On The Effect of Translation on Promoting Reading Comprehension in ESP

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ABSTRACT
According to some studies done during the research, ESP courses are mainly reading oriented, but in spite of these, it seems that Iranian graduated students after studying ESP courses for at least two semesters are not efficient readers and have a lot of problems related to their fields of study. In order to promote the effectiveness of such courses, the present research introduces a set of inter-lingual, intra-lingual, inter-semiotic translation tasks to be used in ESP classes, and further intends to check the effectiveness of the translation tasks in an experimental research. Since the research is an experimental one, an experiment has been done to seek support for our claim. The experiment has been done in many groups and at the end; students reading ability in experimental groups have been compared with that of control groups using t-test method of case II type. The results indicated that translation tasks were so effective in promoting ESP students’ reading ability in experimental group but not so effective in the other one.

KEY WORDS: Translation, Translation and Reading comprehension, ESP, Translational Tasks

INTRODUCTION
This article studies the effect of translation in promoting reading comprehension related to different fields of study. Why graduated students are unable to make use of their ESP knowledge in actual job situations or in their field studies is a matter of concern in Iran. ESP courses are claimed to be based on need analysis and to aim at preparing students to use English in their field job or studies. ESP courses in Iran are mainly reading-oriented but in spite of this, it seems that Iranian graduated students having studied ESP for at least two semesters are not efficient readers and they have a lot of problems in obtaining information from English materials related to their field of study. According to some studies and researches done in this field, it can be claimed that many learners experience a great difficulty in reading and understanding the text in English, even if they possess a considerable amount of linguistic knowledge. The researcher believes that, the problem is with ESP teaching methods, not meeting the specific needs of ESP learners in Iran. The researcher knows that there is no right method, which would work for all learners and in all contexts. So, rather than prescribing or finding the right method, the author wants to introduce a set of translation tasks to be used in ESP classes as a useful type of activities and further intends to check the effectiveness of those translation tasks in an experimental research. In this part, by translation the researcher does not mean pure translation, but a pedagogic one, this refers to some inter-lingual, intra-lingual, and inter-semiotic tasks used in ESP classrooms. In this research, he has introduced some of these tasks and intends to show the pedagogic effectiveness of these translation tasks in improving reading ability of ESP students.

Objectives of the Study
This research is an experimental one, which intends to find an answer for the following research question: Can translation of any kind be an effective pedagogical device in ESP classes for Iranian engineering students?
And to test this hypothesis (H1) of: Translation tasks (of any kind) can be effective pedagogic devices in improving Iranian ESP students’ reading ability.

REVIEW OF THE RELEVANT LITERATURE

The Origins of ESP
According to Hutchinson and Waters (1987:6)
“ESP is a phenomenon that grew out of a number of converging trends. These trends have operated in a variety of ways around the world, but we can identify three main reasons common to the emergence of all ESP’s.”

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The Demands of a Brave New World

According to (Hutchinson and Waters, 1987), the end of Second World War in 1945 coincided with the fast developments in scientific, technical and economical fields. Interchanging of daily knowledge in the world demanded an international language. For many reasons, especially the economic power of the United States in the post-world, this role fell to English. The effect was to create a whole new mass of people wanting to learn English not for pleasure or prestige of knowing the language, but because English was the key to international currencies of technology and commerce. Learning a language was, so to speak, their justification. But as English became the accepted international language of technology and commerce, it created a new generation of learners who knew especially why they were learning a language. All these and many others needed English and, most importantly, they knew why they needed it.

A Revolution in Linguistics

According to (Hutchinson and Waters, 1987) at the same time, as the demands growing for English language courses were tailored to specific needs, influential new ideas began to emerge in the study of language. Traditionally, the aim of linguistics had been to describe the rules of English usage, that is, the grammar. However, the new studies shifted attention away from defining the formal features of language usage to discovering the ways in which language is actually used in communication.

Focus on the Learner

According to (Hutchinson and Waters, 1987), new developments in educational psychology also contributed to the rise of ESP, by emphasizing the central importance of the learners and their attitude to learning. Learners were seen to have different needs and interests, which would have an important influence on their motivation to learn and therefore on the effectiveness of their learning. This lent support to the development of courses in which relevance to the learners’ needs and interests was paramount.

From EFL to ESP

During recent years, one development has extended from ELT to ESP/EST. ESP began to evolve in the mid 60’s in response to an awareness that certain types of learners had specialized needs that were not being sufficiently and efficiently met by EFL courses. According to (Widdowson, 1979), there are two ways of thinking about ESP. The first view, which is called operational, propounds that our problem in the domain of pedagogy is an operational one and that we have had the necessary means for solving the problems and devising ESP programs. The second one believes that we have very little to apply and we know nothing about the nature of scientific communication. In ESP courses, the aims and the content of the courses are determined principally or wholly, not by criteria of general education, but by practical English requirements of the learner. Then ESP is used to refer to the teaching of English for a clearly utilitarian purpose. It is English language teaching designed to meet specific needs of the learners and is related in content to particular disciplines, occupations and activities.

Distinction between ESP and EGP

There are some major factors, which distinguish English for specific purposes from English for general purposes. They are as follows: According to (Widdowson, 1983), English for specific purposes is essentially a training operation, which seeks to provide learners with restricted competence to enable them to cope with certain clearly defined tasks. These tasks constitute the specific purposes, which the ESP course is designed to meet. The course therefore makes direct reference to eventual aims. English for general purposes on the other hand is essentially an educational operation, which seeks to provide learners with a general capacity to enable them to cope with undefined eventualities in future. In EGP, the actual use of language occasioned by communicative necessity is commonly vague and a distant prospect on the other side of formal assessment. While both ESP and EGP can be based on need analysis, it is not so much the nature of needs, which distinguishes them but rather the awareness of a need. In ESP, the learners are mainly adult who are conscious about the aims of English and English is of immediate use for them.

ESP materials should be authentic. They are selected on the basis of analyzing the language used by the language users in communicative situations. In ESP, the selection processes begin with “to whom” and “why”, while in EGP it is “to what”.

Some Basic Characteristics of ESP

ESP has a number of characteristics, which are as follows:

1. ESP is normally goal-oriented: This means students study English because they need it for study or for some other purposes.
2. ESP course is based on need analysis; in other words, it tries to specify the purposes for which language is required or used.
3. ESP students are at advanced levels.

**Needs Analysis**

One definition of ESP, which is still current, is that given by (Munby, 1978:2) at the beginning of his book “On the analysis of learner’s needs”, and it runs as follows: “ESP courses are those where the syllabus and materials are determined in all essentials by the prior analysis of the communication needs of the learner.”

Needs analysis in ESP provides very clear insights into the future communication demands that will be made in the learner. We cannot decide what we are going to teach until we know to whom and why teaching is required. Then in designing an ESP course, we should begin with need analysis. According to (Hutchinson and Waters, 1987:75), there are two types of needs, which are as follows:

1) Target needs (i.e. what the learner needs to do in target situation).
2) Learning needs (i.e. what the learner needs to do in order to learn).

The analysis of target needs involves far more than identifying the linguistic features of the target situation.” According to (Hutchinson and Waters, 1987), a target need is something of an umbrella term, which hides a number of important distinctions: They are necessities, lacks and wants.

**The Importance of Reading**

Reading is a process through which we can expand our knowledge about subject of language. We read English to gain the ability to read journals and books in that language. In fact, language is the key that opens the door and allows us to look into the minds of others, to share what they have learnt, and to feel what they have felt. Language students come to class from the real world in which they read certain types of materials for very real purposes. Readers in real world read what they need or want to read. Therefore, what and why of reading can be answered through reading authentic materials for authentic purposes. Advanced students of science in any country are required to promote their reading ability in order to have scientific or technological contributions for personal or institutionalized use in the (re) creation of new knowledge or for technological transfer. In order to achieve this, students need to be interactants in the discourse activity that is creative and dynamic.

**The Nature of Reading**

Reading involves making and confirming predictions about the meaning of a text. In the reading process, the reader uses his background knowledge in order to negotiate meaning. According to (Kreider, 1975: 178): “Reading requires four major skills of eye-movement, visual discrimination, association, and interpretation.” In reading, we read for meaning to recreate the writer’s meaning. Reading to improve pronunciation, and practice grammatical forms does not constitute reading at all, because by definition reading involves comprehension. When readers do not comprehend, they are not reading.

**The Importance of Translation**

Translation is a complex cumulative process, which involves a host of activities drawing upon other disciplines related to language, writing, linguistics and culture. The more experienced and better equipped a translator is, the better the act of translation will be. According to (Keenan, 1978:13), in the translation process, three major activities run concomitantly:

- “Transfer of data from the source language to the target language.
- Synchronic-analysis of text and translation and research of subject-matter.
- Continuous self-development and learning.”

The actual work of translation brings together everything the translator has learned about the target audience. Having faced many difficulties in preparing for the translation, the translator will face still more obstacles before the work is done. Pitfalls include technical flaws in the translation, insufficient knowledge of the language, and failure to consider the presuppositions of the audience. As with other stages of the process, the finished work can be refined by testing and revision. This research aims to describe and explain the process of translation, so translation as a process is a conscious activity through which a message is reconstructed, represented, recorded, and recreated in the target codes according to the original message in the original text. A key concept in the work of translation is the genre, or type of work that is being translated. Any text is an example of at least one genre, although parts of a text may be of different types.

**The Application of Translation in Teaching ESP**

In this part, we deal with the application of translation strategies in the translation of scientific and technical texts with special emphasis on ESP. Translation strategies should be viewed within the framework of translation studies with particular emphasis on the main concepts of the translation process and translation equivalence. Another area closely connected with the study of translation strategies is text linguistics, particularly considering translation strategies employed in translating larger units of text, beyond the sentence level, and considering the web of interrelationships between the segments of the text.
Translation Tasks or Activities
In this part, some points should be noted:
1. Translation tasks or activities are arranged from word level to paragraph level.
2. They are intended to raise students’ consciousness toward language patterns, and engage them in effective reading activities.

| Task No.1 |
|------------------|--------------------------|
| Title: | English for Students of Architecture |
| University: | Azad University of Shabestar |
| Age of students: | 21-24 |
| Target group: | Architecture students |
| Language level: | Advanced level |
| Type of the activity: | Interlingual |
| Types of the materials: | Some scientific materials related to their field of study |
| Short summary: | I ask them to read the passage more carefully, then try to say in their own language what does X mean? |

Translation Strategies
As we know, translation strategies by themselves do not solve our problems. We must use some plans or strategies in an attempt to solve our problems. Through using exercises, which are mostly translation exercises, it is intended not to train translators but to prepare ESP students for reading and understanding scientific texts. Then training translators and the degree of exactness of equivalencies are not of our concern. Instead, information transfer and raising students’ awareness towards different surface realization of the same deep structure is of our main concern.

Reading ESP and Translation
As pointed out earlier, ESP courses in Iran are mainly reading oriented and reading is of great importance for university students, because they need English to read different things in future. Therefore, we must develop students’ reading ability, so that they can handle any text in the future and comprehend it. Our students need some help to develop their reading ability to the extent that they operate by themselves. Confidence is a key factor here. If they have enough confidence in their work, they will overcome lapses in comprehension and will understand the writer’s meaning. ESP courses in East-Azarbaijan focus on content rather than anything else, and we should consider that lack of content schemata may block understanding, so recognizing and believing in the role of content schemata in reading process will produce fruitful results in the process of foreign language teaching. But in my opinion, content and materials that we use in ESP classes don’t guarantee our students’ success in reading English in future. We should use some meaningful activities to enhance students’ learning.

METHODOLOGY

Subjects:
To determine the role of objective translation in assessing ESP students’ general proficiency in English and also to know whether the changing techniques of testing for ESP learners had any significant effect on their performance, 50 seniors majoring in different branches of ESP such as Engineering, Agriculture, Accountancy, Management and Medicine from some universities like Azad Universities in Tabriz, in Maragheh, in Mahabad, in Bonab, and in Shabestar took part in different phases of the study. The seniors were both male and female Iranian graduate students in the fields of study aforementioned.

Design:
In order to design the course, the students were divided into two groups, experimental and control ones. At first, a reading comprehension text was given to the students at the end of the course. Some suitable passages on Engineering, Agriculture, Accountancy, Architecture and Medicine with appropriate readability were selected. From these passages, some paragraphs were chosen and given as a pretest. Participants took part in the first phase of pretesting, the aim of which was to answer reading comprehension questions.

Then during the course, different translation tasks were used in the experimental group in order to make them familiar with the similarities and differences between two languages, while in the control group, routine pedagogic procedures were employed at university level. In the next step, 20 multiple-choice tests were given to the students in each fields of study. Participants from these universities had to revise or discard the weak items as well as weak choices.
MATERIALS:
In this part, two reading comprehension tests at advanced level were used with the help of some university teachers in the field. The materials for each test were extracted from different articles, journals and source books in that field to assimilate a natural authentic situation of reading. Each test was assessed by means of four to five passages of 150-200 word essays. Each test was checked concerning reliability, and the plausibility of distracters and item difficulty. The reliability of each test was calculated using KR-21 formula, and the items with ID range of 0.37 were included in the main test.

Presentation of the Results
1. There is a positive relationship between ESP students’ performance on reading comprehension test and translation tasks, and those translation tasks are valid and reliable devices for assessing ESP students' English proficiency in their own fields of study.
2. There is a positive relationship between ESP students’ performance on translation test and their educational achievement in their major fields of studies.
3. There is a positive relationship between ESP students’ performance on translation test and varieties of learning tasks used.

(Table 1) Mean, Variance and standard deviation of scores of two groups of students (Students of Accountancy, Bonab)

<table>
<thead>
<tr>
<th>Group</th>
<th>$\sum X/N$</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>$X_e = 15.5$</td>
<td>$V_e = 2.6$</td>
<td>$s_e = 1.6$</td>
</tr>
<tr>
<td>Control</td>
<td>$X_c = 14$</td>
<td>$V_c = 2.9$</td>
<td>$s_c = 1.7$</td>
</tr>
</tbody>
</table>

In this formula, $\bar{X}_e$ = Mean of the scores in the experimental group, while $\bar{X}_c$ = Mean of the scores in the control group. 
$S_e$ = Standard deviation of the scores in the experimental group, while $S_c$ = Standard deviation of the scores in the control group.

n1 = Number of students in the experimental group, while n2 = Number of students in the control group.

(Table 2)

<table>
<thead>
<tr>
<th>$\frac{(n-1) + (n+1)}{2}$</th>
<th>$t_{obs}$</th>
<th>$t_{crit}$</th>
<th>$H_0$</th>
<th>$H_1$</th>
</tr>
</thead>
<tbody>
<tr>
<td>58</td>
<td>3.65</td>
<td>1.7</td>
<td>Rejected</td>
<td>supported</td>
</tr>
</tbody>
</table>

$H_1$ = directional hypothesis  
$H_0$ = null hypothesis  
$t_{obs}$ = t- observed  
$t_{crit}$ = t-criterion
In this part, if $t_{obs} t_{crit}, H_0$(null hypothesis) will be rejected  
$H_1$(directional hypothesis) will be supported. As we see, the achieved $t$- observed stands to be more than the already established $t$-criterion, so $H_1$ is supported.

(Table 3) Mean, Variance and standard deviation of scores of two groups of students (Students of Architecture, Shabestar)

<table>
<thead>
<tr>
<th>Group</th>
<th>$\sum X/N$</th>
<th>Variance</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>$X_e = 15.81$</td>
<td>$V_e = 8.7$</td>
<td>$s_e = 2.95$</td>
</tr>
<tr>
<td>Control</td>
<td>$X_c = 12.95$</td>
<td>$V_c = 7.09$</td>
<td>$s_c = 2.66$</td>
</tr>
</tbody>
</table>
(Table 4) \[
\begin{array}{|c|c|c|c|}
\hline
(n-1) + (n + 1) & t_{\text{obs}} & t_{\text{cri}} & H_0 & H_1 \\
\hline
42 & 3.4 & 1.7 & \text{Rejected} & \text{supported} \\
\hline
\end{array}
\]

\(H_1\) = directional hypothesis  \(H_0\) = null hypothesis \(t_{\text{obs}}\) = t- observed \(t_{\text{cri}}\) = t-criterion
In this part, if \(t_{\text{obs}} > t_{\text{cri}}\) \(H_0\) (null hypothesis) will be rejected \(H_1\) (directional hypothesis) will be supported. As we see, the achieved \(t\)- observed stands to be more than the already established \(t\)-criterion, so \(H_1\) is supported.

(Table 5) Mean, Variance and standard deviation of scores of two groups of students (Students of Agriculture, Maragheh)

<table>
<thead>
<tr>
<th>Group</th>
<th>\sum X/N</th>
<th>Variance= \sum (X - \bar{X})^2/N-1</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>-20.35</td>
<td>4.51</td>
<td>2.12</td>
</tr>
<tr>
<td>Control</td>
<td>-15.5</td>
<td>3.9</td>
<td>1.98</td>
</tr>
</tbody>
</table>

(Table 6) \[
\begin{array}{|c|c|c|c|}
\hline
(n-1) + (n + 1) & t_{\text{obs}} & t_{\text{cri}} & H_0 & H_1 \\
\hline
38 & 7.57 & 1.7 & \text{Rejected} & \text{supported} \\
\hline
\end{array}
\]

\(H_1\) = directional hypothesis  \(H_0\) = null hypothesis \(t_{\text{obs}}\) = t- observed \(t_{\text{cri}}\) = t-criterion
In this part, if \(t_{\text{obs}} > t_{\text{cri}}\) \(H_0\) (null hypothesis) will be rejected \(H_1\) (directional hypothesis) will be supported. As we see, the achieved \(t\)- observed stands to be more than the already established \(t\)-criterion, so \(H_1\) is supported.

(Table 7) Mean, Variance and standard deviation scores of two groups of students (Students of Medicine, Tabriz)

<table>
<thead>
<tr>
<th>Group</th>
<th>\sum X/N</th>
<th>Variance= \sum (X - \bar{X})^2/N-1</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>-13.05</td>
<td>10.52</td>
<td>3.24</td>
</tr>
<tr>
<td>Control</td>
<td>-10.25</td>
<td>15.72</td>
<td>3.46</td>
</tr>
</tbody>
</table>

(Table 8) \[
\begin{array}{|c|c|c|c|}
\hline
(n-1) + (n + 1) & t_{\text{obs}} & t_{\text{cri}} & H_0 & H_1 \\
\hline
38 & 2.34 & 1.7 & \text{Rejected} & \text{supported} \\
\hline
\end{array}
\]

\(H_1\) = directional hypothesis  \(H_0\) = null hypothesis \(t_{\text{obs}}\) = t- observed \(t_{\text{cri}}\) = t-criterion
In this part, if \(t_{\text{obs}} > t_{\text{cri}}\) \(H_0\) (null hypothesis) will be rejected \(H_1\) (directional hypothesis) will be supported. As we see, the achieved \(t\)- observed stands to be more than the already established \(t\)-criterion, so \(H_1\) is supported.
(Table 9)  
\[ X = \text{mean} \quad v = \text{variance} \quad S = \text{standard deviation} \quad N = \text{number of students} \]

<table>
<thead>
<tr>
<th>Group</th>
<th>[ \sum X ]</th>
<th>Variance= [ \sum (X - \overline{X})^2 ]</th>
<th>Standard deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Experimental</td>
<td>[ \overline{X} = 12.5 ]</td>
<td>[ V_e = 15.15 ]</td>
<td>[ s_e = 3.9 ]</td>
</tr>
<tr>
<td>Control</td>
<td>[ \overline{X} = 9.5 ]</td>
<td>[ V_c = 1.36 ]</td>
<td>[ s_c = 3.51 ]</td>
</tr>
</tbody>
</table>

(Table 10)  
\[
\frac{(n-1) + (n+1)}{t_{obs}} \quad t_{cri} \quad H_0 \quad H_1
\]

<table>
<thead>
<tr>
<th></th>
<th>[ t_{obs} ]</th>
<th>[ t_{cri} ]</th>
<th>[ H_0 ]</th>
<th>[ H_1 ]</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>3.5</td>
<td>1.68</td>
<td>Rejected</td>
<td>supported</td>
</tr>
</tbody>
</table>

\[ H_1 = \text{directional hypothesis} \quad H_0 = \text{null hypothesis} \quad t_{obs} = t-observed \quad t_{cri} = t-criterion \]

In this part, if \[ t_{obs} \geq t_{cri} \], \[ H_0 \] (null hypothesis) will be rejected, and \[ H_1 \] (directional hypothesis) will be supported. As we see, the achieved \[ t_{obs} \] is more than the already established \[ t_{cri} \], so \[ H_1 \] is supported.

Conclusion

In conclusion, the results show that translation tasks can improve ESP students’ reading proficiency if we make proper and efficient use of them. That is to say, they are proved to be effective in raising students’ awareness toward language patterns and surface realization of scientific discourse. As we know, translation strategies by themselves do not solve our problems. We must use some plans or strategies in an attempt to solve our problems. Through using exercises, which are mostly translation exercises, it is intended not to train translators but to prepare ESP students for reading and understanding scientific texts. These translation tasks or activities should not be used as assessing devices but as a teaching device in ESP classes. That is, the change of aim would change the result.

According to some studies done during the research, and also based on the researcher’s experiences, it seems that students usually don’t like to participate in activities which are aimed at measuring their linguistic knowledge, and since they don’t participate naturally, translation tasks lose their effectiveness. ESP teachers are very important factors here, because they influence the results. So language teachers will do well, if they have expertise in both science and second language. Although we tried to use authentic and new materials in our ESP classes, one of the main problems in ESP classes in East- and West-Azarbaijan, is lack of authentic, useful, and new materials. Then, during the research, it was found that ESP students are not homogeneous and students in these classes are from different levels of proficiency, and our teachers have not been so effective with students at low levels. Finally, there is lack of learning motivation in our students, so they become frustrated. To conclude, our ESP courses need revision with regard to educational policies, materials, teachers and methodologies.

Implication

Translation tasks of inter-lingual, intra-lingual and inter-semiotic types can promote students’ reading ability of ESP materials. They will enable students to relate their knowledge of the subject matter in their mother tongue to make easy the process of learning a new language. These tasks or activities ask for complete understanding, and they can improve the students’ reading proficiency by promoting their awareness toward the similarities and differences between the two languages involved.

Suggestion for Further Research

As it was pointed out in the conclusion part, our ESP courses need revision with regard to educational policies, materials, teachers and methodologies. He teachers should use some meaningful and authentic materials in order to raise students’ consciousness toward teaching materials and make classroom atmosphere more interesting. So if teachers use some translation activities in the classroom, they can be very useful in sensitizing the students’ awareness toward the system of target language and at the same time in teaching them how to read.
REFERENCES

   *A Learning-Centered Approach*. Cambridge University Press.


   Oxford University Press.