyzed to derive the most frequeltly occurring themes with respect to the main strategies used while performing the required tasks.

Results

Through content analysis of the field notes collected in the classroom, the following themes were elicited.

The widely used reading and translation strategies

-insisting on finding a Persian equivalent for the grammatical points and new words mentioned by the teacher or encountered in the texts in the classroom
-focusing on literal meaning of unknown words rather than its special meaning in the context
-not paying attention to the punctuation marks as carriers of meaning in the same way as they regarded them as trivial things in Persian texts
-pronouncing the words according to their Persian phonetic system as it was internalized in their occupational and educational settings in communication with their peers, colleagues and professors as well as misreading words
-extracting the unknown word from its context and just looking for its meaning in Persian in bilingual dictionaries and picking out its first meaning
-assuming synonyms as words that can be used interchangeably in different contexts
-assuming one consistent meaning, spelling, pronunciation and part of speech for every single word
-trying to replace just one word as the synonym of an unknown word rather than using other strategies such as giving opposites, defining the word in a phrase, using word structure, using its derivations in the text, etc.
- giving synonyms for the new words without paying attention to their part of speech
-giving synonyms for the new words based on their Persian meaning disregarding their use in English
-focusing on the Persian meaning first learned for a given word and trying to insert it in the context in which the word occurred without feeling the need to double check its meaning
-translating every single word in an attempt to transfer words rather than convey meaning (i.e., word-for-word translation)
-linear reading and translation: not paying attention to units of meaning and their function and translating words in the order in which they occurred in a sentence
-decontextualizing unknown words and relying mainly on poor information provided in electronic bilingual dictionaries usually installed on their mobile phones or google translate

The underlying problems

As implied from the learners' responses to their translation and reading tasks and their interactions with each other and the teacher to answer the reading comprehension questions and translation activities, EFL learners had limited sources available to them. Less proficient ESP readers were often unaware of the effective reading strategies and employed ineffective strategies in dealing with reading and translation tasks they encountered. However, they had access to their L1 while processing L2. And it is the learners' striving for meaning that forced

them to translate in the first place (Kern, 1994). The EFL user does not effectively switch off the L1 while processing L2, but has it constantly available (Imani & Farahian, 2016). In other words, the use of translation is a natural tendency for L2 learners. So, the total eradication of its function is not convincing (Kern, 1994) as learners stated that they could not even learn the synonym of a new word, the new word itself or a new concept in L2 unless they know its equivalent in their native language.

In other words, they match the given concept with that already learned in their native language to facilitate its learning. They usually memorize discrete words with their corresponding meaning in L1, comprehend L2 grammar with their L1 knowledge and do translation at the sentence level (Pan & Pan, 2012, Toumu'a, 2012). What aggrevates the situation is that students usually had incorrect or incomplete knowledge of grammatical points and vocabulary items in both their L1 and L2 to use it as a facilitator or scaffolding to understand their equivalents in the target language.

It also seems that during preuniversity education, they learned some rules about grammatical structures rather than their functions in different contexts and they learned a Persian meaning or an English synonym based on its Persian meaning for each of the encountered words. All this resulted in problems in their reading comprehension and its subsequent translation activities. If they had acquired general English before any ESP was started, they might not have been that much dependent on their L1.

In other words, learning in most cases was done in a perfunctory way, that is, superficial, exam/grade oriented, based on memorization, not having a real sound purpose behind it (Rezaei et al., 2012). Such learning during preuniversity education cannot surely provide a solid foundation for effective learning in advanced stages during university education. It can be said that English teaching *in its present status* (added by the author) has a decorative aspect, and has no academic consequences (Inanloo Khajloo, 2013).

Although they were accustomed to word-for-word translation while reading short simple sentences during preuniversity education, this strategy did not work while reading long complex academic sentences. In most cases, they tried not to miss a single word when translating a text. It caused problems, especially when they came across the words used to characterize the academic style of writing with no literal meaning (e.g, it **tends to** …) and words omitted from the text through ellipsis or reduced clauses.

In addition, they relied too much on their content schemata of the academic texts disregarding the complex grammatical and lexical relations between different parts of the sentences, paragraphs or passage and this resulted in misinterpretations of the content in most cases. They believed that grammar was

solely used to do exercises and they were not aware of its critical role with regard to effective reading comprehension and translation. They thought that dictionary was solely used to locate the meaning of the new words, mainly used bilingual dictionaries and were not aware of the rich potentials of monolingual dictionaries. They refused to use monolingual dictionaries mainly for three reasons: their limited vocabulary knowledge, its use being time-consuming, and lack of dictionary use skills. Regarding this point, Martin (2008) views that bilingual dictionaries may lead to errors in that bilingual dictionary user gets used to finding lexical items, and does not necessarily recognize the wider uses of words in context, collocations, phrasal verbs, and idioms. After locating the meaning of the words in bilingual dictionaries, they also had problems in connecting the ideas together, especially due to syntactic complexity of the academic texts (Karami & Salahshoor, 2014; Lin, 2018; Rezaei et al., 2012).

In addition, insufficient exposure to English language input (i.e. authentic English materials) also resulted in the students' reading and translation problems, including lexical and grammatical overgeneralizations, negative transfer and interference.

Strategic instruction as the key to make the best use of mental translation as a natural tendency

It has become evident that the acquisition of even these apparently straightforward skills (i.e., reading comprehension and translation) was not that much easy for the learners. The results of the study revealed that translation is a more sophisticated skill than expected by the learners and that inadequate reading comprehension skills were responsible for the bulk of translation blunders faced by EFL learners (Farahani & Siyyari, 2015; Sadeghi & Atmani, 2011). Science texts are especially suited for close reading because of their density and level of challenge. Closely reading scientific texts demands deep engagement with the text to understand its content (Lapp et al., 2013), requiring students to assess the validity of text claims, infer meanings, and use text structures to facilitate comprehension.

The content analysis of the translation and reading tasks of the participants revealed that they committed almost the same errors in both cases except that in the case of translation activities they had one more problem. It is, in fact, bringing the target language utterance into complete accord with the standards of their native language.

These findings implied that there is a mutual relationship between EFL learners' translation skills and their reading comprehension skills and the inevitable mental translation strategy can be used most efficiently if the learners are equipped with the required reading and translation strategies. The translation quality of EFL students increased after they were given some treatments on their

reading comprehension (Pham, 2017; Vasheghani Farahani & Siyyari, 2015) through strategic reading and translation instruction.

Less capable ESP readers should be given intensive and direct strategy training for a long period. They must consider the need to improve all their reading strategies through constant practice and extensive reading. Readers with lower level language proficiency might benefit from reading strategy instruction where they can discuss their strategies while reading the text (Amirian, 2013; Vasheghani Farahani & Siyyari, 2015) and/or from translation strategy instruction when they translate the challenging parts of a text and receive feedback from their peers and/or teacher.

Discussion

Since students encounter problems in reading academic texts in a foreign language contexts, in line with the results of this study, research on reading comprehension (Li et al., 2022; Alharbi, 2022) has highlighted the role of strategic reading instruction. Syntactic complexity rather than grammatical knowledge is as significant as lexical richness in academic reading performance. This may be explained by the fact that academic texts are abstract and include long, embedded, and complex syntactic structures which also need strong syntactic processing abilities instead of mere knowledge of academic words and grammatical rules (Karami & Salahshoor, 2014; Akbari, 2014). In this case, translation activities and analytical learning strategies can be helpful (Sheikhpour Ahandani & Khodareza, 2022) for adult EFL students with extremely limited vocabulary and grammar knowledge. Although teachers in the light of their theoretical beliefs may not encourage it, using mental translation is a common strategy (Sheikhpour Ahandani & Khodareza, 2022) employed by many adult EFL learners. However, they should be trained how to use it in the right place as a means to achieve the goal of exact reading comprehension of their academic sources. Learners should equip their language learning toolbox with a combination of strategies to fulfill their academic and professional language requirements.

Studies mentioned so far indicated that students can improve their reading skills utilizing the power of translation. Moreover, the relevant literature also shows that engaging in intensive and extensive reading skills also support students' translation skills, which, in turn, further reinforces their reading skills (Sriwantaneeyakul, 2018).

Different students faced different sorts of translation problems which could be attributed to problems in comprehension which is a pre-requisite for translation. The learners expected to readily translate their texts into Persian. But, in practice, they faced a lot of problems due to lack of reading comprehension skills and resorting to the sole sevice they had access to, i.e., their L1. In fact,

throughout their academic education, they implicitly learned to use translation as the first resort and the only means for comprehension of a text. While in this study, they gradually realized that it should be incorporated into other reading strategies to achieve the best results.

In other words, EFL learners always have a natural tendency to use translation (Fernández-Guerra, 2014) and will automatically compare both languages involved, either consciously or unconsciously, so it is pointless to try to avoid their internal thinking in L1 and code-switching between L1 and L2 since it is regarded as naturally developmental (Kavaliauskienë & Kaminskienë, 2007). It is in accordance with Falla-Wood's (2018) results that revealed learners use mental translation as a strategy to compare and establish similarities and differences between L1 and L2 automatically and without awareness and that the use of mental translation as a strategy can explain the errors made by the learners.

One of the scaffolding tools that helps learners in reading comprehension is translation. It is consistent with Dordick's (1998) results that EFL learners resorted to mental translation when they encountered difficulty comprehending the text due to an unknown word or phrase, on the one hand, or when encountering a lengthy or complicated sentence structure, on the other. The more difficult the text for the subjects, the more they would rely on mental translation. The Kern's study (1994) also approves the findings in this study that the more proficient L2 readers become in reading texts, the less they rely on translation in their efforts to comprehend. In other words, the more purposefully and meaningfully they use mental translation. That is, translation is not always indicative of word-for word or "disintegrative" reading and that translation can often foster reading.
L1 (here, Persian) does play the role of cognitive bridging in English language learning, particularly when the students have a 'poor English base' (as perceived by the participants in this study), and when both the teacher and the students share a common L1 (Luitel et al., 2023).

However, L1 should only be used as a supportive means (not as the goal) to ensure progress in the acquisition of the target language (Karimian & Talebinejad, 2013). In other words, it is intended not to train translators, but to prepare ESP students for reading and understanding scientific texts (Akbari, 2017; Pouya, 2012). Information transfer and raising students' awareness towards different surface realizations of the same concepts is of our main concern. Translation practice should raise students' awareness on the fact that, as a rule, there is not a perfect one-to-one correspondence between the languages involved. They should understand the problematic nature of translation and ; therefore, focus on the linguistic, extra-linguistic and cultural gaps between the two languages (Fernández-Guerra, 2014). Translation tasks should require students to reflect on how to achieve equivalence semantically, functionally and pragmatically.

Viewing translation as the fifth skill alongside other skills (Sheikhpour Ahandani & Khodareza, 2022) is more urgent than ever in ESP contexts to make students realize that the equivalence of the entire message is supreme to the equivalence of its segments and that translation as a whole and adaptive transcoding in particular is not about word-by-word rendering of the original message in the target language.

Teaching translation strategies must become an integral part of ESP courses. Finding equivalences to convey the same meaning of a source language text in a target language is not always an easy task. The difficulties associated with the process of translation have been widely commented on by scholars and professional translators. To overcome the difficulties arising from translating texts, students should be trained in the various strategies to solve translating problems. What makes the situation even more complicated for both the teacher and the learners is that the learners had developed wrong conceptions about the target language in the light of incomplete or wrong instructions they had received before entering the university. And it puts a heavy burden on the shoulders of teachers as well as learners to eliminate these deeply rooted perceptions as they interfere with the process of effective learning (Akbari, 2014).

Translation should also offer a crucial lesson in how to read, since it is a critical way into the text. It should be an effective means of forcing students to read texts thoughtfully and to concentrate on the lexical, grammatical and textual levels, and improving general knowledge (Khodabakhsh, et al., 2013), while "unveiling students' problems in comprehending (English) texts" (Khodabakhsh, et al., 2013). Translation can be a useful tool to analyze comprehension pitfalls, which may lead to problems in discourse processing (Khodabakhsh, et al., 2013). It should also raise students' consciousness to the point that their L1 also has its own language intricacies and potentials to convey the same meaning in L2 as effectively, tastefully and tactfully as the way L2 writer used those of his own language to convey the intended message.

Conclusion

Technical and scientific document translation is a challenging task. The language of technical documents is flooded with professional terminology and its structure includes long compound sentences that deliver information in detail. We can contribute to the perceptions of ESP learners and teachers about translation activities as language learning devices and eliminate the misconceptions about translation skills teaching technique.

High-quality translation process demands mastery of reading skills and strategies and detailed reading comprehension as it is the case in reading academic texts requires mastery of translation skills and technoques.Reading and translating are two sides of the same coin. Reading is actually a form of translation and

translation is a form of intense reading. It can, therefore, be assumed that students' reading comprehension of English texts correlates with the ability to translate them and *vice versa* (Permatasari, 2021).

Translation is not the final goal of foreign language learning, but it can be a useful learning tool, by which students can grasp grammar, acquire vocabulary, comprehend text, and develop different skills. Acquisition of L2 might be facilitated if L1 can be effectively incorporated into the process of L2 learning (Pan & Pan, 2012). The mother tongue, in this case, is used to bridge the learners' L1 knowledge to L2 learning *through first reviewing corresponding concepts in L1 and paving the way for learning similar concepts in L2* (added by the author) (Rocha, 2011). Since there are not any books specifically written to develop translation skills and strategies in ESP learners, the findings of this study can be used to design appropriate reading and translation materials to use mental translation as a cognitive strategy more effectively.

Translation in language teaching (TILT) can be a great aid to EFL learning. TILT can expose EFL students to various text types, registers, styles, contexts, etc. (Fernández-Guerra, 2014). Teachers should purposely make students aware of and subsequently guide them to actually use the necessary reading strategies, both intensively and extensively, followed by reflective/evaluative activities for reinforcement and thorough internalization (Hung & Ngan, 2015). "The very role of translation teaching is to help the students travel fewer or shorter detours before they get into the right track" (Zhao, 2004, p.105). The most effective way of achieving this goal is to teach students the features of translation expertise that are missing in the students' translation processes and products (Sheir et al., 2010)

Translation is very significant in language learning if it is used effectively as a cognitive strategy because it is: (1) a language skill; (2) a field of practice; (3) a means of second/foreign language acquisition; (4) a teaching/learning method; and (5) a tool for understanding language structure and vocabulary especially when comparison between two different languages is concerned. It is hoped that more people will consider the potential of translation as an aspect of language learning, experiment with it, and provide more information that will enable instructors to make a more informed decision about it, rather than basing their disapproval of translation on the extreme applications that have been seen to date (Marzban & Azizi, 2012).

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Biodata

Zahra Akbari is an assistant professor in English Department of Isfahan University of Medical Sciences. She has been teaching English to medical and paramedical students for over 20 years. She received her B.A, M.A and Ph.D from Isfahan University, Faculty of Foreign Languages and her major at all levels was TEFL. Her major area of interest is ESP and language learning strategies as far as language skills and their components are concerned. She has written some books for paramedical students and published some articles in these areas of research. She has also attended some international conferences in this regard.

بازبینی ترجمه ذهنی: پتانسیلی برای ارتقای درک مطلب در انگلیسی برای زمینه های خاص و آکادمیک

اگرچه آموزش زبان انگلیسی برای مقاصد خاص و آکادمیک (ESAP) معادل آموزش درک مطلب است، به نظر می رسد دانشجویان فارغ التحصیل ایرانی که در مقاطع کارشناسی و کارشناسی ارشد ESAP تحصیل کرده اند، خوانندگان کارآمدی نیستند و همچنین در کسب اطلاعات از مطالب انگلیسی مرتبط با رشته تحصیلی خود از طریق ترجمه با مشکلات زیادی مواجه هستند. از آنجایی که ترجمه ذهنی هنگام خواندن متون انگلیسی اجتناب ناپذیر است، سوال این است که چگونه می توان از این استراتژی آنی برای ارتقای درک مطلب بهترین استفاده را نمود. 66 دانشجوی رشته های مامایی، پرستاری و اتاق عمل در مقطع کارشناسی ارشد بر اساس نمونه گیری در دسترس انتخاب شدند. آنها با آزمون تعیین سطح استاندارد به عنوان فراگیران متوسط پایین طبقه بندی شدند. شیوه‌های ترجمه و فعالیت‌های خواندن آن‌ها به منظور کشف و استخراج استراتژی‌هایی که اغلب توسط این یادگیرندگان استفاده می‌شود، مورد بررسی قرار گرفت. از طریق تحلیل محتوای این فعالیت های مستند و مصاحبه با فراگیران و مشاهده کلاس های ESP، مشکلات رایج در فرآیند

درک مطلب و ترجمه شناسایی شد. این مشکلات از ترجمه ذهنی نشات می گرفت و با استفاده از آموزش استراتژی محور برطرف شد. یافته‌ها حاکی از چگونگی بهره جستن از ترجمه ذهنی به عنوان یک استراتژی کارآمد از طریق تجهیز فراگیران به مهارت‌ها و استراتژی‌های درک مطلب و ترجمه است.

کلمات کلیدی: **ترجمه ذهنی، درک مطلب، زمینه ESAP، مهارت ها و استراتژی ها، فراگیران ESP**