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The Effect of Familiarity with Academic Topics on Learner's Reading Proficiency As Measured By IELTS

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Abstract: *This study attempts to answer the questions regarding the relationship between content schemata and reading comprehension of ESP readers' at two different levels of reading proficiency and how much time takes for good and poor readers to answer the reading comprehension Tests. The participants were 80 ESP students of Guilan and Rasht Azad Universities, IRAN .They were junior students; their scores on the TOEFL were used as a consistent criterion for assigning the participants into two proficiency levels. Four IELTS were also used to see the effects of academic topic familiarity on learners' reading proficiency based on their field of study. Pearson Product Moment Correlation Coefficient Formula revealed that there is a relationship between the participants' scores of TOEFL and IELTS. The results suggest that language instruction should focus on improving the reading and language ability of students through the presentation of reading materials with appropriate linguistic challenges.*

Keywords: *ESP readers; Content schemata; language proficiency; TOEFL RCT; IELTS RCT.*

1. INTRODUCTION

Reading is important not only for learners to acquire the language but also to obtain knowledge. Although there are many readers who can read a text in the second language fluently, there is a possibility that they may not be able to understand the message being conveyed in the reading. Apart from the reader's lack of proficiency, this problem might also happen because they do not have sufficient cultural or background knowledge of the text. Since all individuals tend to develop different ways of thinking, their background knowledge or schemata might also differ. The dissimilarity is what makes the readers interpret the same reading text differently.

This study aims at investigating the relationship between ESP readers' background knowledge (content schemata), language proficiency and reading comprehension. Particularly, the study attempts to answer the questions regarding the relationship between content schemata and reading comprehension of ESP readers' at two different levels of reading proficiency (high and low intermediate). It will also investigate how much time takes for good and poor readers to answer the reading comprehension questions.

A few studies, up to now, has investigated the relationship between ESP readers' background knowledge, language proficiency and reading comprehension all together regarding the important role of time. In this perspective, therefore, the present study gains significance as the results can shed more light on the process involved in reading comprehension.

The results indicate that the both high-intermediate and low-intermediate students proficiency level may have affected their comprehension of specific types of information.

2. BACKGROUND AND LITERATURE REVIEW

Learners of a second or foreign language may rarely find chances to communicate with native speakers orally, but they can read different texts in different subjects with varying degrees of detail and difficulty. In the contemporary world, technology facilitates the scientific findings to appear in the form of written texts. So the need for reading and extracting information from these texts seems to be vital. As stated by Bernhardt (1991), the ability to read is the most stable and durable of the second language modalities. Rivers (1981) propounds that reading is the most important activity in any language class, not only as a source of information and a pleasurable activity, but also as a means of

consolidating and extending one's knowledge of the language (p.259). Strevens (1977) also emphasizes the great importance of reading to the learners for two reasons: first of all this skill provides the learners with access to a great quantity of further experience of the language. The second reason is presenting a window onto the normal means of continuing the learners' personal education by reading skill." Through reading, the learners would be able to develop a sufficient language base that enables them to produce the spoken or written messages which they are eager to communicate to others. Chastain (1988) believes that "without this knowledge, students are not likely to be successful in the typical language class in which all four language skills are stressed" (p.218).Readers, when engaged in reading, is believed to go through an active and interactive process (Anderson, 1999; Grabe & Stoller, 2002). Such a process presumes that readers have or should have some background knowledge about the topic of the text.

Anderson (1999), for example, explained reading as follows: Reading is an active, fluent process which involves the reader and the reading material in building meaning. Meaning does not reside on the printed page. Synergy occurs in reading, which combines the words on the printed page with the reader s background knowledge and experiences. (p. 1)

Chastain (1988) states "the communicative process in all language skills is a conversation process. Either the participants convert the received oral or written message from language to thought, or they convert their own thoughts, while speaking or writing, to language, reading for meaning is a communicative process, and as such, involves mental processes similar to those of the other three language EFL reader's background knowledge (content schemata), language proficiency and reading comprehension skills." (p.222) Reading as an interactive process requires various mental operations to be performed concurrently or very closely in time. When students read, they are likely to proceed from processing the text in smaller units of language to larger conceptual units (Perfetti, 1985). In fact, readers tend to deal with both micro-level text-driven features, such as pattern recognition, letter identification, and lexical access, and macro-level reader-driven features, such as activation of prior knowledge and monitoring comprehension (Berhnardt, 1991; Brantmeier, 2004). Each of these processes requires valuable memory space and may sometimes overload the working memory, which is limited in capacity (Baddeley, 1997; McLaughlin, Rossman, & McLeod, 1983; Miller, 1956; Pulido, 2003).

Such limited capacity can be further overloaded by the extra efforts that students make when reading. Readers efforts to deal with micro-level linguistic features may place so much demand on the readers that not enough resources can be allocated to macro-level textual analysis (Afflerbach, 1990; Alptekin, 2006). It has been argued, however, that the cognitive load can be lessened by activation of the background knowledge that readers bring to the text (Carrell, 1988; Ellis, 2001; Nassaji, 2002; Pulido, 2004). When readers bring relevant background knowledge to the reading process, they can allocate more intentional space for textual analysis and interpretation. In this sense, existing background knowledge may contribute to the functioning of what are described as *automatic processes* by McLaughlin (1987), sparing valuable intentional space for more unfamiliar and newer elements in the text.

The place of background knowledge in the reading process has been discussed within schema theory (Bartlett, 1932; Carrell & Eisterhold, 1983). Schema theory deals with preexisting knowledge structures stored in the mind (Nassaji, 2002, p. 444) and how readers combine their previous knowledge with the text (Ajideh, 2003; Alderson, 2000; Alptekin, 2006; Anderson, 1999; Carrell, 1983; Carrell & Eisterhold, 1983; Grabe & Stoller, 2002; Johnson, 1981, 1982; Ketchum, 2006; McKay, 1987; Murtagh, 1989). In this paper, the terms *schema* and *background knowledge* will be used synonymously and interchangeably. Background knowledge that readers make use of during their engagement with the text is thought to be of various types (Carrell & Eisterhold, 1983; Nassaji, 2002; Oller, 1995). Of the different types, the most frequently referred to and discussed are *formal* and *content* schemata. Formal schema, also called *textual schema* (Singhal, 1998), is defined as knowledge of language and linguistic conventions, including knowledge of how texts are organized and what the main features of a particular genre of writing are (Alderson, 2000; Carrell, 1987, 1988; Carrell & Eisterhold, 1983). Research into formal schema suggests that texts with familiar rhetorical

organization should be easier to read and comprehend than texts with unfamiliar rhetorical organization (Carrell, 1987, p. 464).

Content schema, which is more relevant to this study and is described as knowledge of the content (Carrell, 1983), can further be divided into two different types: background knowledge and subject matter knowledge. The former refers to the knowledge that may or may not be relevant to the content of a particular text, and the latter is directly related to the text content and topic (Alderson, 2000).

According to Chitravelu (2005), readers response towards any text is influenced by factors like the prior knowledge of the text content, the readers beliefs and attitudes about the content, the writing form, the author and the degree of interest in the topic discussed.

Since reading is important in developing language intuition, determining academic success and encouraging readers to extract the important ideas from the text, it is, therefore, central for learners to acquire the reading skill. Acquiring reading requires one to be able to comprehend the text itself.

Reading comprehension determined by the readers' interpretation of the text differs according to the readers' background knowledge. In addition to this, Bettelheim and Zelan (1982) said that both the feelings brought to the text and the ones aroused from the readers experience affect the meaning of what is read. The different ways in obtaining the text meaning can also be seen by comparing young and adult, low and high proficient or even male and female readers. In terms of the proficiency level, for example, Cziko (1978, 1980) and Stefensen (1987) claimed that high and low proficiency learners possess different reading strategies. Good readers are more likely to utilize a wider range of reading strategies compared to the poor readers. Meanwhile, in terms of gender, Shaw (1995) stated that boys and girls are generally different in their attitude and apparently aptitude towards reading and books. Girls, on average read faster and more fluently, enjoy reading and rely on tables and charts less compared to boys.

The primary goal of reading is to obtain some kind of information from a text, whether it is to search for specific information, to learn from texts, or for general comprehension (Grabe & Stoller, 2002). Research in second language (L2) reading has found that learners can also gain additional information about the language in which that information is encoded. For example, while reading a text for meaning, L2 readers can learn new words (Pulido, 2003, 2004; Rott, 1999), gain greater knowledge of partially known grammatical forms and structures (Leow, 1997; Shook, 1994), as well as process previously unknown grammatical forms (Lee, 2002; Leeser, 2004). The reading process has been described as dynamic in that reader variables such as background knowledge, aptitude, and memory constraints interact with text variables (e.g., text structure, length, lexical and linguistic complexity) as readers construct a mental representation or comprehend a text. However, research on L2 readers processing of grammatical form during comprehension has focused primarily on text variables. In contrast, the present study examines how two reader variables familiarity with text topics (i.e., topic familiarity) and language proficiency affect learner's comprehension of texts. Since learners comprehension of the text meaning varies according to individuals, it is important for us to understand the reasons for this phenomenon. How readers interpret their readings may be influenced by factors like background and cultural knowledge, experience with the content as well as the purposes of reading.

Compared to L1 reading, unfamiliarity with the content or structure of a text written in second language may be more detrimental to L2 readers as it brings extra challenges to the readers over and above the linguistic difficulties presented by a foreign language. Due to the fact that accessing of appropriate schemata in L2 reading generally depends initially on the reader's ability to understand the foreign linguistic code, L2 competence is presumed to play some role in the activation of relevant schemata.

2.1. Threshold Level and Reading Comprehension

Since the late 1970s, substantial amount of energy devoted to second language reading research has led to the common belief that a certain level of second language linguistic ability must be achieved before readers can read effectively in the target language. Researchers who subscribe to this stance contend that inadequate command of the target language creates a threshold for effective transfer of L1 comprehension skills to L2 reading when confronted with a difficult or

confusing task in the second language, and substantial comprehension skills in L1 cannot compensate for deficient L2 processing at the lexical and syntactic levels (Clarke, 1979; Cziko, 1980). Specifically, when language competence in an L2 is underdeveloped, word identification becomes sluggish.L2reading research has demonstrated that less competent L2 readers rely more on the mediation of translation from L2 to L1 in order to access the conceptual representation of the L2 word than competent L2 readers (Dufour & Kroll, 1995). In addition, when reading an L2 whose orthography is different from that of one s own, L2 readers spent most of their energy in lower-level processing (Everson & Ke, 1997; Horiba, 2000).

2.2. Schema Theory

Beyond the challenge brought by unfamiliar linguistic code, L2 learners are also faced with foreign content that is often associated with L2 reading. Studies adopted the schema-theoretic view in both L1 and L2 reading have reported facilitative effects of familiarity with both text content (content schemata) and with the structure or rhetorical patterns of the text (formal schemata) on improved inferencing and comprehension as measured by recall (e.g. Carrell, 1983; Lee, 1986).

2.3. Content Schemata

One type of schemata, or background knowledge, a reader brings to a text is the content schemata, which is the knowledge relative to the content domain of the text. Content schemata refer to the background knowledge of the reader reading the content area of the text (Carrell, 1987). For example, the knowledge about the customs of Muslims, the history of Greece, or the economy of England, celebrating New Year's Eve in Hawaii, etc. are the kinds of background knowledge which refer to the content of the material which a reader may process before reading.

Comprehension of any kind depends on knowledge; that is, relating what we don't know (i.e., new information, to what we already know, which is not a random collection of facts but a theory of the world. In other words, our understanding of a text depends on how much related schema we, as readers, possess while reading. Consequently, failure of L1 or L2 readers to make sense of a text is caused by their lack of an appropriate schema that can easily fit within the content of the text. This lack of an appropriate schema can be content, formal or linguistic.

Content schema refers to the one's familiarity with the subject matter of the text. It includes an understanding of the topic of the text and the culture-specific elements needed to interpret it. Content schema is part of the individual's cultural orientation, and since culture affects all aspects of life, it certainly has a major impact on all elements of reading. Although idiosyncrasy cannot be ignored, ones cultural orientation appears to be a dominant force in shaping ones reading habits. Therefore, a reader is most likely to fail if his/her cultural schema is different from the one proposed by the text. As pointed out by Carrell & Eisterhold (1983, p. 80), one of the most obvious reasons why a particular content schema may fail to exist for a reader is that the schema is culturally specific and is not part of a particular reader s cultural background.

2.4. Formal Schemata

The other type of schemata is the formal schemata which is background knowledge of organizational patterns and rhetorical conventions of written texts. In the course of reading, the reader obtains content schemata by means of formal schemata. When the reading is completed, it is the content schemata rather than the formal schemata that leave a memory trace in the reader's mind.

2.5. Schemata Theory in ESL

Schema theory has been utilized in research fields such as ESL education, especially in reading and writing instruction. According to schema theory, ESL students from different countries have different schemata and most have difficulties in processing knowledge like English native speakers. As this theory states, proficient readers are able to activate prior knowledge stored in memory to integrate new linguistic data in the comprehension process. Therefore, under schema theory, ESL reading and writing classes should utilize pre-reading and pre-writing activities to activate prior knowledge and teachers should provide background knowledge when students do not have sufficient prior knowledge, especially due to cultural differences.

3. STATEMENT OF THE PROBLEM

Many studies have been conducted to show the importance of prior knowledge of the world on ESL/EFL learners reading comprehension. All of these studies emphasized the fact that the ability to understand a text is based not only on the reader's linguistic knowledge, but also on general knowledge of the world and the extent to which that knowledge is activated during processing .About the importance of prior knowledge of world these question are noticeable, Do learners at different levels of proficiency perform significantly better on academic reading when the content of reading relates to their discipline? Which of the independent variables; content familiarity, reading speed or proficiency level significantly relates to higher scores on reading comprehension? Do the learners of different fields of study perform differently in comprehending the familiar and unfamiliar texts?. Although there are many readers who can read a text in the second language fluently, there is a possibility that they may not be able to understand the message being conveyed in the reading. Apart from the readers' lack of proficiency, this problem might also happen because they do not have sufficient cultural or background knowledge of the text.

4. MATERIALS AND METHODS

For answering, the questions regarding the relationship between content schemata and reading comprehension of ESP readers' at reading proficiency levels (high and low intermediate) and how much time takes for good and poor readers to answer the reading comprehension questions 80 out of 100(34 males and 46 females) ESP students of Guilan University between the ages of 20 to 27 were selected based on their scores. Very strong and very weak students were omitted from the groups and in each group 20 students were randomly chosen they were all junior students majoring in the following fields: English literature, Civil engineering, Architecture and Nursing. The participants were divided into four groups of 20 students (10 of a low- and 10 of a high-proficiency level).

The subjects' scores on the TOEFL Reading Comprehension Test were used as a consistent criterion for assigning the participants into two proficiency levels.

The results of two separate one-way ANOVAs confirmed the homogeneity of the subgroups within the high- and low-proficiency levels.

The materials used for this study include 5 reading comprehension tests. One TOEFL reading comprehension test was used to measure learners' reading proficiency and to put them into two different groups: high and low readers. Four IELTS reading comprehension tests were also used to see the effects of academic topic familiarity on learners' reading proficiency based on their field of study. One of the IELTS passage was related to learners' discipline, used as the familiar passage, and the other was completely unrelated to their field of study, used as the unfamiliar one. Pearson Product Moment Correlation Coefficient Formula revealed that there is a strong relationship ($r = .81$) between the participants' scores of TOEFL and IELTS.

The data were collected on three class days during the participants' regularly scheduled classes. On the first day, the participants were provided with general information about the study, and completed a background questionnaire and the reading proficiency test. The following week the participants were asked to read a familiar IELTS text and answer the comprehension questions. The next session the participants were asked to read an unfamiliar IELTS text and answer the comprehension questions.

Hierarchical Regression was conducted to examine the contribution of discipline-related knowledge (content familiarity) and the speed of reading. Content familiarity (based on the students' discipline) served as the within-subjects categorical independent variable with two levels: familiar and unfamiliar. Language proficiency was the secondary independent variable with two levels: low- and high-intermediate. The dependent variables were the speed of reading based on the time participants need to read the texts and reading comprehension (based on the participants' scores on IELTS). Two separate one-way ANOVAs were conducted to see if the four groups were homogenous. The results showed that there was no significant difference between the groups.

5. RESULTS AND DISCUSSIONS

The performance of the high and low intermediate students was compared separately on the familiar and unfamiliar text. The results showed that both high-intermediate and low-

intermediate students performed better on the familiar text tables 5.1 and 5.3. But as the results of t-test on tables 5.2 and 5.4 shows t_{obs} of the low-intermediate group is much greater than t_{obs} of the high-intermediate and it is also greater than t_{crit} It is also clear in figures 5.1 and 5.3 that the differences between the scores of the familiar and unfamiliar texts of the low-intermediate are much greater than those of the high-intermediate group which means the high-intermediate group performed better on both tests.

Table5.1. *The descriptive statistics needed for the t-test of the high-intermediate group*

Std. Error Mean	Std. Deviation	Mean	Code	Level
.30498	1.92886	8.6500	Familiar	High-intermediate
.26842	1.69766	7.7000	Unfamiliar	

Table5.2. *The results of t-test of the high-intermediate students*

Sig	t	df	Mean difference	Unfamiliar	Familiar	High-intermediate
.000	2.375*	39	0.95	7.70	8.65	X

Table5.3. *The descriptive statistics needed for the t-test of the low-intermediate group*

Group Statistics				
Std. Error Mean	Std. Deviation	Mean	Code	Level
.16231	1.02657	3.6500	Familiar	Low-intermediate
.16364	1.03497	1.4250	Unfamiliar	

Table5.4. *The results of the t-test of the low-intermediate students*

Sig	t	df	Mean difference	Unfamiliar	Familiar	Low-intermediate
.000	5.30*	39	2.23	1.42	3.65	X

The results show that there are significant differences with regard to the performance of the low ability students on the familiar and unfamiliar texts. These students performed better on the test related to the familiar text than on the test related to the unfamiliar text. However, the performances of the high ability students showed no significant differences between the familiar and unfamiliar texts. These results indicate that the learner's proficiency level may have affected the students' comprehension of specific types of information, as the low-ability students scores for comprehension of the unfamiliar text did not match their scores for the familiar text.

The second question investigated the relationship between the effect of the speed of reading and content familiarity on ESP reading comprehension. Tables 5.5 and 5.6 show the result of hierarchical regression.

Table5.5. *The descriptive statistics for regression process*

Model Summary							
Change Statistics			Std. Error of the Estimate	Adjusted R Square	R Square	R	Model
Sig. F Change	F Change	R Square Change					
.000	59.217	.273	2.82106	.268	.273	.522[a]	1
.000	84.718	.255	2.28079	.522	.528	.726[b]	2
				a. Predictors: (Constant), time			
			b. Predictors: (Constant), time, content familiarity				

Table5.6. *The results of regression process*

Coefficients[a]						
Sig.	t	Standardized Coefficients	Unstandardized Coefficients		Model	
		Beta	Std. Error	B		
.000	9.427		3.057	28.816	(Constant)	1
.000	-7.695	-.522	.160	-1.228	Time	
.000	11.221		2.474	27.759	(Constant)	2
.000	-10.908	-.607	.131	-1.427	Time	
.000	9.204	.512	.422	3.886	Content familiarity	
a. Dependent variable: Reading comprehension						

As it can be seen in table 5.5, 27.3% of those students who spent less time to read the texts gained better scores and this is statistically significant regarding the level of significance (.000), i.e. less than .05. On the other hand the negative sign of in table 5.6 indicates that there is a negative relationship between the time of reading and the reading comprehension scores of the students, i.e. the more their reading comprehension scores, the less time they need to read the text. The formula of regression in the first model is as follows:

$Y= ax + b$

Reading comprehension = -.522 time + 28.816

On the second step by entering content familiarity into the model the R^2 change shows that 25.5 % of the students gained better scores on the familiar text and also the positive sign of indicates that there is a positive relationship between content familiarity and the students' reading comprehension scores. In the second model the regression formula changes as it follows:

Reading comprehension = -.607 time + .512 content familiarity + 27.759

So it can be claimed that there is a relationship between the students' reading comprehension scores and time of reading and this relationship is affected by content familiarity, i.e. content familiarity lets students read the texts in a shorter span of time so they can gain better scores.

The other question sought to investigate the relationship between the participants' field of study and their comprehension of familiar and unfamiliar texts. To do this, four one-way ANOVAs were conducted. The results of the analyses are summarized below:

Table5.7a. *The results of the ANOVA for the familiar text for the high-intermediate students*

ANOVA					
					Familiar text for high-intermediate students
Sig.	F	Mean Square	df	Sum of Squares	
.000	16.733	28.167	3	84.500	Between Groups
		1.683	36	60.600	Within Groups
			39	145.100	Total

A glance at table 5.7a indicates that the comprehension of the familiar text for the high-intermediate students of the four groups is different, F= 16.733 and the significance level =.000 and this is statistically significant at p<.05. Duncan's test was used to see which group performed better.

Table5.7b. *Duncan's test of the familiar text for the high-intermediate students*

Familiar text for the high-intermediate students				
			Duncan	
Subset for alpha = 0.05			N	Field
3	2	1		
		6.6000	10	Architecture
	8.5000		10	Civil Eng.
	8.8000		10	Nursing
10.7000			10	English Lit.
1.000	.608	1.000		Sig.
Means for groups in homogeneous subsets are displayed.				

According to Duncan's table the lowest scores belong to Architecture students ($X_A = 6.6$) the means of Civil Engineering ($X_C = 8.5$) and Nursing students ($X_N = 8.8$) are almost equal and the higher scores belong to those who study English Literature ($X_E = 10.7$).

Table5.7c. *The results of the ANOVA for the unfamiliar text for the high-intermediate students*

ANOVA					
					Unfamiliar text for high-intermediate students

Sig.	F	Mean Square	df	Sum of Squares	
.000	7.548	14.467	3	43.400	Between Groups
		1.917	36	69.000	Within Groups
			39	112.400	Total

A look at table 5.7c indicates that the comprehension of the familiar text for the high intermediate students of the four groups is different, F=7.548 where the significance level is less than .05 so the difference is statistically significant.

Table5.7d. *Duncan's test of the unfamiliar text for the high-intermediate students*

Unfamiliar text for high-intermediate students			
		Duncan	
Subset for alpha = 0.05		N	Field
2	1		
	6.1000	10	Architecture
7.7000		10	Civil Eng.
8.0000		10	Nursing
9.0000		10	English Lit.
.053	1.000		Sig.
Means for groups in homogeneous subsets are displayed.			

As it can be observed in table 5.7d, the lowest mean belongs to the Architecture students (X_A= 6.1).Other three groups performed similarly (X_C = 7.7, X_N = 8.0 and X_E = 9.0).

Table5.8a. *The results of the ANOVA on the familiar text for the low-intermediate students*

ANOVA					
					Familiar text for low-intermediate students
Sig.	F	Mean Square	df	Sum of Squares	
.445	.911	.967	3	2.900	Between Groups
		1.061	36	38.200	Within Groups
			39	41.100	Total

According to table 5.8a, the F-value of .911 is not statistically significant at p<.05 because its significance level is .445 so there is no difference in the low-intermediate students' comprehension of the familiar text among the four groups. Duncan's test also showed that the four groups belong to one level as a result there is no difference between them.

Table5.8b. *Duncan's test of the familiar text for the low-intermediate students*

Familiar text for low-intermediate students		
	Duncan	
Subset for alpha =0.05	N	Field
1		
3.4000	10	Architecture
3.5000	10	Civil Eng.
3.6000	10	Nursing
4.1000	10	English Lit.
.174		Sig.
Means for groups in homogeneous subsets are displayed.		

Although there are differences in the performance of the low-intermediate students of the four groups in comprehending the familiar texts, the differences are not statistically significant.

In order to compare the low-intermediate students' performance on the unfamiliar text, a one-way ANOVA procedure was run. The result of the analysis is provided in table 5.8c.

Table5.13c. *The results of the ANOVA on the unfamiliar text for the low-intermediate students*

ANOVA

					Unfamiliar text for low intermediate students
Sig.	F	Mean Square	df	Sum of Squares	
.149	1.886	1.892	3	5.675	Between Groups
		1.003	36	36.100	Within Groups
			39	41.775	Total

As it can be observed in the table, the F-value of 1.886 is not statistically significant at $p<.05$ because its significance level is .149. Since there are no significant differences between the means of the groups.

Table5.8d. *Duncan's test of the unfamiliar text for the low-intermediate students*

Unfamiliar text for low-intermediate students			
		Duncan	
Subset for alpha = 0.05		N	Field
2	1		
	1.0000	10	Civil Eng.
1.2000	1.2000	10	Nursing
1.5000	1.5000	10	Architecture
2.0000		10	English Lit.
.099	.300		Sig.
Means for groups in homogeneous subsets are displayed.			

So, content familiarity was found to have facilitated the comprehension performance of both the low- and the high-ability students. The results also showed that there were significant differences in the comprehension performance between the high-ability and the low-ability students, especially in their performance on the unfamiliar text.

This study sought to explore the relative effects of language ability and content familiarity on text comprehension. In general, content familiarity was found to have significantly affected the students' overall comprehension performance. Compared with their performance on the unfamiliar passage, they tended to core higher on the familiar passage. These results appeared to support the schema theory of reading and research on L2 reading [Carrell, P. L. (1991), Coady, J. (1979), Hudson, T.(1988) and Levin, M. G. and Haus, G. J. (1985)]. According to the schema theory of reading knowledge of text content can facilitate comprehension during the encoding/decoding process by providing a knowledge structure with which readers can compare and fit pieces of incoming information, thus making it possible to assimilate the text information without the need to consider all the words and phrases in the text.

On the other hand, the inability to fit incoming information to the existing knowledge structure not only increases the necessity to comprehend each individual idea unit, but also increases memory constraints and reduces the cognitive resources available for the reader to integrate and incorporate ideas in the passage, making information assimilation difficult. The results support Urquhart and Weir s (1998) suggestion that the content of a text should be sufficiently familiar to permit the deployment of appropriate skills and strategies in order to understand the text. Although the results of this study showed that the high-intermediate group performed better on both the familiar and unfamiliar texts, the graphs revealed that at the low-intermediate group the difference between the familiar and unfamiliar texts is much greater whereas the high-intermediate group performed equally well on both texts.

The comparison of the four groups studying at different fields also showed that those studying English Literature performed better than the other groups and the lowest scores belonged to the students of Architecture. It is necessary to say that the four groups were completely homogeneous at first based on the results of TOEFL. This is completely compatible with the conclusions of the previous studies which revealed that students from the faculties of Science and Technology obtained higher mean scores not only on the content familiar subtest but also on the unfamiliar subtest. [Shoham, M., Peretz,A. S., and Vorhaus R. (1987), Koh (1985)]. Koh (1985) attributes this success to the better language proficiency of the science students which could

compensate for the ignorance of the subject matter.

Regression procedure also showed that both the speed of reading and content familiarity significantly affect the reading comprehension scores. And there is a negative relationship between the time of reading and the reading comprehension ability, i.e. the high-intermediate students read the text in a shorter time span and gained better scores. Content familiarity also decreased the time of reading. But the relationship between the content familiarity and reading proficiency is positive and significant. This means that the students gained higher scores on the familiar text rather than the unfamiliar one.

6. CONCLUSION

Content familiarity and language ability seemed to have significantly affected the participating readers' comprehension performance. While prior knowledge of content seemed to have facilitated the reading comprehension of the low-ability students, which was reflected in their performance, greater language ability may have helped the high-ability students in their performance on the unfamiliar passage. These results suggest that language instruction should focus on improving the reading and language ability of students through the presentation of reading materials with appropriate linguistic challenges.

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