

## Lexical Knowledge and Translation Ability

■ Parviz Birjandi

□□ Prof., English Dept. - Allameh Tabatabaei Uni.

### Abstract

*Translation, being a very complicated and challenging procedure, requires different knowledge areas, the most important of which are syntactic, semantic, cultural, stylistic and lexical. Insufficient knowledge in any of these areas will definitely lead to mistranslation or at least to inaccurate translation. Ignoring each of these factors may distort the meaning of the original text. Therefore, if translation studies focus on these areas, much more realistic and accurate results will be achieved.*

*This study, which was carried out at Islamic Azad University (Tehran-Central Branch) with 58 female undergraduate students of English Translation as subjects, aimed to investigate the impact of foreign language learners' lexical knowledge on their translation ability. Furthermore, the study examined the effect of foreign language proficiency on translation ability. For the purposes of the study, a battery of four tests was administered: an English Proficiency Test (EPT), a 60-item Test of Vocabulary, a Translation Multiple-Choice Test (TMT), and a Translation Production Test (TPT).*



*Through a number of correlational studies, it was found that there is a significant correlation between students' lexical knowledge and their translation ability. It was concluded that those students who scored higher on the vocabulary test had a higher command of translation and, therefore, the development of lexical knowledge of EFL learners would improve their ability in translation. This implies that in order to improve the learners' translation ability, teachers, testers, and material developers should also aim at increasing the learners' knowledge of vocabulary. Also, it was found that the degree of lexical knowledge correlated higher with TMT than with TPT. The results also indicated that there is a significant correlation between students' performance on TMT and TPT. Finally, a significant correlation was found to hold between the scores of EPT and those of translation tests.*

**Keywords:** Translation, Lexical, Knowledge, TMT, TPT.

## **Translation**

Translation is an art or a craft and therefore not amenable to objective, scientific description and explanation. Whether translation is considered as an art or a science, it is, in its modern sense, a by-product of a long history of trials and errors, developments, improvements, and innovations. (Miremmadi, 1993).

Although there is a vast body of literature on translation, offering a wealth of observations and views on the subject, the volume of literature is not necessarily indicative of the degree of understanding reached in this field. Steiner (1975) expresses this clearly. He believes that "despite the rich history, and despite the calibre of those who have written about the art and theory of translation, the number of original, significant ideas in the subject remains meagre". (p. 238)

Different viewpoints have been proposed for this situation. One is that there has been a lack of comprehensive approach to translation from both systematic and theoretical points of view. The other is that there has been unfruitful issues among translation theorists, such as whether translation should be literal or free, or whether

translation is possible or not. Another suggestion is that the understanding of translation has remained inadequate because it has never been studied in its own right, but merely as a sub-domain of some other subjects, such as literature or foreign language teaching. The other suggestion is that translation has always been considered a second-hand art and thus not given the prestige it deserves.

The limitations in the translation studies have been rooted in the controversial issues over what translation is. Therefore, translation itself should be defined in the first place. Catford (1965) believes that translation is just an operation performed on language, it is like a process of substituting a text in one language for a text in another. Newmark (1988) regards translation as a craft in which the translator makes an attempt to substitute a written message in the source language for another written message in the target language.

There are controversial arguments over the nature of translation and that's why it is difficult to give a definition for translation. For example, Steiner (1975) argues that the precisions to be achieved in translation are of an intense but unsystematic kind. He then concludes that the study of translation as a whole is not really a science. "What we are dealing with is not a science, but an exact art". (1975, p. 295)

Newmark (1988) states that, "Translation shares with the arts and other crafts the feature that its standards of excellence can be determined only through the informed discussion of experts or exceptionally intelligent laymen...". (p. 18)

Bassnett-McGuire (1989) believes that any debate about the existence of a science of translation is out of date. She states:

There already exists, with translation studies, a serious discipline investigating the process of translation, attempting to clarify the question of equivalence and to examine what constitutes meaning within that process. But nowhere is there a theory that pretends about the goal of the discipline to suggest that a comprehensive theory might also be used as a guideline for producing translation, this is a long way from suggesting that the purpose of translation is to be prescriptive. (p. 58)

The whole study of translation has been dominated by the debate about its status as an art or a science. The linguist approaches translation from a scientific point of



view, seeking to create some kind of objective description of the phenomenon. This is when some other scholars consider it as an art or a craft.

## **Translator**

The term "translator" has been defined as a bilingual mediating agent between monolingual communication participants in two different language communities, i.e. the translator decodes messages transmitted in one language and re-encodes them in another. Bassnett-McGuire (1980) believes that the translator is both a receiver and an emitter, the end and the beginning of two separate but linked chains of communication. According to her explanation, "theory and practice are indissolubly linked, and are not in conflict" (Bassnett-McGuire, 1989). She is against creativity in translation and believes that understanding of the processes can only help in the production and, since the product is the result of a complex system of decoding and encoding on the semantic, syntactic and pragmatic levels, it should not be evaluated according to an outdated hierarchical interpretation of what constitutes creativity.

According to Bell (1991, p. 36), the translator must have semantic, syntactic and pragmatic knowledge. Lack of knowledge or control in any of the three cases means that the translator could not translate. Without semantic and syntactic knowledge, even literal meaning would elude the translator. Without pragmatic knowledge, meaning would be limited to the literal (semantic sense) carried by utterances which would lack functional coherence and communicative value.

## **Theory of Translation**

A theory of translation explains what translation is, how it works and how it fits into human communications. Bassnett-McGuire argues that the purpose of translation theory is not to provide a set of norms for affecting the perfect translation, but to reach an understanding of the process undertaken in the act of translation. There are different views regarding the theory of translation.

A theory of translation as a process (i.e. a theory of translating) would require a study of information processing and, within that, such topics as perception, memory and the encoding and decoding of messages, and would draw heavily on psychology and psycholinguistics.

A theory of translation as a product (i.e. a theory of translated texts) would require a study of texts not merely by means of the traditional levels of linguistic analysis (syntax and semantics) but also by making use of stylistic and recent advances in text-linguistics and discourse analysis.

A theory of translation as both process and product (i.e. a theory of translating and translation) would require the integrated study of both and such a general theory is, presumably, the long-term goal for translation studies (Bell, 1991, p. 26).

Translation theory's main concern is to determine appropriate translation methods for the widest possible range of texts or text-categories. Furthermore, it provides a framework of principles, restricted rules and hints for translating texts, criticizing translations, and a background for problem-solving. Translation theory also attempts to give some insight into the relation between thought, meaning and language; the universal, cultural and individual aspects of language and behavior, the understanding of cultures; the interpretation of texts that may be clarified and even supplemented by way of translation.

One of the knowledge areas which is directly related to translation is the knowledge of vocabulary. It is obvious that without knowing the meaning of words, no one can translate a text and, consequently, no translation can take place.

## **Vocabulary**

The term vocabulary refers to a list or set of words for a particular language or a list or set of words that individual speakers of a language might use. The term lexicon refers to the overall system of word forms. Anderson and Freeboy (1981) claim that the correlations between knowledge of word meanings and ability to comprehend passages containing those words are all high and well established in first language studies. In fact, they believe that vocabulary knowledge is an excellent predictor of general language ability. Two different kinds of vocabulary have been distinguished by Miller, namely sight vocabulary and meaning vocabulary. According to Miller (1973), sight vocabulary is recognized by word form clues, the total shape of the word, or special characteristics in the word. Meaning vocabulary is the second aspect of the vocabulary development. Miller (1973) also believes, "if a student doesn't



know the meaning of a word in a particular context, it does little good for him to recognize the word by sight. Of course, a word can have many different meanings, depending upon its use in context. The more meanings a student has for a particular word, the more likely he will be to attain the exact comprehension of a passage that is intended" (p. 1633).

As is obvious, vocabulary is made up of words. But what is a "word"? A word is an arbitrary pairing of sound and meaning. This relationship is arbitrary. Words can be divided into simple and complex forms, depending on whether they include one morpheme or two or more, respectively. There are also two kinds of words namely, structure words and content words. Structure words are learned early, partly because they recur so frequently, but more importantly because a reasonable sample of them must be mastered for a student to comprehend readily and translate meaningfully in any context. They are the mortar that holds the content words, or bricks, together, with specific patterns including relationships between the lexical meanings of the content words. So information can be exchanged. Learning a language has been proved to be based on knowing its components. Vocabulary learning is just like any other kind of learning and can be explained with reference to a general theory of learning.

## The Study

It has been agreed that efficient translators must have a good knowledge of the source language, the target language, and the content. In the present study, an investigation has been made to detect the possible relationships between lexical knowledge and translation ability.

To achieve the purpose of the study, the following research questions were addressed:

1. Is there any significant relationship between the foreign language learners' knowledge of vocabulary and their translation ability?
2. Do the scores on a vocabulary test correlate higher with translation multiple-choice test scores than with translation production test scores?

3. Is there any significant relationship between a multiple-choice test of translation and a production test of translation in assessing the translation ability?
4. Is there any significant relationship between the foreign language learners' language proficiency and their translation ability?
5. Is there any significant relationship between the foreign language learners' knowledge of grammar and their translation ability?
6. Do translation scores (TMT & TPT) correlate higher with vocabulary scores than with grammar scores?

## **Method**

### **Subjects**

The subjects who participated in this study consisted of 58 female undergraduate students, majoring in English translation at Islamic Azad University (Tehran – Central Branch) who had passed between 5 to 7 courses in English translation. They were selected from among 120 students who took the language proficiency (TOEFL) test as a pre-test. The researcher selected those students whose language proficiency scores were at most one standard deviation above or below the mean. The subjects were also homogeneous regarding their sex, age, and nationality.

### **Instrumentation**

Four instruments were utilized in this study:

#### **1. English Proficiency Test (EPT)**

The TOEFL test was used as a pre-test in order to select subjects with similar English language proficiency levels. This test consisted of 40 grammar items, 30 vocabulary items, and 30 reading items.

#### **2. Vocabulary Test (VT)**

A 60-item vocabulary test (taken from NTC's preparation for the TOEFL, 1992) was used to detect the degree of vocabulary knowledge of the subjects.



### **3. Translation Multiple-Choice Test (TMT)**

This test consisted of 23 items based on four brief informative texts in English. Each text was broken up into its component sentences. Each sentence was then used as a stem, and four different options of Farsi translations were given for it. The subjects were required to choose the most accurate and natural translation equivalent for each sentence from among the given choices.

### **4. Translation Production Test (TPT)**

This test consisted of the same four texts used in TMT. The subjects were required to translate the texts from English to Farsi.

The translation tests used in this study had originally been used in an earlier research by Birjandi and Farahzad (1996). However, the researcher performed a pilot study and revised some of the items.

## **Procedure**

### **Administration**

To accomplish the purposes of the study, first, the EPT was administered as a pre-test. One week later, a vocabulary test was given to the subjects in order to determine their level of lexical knowledge. Then the TMT was administered in the third week to assess their recognition ability. The TPT was administered with a time span of one week to determine the subjects' translation ability.

### **Scoring**

The TOEFL and vocabulary tests were scored objectively. The TMT was also scored objectively using the key of correct responses. The TPT scoring was, however, complicated. It had to be scored subjectively and the scoring was analytical. For minimizing the subjectivity of scoring, a scale was developed which evaluated four factors, namely, the choice of words, syntax, naturalness and comprehension. Two experienced instructors teaching translation courses at Azad University were requested to score the papers on the basis of the above factors. Since, the TPT was composed of 4 informative texts, each text was given a score of 5, and thus the total



score summed up to 20. Each of the factors mentioned above was also given one point.

## Data Analysis

A number of correlational studies was carried out in order to provide answers for the research questions of this study.

First, the inter-rater reliability was calculated using the Pearson-Products Moment formula. The inter-rater reliability between the two sets of scores turned out to be 0.82 which was satisfactory. Then, descriptive statistics was used to summarize and describe the sample data and to render an overall view of the results.

In the first analysis, a correlational study was carried out to compare the results of the VT with those of TMT. The results are presented in Matrix 1. As can be seen in the Matrix, the correlation coefficient between these two measures is 0.84. The  $r_{\text{observed}}$  exceeds the  $r_{\text{critical}}$ , so the relationship is significant. The common variance between these two measures was 0.70. The magnitude of  $r^2$  indicated that the variation in vocabulary scores accounted for about 70 percent of the variation among translation scores which is more than a half. Therefore, on the basis of high correlation and common variance between these sets of scores, the first null hypothesis was rejected, meaning that there is a significant and strong relationship between lexical knowledge and translation ability. One may cautiously conclude that those who have a high command of vocabulary are expected to score high on the TMT, too. As a result, the high correlation coefficient and substantial common variance between the vocabulary test and TMT may indicate that those students of translation who have a higher command of English vocabulary seem to possess a

**Matrix 1: Pattern of correlation between VT, TMT and TPT**

	VT	TMT	TPT
VT	1	0.84	0.77
TMT	0.84	1	0.76
TPT	0.77	0.76	1
N = 58,	p < 0.05	df = 56	critical r = 0.25



higher translation ability, which does not necessarily mean that they are able to produce better translations.

In the second analysis, a correlational study was performed to provide an answer for the second research question. The results are presented in Matrix 1. The result signified that the relationship between FLLs' lexical knowledge and their translation ability assessed by the TPT is also high. The correlation coefficient between these two sets of scores was 0.77. The result indicated that there is a strong relationship between vocabulary knowledge and translation ability, since  $r_{\text{observed}}$  exceeded the  $r_{\text{critical}}$ . The common variance ( $r^2$ ) between these two measures was 0.59. The magnitude of  $r^2$  signified that the variation in the two sets of scores overlapped about 59 percent, which is more than a half and only 41 percent was not shared by the two sets of scores. So, the relationship is substantial and significant. The correlation between the test of vocabulary and the TMT was higher than the one between VT and the TPT. As a result, the second null hypothesis was refuted. Vocabulary scores correlated higher with the TMT than with TPT.

Regarding the third research question, a correlational study was carried out to compare the results of TMT with TPT. The correlation coefficient between these two sets of scores is presented in Matrix 1. As can be seen in the Matrix, the correlation coefficient is indicative of a positive relationship between TMT and TPT. The relationship is significant since the  $r_{\text{observed}}$  exceeded the  $r_{\text{critical}}$ . The common variance ( $r^2$ ) between these two sets of scores was 0.58 which is more than a half. The overlap is moderate and tells us that the two measures are providing similar information. As a result, the substantial correlation between these two measures signified that there is a significant relationship between TMT and TPT in assessing translation ability. However, it should be taken into account that the nature of these two tests is completely different. TMT is related to recognition while TPT is related to production. Therefore, in spite of the high correlation between these two tests, they cannot substitute one another and they should be used together and as complements of each other in assessing translation ability.

The fourth analysis was performed to investigate the pattern of correlation between EPT scores and TMT. The results are presented in Matrix 2. The

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correlation coefficient between these two measures was 0.60. The common variance ( $r^2$ ) between these two measures was 0.36. The  $r_{\text{observed}}$  is larger than the  $r_{\text{critical}}$ , so the relationship is significant. The magnitude of  $r^2$  indicated that the variation among language proficiency scores accounted for about 36 percent of the variation among translation scores. The overlap is less than a half, so the relationship is moderate. Those subjects who scored higher on EPT seemed to attain higher scores on the TMT.

**Matrix 2: The pattern of correlation between EPT, TMT and TPT**

	EPT	TMT	TPT
EPT	1	0.60	0.57
TMT	0.60	1	0.76
TPT	0.57	0.76	1
N = 58,	p < 0.05	df = 56	critical r = 0.25

The correlation coefficient between EPT and TPT was also calculated. The results are presented in Matrix 2. The correlation coefficient between these two measures was 0.57. The relationship is also significant since the  $r_{\text{observed}}$  exceeded the  $r_{\text{critical}}$ . The common variance ( $r^2$ ) between these two measures was 0.32 which indicated that the overlap between these two measures is less than a half. As a result, the fourth null hypothesis is refuted. There is a significant relationship between language proficiency and translation ability. Those subjects who scored higher on EPT seemed to obtain higher scores on TPT. It was also noticed that the correlation coefficient between the scores of EPT and TMT are higher than the ones between EPT and TPT. This might be due to the similarity in the format of EPT and TMT, since they both ask for the recognition ability of the students.

In the fifth analysis, a correlational study was carried out to provide an answer for the fifth research question. The results are presented in Matrix 3. The correlation coefficient between STR and TMT was 0.55. The  $r_{\text{observed}}$  exceeded the  $r_{\text{critical}}$ , so the relationship is significant. The common variance between these two measures was 0.30 which is less than a half. The magnitude of  $r^2$  indicated that the variation in



**Matrix 3: The pattern of correlation between STR, TMT and TPT**

	STR	TMT	TPT
STR	1	0.55	0.51
TMT	0.55	1	0.76
TPT	0.51	0.76	1
N = 58,	p < 0.05	df = 56	critical r = 0.25

the two sets of scores overlapped about 30 percent and 70 percent of the variation is not shared by the two sets of scores. The correlation coefficient between STR and TPT was 0.51 which exceeded the critical r. So, the relationship is significant. The common variance between these two sets of scores was 0.26 which is very low. The magnitude of  $r^2$  indicated that the variation in STR scores accounted only for about 26 percent of the variations in TPT. Comparison of these two correlations revealed that the correlation coefficient between STR and TMT is higher than the one between STR and TPT. This fact might be due to the similarity in format of the tests.

In the sixth analysis, a comparison was made between the correlations of VT with TMT & TPT, and STR with TMT & TPT in order to provide an answer for the sixth research question. The results indicated that translation scores correlated higher with vocabulary scores than with grammar scores. Lexical knowledge and syntactic knowledge both have positive relationships with translation ability, but lexical knowledge is highly correlated with translation ability. Therefore, the sixth null hypothesis is rejected. It may be suggested that vocabulary knowledge affects translation ability more than grammar knowledge does.

## Conclusions

The present study was an attempt to study the impact of lexical knowledge on translation ability.

The research carried out revealed the impact of lexical knowledge on translation ability. It showed that there is a significant relationship between lexical knowledge and translation ability. Those subjects who scored higher on translation, had a higher

command of vocabulary. It can be concluded that taking precautions to improve the student's lexical competence might have positive effects upon improving his/ her translation ability. However, it should be taken into consideration that TMT served merely as a recognition test, which differs from a test of translation in nature and the subjects only have to choose the correct response. Furthermore, the vocabulary test was a recognition test and, therefore, it was presented in the same form as the TMT. In both cases, the subjects did not produce anything, but were merely required to recognize and select the correct choice. These two facts might have contributed to the increase of the correlation between vocabulary test and TMT.

The vocabulary scores correlated higher with TMT than with TPT. It can be concluded that the subjects' command of recognizing the correct translation is higher than their skill in producing a translation. In other words, their passive knowledge of translation is better than their active and actual translation ability. But as mentioned earlier in the first comparison, the difference might be due to a similarity in format and also to a similarity in cognitive processes required for successful performance on recognition tests.

Furthermore, it was concluded that there was a significant relationship between TMT and TPT. In spite of the high correlation between these two tests, they cannot substitute one another in all situations. The reason is that the nature of these two tests are completely different. However, considering the fact that they correlate positively with each other, TMT can be used instead of TPT in classroom settings where the target aspect of assessment is more important. When serious decision-making is involved, the production ability of the testees has to be assessed at any cost. A better suggestion is that since the nature of these two tests are completely different, i.e. one is related to recognition and competence while the other is related to production and performance, these two tests should be used as complements of each other in assessing translation ability.

The subjects' level of language proficiency also positively correlated with their translation ability. Those subjects who scored higher on the TOEFL showed a higher command of translation but the relationship was moderate. Therefore, it can be concluded that language proficiency is a necessary but not sufficient factor in translation.



The relationship between syntactic knowledge of the subjects and their translation ability was also positive and significant. Those subjects with higher scores on the grammar test, scored higher on the translation tests. This revealed that there is a relationship between syntactic knowledge and translation ability. But since the overlap was low, it was concluded that the grammar knowledge is a necessary but not sufficient factor in translation. The correlation between STR and TMT was also higher than the one between STR and TPT. This fact will also support the idea regarding the uniformity of items in the format of the tests.

The translation scores correlated higher with vocabulary scores than with grammar scores. Those subjects with better performance on vocabulary scored higher on translation than those with better performance on grammar. The reason may be that lexical words have a greater role in meaning than function words and grammatical structures. Therefore, to translate better, it is more crucial to understand the meaning which is more dependent on the lexical words rather than on grammar.

From all the statistical analyses carried out in this study, the conclusion drawn is that lexical knowledge may contribute to the development of translation skills and thus, results in an increase in translation scores. A closer look indicates that lexical knowledge contributes to the conceptual comprehension of the text which obviously results in better translation.

## **Pedagogical Implications**

Usually descriptive researches reveal their value when their results can provide implications in three interrelated areas of teaching, testing and materials development. The findings of this research may, therefore, be used in language programming and materials development.

Since the subjects' lexical knowledge was shown to correlate with their translation ability, teachers can consider the improvement of their students' lexical knowledge as an important factor in developing their translation ability. Vocabulary exercises can be used in translation classes. Instructors can use different techniques for teaching vocabulary. Since the degree of syntactic knowledge and the level of

language proficiency also correlated with translation ability, teachers should consider the importance of this fact and pay more attention to these areas. For instance, they can use a more grammar-oriented approach in their classes and also give proficiency tests at the beginning of each class to assess the students' language ability.

Translation tests can be used for both achievement and prognostic purposes in educational and vocational settings. By improving the quality of these tests, testers can make accurate decisions on the basis of the test results. Language testers might be able to use translation tests as integrative tests which can tap students' lexical knowledge, syntactic knowledge, etc. So it is recommended that a translation subpart be added to those tests which aim to measure students' language proficiency. The present tests of translation can be improved by paying more attention to the lexical knowledge of students, specially with regard to technical terminologies.





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