EFFECT OF CONTENT SCHEMA, VOCABULARY KNOWLEDGE, AND READING COMPREHENSION ON TRANSLATION PERFORMANCE

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Abstract: Schemata refer to all kinds of knowledge which are gained throughout the lifetime. Few studies have attempted to integrate schema theory with vocabulary knowledge and reading comprehension, which are two other crucial factors in translation and learning. Thus, the present research aimed at delineating the potential effect of these three factors on translation performance of Iranian undergraduate students majoring in translator training. To this end, 172 Iranian undergraduate students majoring in translator training were selected based on two-step cluster sampling. To collect data, the participants answered a set of 6 open-ended questions to measure the students' content schema along with a vocabulary size test, reading comprehension test, and translation task. To analyze data, Pearson correlation coefficient as well as stepwise multiple regressions were conducted through Statistical Package for Social Sciences (SPSS) version 17. Data analysis indicated that the independent variables significantly correlated with translation performance. In addition, multiple regressions analysis specified reading comprehension as the main contributing variable and content schema as the second in students' translation performance. It also showed that vocabulary knowledge could not be a predicting factor in translation performance of the learners; the reason may be related to the crucial role of the dictionary in the translation task. The results highlighted the role of content schema in translation performance of the learners.

Keywords – Content schema, Schema theory, Translation performance, Vocabulary knowledge

INTRODUCTION

Translation can be viewed as a process that incorporates both "psychology and cognitive sciences" (Munday, 2001, p. 183). This viewpoint has resulted in "mental processes", not the texts, receiving more attention in "cognitive-linguistic analysis" (Hatim&Munday, 2004, p. 57). In addition, translator should understand the whole text in context (2016:91). In conjunction with this vision, many studies have been done by focusing on cognitive and "psycholinguistic approaches" while taking "translation didactics and pedagogy" into account (Kostopoulou, 2007).Translation process would encompass "inferencing", a "cognitive activity" which is fundamental in all kinds of communication including "reading or translation" (Hatim&Munday, 2004, p. 57). In relation to text processing and reading comprehension, some "global patterns" can be specified like scripts, frames, plans, and schemata (Beaugrande& Dressler, 1981, p. 90). On the other hand, the translator's task is to parallel "the world as presented to us by the text ('the text world') with the world as we know it (the real world)" (Bell, 1993, p. 166). Moreover, this would require the translator's inferencing from the text, interpreting it, and making predictions all of which highlight the role of the translator's schemata, especially content schema.

In general, schema is defined "as the organized background knowledge" that influences interpreting a text (Brown & Yule, 1983, p. 248). Schemata are considered as an individual's "information structure" that can be changed by receiving new data (Roy, 2005). Different scholars have categorized schema in various ways. The related category to the current study is content schema, which is defined as a representation of one's world knowledge or possessing background knowledge about a text's content area (Carrell &Eisterhold, 1983) although part of formal schema, vocabulary knowledge, is also taken into account in this study.

It has been observed that Iranian students, even after passing 12 credit-bearing courses in reading comprehension, are not able to perform well in translation. Inappropriate translation may be due to lack of enough background knowledge or content schema (Kim, 2006). Small vocabulary pool could be another reason, which should be taken into serious consideration (Yazdi&Kafipour, 2014). Although many elements including grammar can contribute to a good communication (Khojasteh&Reinders, 2013) the role of vocabulary cannot be over emphasized. However, it should be mentioned that vocabulary as an important part of language learning has been derelict so far in Iranian context; not enough attention has been paid to vocabulary as the most important part of communication and vocabulary related variables such as vocabulary level, vocabulary size

and vocabulary learning strategies (GaniHamzah, Kafipour, & Abdullah 2009). Target language vocabulary plays the most significant role in reading comprehension; even at the time of guessing the meaning of an unfamiliar word, a learner with small vocabulary size would guess based on the "form of the word," and not the context that may lead to erroneous results (Laufer, 1996). Moreover, the crucial role of form of the word is clearly highlighted since inaccurate guessing would lead to a completely different translation. To the best of researchers, few studies tried to investigate all these variables in one piece of research. All of the above has motivated the authors to conduct the present study.

The present study attempts to explore how content schemata can affect students' performance in translation. In addition, what is of vital importance in the process of translation would be how students make inferences from source text (ST) to convert it into target text (TT); and this will include the role of reading comprehension and vocabulary knowledge (part of formal schema) in translation as well. Translation and comprehension, possibly, have been tied since Catford's proposition of theory of meaning (Bialystok, 1991, p. 145). This study, therefore, aims at identifying the correlation and variance contribution between content schema, reading comprehension, and vocabulary knowledge as independent variables and students' performance in translation as the dependent variable.

Based on the above, the following questions can be raised for the following study:

A) Is there any significant relationship between independent variables including content schema, reading comprehension, and vocabulary knowledge, and the dependent variable of translation performance?

B) To what extent, if any, do the independent variables of content schema, reading comprehension, and vocabulary knowledge contribute to translation performance?

Schema theory is believed to have been introduced by Bartlett (Cook, 1997; Razi, 2004). Bartlett (1932), one of the oldest schema theorists, defines schema as a reference "to an active organization of past reactions, or of past experiences, which must always be supposed to be operating in any well-adapted organic response"; i.e. one will have responses akin to what he/she had before in a similar situation (p. 201). Gradually, the notion of schema expanded as far as it can be adapted with different situations, without altering its essential nature (Rumelhart, 1980). Rumelhart (1980) represents schema as "building blocks of cognition" and believes that schema theory deals with the representation of knowledge; also with different ways through which this representation ease "the use of knowledge" (Reed, 2006, p. 235). Furthermore, Pritchard (1990) expresses that "schema theorists" view knowledge as "stored in schematic structures, or schemata,

which are organized representations of one's background experiences." Rumelhart argues that "a schema is a prototype representation of a concept that functions as a standard of good judgment between the prototype in memory and an element of external environment" (Alidib, 2004). Schema being defined in its broad sense, represents a collection of organizations consisting of a series of "mental representations…which incorporate all the knowledge of a given type of object or event that have been acquired from past experience and operate in a top-down direction to help us interpret the bottom-up flow of information from the world" (Bell, 1993, p. 249-250).

Razi (2004) argued that "schema theory deals with reading process, where readers are expected to combine their previous experience with the text they are reading"; and it's "culture specific" due to individuals' background knowledge. Background knowledge is believed to play a significant role in reading by Carrell and Eisterhold (1983), which was identified by research based on schema theory (Carrell et al. 1998, p. 73). Likewise, translation process encompasses inferencing, "a cognitive activity" which is fundamental in all kinds of communication including "reading or translation" (Hatim&Munday, 2004, p. 57). But few researches have investigated the role of schema theory in translation; thus this study attempts to shed light on this area. Moreover, unlike the crucial role schema theory plays in designing academic curriculum, academic curriculum for translator training courses in undergraduate level in Iran does not pay enough attention to the role of background knowledge, content schema, and students are not aware of schema theory when they graduate.

Schema has been classified into various categories; the related categorization, however, would view schema as content and formal schema.Content schema, which is on the focus of the present study, deals with an individual's knowledge of the world; it represents one's "background knowledge of the content area of the text" (Carrell et al. 1988, p. 79; Razi, 2004) that he/she "brings to a text" (Alidib, 2004; Razi, 2004). Possessing knowledge related to the content of a given text helps readers to understand it (Alderson, 2000, p. 43). In relation to content schema, cultural schema can be defined as "conceptual structures" that makes it possible for a person to gather "perceptual and conceptual information about his or her culture and interpret cultural experiences and expressions" (Malcolm &Sharifian, 2002). This knowledge or information is gained through one's lifetime, from childhood to adulthood (Alderson, 2000, p. 46).

Furthermore, formal schema represents one's knowledge related to "rhetorical structure of the text" (Schwenk, 2009). It takes account of "the knowledge that different types of texts use text organization, language structures, vocabulary, grammar and level of

register differently" (Alidib, 2004). In this study, vocabulary knowledge as part of formal schema will be taken into account.

Few studies have been carried out to investigate the effect of schema theory on translation whereas many researchers have investigated the role of schema theory in second/foreign language comprehension: reading and listening. Most of the research investigates the role of cultural schemata, which is "culture specific content schema" (Alidib, 2004), in reading comprehension (Schwenk, 2009; Razi, 2004; Pritchard, 1990; Johnson, 1981; Steffensen, et al. 1979). These studies confirmed the significant role of cultural schema in comprehending a text.

In this regard, Carrell (1987) has done a fundamental investigation by taking formal and content schema into account. She had selected Christian and Muslims as her two groups of samples. Her study was indicative of the significant effect of ESL speakers' content and formal schemata on their interpretation of the texts; however, content schema was found to be more effective (Carrell, 1987, p. 476). Keshavarz et al. (2007) repeated the research with Iranian samples and concluded that content schema, unlike the formal schema, was a significant factor in reading comprehension. Many other studies have confirmed the predominant role of content schema over the formal schema (Langer et al. 1990; Carrell, 1981).

Few empirical studies attempted to shed light on the impact of schema theory in general, and content schema in particular, on translation performance. Taking this into consideration, Shakir (1995) investigated the role of "schematic knowledge on the appropriateness and communicative acceptability of translation rendered of four ambiguous contextless [context-free] texts." He argued that a translator should possess knowledge with regards to the "cultural, pragmatics, and communicative dimensions of the text" he/she is translating (ibid). He concluded that it is essential for the learners to be aware of "contextual aspects that motivate or co-occur with linguistic input of the SL text." He argued that integrating the proportions of a given text's context with the world knowledge of the translator or the interpreter forms "frames of reference" in the mind of her/him to confer with when confronting vague "linguistic input"; that is, content schema can compensate for lack of proper linguistic knowledge (ibid).

Kim (2006) also studied the importance of background knowledge and the effect of its quality and quantity on students' translation performance. The results of the study showed that possessing background knowledge; content schema, on a certain issue significantly affected translation quality; and it was the quality of the background information, not the quantity, which had a significant impact on the quality of translation.

Besides, it is not possible to take the translator into account without considering his/her skill in reading comprehension. The first stage of translating is to analyze the text based on comprehending it (Newmark, 1988, p. 17). In addition, a skillful translator is believed to be a skillful reader (Bell, 1993, p. 104) since the translator as the reader of the source text is to make predictions and consequently to make inferences from the text he/she is reading (Venuti, 2008, p. 372). Therefore, the translator's major concern is to be a perfect reader; however, the translator's "textual expectations and cultural knowledge" will certainly differ from the ST reader, regardless of how much he/she is alike the ST reader (Coulthard, 1992, p. 12). Thus, content schema, translation and reading comprehension bind together inseparably.

Furthermore, vocabulary knowledge is more closely related to reading comprehension, even more than familiarity with the subject area and grammar knowledge (Mehrpour&Rahimi, 2010). It is believed that vocabulary constitutes the immense piece carrying the meaning in every languages, thus the size of one's vocabulary is of a great significance (McCarthy, 2001). On the other hand, Schemata as constituents of schema theory are the representations of all kinds of knowledge (Bell, 1993, p. 250); among which vocabulary knowledge is of great significance. Keshavarz, et al. (2007) regarded vocabulary knowledge as a major factor in formal schema.

METHOD

Participants of this study were senior undergraduate students of English Translation at Islamic Azad University of Shiraz, Hafez non-profit university, as well as Booshehr, Safashahr, and Lar Payame-nour universities. They were selected based on two-step cluster sampling. Thus, 172 undergraduate students majoring in translator training (32 male and 140 females) were randomly selected. They were all 21-29 years old studying in the fourth year, last year, of their undergraduate studies and had passed 12 credit-bearing courses in reading comprehension as well as 4 credit-bearing courses in linguistics. The data used in this research was ratio data. It is kind of datum that can give information about the difference level of number in detail (Prastyo, 2017).

The first main instrument in the present study was a set of 6 open-ended questions to access the participants' content schema on different aspects of accent and/or dialect, which was the content area of the text to be translated later. This test was a modified version of a set of 12 essay-type questions administered in the pilot phase of the current research.

The second main instrument was the vocabulary size test developed by Nation and Beglar (2007) to explore the vocabulary knowledge of the participants. This test is designed to measure one's vocabulary size between 1000 to 14000 word families. The last instrument applied in this study was a reading comprehension test, selected from an IBT TOEFL preparatory book by Gallagher (2007).

This study was conducted in two sessions. In the first session, the researcher asked students to answer open-ended questions related to their content schema, which took around 20 minutes although the participants were not limited in time. Each participant received the vocabulary size test right after returning the answers to the content schema questions. Answering vocabulary size test took less than one hour. This phase of data collection took an entire session.

In the second session, the researcher administered the reading comprehension test which took around 15 minutes. After that, the researcher asked the participants to translate the first 3 paragraphs of the text used for reading comprehension test in 25 minutes. Translations were scored based on Waddington's method proposed as method A (Waddington, 2001). Both sessions were held in the beginning of classes to avoid the effects of being fatigue or influenced by the subject matter taught in the class. The time for the translation test was determined based on the pilot study. After collecting data, the researcher ran Pearson Product Moment correlation and Stepwise Multiple Regression to analyze the data.

FINDINGS AND DISCUSSIONS

Findings

To answer the first research question, (Is there any significant relationship between independent variables such as content schema, reading comprehension, and vocabulary knowledge and dependent variable, translation performance?) Pearson Product Moment Correlation was run. Table 1 shows the obtained results.

		RC	VK	CS
TP	Correlation Coefficient	0.903**	0.774**	0.896**
	Sig.	0.000	0.000	0.000

Table1: Correlation between independent variables (content schema, reading comprehension,vocabulary knowledge) and dependent variable (translation performance)

**. Correlation is significant at the 0.01 level

RC. Reading Comprehension; TP. Translation Performance; CS. Content Schema; VK. Vocabulary Knowledge

According to Table 1, all independent variables (reading comprehension, content schema, and vocabulary knowledge respectively) strongly, significantly, and positively correlated with translation performance as the dependent variable of the current study. Due to the identification of significant correlation, it is required to investigate if the independent variables significantly contribute to the translation performance of the learners. This will address the second research question for the current study. To this end, stepwise multiple regressions was conducted utilizing statistical package for social sciences (SPSS) version 17.

Variable	B	Beta (β	T	Sig.	R^2	Contribution (%)
RC	1.296	0.603	27.386	0.000	0.815	81.5
CS	0.024	0.412	4.570	0.000	0.836	2.1
Constant	6.196			0.000		83.6

Table 2: Stepwise multiple regressions analysis for reading comprehension and content schema that influence translator trainees' translation performance

Dependent variable: Translation   RC: Reading Comprehension   CS: content schema

It indicated that reading comprehension (81.5%) and content schema (83.6%) were the only predicators among the independent variables of the study with a significantly high correlation and contribution (p<0.01). The other independent variable (vocabulary knowledge) was unable to predict the variance in translation performance of the students (Sig. =0.814).

The highest predictor in translation performance of the translator trainees was reading comprehension (β= 0.903, T= 27.386, Sig. T= 0.000) with a contribution of 81.5% (Table 2). This condition indicates that increasing reading comprehension by one unit leads to the translation performance escalation by 0.903 units. Moreover, the beta (β) value for content schema shows its effect on translation performance (β= 0.412, T= 4.570, Sig.= 0.000). Content schema's contribution to students' performance in translation is 2.1%. This circumstance reveals a one-unit rise in content schema results in students' translation performance enhanced by 0.412 units.

The R square value in table 2 (R2= 0.836) was indicative of a correlated level and contribution between reading comprehension and content schema. In addition, it was evident toward the great significance of these independent variables in translation performance of the translator trainees. Referring to Table 3, variants analysis illustrated F

value of 429.300 (df= 2.169) and P< 0.01. This can explain that the R square value of 83.6 % was related to the broad contribution of the two out of three independent variables of the present study.

Sources		Sum of Squares	df	Mean Square	F	Sig.
1	regression	4821.567	1	4821.567	750.009	0.000
	residual	1092.875	170	6.429		
	Total	5914.442	171			
2	regression	4941.747	2	2470.873	429.300	0.000
	residual	972.695	169	5.756		
	Total	5914.442	171			

Table3: Regression ANOVA

Discussions

Analyzing data showed correlation between all independent variables, content schema, vocabulary knowledge, and reading comprehension) and dependent variable (translation performance). In fact, the strongest correlation was found between reading comprehension and translation performance (p= 0.903). This finding supports claims that a translator should first be a "skillful reader" (Venuti, 2008, p. 372; Bell, 1993, p. 104; Coulthard, 1992, p. 12). The essential argues over 'word for word' and 'sense for sense', which trace back to Cicero and St Jerome (Munday, 2001, p. 19) is a clue to view this relationship as evident.

The process of translation as a kind of information processing act (Bell, 1993, p. 44) starts with reading comprehension (Newmark, 1988, p. 11). Decoding the ST is possible only through comprehension during the reading phase; it cannot happen without the reader /translator's grasp of the meaning, interpretation, as well as evaluation of the author's intended words (Medina &Pilonieta, 2006, p. 223). Decoding ST also includes the use of memory to remember the text which was read (ibid) that is in direct relation to cognition (Bell, 1993, p. 44). In addition, Cognition links translation to reading comprehension via inferencing. Gutt (1991) viewed both of these processes as communicative activities, in which inferencing is inherent. Besides, reading comprehension process is defined as a concurrent act of extracting and constructing meaning (Sweet & Snow, 2003, p. 1). These features of reading comprehension highlight the role of meaning in translation, which probably came into the focus of translation theories since the proposition of theory of meaning by Catford (1965).

Reading comprehension process is believed to occur exclusively through "translation and interpretation" (Mininni, 1981). Unlike the current study, some research has focused on the effective role of translation in reading comprehension (Yau, 2010; Dordick, 1998; Lefa, 1992; Bensoussan, 1990); it is notable that Bensoussan (1990) utilized translation as a means of testing learners' reading comprehension ability in different types of texts. In addition, utilizing translation as a means in language learning traces back to Grammar Translation Method (Munday, 2001, p. 7); although this line of inquiry is far from the purpose of the study.

In line with the present research aims, Newmark (1988) emphasizes on the effectiveness of reading comprehension in translation (p. 11). He refers to two kinds of reading, i.e. general and close reading; of which close reading is closely related to vocabulary knowledge and general reading to content schema in this research. In close reading, the translator trainee is guided to look up every word in case of conveying odd concepts. Besides, the purpose of general reading is considered to achieve the essence of the text; to this end, the translator may need to do a search on the text's subject matter and concepts. This kind of reading implies the role of content schema in translation on one side and on the other it underlines the role of reading comprehension in translation.

Nonetheless, few empirical studies have been carried out on the role of reading comprehension in students' translation performance, empirically. However, some research findings imply the marked role of reading comprehension in translation, which despite differences are not far from the present study. As an example, Abdelhalim (2011) found out that being weak in critical reading- as one type of reading- affects translation skills negatively. It is argued that translators attempt to have a thorough comprehension of a text by means of her/his knowledge and "critical reading skills" as well as the way he/she is trained (Abdelhalim, 2011, p. 337). This argument is close to the present research, which considers the effective role of content schema and reading comprehension in students' translation performance. It is a sign to conclude that translator trainees can reach the deep meaning of the text, which is far beyond surface meaning of words, by resorting to their schematic knowledge and reading skills that are successively tied to each other.

Reading comprehension is emphasized in textbooks for translation students (Venuti, 2008; Bell, 1993; Newmark, 1988); though, its contribution toward translation performance is little discussed in any empirical researches. The reason may be due to the usual automaticity of this complex cognitive skill, i.e. comprehension; consequently, observing it scientifically is not so simple (VanDijk&Kintsch, 1983, p. 70). The results of the present study are in line with the claim that translation cannot happen properly without

comprehending the text (Catford, 1965; Brislin, 1976; Widdowson, 1979; Wilss, 1982). It is obvious that the present study views the translator as the reader of the ST, which is in accordance with Venuti (2008) view. He believes that translators can reach the unique intended message of the text only if they are "intimate" readers (ibid, p. 372). This means that a translator needs to be a perfect reader in order to translate successfully (Bell, 1993, p. 104; Coulthard, 1992, p. 12). In order to be a perfect reader, a translator trainee needs to improve her/his reading skills and this depends largely on how they are trained.

The results showed content schema as the second highly correlated variable with translation performance. It was also found as the second predictor of translation performance. This can be explained through cognitive clues. Cognitive networks augment the translator's linguistic competence with her/his world experiences including culture and discourse dimensions (Shakir, 1995). These are the dimensions essential for the translator to reach the deep meaning of a text, which is the upshot of making precise inferences from it. Inferencing, which is in turn an activity based on cognition, is innate in communicative activities including translation and reading (Gutt, 1991). It is a process, through which meaning comes into being in connection to the one's schema (Keen & Zimmerman, 1997, p. 149). Accordingly, translation and interpreting- a branch of it- are under the influence of the pre-existing background knowledge (Pochhacker, 2004, p. 57). This is especially remarkable when translator trainees have cognizance of presenting a TL version of ST "in terms of expression, function, and content" (Shakir, 1995, p. 694).

Background knowledge is also proved to have a significant role in students' translations in Kim's (2006) research. It should be noted that his definition of background knowledge is close to that of the content schema, i.e. possessing knowledge about the subject matter of a text. Findings of that study showed that the quality of students' background knowledge was an influential predictor in the quality of their translations which is congruent with the findings of the current study.

In line with the present study, Shakir (1995) concluded that translator trainees required having some knowledge about contextual features of a text. In addition, his research findings address this point that possessing linguistic knowledge would not be enough to translate a text while the register and rhetoric of the ST remain intact. His study stresses the role of instructors to help students perceive the importance of background knowledge in translation performance.

The findings of this study showed that possessing relevant content schema is a prerequisite for translator trainees, so that they can noticeably improve their performance in translation. This would help them integrate the excerpts of a certain text with their own

knowledge of the world to shape "frames of reference" for their translation (Shakir, 1995, p. 698). In this way, they can fill the existing gaps in a text. Yule (1985) expresses that the notion of coherence exists in people; they interpret texts in accordance with experiences they have of the world around them (p. 12). Therefore, a text is merely a kind of direction for the reader to perceive the meaning by employing the pre-existing gained knowledge (Carrell &Eisterhold, 1983, p. 556). Having adequate prior knowledge helps translators analyze sentences precisely to ascertain main ideas of them (Kim, 2006). These necessitate building relevant background knowledge for translator trainees before starting the translation process. Hence, students of translation should be trained in a way to explore the significance of content schema. In accordance with the present study, Kim (2006) suggested that having knowledge about the specific theme of the text is essential in comprehending the meaning and identifying the linguistic clues by the translator to employ in information transference, new concept introduction or in discussing situation. Besides, Schema is one of the exterior and crucial factors that help the translator in comprehension and production toward organizing the text meaning (Van Dijk&Kintsch, 1983, p. 70).

Furthermore, the effectiveness of schema in comprehension and production is due to the translator's mind that makes use of schematic knowledge in order to interpret a text (Cook, 1989, p. 70). This may be the reason why content schema is the second predictor following reading comprehension as a predictor of translation performance. It is suggested that instructors can draw on strategies of building or activating schemata. Building or activating schemata can happen through administrating pre-reading activities. Though these activities have been suggested so far to improve learners' reading comprehension performance, they may also be utilized in translation didactics as a point of departure to improve students' performance in translation, and perhaps to form a basis for proposing building or activating schemata strategies directly related to translation process. This research is not an attempt toward suggesting such strategies; however, it would encourage students to gain information about the topic before translating. Moreover, instructors are advised to help students find relevant sources of information since they are responsible for providing learners with the relevant background knowledge. It reveals how translation performance, reading comprehension, and content schema tie together inseparably; therefore, translator trainers and trainees in addition to textbook writers and curriculum designers should pay more attention to the close connection between these variables. This close connection was also highlighted by other researchers (Ajideh, 2006; Kim, 2006; Shakir, 1995).

However, lack of content schema would not be the only reason concerning learners' reading problems; inactivated appropriate schemata can be another major cause (Carrell &Eisterhold, 1983).It means that students' schemata may not be activated while they are reading a text. In this regard, pre-reading activities may be employed in order to build a new schema or to activate the already-existing schema. Thus, in case of being confirmative to prior studies, this study would motivate learners to attempt at improving their reading skill. Translator trainers should also be encouraged to focus on students' reading skill prior to translation.

Finally, the results showed that vocabulary knowledge had a significant relationship with translation performance. However, this relationship could not contribute significantly to the translation performance. Newmark (1988) believed that an appropriate method in translator training courses is recommending students to underline problematic words in translation to be able to carefully check them later. This would indirectly point out to students' vocabulary knowledge as an effective factor in their translation performance. Furthermore, students' problems in translation were assumed to be linked with their limited vocabulary. Unlike these studies, the current study did not find vocabulary knowledge as a contributor to the translation performance of the learners. It can be explained through the fact that learners' prior knowledge makes up for lack of proper linguistic knowledge (Krashen, 1981). In addition, vocabulary as a segment of linguistic knowledge depends largely on context on one hand and students' interest in "content of the message" (Lefa, 1992, p. 63) on the other hand.

Another reason may be the use of dictionaries or glossaries. It is notable that in the present research, students received a glossary of words predicted to be unfamiliar to them. It is believed that dictionaries or glossaries assist students in avoiding errors (Cowie, 1979). Therefore, it may control and limit the learners' vocabulary choice and neutralize its effect as a predictor for translation performance.

Razi's (2004) findings are congruent with the current study. His findings imply that mostly content schema is activated or its activation is of greater significance than that of formal schema and subsequently vocabulary knowledge as it is considered part of formal schema. Some other researchers have also highlighted the effectiveness of learners' content schema rather than formal schema (Keshavarz et al. 2007; Floyd & Carrell, 1987; Johnson, 1981). This can justify why content schema was found to be a predictor of translation performance while vocabulary knowledge as part of formal schema was not. It means that using dictionaries or glossaries as well as possessing adequate content schema compensate for small vocabulary size of learners.

CONCLUSIONS AND SUGGESTION

The results showed content schema as the second highly correlated variable with translation performance. It was also found as the second predictor of translation performance.

The findings of this study showed that possessing relevant content schema is a prerequisite for translator trainees, so that they can noticeably improve their performance in translation.

Finally, the results showed that vocabulary knowledge had a significant relationship with translation performance. However, this relationship could not contribute significantly to the translation performance.

REFERENCES

Abdelhalim, S. M. (2011). Improving EFL majors' critical reading skills and political awareness: A proposed translation program. *International Journal of Educational Research, 50* (1), 336- 348.

Ajideh, P. (2006). Schema–theory based considerations on pre-reading activities in ESP textbooks. *The Asian EFL Journal. Teaching Articles, 16* (1), 1-19.

Alderson, J. C. (2000). *Assessing reading.* Cambridge: Cambridge University Press.

Alidib, A. (2004). The Effects of text genre on foreign language reading comprehension of college elementry and intermediate readers of french. [Online]Available: http://etd.ohiolink.edu/view.cgi/Alidib%20Zuheir.pdf?osu1101661869

Bartlett, F. C. (1932). *Remembering: A study in experimental and social psychology.* Cambridge: Cambridge University Press.

Beaugrande, R. & Dressler, W. (1981). *Introduction to text linguistics.* London: Longman.

Bensoussan, M. (1990). EFL reading as seen through translation and discourse analysis: Narrative vs. expository texts. *English for Specific Purposes,* 9(1), 49-66.

Bell, R.T. (1993). *Translation and translating: Theory and practice*. London and New York: Longman.

Bialystok, E. (1991). *Language processing in bilingual children*. New York: Cambridge University Press.

Brislin, R. (1976). *Translation: Applications and research*. New York: Gardner Press.

Brown, G. & Yule, G. (1983). *Discourse analysis.* New York: Cambridge University Press.

Carrell, P. L. (1981). Culture-specific schemata in L2 comprehension. In R. Orem and J. Haskell (Eds.), *Selected papers form the ninth Illinois TESOL/ BE annual convention, First Midwest TESOL Conference.* (pp. 123-132). Chicago: Illinois TESOL/ BE.

Carrell, P. L. (1987). Content and formal schemata in ESL reading. *TESOL Quarterly,* 21 (3), 461-481.

Carrell, P. L., Joanne, D., &Eskey, D. E. (1988). *Interactive approaches to second language reading*. New York: Cambridge University Press.

Carrell, P. L. & Eisterhold, J. C. (1983). Schema theory and ESL reading pedagogy. *TESOL Quarterly,* 17(4), 553-573.

Catford, J. C. (1965). *A Linguistic theory of translation.* Oxford: Oxford University Press.

Cook, G. (1997). Key concepts in ELT: Schemas. *ELT Journal,* 51(1), 86.

Cook, G. (1989). *Discourse in language teaching: A scheme for teacher education.* Oxford: Oxford University Press.

Coulthard, M. (1992). Linguistic constraints on translation. In *studies in translation / Estudos da Traducao, Ilha do Desterro, 28 (*pp. 9-23)*.* Universidade Federal de Santa Catarina.

Cowie, A. P. (1979). The treatment of polysemy in the design of a learner's dictionary. In R. R. K. Hartmann (Ed.), *Dictionaries and their users (*pp. 82- 88). Exeter, UK: University of Exeter Press.

Dordick, M. L. (1998). *The use of mental translation as a reading strategy by Spanish speakers as they read English*. (Unpublished PhD dissertation). Oklahoma State University, USA.

Floyd, P. &Carrell, P. L. (1987). Effects on ESL reading of teaching cultural content schemata. *Language Learning: A Journal of Research in Language Studies, 37* (1), 89-108.

Gallagher, N. (2007). *Delta's key to the next generation TOEFL test: Advanced Skill Practice for the IBT*.IL: Delta Publishing Company.

GaniHamzah, M. S., Kafipour, R. & Abdullah, S. K. (2009). Vocabulary learning strategies of Iranian undergraduate EFL students and its relation to their vocabulary size. *European Journal of Social Sciences*, 11(1), 39-50.

Gutt, E. A. (1991). *Translation and relevance: Cognition and context.* Oxford: Blackwell.

Hatim, B. &Munday, J. (2004). *Translation: An advanced resource book.* London and New York: Routledge.

Johnson, P. (1981). Effects on reading comprehension of language complexity and cultural background of a text. *TESOL Quarterly,* 15 (2), 169-181.

Kafipour, R. (2010). Vocabulary learning strategies, vocabulary knowledge and reading comprehension of EFL undergraduate students in Iran. Unpublished PhD thesis, University Putra Malaysia, Malaysia.

Keen, E. O. & Zimmerman, S. (1997). *Mosaic of thought: Teaching comprehension in a reader's workshop.* Portsmouth, NH: Heinemann.

Keshavarz, M. H., Attai, M. R., & Ahmadi, H. (2007). Content schemata, linguistic simplification, and EFL readers' comprehension and recall. *Reading in a foreign Language,* 19(1), 19-33.

Khristianto. (2016). English Translation of Javanese Culture Pieces in Ronggeng Dhukuh Paruk Nove. *Indonesian EFL Journal: Journal of ELT, Linguistics, and Literature.* 2(2): 91-96.

Khojasteh, L. &Reinders, H. (2013). How textbooks (and learners) get it wrong: A corpus study of modal auxiliary verbs. *Applied Research on English Language*, 2(1), 33-44.

Kim, H. (2006). The influence of background information in translation: Quantity vs. quality or both? *Meta: journal des traducteurs / Meta: Translators' Journal, 51*(2), 328-342.

Kostopoulou, G. (2007). The role of coherence in text approaching and comprehension: applications in translation didactics. *Meta: journal des traducteurs / Meta: Translators' Journal*, 52(1), 146-155.

Krashen, S. D. (1981). The ease for narrow reading. *TESOL Newsletter, 15* (6), 23.

Langer, J. A., Bartolome, L., Vasquez, O., & Lucas, T. (1990). Meaning construction in school literacy tasks: A study of bilingual students. *American Educational Research Journal*,27(4), 427-471.

Laufer, B. (1996). The lexical threshold of second language reading comprehension: What it is and how it relates to L1 reading ability. In K. Sajavaara& C. Fairweather(Eds.), *Approaches to second language acquisition (*pp. 55-62). Jyvaskyla, Finland: University of Jyvaskyla.

Lefa, V. J. (1992). Making foreign language texts comprehensible for beginners: An experiment with an electronic glossary. *System, 20* (1), 63- 73.

Malcolm, I. G. &Sharifian, F. (2002). Aspects of aboriginal English oral discourse: An application of cultural schema theory. *Discourse Studies,* 4(2), 169-181.

McCarthy, J. (2001). The skills, training, and qualifications of guidance workers. *A paper prepared for an OECD review of policies for information, guidance and counseling services commissioned jointly by the European commission and the OECD, National Centre for Guidance in Education,* Ireland.

Medina, A. &Pilonieta, P. (2006). Narrative text once upon a time: Comprehending. In J. Schumm (Ed.), *Reading assessment and instruction for all learners* (pp. 222- 296). New York: The Gifted Press.

Mehrpour, S. &Rahimi, M. (2010). The impact of general and specific vocabulary knowledge on reading and listening comprehension: A case of Iranian EFL learners. *System*, *38*(1), 292-300.Doi: 10.1016/j.system.2010.01.004.

Mininni, G. (1981). On the need of psycholinguistic research on translation. *International Journal of Psycholinguistics,* 8(1), 79-101.

Munday, J. (2001). *Introducing translation studies: Theories and applications.* London and New York: Routledge.

Nation, I.S. P. &Beglar, D. (2007). A vocabulary size test. *JALT*, *31*(7), 10-13.

Newmark, P. (1988). *A textbook of translation.* New York: Prentice Hall International.

Pochhacker, F. (2004). *Introducing interpreting studies.* London: Routledge.

Prastyo, H. (2017). *Statistik Dasar: Sebuah Panduan untuk Peneliti Pemula*. Mojokerto: Lembaga Pendidikan dan Pelatihan International English Institute of Indonesia.

Pritchard, R. (1990). The effect of cultural schema on reading processing strategies. *Reading Research Quarterly,* 25(4), 273-295.

Razi, S. (2004). The effects of cultural schema and reading activities on reading comprehension. In *Singhal, M. Proceedings of the First International Online Conference on Second and Foreign Language Teaching and Research- September 25-26, The Reading Matrix Inc., The USA (ISSN 1550-8501).* [Online] Available: http://www.readingmatrix.com/conference/pp/proceedings/razi.pdf (July 2, 2011)

Reed, S. K. (2006). *Cognition: Theory and applications.* Belmont: Wadsworth.

Roy, D. (2005). A framework for grounding language in action and perception. Artificial Intelligence167,170-205,doi:10.1016/j.artint.2005.04.007, http://www.Elsevier.com/locate/artint

Rumelhart, D. E. (1980). Schemata: The building blocks of cognition. *Theoretical Issues in Reading Comprehension, R. J. Spiro, B. C. Bruce, and W. E. Brewer (eds.), 33-58.* Hillsdale, NJ: Erlbaum.

Schwenk, B. (2009). The role of background knowledge in ESL basic reading: A closer look at emergent ESL readers and their Performance within culture-specific reading material. [Online] Available: http://rave.ohiolink.edu/etdc/view?acc_num=ohiou1237209242 (July 5, 2011)

Shakir, A. (1995). Reference and representation in translation: A look into the translator's resources. *Meta: journal des traducteurs/ Meta: Translators' Journal,* 40 (4), 693-701.

Steffensen, M. S., Joag-Dev, C., & Anderson, R. C. (1979). A cross-cultural perspective on reading comprehension. *Reading Research Quarterly,* 15 (1), 10-29.

Sweet, A. P. & Snow, C. E. (2003). *Rethinking reading comprehension.* New York: Guilford Publications, Inc.

Van Dijk, T. (1980). *Macrostructures*. Hillslade, N.J.: Lawrence Erlbaum.

Van Dijk, T. & Kintsch, W. (1983). *Strategies of discourse comprehension*. New York: Academic Press.

Venuti, L. (2008). *The translation studies reader.* London: Routledge

Waddington, C. (2001). Different methods of evaluating student translations: The question of validity. *Meta: Translators' Journal, 46* (2), 311-325.

Widdowson, H. G. (1983). *Learning Purpose and Language use.* Oxford: Oxford University Press.

Wilss, W. (1982). *The science of translation: Problems and methods,* (E. Klett, Trans.). Tubingen: Gunter Narr.

Yau, J. C. (2010). Roles of mental translation in first and foreign language reading. *International Journal of Bilingualism,* 15(4), 373- 387.

Yazdi, M. &Kafipour, R.(2014). A qualitative study of vocabulary learning strategies applied by Iranian undergraduate EFL learners in real learning setting. *English Language Teaching*, 7(7), 1-7.

Yule, G. (1985). *The study of language*. Oxford: Oxford University Press.

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