

Schema of Translators and Its Influence on Translation Quality: A Case Study of the Iranian Undergraduate Literary Translation Students *

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Abstract

This article is a research on the effects of background knowledge (Content and Linguistic schemata) on the translation quality of Iranian undergraduate literary translation students. In order to conduct the research, the Treatment and Control group design was used. The participants of this study were randomly divided into three groups. All the participants were assigned to do an English to Persian translation production test after the treatments. In an attempt to arouse schemata, the experimental group 1 and experimental group 2 were given pre-translation, schemata-activating materials, while the Control-group engaged in translation test without any preliminary schemata-inducing activities. The treatment for the first experimental group consisted of being exposed to content background knowledge (schemata) about the topic of the translation. The treatment for the second experimental group consisted of being exposed to Linguistic background knowledge about the topic of translation. In the meantime, the control group was not given any treatments. The schemata-inducing activities were of two types: for content schemata, we used reading Persian domain specific texts referring to the content area of the text to be translated. For linguistic schemata, we used memorizing English technical terminology and their Persian equivalents. Outputs of the three groups were evaluated by three raters according to Waddington's TQA model (2001) to assess the impact of background knowledge. The statistical analysis revealed that both content schemata and linguistic schemata improve the quality of translations. Moreover, it was revealed that linguistic schemata better improves translation quality than content schemata.

Keywords: Background knowledge, Content schemata, Linguistic schemata, Translation Quality, TQA (Translation Quality Assessment)

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1. INTRODUCTION

Research on the psychological processes involved in comprehension clearly shows that what we understand of something is a function of our past experience, our background knowledge, or what are sometimes more technically called our schemata (Bartlett, 1932, Rumelhart and Ortony, 1977, Rumelhart, 1980). Different researchers use different labels for the concept of background knowledge; in addition to schemata, other terms commonly used are frames (Fillmore, 1976), scripts (Schank and Abelson, 1977), event chains (Warren, Nicholas and Trabasso, 1979), and expectations (Tannen, 1978). Research in reading supports the notion that activating prior knowledge or knowledge of the world and applying this knowledge to new input greatly facilitates processing and understanding (Christen & Murphy, 1991; Graves & Cook, 1980; Hayes & Tierney, 1982; Stevens, 1982). Understanding the text is a prerequisite factor in translation/ interpreting process and it helps translators/ interpreters to construct the best possible translation/interpreting. Accordingly, the effect of activating different types of prior knowledge on translation quality could be of paramount importance to translator trainers and trainees. Generally, there are three major types of schemata, namely content schemata, formal schemata and linguistic schemata which are closely related to comprehension of the SL. Content schemata refer to the background knowledge of the content area of a text, or the topic a text talks about. They include topic familiarity, cultural knowledge and previous experience with a field. Content schemata deal with the knowledge relative to the content domain of the text, which is the key to the understanding of texts. Linguistic schemata refer to readers' existing language proficiency in vocabulary, grammar and idioms. Formal schemata are the organizational forms and rhetorical structures of written texts. They include knowledge of different text types and genres, and also include the knowledge that different types of texts use text organization, language structures, vocabulary, grammar and level of formality differently.

2. REVIEW OF LITERATURE

2.1. Schemata and Translation

Few empirical studies have explored the potential effect of prior knowledge and translation quality. Kim (2006) indicated that having access to background information does have an effect on translation quality, in the second phase of the study he concluded that while background information quality had a significant influence on the translation quality, background information quantity had little effect. Shadman (2013) revealed that reading Persian economic texts better improves translation quality than memorizing English economic terminology. In her study reading Persian economic texts was used as the content schema-arousing material and memorizing English to Persian economic terminology was utilized to activate the linguistic schemata of the participants.

2.2. Schemata and Listening Comprehension

On the contrary, when it comes to the effect of schema on language skills, there has been much research exploring schemata and language skills such as Listening and Reading comprehension. Some researchers (e.g. Christine & Christa, 1995) believe that listeners' linguistic knowledge and background knowledge are the essential factors that could affect their understanding of the foreign language. Using clues from the context and their background knowledge to understand an overall text enables learners to reduce the intensity of listening effort (Hasan, 2000) as well as to improve their listening comprehension skill.

Markham and Latham (1987) concluded that background knowledge does significantly influence ESL students' listening comprehension. Hohzawa (1998) found that listeners with high prior knowledge understood more familiar text than unfamiliar text and more proficient L2 listeners understood more than less-skilled listeners in either familiar or unfamiliar text. Sadighi and Zare (2002) explored the effect of background knowledge on listening comprehension. A statistical analysis of the results provides some evidence in support of the effect of background knowledge on listening comprehension. The results showed that the four groups performed differently on the post-test, which indicated that greater familiarity with specific

culturally-oriented language listening material would improve Iranian EFL learners' listening proficiency.

All the above literature reviews the influence of different types of schema on listening comprehension. These researchers investigated different types of schema for example Markham and Latham (1987) investigated religious-specific background knowledge.

However, there are some conflicting results, for example Chiang and Dunkel (1992) reported that content knowledge did not support comprehension of listening to monologue texts, whereas L2 proficiency played a significant role in the degree of L2 listening comprehension demonstrated. Similarly, Jensen and Hansen (1995) reported that listening comprehension performance of L2 learners was mainly affected by their level of L2 proficiency, not by their prior knowledge. Additional studies are required to establish the relationship between background knowledge and L2 proficiency in L2 listening comprehension, especially in examining the specific roles learners' L2 proficiency and background knowledge play in comprehension.

2.3. Schemata and Reading Comprehension

Research in reading supports the notion that activating background knowledge and applying this knowledge to new input greatly facilitates processing and understanding (Graves and Cook, 1980).

Research on content schemata consists of Steffensen, Joag-dev, and Anderson (1979), and Johnson (1981)'s study. Their findings suggest that text which contains culturally- familiar content schema is easier to process. Conversely, research that studied the effects of formal schemata found that familiar formal schemata helped subjects better recall protocol information. So generally speaking, Schema has an effect on Reading comprehension which is in line with the findings of this study that schema affects translation quality.

Carrell (1987) explored the simultaneous effects of both formal and content schemata on ESL reading comprehension. The outcome supported the results of previous studies that reading is easiest when both content and form are familiar and that reading is the most difficult when both are unfamiliar. When either form or content was unfamiliar, it was revealed that unfamiliar content schemata affected reading comprehension to a greater extent than formal schemata. In

other words, reading familiar content even in an unfamiliar rhetorical form is relatively easier than reading unfamiliar content in a familiar rhetorical form.

3.METHODOLOGY

3.1. Subjects

The subjects taking part in this study were undergraduate students majoring in English translation in Shahid Bahonar University of Kerman. The total number of participants was 90, but certain subjects were omitted due to their unsuitability. Three groups of subjects were needed for the study. They were randomly selected from the students enrolled in translation courses. The Control group was assigned a translation task without any background knowledge about the topic of the translation. The experimental group 1 was given Content Background knowledge (schemata) in the form of reading Persian domain specific texts referring to the content area of the text to be translated before the task of translation. The experimental group 2 was given Linguistic Background knowledge about the topic of translation in the form of sufficient domain-specific (technical) English terminology and their Persian equivalents.

As noted earlier, the initial number of subjects included in the study was more than 90. However, this number had to be reduced to 90 in the course of conducting the study due to 2 main reasons. Firstly, some of the participants did not translate the whole text so their translation was not rated. The researcher decided to omit them from the course of the study. A few other subjects had to be removed from the study for a different reason, which will be elaborated below. Some of the participants were omitted by the class instructor's idea since they believed the participants did not suit to attend the test.

Prior to administering the translation test, all the subjects were given sufficient explanation as to the objective and significance of the study and asked to do the tests carefully. Following the administration of the test, however, it was observed that a few of the participants had not taken the test with due care and attention. The way they had completed the provided translation pointed to the fact that they had not properly concentrated on the test. These few careless individuals had to be omitted from the analysis as well in order for the subsequent analyses and comparisons between the three groups to be meaningful and reliable.

3.2. Instrument

Three instruments were used in the present study. The researcher conducted a translation production test and distributed two schemata arousing materials. The two schema materials (content & linguistic) were administered one week before the translation production test. The researcher elaborated on the significance and procedure of the study in the presence of the class instructor.

3.3. Procedures

3.3.1. Data Collection

A translation production test, a Content schema material and a Linguistic schema material were administered in this study. Before distributing the materials to the participants, they were informed briefly about the purposes of the study and the possible implications its results may have for translation trainers and translation students. As administering the materials to all participants in one setting was not possible, the researcher had to resort to multiple settings while keeping the conditions identical in terms of procedure, and usage of accessories. First, the researcher divided the participants of the class into three equal random groups. As discussed earlier, the Experimental – Control group design was used in the case of this study. The First experimental group was given the Content background knowledge material to be read before coming to class next session. The Second experimental group was given the Linguistic background knowledge material to be read before coming to class next session. The participants in control group were not informed about the true nature of the research. The experimental groups had one week time to go over the materials. The first experimental group were supposed to read the Content schema including fifteen Persian Political passages related to the topic of the translation test. The participants in the second experimental group were supposed to memorize the English terminology and their Persian equivalents (linguistic schema material).

The researcher administered the translation test to the participants the session after distributing the schema materials in the presence of the instructors. The maximum time allocated for administering the tests was 60 minutes. As it was assumed that some of the participants may not go over the schemata arousing materials, regarding different

reasons such as lack of interest and time, the researcher asked them to let us know about that. The researcher put such participants in the control group i.e No Background Knowledge group. This way helps to have more reliable results.

3.3.2. Data Analysis

Waddington's (2001) Translation Quality Assessment Method was used to rate the translations. It has four methods, in the case of this study the holistic approach (method C) was chosen. Three raters whose inter-rater reliability had been established rated the translations of the 90 participants. The researcher used Pearson Correlation Coefficient to measure the raters' reliability. Raters in both the control and experimental groups enjoyed a significant inter-rater reliability. The two experimental groups and control group were assigned to do the same task of translation. Translations from all three groups were graded by three raters according to Waddington's model (2001). The translations were mixed in random order and judges were not provided with any information regarding the experiment treatment.

The mean score of each group was measured by SPSS (Statistical Package for the Social Sciences) software. In the case of this research one-way ANOVA was used to compare the mean score of the groups. There was a significant difference between the mean score of the three groups, so a scheffe post-hoc test was run to provide specific information on which means are significantly different from each other. The researcher also considered the two assumptions of ONE-WAY ANOVA i.e. normal distribution of the data and the homogeneity of the variances.

3.4. Research Questions

In keeping with the purpose of the study, which was to see whether sufficient background knowledge (Content and Linguistic schemata) affects translation quality, the following research questions were raised:

Q1: Does sufficient content background knowledge (schemata) of the translator have any significant effect on the quality of translation he/she produces?

Q2: Does sufficient Linguistic background knowledge (schemata) of the translator have any significant effect on the quality of translation he/she produces?

Q3: Which type of background knowledge (Content or Linguistic) is more associated with translation quality?

4. RESULTS AND DISCUSSION

As the translation production test was administered among the participants of the study, three raters evaluated the translations separately. The translations were mixed in random order and judges were not provided with any information regarding the experiment treatment. The researcher used Pearson Correlation Coefficient to measure the raters' reliability. Raters in the control and experimental groups enjoyed a significant inter-rater reliability.

Table 3 reveals the correlation coefficient between Rater 1 and 2 scores was 0.628, that of Rater 1 and 3 was 0.786, and Rater 2 and 3 was 0.759 which were all significant at 0.01 levels in a two-tailed test.

Table 4 reveals the correlation coefficient between Rater 1 and 2 scores was 0.856, that of Rater 1 and 3 was 0.813, and Rater 2 and 3 was 0.885 which were all significant at 0.01 levels in a two-tailed test.

Table 5 reveals the correlation coefficient between Rater 1 and 2 scores was 0.599, that of Rater 1 and 3 was 0.750, and Rater 2 and 3 was 0.677 which were all significant at 0.01 levels in a two-tailed test.

For values between 0 and 1, Cohen (1988:79-81) interprets $r = .10$ to $.29$ as small; $r = .30$ to $.49$ as medium and $r = .50$ to 1.0 as large values of relationship. The size of the value of the correlation coefficient in this study indicates that there is a very large value of relationship between the scores of the three raters.

To explore the performance of control and experimental groups on the translation production test administered, one-way ANOVA analysis should be employed. Prior to this of course, the assumptions for running this parametric test had to be checked, i.e. 1. All the populations from which the samples are drawn must follow the normal probability distribution. 2. All the populations from which samples are drawn must have the same variance (Homogeneity of variance)

Normality of Distribution

Below is the table which presents the results from the test of normality, namely the

Kolmogorov-Smirnov Test and the Shapiro-Wilk Test. We can see from the above table that for the " No Background Knowledge ", " Content Background Knowledge " and " Linguistic Background Knowledge Group" the dependent variable, "Translation score", was normally distributed. Since the **Sig.** value of the Shapiro- Wilk Test is greater the 0.05, the data is normal. $P > 0.05$, If it is below 0.05, the data significantly deviate from a normal distribution.

Homogeneity of Variances

The p value is .153. Because the p value is greater than the α level, it implies that there is little evidence that the variances are not equal and the homogeneity of variance assumption may be reasonably satisfied.

To explore the performance of control and experimental groups on the translation production test administered, one-way ANOVA analysis was employed.

Table 8 shows the results of the analysis. As can be seen, the mean scores of the three groups differ significantly from each other. ($f=21.92, p < 0.05$)

We can see that the significance level is 0.00 ($p = .000$), which is below 0.05. and, therefore, there is a statistically significant difference in the mean score between the different courses taken. This is great to know, but we do not know which of the specific groups differed. Luckily, we can find this out in the Multiple Comparisons Table which contains the results of post-hoc tests.

Scheffe post-hoc multiple-range test

The analysis of variance showed just the difference among the three groups, A Scheffe post- hoc multiple-range test was selected as an option in the ANOVA just described to see where exactly the difference between the groups lies.

Table 9 demonstrates that the difference in mean scores among the three groups is significant at $p < 0.05$ and participants with Linguistic Background Knowledge have obtained higher scores in Translation Test than the other two groups.

As with the first research question, the results revealed a significant difference among the means among the groups. ($f=21.92, p < 0.05$)

The Scheffe post hoc revealed that the mean score of the Content Background knowledge group was significantly different from the mean score of the Control group ($\rho = .001$)

So, based on the results obtained, the first null hypothesis is rejected. As with the Second research question, the results revealed a significant difference among the means *among the groups*. ($f=21.92$, $p<0.05$)

The Scheffe post hoc revealed that the mean score of the Linguistic Background knowledge group was significantly different from the mean score of the Control group ($\rho = .000$)

Thus, based on the observed results, the second null hypothesis is also rejected

As with the Third research question, the results revealed a significant difference among the means among the groups. ($f=21.92$, $p<0.05$)

The Scheffe post hoc revealed that the mean score of the Linguistic Background knowledge group was significantly different from the mean score of the Content Background Knowledge group ($\rho=.032$) It means that linguistic background knowledge is more associated with translation quality.

Thus, based on the observed results, the third null hypothesis is also rejected.

5. CONCLUSION

This study examined the effect of different types of background knowledge (schema) on translation quality. The research provided evidence that background knowledge has an effect on the English-to-Farsi translation performance of translation students. The results showed that the mean score of the three groups differed significantly which means background knowledge affects translation quality. The results of the Scheffe post-hoc test confirmed Linguistic background knowledge is more associated with translation quality of students. In other words, students with linguistic schema performed better in translation test than students with content schema.

The aforementioned findings of this study have shown that there was a significant difference among translation scores of Shahid Bahonar University of Kerman Translation Students with different types of background knowledge about the topic of translation. They may be

considered as a representative sample of a larger group of Iranian students. Concordantly, the researcher suggests the following pedagogical guidelines:

Firstly, it can be concluded that improving Iranian students' background knowledge (through various techniques etc.) can be considered as one of the factors that should be included in our education system to enhance the translation performance of students. When different types of background knowledge affect translation quality, translation instructors can apply procedures to improve students' background knowledge level and consequently improve their translation quality. So it is essential to inform instructors and teachers about the benefits of improving students' background knowledge level in their translation work.

Secondly, the effectiveness of students' background knowledge can be also put into consideration in syllabus designing and teachers' training courses. Teachers can be given training on how to improve students' background knowledge on the routine teacher training courses in Iran. Alongside considering this factor in teacher training courses, it can also be included in teachers' guidebooks for the learners' textbooks. They could include tasks and techniques to improve the students' background knowledge. To this end, a group of syllabus designers and material developers can cooperate with teachers and learners themselves, to receive ideas from them in the process of producing the required materials. Thirdly, the findings of the study confirm the idea of training specific field translators. In this way, translators who are expert in translating different text-types or genres produce high quality products. The translator trainers can identify the student's field of interest and focus on that specific field by exposing them to different types of background knowledge and experience concerning the field.

Of course as translation studies appear to be a somewhat new discipline, especially in Iran, there is the growing need for such researches which could shed light on the discipline and help other researchers to find the answer of their questions regarding different factors affecting the process of translation. Such researches can also encourage different scholars and instructors to examine this discipline more systematically in order to equip their students with more detailed knowledge about translation and as a result become better

translators. All this of course would impact the pedagogical procedures of translation studies as a discipline.

The following suggestions are made by the researcher for further investigation in this area of study.

1- In the present study, the researcher did not consider the demographics of the participants. Other studies may focus on factors such as age, nationality, proficiency level, ethnicity, etc of participants.

2- The translation text in this study was a political passage which was taken from "Translating Texts In Politics" written by Tajvidi (1379). Further studies are required to examine the effect of different types of background knowledge(schemata) in translating other genres.

3- In this study, the effect of two types of schema i.e Content and Linguistic on translation quality was explored. Other studies may focus on other types of schema for instance formal schema.

4- For the translation assessment part of the study, the researcher evaluated only the overall quality of the students' translation; he chose Waddington's holistic method of TQA. Further research can investigate other TQA models which are more objective than the one conducted in this study.

5- The participants of this study were undergraduate students, other research can investigate the results on graduate and post-graduate students since they are more equipped with translation strategies and procedures and translation methods. More years of experience and academic knowledge may affect the current results.

6- Further studies, may investigate other aspects of effect of schema on translation for example how quality and quantity of different types of schema affects the translation product.

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