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The Relationship between Intermediate EFL Learners' Reading Comprehension Performance and their Test Anxiety and Lexical Knowledge

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Abstract

Reading Comprehension (RC) plays a significant role in any academic field, especially in TEFL. This study aimed to illuminate and investigate one psychological and crucial factor influencing RC performance: Test Anxiety (TA). Furthermore, this study intended to probe into the role of lexical knowledge in RC. An attempt was made to assess the relationship among TA, LK, and RC. In so doing, after homogenizing the students as intermediate ones via a placement test, a valid questionnaire of TA (Richmond, Wrench, & Gorham, 2001) and also a Cambridge Lexical Knowledge Test were administered to the 38 intermediate students. Having administered the tests, the researcher asked the subjects to take part in a reading comprehension IELTS mock test. Based on the test, the subjects were divided into four groups: 1) High TA, High LK, 2) High TA, Low LK, 3) Low TA, High LK, and 4) Low TA, Low LK. The data collected from the questionnaire and also the vocabulary test as well as the scores given to their reading comprehension performances was analyzed through SPSS (21.00). Results indicated that there were statistically significant differences between the two groups of High LK, Low TA and the other three groups. This group outperformed the other groups. The Low LK, High TA group received the lowest scores in their reading comprehension performances. This proved the belief that those benefiting from a high mastery of lexical knowledge and lacking test apprehension while sitting for a test could attain the best records among all. The outcomes of this study can have benefits for both foreign language teachers and learners. They both can attain better results by focusing more on the psychological factor of TA in their roles. The findings of the present study demonstrated that more concentration ought to be placed on enhancing LK and lowering TA in order to augment students' reading comprehension performances.

Introduction

One of the problems that face EFL learners is their anxiety or apprehension in different examinations and tests. Some of the learners are highly apprehended while sitting for an exam. Moreover, test anxiety influences the task performance of learners in reading comprehension test. Test anxiety affects the learners' performance negatively. As noted by Kitano (2001), fear of negative evaluation is an issue that has attracted little attention in language learning research. One of the dominant struggles of the teachers in this area is to decrease the level of anxiety and make the environment less stressful for the learners.

As it is crystal clear, lexical knowledge plays a role in better understanding of a text. The more learners benefit from a high command of vocabulary knowledge, the better score they receive in their performances including reading comprehension tests. However, even learners with a high knowledge of vocabulary might not succeed in their performance due to panic, nervousness, apprehension, or anxiety. In order to be overcome these hurdles, they must not only increase their vocabulary knowledge but they must also decrease their level of anxiety. Recent investigations were rarely devoted to the examination of the relationships among test

anxiety, lexical knowledge, and reading comprehension performance in Iran.

This study intended to probe into a comprehensive study figuring out the relationships among the three variables of test anxiety, lexical knowledge, and reading comprehension performance of intermediate EFL learners. The present study could help to solve the problems of EFL teachers and learners in decreasing the amount of test anxiety by introducing the supreme source of fear of negative evaluation. The findings of this study could help the EFL learners to find out how they could achieve the best performance in their reading comprehension tests without stress. The results of this study might also provide insights into helping EFL learners to reduce their test anxiety and also increase the level of their confidence.

Research Questions

Based on the reasons why this study was conducted, the research questions are addressed as follows:

Q1) Is there any significant relationship between intermediate EFL students' level of test anxiety and their reading comprehension performance?

Q2) Is there any significant relationship between intermediate EFL students' lexical knowledge and their reading comprehension performance?

Q3) Is there any significant relationship between intermediate EFL students' reading comprehension performance and the interactional effect of their test anxiety and lexical knowledge?

Null Hypotheses

H01. There is no significant relationship between intermediate EFL students' level of test anxiety and their reading comprehension performance.

H02. There is no significant relationship between intermediate EFL students' lexical knowledge and their reading comprehension performance.

H03. There is no significant relationship between intermediate EFL students' reading comprehension performance and the interactional effect of their test anxiety and lexical knowledge.

Participants, Design, and Procedure

The participants were 50 MA EFL students (male and female) at Islamic Azad University of Zanjan and were chosen on the basis of convenience sampling. Having been homogenized via a proficiency test (Cambridge Placement Test, 2010), 35 students were selected as intermediate level. Their age ranged between 25 and 40. The study was ex-post – facto design, since there were two independent variables (lexical knowledge & test anxiety) and one dependent one (reading comprehension performance). To obtain reasonable answers to the research questions mentioned earlier, the following steps were taken: First, a Cambridge placement test was distributed among EFL students of Islamic Azad University of Zanjan to determine the homogeneity of the participants and select the intermediate language learners. After conducting and analyzing the placement test, 38 students were selected as intermediate ones. However, after the administration of the test anxiety questionnaire, three more students whose scores fell between 55 and 105 were crossed out since this range indicated moderate test anxiety. The total score is between 20 and 140: (High Test Anxiety > 105) and (Low Test Anxiety <55).

Afterwards, all the selected students were later asked to sit for a lexical knowledge test (Cambridge standard lexical knowledge test). This test included 100 questions which covered scrambled sentences, matching, filling the gaps, incorrect words, word choices and sentence completion. Each correct answer would receive 1 score; thus, the total score would amount to 100. The students whose scores fall above 60 were described as High lexical knowledge learners and those whose scores lie below 60 were considered as Low lexical knowledge learners.

Thereafter, the learners were asked to sit for a mock IELTS exam reading comprehension test. Three texts including 40 questions were administered to the students. Scoring was based on IELTS rubric for reading comprehension test.

Based on the collected data, four groups will be formed:

1. High LK – High TA group
2. High LK- Low TA group
3. Low LK – Low TA group
4. Low LK – High TA group

Data Analysis

Research Question one

Is there any significant relationship between intermediate EFL students' level of test anxiety and their reading comprehension performance?

Table 1 Pearson Correlation; Test anxiety and Reading Comprehension

		Reading Comprehension
Test Anxiety	Pearson Correlation	-.754**
	Sig. (2-tailed)	.003
	N	35

** . Correlation is significant at the 0.01 level (2-tailed).

A Pearson correlation was run to probe any significant relationship between Intermediate EFL students' level of test anxiety and their reading comprehension. Based on the results displayed in Table 1 ($r(33) = -.75$, $P < .05$ representing a large effect size) it can be concluded that there was a significant, large and negative correlation between test anxiety and reading comprehension performance. Thus the first null-hypothesis was rejected.

Research Question two

Is there any significant relationship between intermediate EFL students' lexical knowledge and their reading comprehension performance?

A Pearson correlation was run to probe any significant relationship between Intermediate EFL students' level of lexical knowledge and their

reading comprehension. Based on the results displayed in Table 2 ($r(33) = .70$, $P < .05$ representing a large effect size) it can be concluded that there was a significant and large correlation between lexical knowledge and reading comprehension performance. Thus the second null-hypothesis was rejected.

Table 2 Pearson Correlation; Lexical knowledge and Reading Comprehension

		Reading comprehension
Lexical knowledge	Pearson Correlation	.718**
	Sig. (2-tailed)	.005
	N	35

** . Correlation is significant at the 0.01 level (2-tailed).

Research Question three

Is there any significant relationship between intermediate EFL students' reading comprehension performance and the interactional effect of their test anxiety and lexical knowledge?

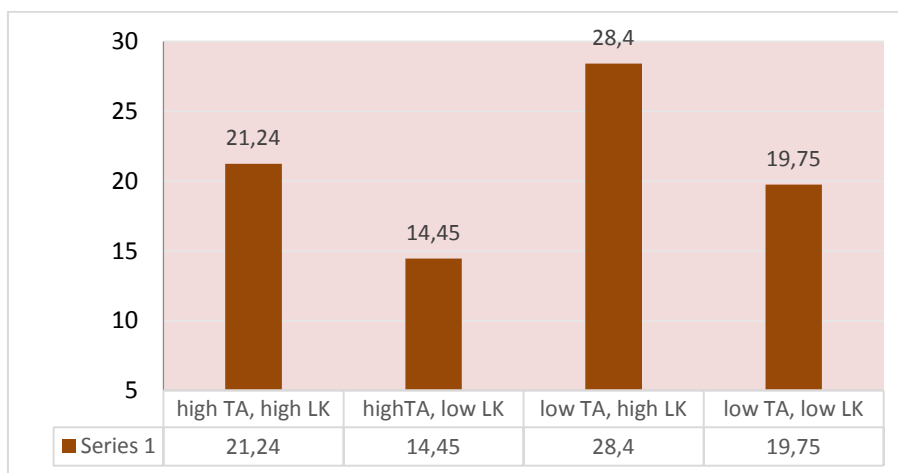
A one-way ANOVA was run to compare the four groups' means on the reading comprehension in order to probe the third research question. Based

on the results displayed in Table 3, it can be concluded that the low TA high LK (LTAHLK) showed the highest mean on reading comprehension ($M = 28.40$). This was followed by high TA high LK (HTAHLK) ($M = 21.24$), low TA low LK (LTALLK) ($M = 19.75$) and high TA low LK (HTALLK) ($M = 14.86$).

Table 3 Descriptive Statistics; Reading Comprehension by Groups

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
LTAHLK	10	28.40	4.73	1.57	20.21	35.54	20	36
HTAHLK	8	21.24	3.54	1.18	18.04	23.56	18	24
LTALLK	8	19.75	3.29	1.09	15.33	22.80	15	23
HTALLK	9	14.45	2.40	.80	11.40	27.26	11	28
Total	35	20.96	13.96	4.64	24.41	27.29	11	36

Note. HTAHLK= high test anxiety high lexical knowledge, HTALLK= high test anxiety Low lexical knowledge, LTAHLK= low test anxiety high lexical knowledge LTALLK = low test anxiety low lexical knowledge



Graph 1 Reading Comprehension Performance by Groups

The one-way ANOVA results ($F(3, 31) = 48.65$, $P < .05$) indicated that there were significant differences between the means of the four groups

on the reading comprehension performance. Thus the third null-hypothesis was rejected.

Table 4 One-Way ANOVA; Reading Comprehension by Groups

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	45.165	3	15.055	48.65	.000
Within Groups	9.61	31	.31		
Total	54.775	34			

Although the F-value of 48.65 indicated significant differences between the means of the four groups, the post-hoc Scheffe’s tests (Table 5)

should be run to compare the means two by two. Based on the results displayed in Table 5, it can be concluded that:

Table 5 Multiple Comparisons

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
LTAHL K	HTAHLK	7.16*	1.198	.000
	LTALLK	8.65*	1.218	.000
	HTALLK	13.95*	1.218	.000
LTALLK	HTALLK	5.3*	1.242	.000
HTAHL K	LTALLK	1.49	1.242	.895
	HTALLK	6.79*	1.258	.000

*. The mean difference is significant at the 0.05 level.

The low TA high LK group (M = 28.40) outperformed the high TA low LK group (M = 21.24) on the reading comprehension test (MD = 7.16, $P < .05$).

The low TA high LK group (M = 28.40) outperformed the low TA low LK group (M = 19.75) on the reading comprehension test (MD = 8.65, $P < .05$).

The low TA high LK group (M = 28.40) outperformed the high TA low LK group (M = 14.45) on reading comprehension test (MD = 13.95, $P < .05$).

The low TA low LK group (M = 19.75) outperformed the high TA low LK (M = 14.45) on the reading comprehension test (MD = 5.3, $P < .05$).

There was not any significant difference between the mean scores of the high TA high LK group (M = 21.24) and high low TA low LK group (M = 19.75) on the reading comprehension test (MD = 1.49, $P > .05$).

The high TA high LK group (M = 21.24) outperformed the high TA low LK group (M = 14.45) on the reading comprehension (MD = 6.79, $P < .05$).

Discussion

The analysis demonstrated that students with high lexical knowledge outperformed the students with low lexical knowledge. Lexical knowledge has a positive relationship with the reading comprehension performance. However, test anxiety has a negative relationship with the

reading comprehension performance. That is, the highly anxious learners did much more poorly in the performance. It is crystal clear that both lexical knowledge and test anxiety played an important role in students' reading comprehension performance. It was seen that learners with a very high command of lexical knowledge outdid those with a low lexical knowledge in the test; however, lexical knowledge, on its own, cannot guarantee an appropriate performance.

This study was in line with the findings of Sarason (1987), Sarason & Sarason (1990), and Spielberger and Vagg (1995) that test anxiety makes it hard for students to concentrate on test and perform adequately.

In addition, this study proved that as Spielberger and Vagg (1995) and Zeidner (1998) realized, for test anxious students who spend a lot of their time in achievement contexts that involves regular testing, anxiety may tremendously affect their well-being. In addition, test anxiety can impair performance.

This study was also consistent with the findings of Horwitz (2001), MacIntyre and Gardner (1990), and Zaharakar (2008) that there is a moderately negative relationship between foreign language anxiety overall and language achievement. High level of anxiety threatens individuals' mental and physical health and has a negative effect on their personal, social, familial, occupational, and educational performance

According to the outcomes of this study, as Abulghasemi (2008), Hong and Karstensson

(2002), and Onyeizugbo (2010) assert, there is a negative correlation between test anxiety and students' performances. They also believe that high level of anxiety creates intrusive thoughts which does not associate with test and don't let them concentrate on test. All these cut and off thoughts cause failure in learning.

The findings of this research were also in line with Cassady and Johnson (2002), Ohata (2005), and Sarason (1980, 1986) that test anxiety during the preparation for a test may lead to poor understanding and organization of the concepts and hence make the retrieval cumbersome. While test anxiety during the test decreases test takers' attention and thereby increases the number of errors.

This research was also consistent with Eysenck's (2001) findings that test-anxious individuals show impaired performance because part of their working memory is occupied with task- irrelevant thoughts such as worries about the performance and thoughts about failure, leading to inferior performance in memory tasks.

This study was in line with Zeidner (1998) that , "test-anxious students tend to be easily distracted on an exam, experience difficulty in comprehending relatively simple instructions, and also have difficulty organizing or recalling relevant information during the test" (p. 4).

Consistent with the findings of this research, there are number of studies reporting text anxiety as one of the major cause for students' underachievement and low performances at different levels of their educational life (Oludipe, 2009) and has been shown to affect students' ability to profit from instruction (Schonwetler, 1995). Cassady and Johnson (2002) and Jing (2007), found that test anxiety is negatively correlated with academic performance. Greater anxiety would be associated with poorer academic achievement (Luigi et al., 2007)

However, this research was not consistent with Chapell et al. (2005) who believe that for some students some anxiety might be a good thing. It might motivate longer periods of study and more

careful attention to questions on the exam. This research didn't prove Cheraghian's (2007) finding that no relationship has been indicated between test anxiety and students' performances.

This study also proved the findings of Coxhead (2006), Horst, Cobb, & Nicolae (2005), Lee and Munice (2006), and Mokhtar (2010) that in learning English language, vocabulary and lexical knowledge is acknowledged as a significant contributor to ESL or EFL improvement. In other words, L2 learners' lexical knowledge may determine the quality of their listening, speaking, reading, and writing performances.

This research was also consistent with the findings of Ellis (1995), Ellis, Tanaka, and Yamakazi (1994) that lexical proficiency is also crucial because the understanding of lexical acquisition in relation to its deeper, cognitive functions can lead to increased awareness of how learners process and produce an L2.

In line with Koda (1989), and Bensoussan and Laufer (1984), this study proved that claims vocabulary plays a key role in intermediate level text comprehension and there is a significant relationship between vocabulary knowledge and L2 reading comprehension.

Conclusion

Based on the three hypotheses, and the statistical analyses, the outcomes are as follows:

- 1) There is a significant, negative, and large correlation between test anxiety and reading comprehension performance of intermediate EFL students.
- 2) There is a significantly large correlation between lexical knowledge and reading comprehension performance of intermediate EFL students.
- 3) There is a significant relationship between reading comprehension performance of intermediate EFL students and the interaction of their lexical knowledge and test anxiety.

According to post-hoc Scheffe results, it can be asserted that the group which outperformed the others was high lexical knowledge- low test anxiety group ($M = 28.40$). That means the interaction of two variables resulted in acceptable reading comprehension performance. Therefore, the interaction or joint effect of both high self-efficacy and low test anxiety has had a positive impact on students' written performance.

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