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The Effect of Lexical Inference Strategy Instruction on Saudi EFL learners' Reading Comprehension

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Abstract

Lexical inference strategy plays an important role in increasing the level of reading comprehension of second or foreign language learners. Lexical inferencing as an efficient strategy to deal with unfamiliar words has attracted much attention in the comprehension literature. However, few studies on lexical inferencing have been conducted in an English as a foreign language (EFL) setting. To fill in the existing gap, the current study aimed at investigating the effect of lexical inferencing strategy instruction on Saudi EFL students' reading comprehension. Additionally, it sought to identify the lexical inferencing strategies used by Saudi EFL learners while they were inferring unknown words in a text. Last, the current study attempted to find the relationship between lexical inference strategies and reading comprehension among Saudi EFL learners. Sixty students from the English department were selected based on their scores on the Oxford Placement Test, indicating that they were at intermediate levels of English proficiency. The participants were randomly divided into two groups: control and experimental (each consisting of 30 students). The participants in the control group received regular instruction, while the participants in the experimental group were treated using lexical inference strategies. The instruments used for collecting data were Oxford Placement Test, reading comprehension test, and think-aloud protocol. A pre-test and post-test were administered for control and experimental groups. The results of the independent samples t-test revealed that teaching inference skills had a significant effect on reading comprehension performance among EFL learners. The results of the paired t-tests showed that lexical inferencing instruction had a statistically significant effect on EFL learners' reading comprehension development. The results of the Spearman correlation coefficient indicated that there was a significant relationship between lexical inferencing strategies and reading comprehension. The findings revealed the profound impact of lexical inferencing strategy instruction on the experimental group's performance in understanding reading text. Hence, it was concluded that lexical inferencing strategies were recommended to teach to improve the students' reading comprehension performance.

Keywords: Reading Comprehension, Lexical Inferencing Strategy, Verbal report

Introduction

The importance of reading English for EFL learners cannot be overemphasized. It receives the special focus in second or foreign language teaching and learning. It is widely recognized that reading is one of the most important skills for ESL/ EFL learners to master. As Alsheikh (2011) stated, the mastery of reading skill could help ESL/ EFL learners achieve success in English learning. Reading has played a crucial role in overall development in

language skills and even in academic success for decades (Al Fraidan, 2011). In school, reading ability is viewed as critical to academic success because students read to learn and acquire new information (Jamil, Aziz, & Razak 2010). Therefore, according to Radojevic (2006), "reading is essential for successfully completing all college-level courses. In other words, college students who are more proficient readers are most likely to experience more success in their courses". Reading is required in many of our daily occupational and recreational activities and is a prerequisite for success in our educational system (Kashkouli, &Barati, 2013; Amer and Ghabelju, 2013).

Although reading is the most demanding skill in learning English, many students face many difficulties in comprehending a reading text. They encounter many unknown vocabularies, and they often fail to generate suitable meanings. This causes comprehension problems to second and foreign language students. Similarly, Julianna (2017) points out that EFL learners are also faced with unfamiliar lexical items which can jeopardize the reading process and/or make it seem an insurmountable obstacle. To overcome such an obstacle, EFL learners normally turn to different kinds of strategies to compensate for the incomprehensible input in general and lack of vocabulary knowledge in particular (Kaivanpanah and Moghaddam, 2012). Coming across unknown words, Kaivanpanah and Moghaddam (2012) note, EFL learners either ignore the unknown words or seriously search for a strategy to compensate for their lack of knowledge. One of the most commonly used strategies has been guessing the meaning of the unknown words or, simply, lexical inferencing (Buslon, & Alieto, 2019; Nassaji and Hu, 2014; Paribakht, 2005; Qian, 2004). Lexical inferencing strategy, as Haastrup (1991: 40) defines it, 'involves making informed guesses as to the meaning of the unknown word in the light of all available linguistic cues in combination with the learner's general knowledge of the world, her awareness of the co-text and her relevant linguistic knowledge'. It is considered as an important strategy since it provides a deeper information processing of the text and also it can contribute to a better comprehension of the text as a whole (Wang, 2011). Research has demonstrated that L2 learners make wide use of lexical inferencing strategies when they deal with unknown words in their reading tasks (Nassaji 2004).

Due to the vital role of the lexical inferencing strategies in helping LS and EFL learners in making acceptable guessing from texts and utilizing lexical inferencing strategies that help them understand materials written in English in their majors, many researches in recent years have investigated the topic of the effect of the lexical inferencing strategy instruction on EFL readers (Bengeleil & Paribakht, 2004; Nakagawa, 2006; Tavakoli & Hayati, 2011; Kaivanpanah & Moghaddam, 2012; Hu & Nassaji, 2014; Safa & Kokabi, 2017; Muikku-Werner, 2017, Buslon & Alieto, 2019). Such researches indicate the positive effect of the lexical inference strategies on reading comprehension and problems in inferring the meanings of vocabulary from context. Wang (2011) further conducted a contrastive analysis between Filipino Graduate Students and Chinese Graduate Students and examined lexical inferencing strategies for dealing with unknown words. The results showed that Chinese and Filipino graduate students employed lexical inferencing strategies to deal with unknown words in reading.

Recently, Hu and Nassaji (2014) conducted a TAP with 11 Chinese ESL learners to explore L2 learners' inferential strategies and the relationship with their success. Based on both qualitative and quantitative analysis, they concluded that there were a number of differences between successful and less successful inferencers. These differences were related to not only the degree to which the participants used certain strategies but also when and how to use them successfully.

According to Anvari and Farvardin (2016), lexical inferencing strategies are among the most conducive strategies to ESL/EFL readers when they encounter an unknown word in a text. Furthermore, developing the guessing strategies can help students to overcome some of the problems arising from their lack of vocabulary knowledge (Wang, 2011). Inferential strategies are often emphasized in academic reading classes for EFL learners since they all the time encounter with the unknown words in their extensive readings and sometimes it is impractical to check the dictionary for every unknown word. Moreover, relying on dictionary may limit learners to the sentence level and prevent their global text comprehension.

However, learners' lexical inferencing is not always successful. Kaivanpanah and Alavi (2008: 92) found that 'the ability of learners to guess the meaning of unknown words is of limited value'. Learners may make mistakes in their lexical inferences (Cai and Lee, 2010). The situation is bound to deteriorate when the teachers are unaware

of unsuccessful inferences. It seems that EFL readers are prone to inexact and irrelevant guesses, hence misunderstanding the whole text. Muikku-Werner (2017) highlights the negative effect of unwarranted lexical inferences cautioning that wrong inferred meanings might be fossilized. Therefore, neither with all contexts nor with all learners should we encourage lexical inferencing (Wang, 2011). In the same line of argument, Safa & Kokabi, (2017) maintain that a threshold level of vocabulary and general language mastery is essential for successful use of lexical inferencing.

Inferencing is an adequate strategy for learners to arrive at a successful inference in L2 and EFL (Alieto and Buslon, 2019). As a result, the way learners deal with unknown words during reading has become the focus of many empirical studies in recent years. However, as stated by Cai and Lee (2010): "While much research has been done on unfamiliar word processing in reading comprehension in LS settings, empirical studies specifically investigating this issue in reading comprehension are still limited in EFL settings. Not much is known about how EFL learners process unfamiliar words in reading comprehension" (p. 126). Furthermore, Saudi EFL learners need to know how to utilize the lexical inferencing strategy for making successful inferences from the texts. Therefore, it is needed to conduct more research in this area to address such gap. Hence, the present study addressed such gap and sought to investigate the effect of the lexical inferencing strategy instruction on the Saudi EFL learners' reading comprehension. Meanwhile, as a second purpose, the study seeks to delve into the types of the lexical inferencing strategies used by Saudi EFL learners.

Statement of the problem

While lexical acquisition is an essential prerequisite to communication, it is often regarded as an 'agony' for L2 learners (Muikku-Werner, 2017). Saudi EFL learners are no exception of such an agony that can be partially relieved by lexical inferencing. Deriving word meaning, with the help of clues/ hints, makes inferencing seem a pragmatic solution to many difficulties faced by EFL learners. Nevertheless, deciding on the more acceptable inferred meanings opens the door for mistakes and it makes inferencing risky, and this brings up to the surface the issue of what types of lexical inferencing strategies (such as guessing, analyzing and monitoring strategies) are necessary for making correct inferences and how these strategies are utilized.

Training students to use the lexical inferencing strategies in order to derive the meaning of unknown words can be an ideal way of helping students to develop the students' reading comprehension performance. Many previous researches in LS and EFL settings indicate positive outcomes for many students who experienced difficulties in understanding the texts that were taught to use reading comprehension strategies (Wang, 2013; Hagaman, Casey, & Reid 2016; Ilhan Ilter, 2018; Alieto and Buslon, 2019). The results of such previous studies showed that the use of the lexical inferencing strategies had significantly affected the students' reading comprehension performance. Hence, it was concluded that lexical inferencing strategies were recommended to teach to improve the students' reading comprehension performance.

Due to the lack of studies that attest the effectiveness of lexical inferencing strategies for Saudi EFL learners' reading comprehension development, the present study sought to investigate the effect of the lexical inferencing strategy instruction on the Saudi EFL learners' reading comprehension. In addition to this, the current study seeks to delve into the types of the lexical inferencing strategies used by Saudi EFL learners. Finally, the present study attempts to examine the relationship between the respondents' lexical inferencing strategy use and their reading comprehension performance in English.

Research Questions

This study aims at investigating the lexical inferencing strategies that Saudi EFL learners employ as they read to infer the meaning of unfamiliar words. In compliance with this aim, this study addresses the following research questions:
1. Does lexical inference strategy instruction have any statistically significant effect on Saudi EFL learners' reading comprehension?

2. What types of lexical inferencing strategies do the Saudi EFL students at intermediate levels use when they attempt to guess the meaning of unknown words they encounter while reading?

3. Is there a significant relationship between the respondents' lexical inferencing strategy use and their reading comprehension performance in English?

Hypotheses of the Study

Based on the research questions and the nature of the study, the hypotheses are:

1. There is no significant difference between means of scores obtained by the experimental group (who have lexical inferencing strategy instruction) and the control group (who have regular instruction) in terms of their overall reading comprehension in the pre-test.

2. There is no significant difference between the pre- and post-test mean scores of overall reading comprehension for the control group.

3. There is significant difference between the pre- and post-test mean scores of overall reading comprehension for the experimental group and this difference is in favor of the post-test.

4. There is significant difference between means of scores obtained by the experimental and the control group in terms of their overall reading comprehension in the post-test and this difference is in favor of the experimental group.

5. There is no correlation between students' reading comprehension and their use of lexical inferencing strategy.

Research Methodology

Participants

Sixty participants took part in the present study. They were English majors at the English Department in Qassim University in the academic year 2019-2020. Students' age in both groups ranged from nineteen to twenty-one. They were enrolled in the "reading and vocabulary" class and met once a week.

Before the commencement of the experiment, ninety students were asked to take an Oxford Placement Test which is designed to determine the homogeneity of the groups to place them into appropriate classes. According to the results obtained by the students in the Oxford Placement Test administered before the start of the experiment, sixty participants were selected out of ninety English majors based on their scores on the proficiency test. They were then randomly divided into two equal groups; the experimental group (30 students) was taught through the use of lexical inferencing strategies whereas the control group (30 students) was taught through the traditional lecture method. The students thus constituted two homogenous groups in terms of their English proficiency.

Instruments of the study

Tools of the study

The present study was based upon a triangulated data collection approach using Oxford Placement Test, multiple-choice reading comprehension test, two passages and think –aloud protocol. To increase the validity of the results obtained, the method utilized for data collection in this research was based on triangulation.

Oxford placement test

In order to manifest the participants' homogeneity in terms of language proficiency level, a version of Oxford Placement Test (Edwards, 2007) was used in this study. Oxford Placement Test was valid and reliable. It was used to follow the placement procedure. The test and its criteria for placement were used to appropriately place learners in relevant proficiency levels. Oxford placement test has been used after consultation with teachers, and it was administered to assess students' knowledge of grammar, vocabulary and reading. It also enabled the researcher to have a greater understanding of what level his participants were at. The test contained 50 multiple choice questions assessing students' knowledge of key grammar and vocabulary from elementary to intermediate levels, and a

reading text with 10 graded comprehension questions (five true-false and five multiple choice items). The test was administered to ninety participants, and, based on the scored results, those whose scores were considered as extreme scores were removed from the study. Data analysis showed that 60 participants (66.7%) were in the same level and 25 (27.8%) students were in another level. So, in order to homogenize the participants, thirty participants were discarded. Then, the sixty participants were randomly assigned to the experimental and the control group. (30 students in the control group and 30 in the experimental group)

Reading comprehension test

The second instrument in the present study was a reading comprehension test which was devised by the researcher. This test intends to investigate the lexical inferencing strategies employed by students when they take multiple-choice reading comprehension test based on students' think-aloud protocols. The final version of the test contained two reading comprehension passages administered as the post-test. Each passage consisted of 10 multiple choice questions followed by 15-multiple choice vocabulary items. The first passage consists of 521 words, and the second consists of 336 words. Four options a, b, c, or d were available for every item. The selected passages were reviewed by two experts in the field to confirm that the passages to be used for the think-aloud purpose were suitable with the content and level of difficulty close to the general passages that most students in their fields had to read. Thus, they were served as representative passages in the field that the participant studied.

Validity of the test

The Validity of the test was achieved by six-member jury who evaluated the multiple-choice items of the reading comprehension test as for:
-Clarity of the items
-Whether the items reflect the content of the point tested
 - Fitness of the test to the study group.

Reliability of the test

In order to determine the reliability of the reading comprehension pre and post-test and English passage comprehension results, Cronbach's Alpha test was conducted for the total number of test items. The obtained Cronbach α=.732, significant at p-value<0.05, demonstrated the relative consistency of the participants' performance on total reading comprehension test items.

Table 1: Cronbach's Alpha Indices for the Instruments of the Study

Instrument	Cronbach's Alpha	Number of Items
Reading comprehension	73	20
Reading comprehension	82	20
English passage comprehension	79	20

Since the Cronbach's Alpha indices are all above .70, it can be interpreted that all measures of the study met a satisfactory level of reliability (Brown, 2007).

Think-aloud protocols

Think aloud protocol was the third methodological tool deployed in the present study. It was used to discover the lexical inferencing strategies that EFL learners used. Think aloud protocol was one of the most widely used tools in lexical inferencing strategy research by many researchers in a second or foreign language (Smith, Kim, Vorobel, and King, 2019; Nassaji, 2006; Cohen & Upton, 2007). The main purpose for using the technique of Think-aloud protocols is to get a clearer picture of what EFL learners are doing and thinking while reading an English text, specifying the knowledge sources they used to guess the meaning of unknown words. In this procedure, learners

were asked to read the text and guess the meaning of the words they did not know and reveal how they arrived at that meaning through think aloud. Each participant will report his strategies immediately after each item.

Respondent training on how to think aloud

Before taking the reading comprehension test, all the participants received a training lesson on what is think-aloud and how to do it before collecting the data. First, they were debriefed about the TAPs. The written instructions were adopted from Seng (2007). Then, they were asked to listen carefully to the teacher conducting a think-aloud activity when reading a passage and trying to infer the meanings of some unknown words. A passage from "Interaction Level 2 Reading" (2013) was selected and then the teacher verbalized his thoughts while inferring the unknown words. Furthermore, participants' questions regarding TAPs were answered. Next, the participants were given a short passage chosen from "Interaction Level 2 Reading" (2013). The passage length was about 300 words and eight words were selected as unknown words and written in bold font. The participants were asked to read the text and attempt to infer the meaning of target words. In addition, they were asked to verbalize what they were thinking about the passage while trying to infer the meanings of unknown words. Before doing the task, they were asked to be completely relaxed and think that they were in their bedrooms in order to eliminate the effect of stress. Their voice was recorded and then transcribed to see whether they were comfortable with think-aloud or not. The audio-recordings were also analyzed to check the number and quality of strategies used by the participants. By analyzing the audio recordings of the think-aloud activity, it was found that the participants learned to verbalize their thoughts. Afterwards, two passages were given to them and 20 unknown words were highlighted as the target words. While reading the passages, students were asked to verbalize their thoughts when they were inferring the meanings of those words and their voices were recorded. The participants were allowed to use the language they felt most comfortable with, either English or Arabic, while they were thinking aloud. The participants were required to answer the questions in 60 minutes. After data collection, the think-aloud protocols were transcribed and translated into English.

How to collect the data from the verbal report

After doing the treatment, each participant was given a reading comprehension test. The test consists of two reading passages. Each target text includes ten target words bold in it. They were asked to read the text for comprehension and to infer the meaning of the target words from the context. The participants were asked to verbalize what they would be thinking aloud to passage while inferring the meanings of the meanings of the unfamiliar target words. They were asked to think-aloud by reporting their thoughts when they were inferring the meaning of the words. They were permitted to do the think-aloud in the language they felt most relaxed with it (either their own L1 or English).

Reading comprehension passages

Before commencing the treatment, the participants were asked to read two comprehension passages. The first passage contained 521words, with 10 target words highlighted. The second passage consists of 374 words, with 10 target words highlighted. Students were asked to infer the meaning of the unknown words. Each correct answer was given a score of 1; therefore, the total score of the whole test would be 20.

Materials

Two sets of materials were used in the present study. One was the reading materials and the other one was the list of lexical inferencing strategies taught to students (Kispal, 2008). The reading materials used in the study included reading passages taken from the first 8 unites of "Interaction 2 Reading" book by Hartmann. These passages served as reading materials upon which students learned and practiced lexical inferencing strategies. They also used as the source for choosing target words to be learned by students.

Procedures

After establishing the homogeneity of the participants in terms of language proficiency, then the reading comprehension pre-test (Nation & Beglar, 2007) was given to both groups to control the participants' reading comprehension and further ensure there was no difference between the two groups.

After the pre-test, the control group proceeded with the daily teachings according to the curriculum, while the experimental group was also taught the lexical inferencing strategies. The participants in the control group did not receive any lexical inferencing strategy instruction and just received the traditional method of teaching unknown words such as explanations or providing synonyms about meaning of unknown words. The lexical inferencing strategies to be taught to the participants of the study were taken from the list of lexical strategies identified and classified by Kispal (2008). Based on Kispal' (2008) definition and classification of lexical inferencing strategies, efforts were made to explain them to learners and how and when to use them. Students' behaviors were also observed and monitored by the researchers and at times students were asked to act out the lexical inferencing procedure when encountering an unknown word. Any misunderstandings and misuse of strategies were noted, and the proper way of using them was demonstrated to students. Students were also encouraged to think of similar situations they could use the strategies and their ideas were discussed in class and examples were drawn. While reading the texts, students were supposed to try various strategies and identify the ones they could use more effectively. Finally, the teacher modeled his own way of using the strategies based on his previous experience. This is because teaching students to successfully use context clues is a process that requires modeling, instructional scaffolding, and a great deal of practice, particularly in the case of struggling readers.

The treatment period lasted for 10 sessions and each session was about 90 minutes. During the treatment, reading passages in book "Interaction 2 Reading" by Hartmann were used as the reading materials. At the end of instruction period, the participants in both groups took the reading comprehension posttest and two passages to measure their potential improvement in reading comprehension.

Data Analysis

After the needed data on language proficiency test, reading comprehension test and vocabulary knowledge test were obtained, they were statistically analyzed through SPSS. The data were described using descriptive functions of the software and the statistical technique of one-way ANOVA was used to identify the possible differences between the groups in language proficiency prior to commencing the experimentation and in reading comprehension and vocabulary knowledge before and after the experimentation.

Results and discussion

The pre-test of reading comprehension was administered to both groups at the beginning of the study to examine their initial homogeneity with respect to reading comprehension. Then, the specific treatment was given to the experimental group while the control group received traditional teaching. After ten sessions, both groups took the post-test. The data collected from the reading comprehension test were summed up and were systematically uploaded into a computer for quantitative analyses. The Statistical Package for the Social Science (SPSS) was adopted in the statistical analysis. Consequently, two independent t-tests were run for the difference between the mean scores of the experimental group and the control group on the pre-test as well as the post-test. A paired t-test was run to find the difference between the means of the scores on the following tests: the pre- and post-tests for the control group as well as for the experimental group to see if there was any difference between the performance of the subjects on the pre- and post-tests.

The procedures of descriptive statistics

Pre-test results of reading comprehension between the experimental group and the control group

Before commencing the treatment, a pre-test on the participants' reading performance was administered. After the data collection procedure was completed, the pre-test scores of both experimental and control groups were analyzed by applying an independent sample T-test to determine whether there was any significant difference between the control group and the experimental group in terms of their performance on pre- test at the beginning of the study. As shown in table 2,

The results of the pretest showed that the control and experimental groups (M=12. 27and M=12) were relatively similar. The results of the independent samples T-test between the reading pretest scores of the control and experimental groups indicated that there was not a significant difference between the mean scores of the two groups in pre-test (t= .630). The mean scores of the two groups in pre-test indicated that they had the same level of performance in reading comprehension test at the beginning of the experiment. Thus, it can be concluded that the participants' reading comprehension scores in the two groups were not significantly different prior to the administration of the treatment.

Table 2: A Comparison of the Pre-Test Mean Scores of the Control and Experimental Groups (An Independent T-test) in reading comprehension pre-test

An Independent T-test Results									
Group	Test	N	Mean	SD	Df	T	Sig. (2-tailed)	95%_Confidence Interval_of_the_ Difference	
								Lower	Upper
Control G	Reading Comprehension Test	30	12.27	1.574	58	.630	.531	.581	1.114
Experimental G		30	12	1.702				.581	1.114

Comparison of the reading pre-test and post-test within the group

The data in table 3 indicates that there is a significant difference between the mean scores of the pre-test (12) and the post-test of the experimental group (16.70). Scores of the experimental group in the post-test were greatly higher than those in the pre-test. This considerable improvement shown by the subjects of the experimental group is due to the effect of the exposure to the test-taking strategy instruction, which included presentation and practice on test-taking strategies. This indicates that the participants in the experimental group indeed benefited from the test-taking strategy instruction. This implies that the students in the experimental group improved their reading comprehension significantly after they were taught with regular lessons and the test-taking strategies. The present study also gives us more evidence for the notion that lexical inferencing strategies instruction has an effect on reading tests. This finding obtained from table 2 disagrees with the second hypothesis and assures that there is significant difference between the pre-test and the post test of the experimental group in test-taking strategies.

The students' level of performance in lexical inferencing strategies witnessed a considerable improvement. These remarkably high gains shown by the students of the experimental group in the pre and post-test are due to the effect of the systematic training the students had in lexical inferencing strategies. This finding is similar to that of (Chavosh and Davoudi, 2016; Shen, 2017; Yousefi, and Ahadzadeh, 2017) who report that training improves the attainments of the students in lexical inferencing strategies. On the other hand, table 3 also displays that there is slight significant difference between means of the scores of the control group on the pre-test, post-test basis. This assures that there is no improvement in lexical inferencing strategies. The control group, which received regular instruction, made little progress in tackling the reading items. This may be ascribed to the lack of systematic training in lexical inferencing strategies. According to obtained results, there was support for the second hypothesis stating that there is no significant difference between means of scores obtained by the control group strategies in terms of their performance on the pre-posttest of reading comprehension. On the contrary, there was rejection for

the third hypothesis stating that there is no significant difference between means of scores obtained by the experimental group strategies in terms of their performance on the pre-posttest of reading comprehension.

Table 3: A Comparison of the Mean of the Pre-test and Post-test within the Group () in both reading comprehension test and vocabulary knowledge test

	Paired-samples T-test							
	N	Mean	SD	Df	T	Sig. (2-tailed)	95%_Confidence Interval_of_the_ Difference	
							Lower	Upper
Pair 1 Pre-test of RCT	30	12.27	1.574	58	-7.954	.000	2.011	1.189
Post of RCT	30	13.87	1.502					
Pair 2 Pre-test of RCT	30	12	1.702	58	-12.335	.000	5.479	3.921
Post of RCT	30	16.70	1.622					

A Comparison of the Post-Test Mean Scores of the Control and Experimental Groups

After the end of the treatment which focused on teaching inference skills and strategies explicitly besides the conventional teachings that all participants were exposed to, a post-test on the participants' reading performance was readministered. T-test was used to analyze the difference between means of scores of the control and the experimental groups. As is shown in table (4) below, using t-test revealed that there is a significant difference between means of the scores of the control group and those of the experimental group in the posttest. The experimental group got a higher mean (16.70) than that of the control group (13.87). The results of the independent-samples t-test revealed that the students in the experimental group significantly outscored their counterparts in the control group. Mean scores and standard deviations for the performance of on the test of reading comprehension for both groups showed that the experimental group students had better performance compared with their counterparts in the control group. In other words, there is a significant difference between the two groups after the post-test because the p-value is less than .05. Thus, it can be concluded that the participants' reading comprehension posttest scores in the two groups were significantly different after the administration of the treatment with the experimental group performing better. Additionally, the results revealed that teaching inference skills had a significant and positive impact on the reading comprehension performance of EFL learners.

Table 4: A Comparison of the Post-Test Mean Scores of the Control and Experimental Groups in both Reading Comprehension Test and Vocabulary knowledge Test

An Independent T-test Results									
Group	Test	N	Mean	SD	Df	T	Sig. (2-tailed)	95%_Confidence Interval_of_the_ Difference	
								Lower	Upper
Control G	Reading Comprehension Test		13.87	1.502	58	-7.019	.000	3.641	2.025
Experimental G			16.70	1.622					

It was displayed that the students in the experimental group performed significantly better when taking the post-test than those in the control group. Modeling the lexical inferencing strategies enabled students to apply the same thought processes to their own independent work. This form of instruction enabled students in the experimental

group to improve in their abilities to comprehend and respond to text and therefore should be incorporated as an effective form of classroom teaching.

By contrast to the experimental group students, the control group students seemed to use few lexical inferencing strategies to work out the meanings of the unknown words, which may be due to lack of the training on how to use the lexical inferencing strategies.

Think-aloud protocols

The think-aloud protocol in the present study was utilized to investigate Saudi EFL learner's use of different types of lexical inferencing strategies in order to derive the meaning of unknown words from context. Lexical inferencing strategies were defined as any cognitive or metacognitive activity that the learner turned to for help while trying to derive the meaning of the unknown word from context (Anvari and Farvardin, 2016). In order to identify the strategies learners used by Saudi EFL learners, the researcher reviewed many previous studies used the think-aloud protocol. An inductive approach was used so that the transcriptions were read and re-read to identify the strategies learners used. For that purpose, previous research on lexical inferencing (e.g., Nassaji, 2003, 2004; Haastrup, 1991; Chavosh and Davoudi, 2016; Shen, 2017; Safa and Kokabi, 2017; Sadeghi, Gilani, & Niyazi, 2018 Paribakht & Wesche, 1999) as well as on vocabulary learning strategies (Yousefi, and Ahadzadeh, 2017) was also consulted. Based on the reading of the transcriptions, a coding scheme for analyzing the data was adopted from Hu and Nassaji's (2014) study in which twelve types of strategies were identified: analyzing, associating, repeating, using textual clues, using prior knowledge, paraphrasing, making inquiry, confirming/disconfirming, commenting, stating failure or difficulty, suspending judgments and reattempting. Then based on the nature of these strategies they were grouped into four major categories: form-focused, meaning-focused, evaluating, and monitoring strategies.

In order to identify the lexical inferencing strategies used by these learners in the present study, all the protocols were initially transcribed and then carefully examined for any observable inferencing strategies. Lexical inferencing strategies were defined as any cognitive or metacognitive activity that the learner turned to for help while trying to derive the meaning of the unknown word from context. Strategies were identified using an inductive procedure involving reading and rereading the protocols. The strategies identified derive mainly from the data and reflect the thinking of the learners participating in the study. Initially, three main categories of strategy types were identified. Lexical inferencing strategies were defined as any cognitive or metacognitive activity that the learner turned to for help while trying to derive the meaning of the unknown word from context. Strategies were identified using an inductive procedure involving reading and rereading the protocols. The strategies identified derive mainly from the data and reflect the thinking of the learners participating in the study. Initially, three main categories of strategy types were identified. Following Nassaji and Hu (2014), these were characterized as form-focused, meaning-focused, evaluating, and monitoring strategies. Table 5 presents these main strategies, the sub-strategies and their definitions drawn from participants' think-aloud protocols.

Table 5: Overview of Lexical Inferencing Strategy Types (Adapted from Anvari and Farvardin, 2016; 1991, pp. 126-129)

Main Strategies	Sub-strategies	Definitions
form-focused	Analyzing	Analyzing a word into various components, roots, prefixes, suffixes.
	Associating	Attempting to infer the meaning of the target words with other similar words.
	Repeating	The learner repeats any portion of the text, including the word, the phrase, or the sentence in which the word has occurred.
meaning-focused	Guessing from textual clues	Guessing the meaning of the TW by using the surrounding context clues.
	Using prior knowledge	The learner uses his background knowledge of the topic of the text to guess the meaning of the unknown word.

	Paraphrasing /translating	Paraphrasing or translating part of the text that contains the target words.
Evaluating	Inquiry	Self-Inquiry: The learner asks himself or herself questions about the word or the meaning he or she has already inferred.
	Confirming /disconfirming	The inferences made by using the information in the text
	Commenting	Making evaluative comments about the TW
Monitoring	Stating the failure/ difficulty	Making statements about the failure of inferencing or the difficulty of the target word
	Suspending judgment	Postponing the inference making and leaving it for a later time
	Reattempting	Discarding the old inference and attempting to make a new one.

As for the first research question whether the control and the experimental group students in this study employed lexical inferencing to deal with unknown words in reading, the results in this study provided a confirmative answer. After the lexical inferencing strategies were identified, the data were analyzed for the number of correct inferences by each participant. Table 6 demonstrates the total number and frequency of each main strategy and sub-strategy type used by the control and experimental groups. The results of these analyses are presented in Table 6. As it is shown in table 6, the experimental group participants made 1011 lexical inferences, whereas the control group students made 802 inferences. Out of a total of 1011 inferences, 740 correct inferences (73.2%) were made by the experimental group participants. As for the control group, only 369 correct inferences (46%) were made. This finding indicates that the percentage of correct inferences made by the experimental group is higher than that made by the control group. This outperformance of the experimental group the experimental group is attributed to the training in lexical inference strategies.

Table 6: Number and Percentage of Lexical Inferencing Strategy Types Used by the Control and the Experimental groups

Main Strategies	Sub-strategies	Control Group (802)						Experimental (1011)					
		F		Correct		Incorrect		F		Correct		Incorrect	
		N	%	N	%	N	%	N	%	N	%	N	%
Form – focused	Analyzing	83	10.3	35	42.2	48	57.8	112	11	90	80.4	22	19.6
	Associating	74	9.2	28	37.7	46	62.3	90	8.9	59	65.6	31	34.4
	Repeating	63	7.9	34	54	29	46	83	8.2	65	78.3	18	21.7
Meaning – focused	Guessing from textual clues	80	10	41	51.3	39	48.7	125	12.4	94	75.2	31	24.8
	Using prior knowledge	59	7.4	30	50.8	29	48.2	81	8	66	81.5	15	19.5
	Paraphrasing /translating	69	8.6	25	36.2	44	63.8	120	11.7	100	88.3	20	16.7
Evaluating	Inquiry	82	10.2	37	45.1	45	54.9	80	7.9	62	77.5	18	22.5
	Confirming /disconfirming	63	7.9	25	39.7	38	61.3	71	7	48	67.6	23	32.4
	Commenting	54	6.7	25	49.3	29	50.7	59	5.8	40	67.8	19	22.2
Monitoring	Stating the failure/ difficulty	52	6.5	27	51.9	25	48.1	56	5.5	34	60.7	22	39.3
	Suspending judgment	50	6.2	30	60	20	40	54	5.3	28	51.9	26	48.1
	Reattempting	73	9.1	32	43.8	41	56.2	80	7.9	54	67.5	26	32.5

As the table No.6 shows, Saudi EFL learners have a rich repertoire of strategies to infer the meaning of the unknown words. They simultaneously employed more than one strategy (e.g., Form-focused strategies + Meaning-focused strategies +Evaluating strategies +Monitoring strategies).

The findings, as indicated in table, suggest that meaning-focused strategies were the most commonly used strategies (326 inferences) by the experimental group participants which accounted for 32.2 % out of the 1011 strategy counts. They were followed by the Form –focused strategies (28.2%) and by the evaluating strategies (20.8%), and monitoring strategies (18.8%). This can be attributed to the fact that the participants most frequently relied on using contextual clues, both linguistic and non-linguistic, their prior knowledge and paraphrasing.

On the other hand, form-focused strategies were the most commonly used strategies (27.4) by the control group. They were followed by the meaning-focused strategies (25.9%), and by the evaluating strategies (24.8%), and monitoring strategies (21.8%). Analyzing is the first and foremost sub-strategy on this regard. This might be attributed to the fact that associating has saliency among cognitive tasks and hence the participants have propensity to apply the strategy more than the other strategies. It is recommended that language teachers emphasize the strategy teaching reading skill.

From Table 6, it can also be seen that the most frequently used inferencing strategies by the two groups of learners are guessing, paraphrasing, analyzing, and associating. They tried to use such strategies in inferencing the meanings of the unknown words while reading the comprehension passages. On the other hand, the least frequently utilized inferencing strategies by the two groups of learners are commenting, stating difficulty, and suspending judgments.

As shown in Table 6, the highest number of correct inferences made by the experimental learners was with the use of paraphrasing /translating strategy (88.3%), and the highest number of their correct inferences occurred with the suspending judgement strategy (48.1%). As for the control group, the highest number of correct inferences made with the use of suspending judgement (60%), and the highest number of their incorrect inferences occurred with the paraphrasing /translating strategy (63.8%).

In most categories of lexical inferencing strategies, the control group had a higher percentage of incorrect inference than the experimental group (57.8% vs.19.6%; 62.3% vs. 34.4%; 46% vs. 21.7%; 48.7% vs. 24.8%; 48.2vs. 19.5). This means that the control group participants had more difficulties in the use of lexical inferencing strategies, resulting in higher percentage of incorrect guess. The readers' lack of success in lexical inferencing might also be attributed to the learners' inadequate use of required strategy since the appropriate use of different strategies is of critical value for correct inference making.

Table 6 also indicated the total number and frequency of each strategy type used by all participants. For example, guessing from textual clues was the most frequently used strategy type by the experimental group (125 inferences), which accounted for %13.5 out of the 1011 strategy counts. Also, suspending judgement was the least frequently used strategy type with just 54 counts, which was about %5.3 percent. As for the control group, analyzing was the most frequently used strategy type (83 inferences), which accounted for %10.35 out of the 802 strategy counts. Also, suspending judgement was the least frequently used strategy type with just 50 inferences, which was about % 6.2 percent.

The results of the present study displayed that Saudi EFL learners, under some circumstances, simultaneously employed more than one strategy type. They tend to utilize Meaning-focused Strategies (using contextual clues) than any other strategy type. It might be because of the fact that the participants read the text for comprehension purpose. Although participants simultaneously used both strategy types (e.g Analyzing + Paraphrasing), but a small number of participants employed these strategies. I think because they didn't know the strategies and didn't know how they used these strategies.

In general, the results indicated that both of the experimental and control group students used the four categories of lexical inferencing strategies when they inferred the meaning of the unknown word, namely, form-focused,

meaning-focused, evaluating and monitoring strategies. However, the results further indicated that the two groups differed significantly only on the frequency of the strategies used. In terms of the number of inferences made by, it was seen that the students of the experimental group outperformed the students of the control group.

The relationship between the learners' reading comprehension and their lexical inferencing strategy use

With respect to the last research question about whether there is a relationship between the learners' reading comprehension and their lexical inferencing strategy use, Table 7 displays the answers. To determine the significant relationship between the lexical inferencing strategies and the respondents' reading comprehension, Pearson r was the statistical tool used to draw the relationship. In order to determine the relationship between the independent variable (lexical inferencing strategy) and the dependent variable (reading comprehension), correlation coefficient between these two variables calculated at .01 level of significance. The results obtained from these computations are presented in table 7.

Table 7: Pearson Correlations between the Lexical Inferencing Strategy and Reading Comprehension (posttest) for the experimental Group

Correlation			
		Reading	Lexical Inferencing Strategy
Reading	Pearson Correlation		.935
	Sig. (2-tailed)		.000
	N		60
Lexical Inferencing Strategy	Pearson Correlation	.935	
	Sig. (2-tailed)	.000	
	N	60	

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

Table 7 shows the correlations between the lexical inferencing strategy, and reading comprehension scores. With regard to the lexical inferencing strategy as another variable of the study, as far as the results of the above statistical analysis reveal, there was a high and significant correlation between this variable and reading comprehension ($r = .935$, $p < .01$) which suggests that lexical inferencing strategies help learners comprehend the text better. Furthermore, there is a direct and significant relationship between lexical inferencing strategy scores and reading test scores of students, and by increasing lexical inferencing strategy lexical inferencing strategy scores, reading test scores had been increased and vice versa. So, the second hypothesis was rejected and can be claimed that there is relationship between lexical inferencing strategy and the experimental group learners' reading comprehension performance.

As for the control group, there was a strong positive correlation ($r = .931$, $p < .01$) between the use of lexical inferencing strategies and the reading comprehension test (See table 8). The results also indicate that there was significant relationship between the results on the reading comprehension test and the lexical inferencing strategies used by learners.

Table 8: Pearson Correlations between the Lexical Inferencing Strategy and Reading Comprehension (posttest) for the Control Group

Correlation			
		Reading	Lexical Inferencing Strategy
Reading	Pearson Correlation		.931
	Sig. (2-tailed)		.000

			60
	N		60
Lexical Inferencing Strategy	Pearson Correlation	.931	
	Sig. (2-tailed)	.000	
	N	60	

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

Discussion

The present study investigated the effects of lexical inferencing strategies on reading comprehension ability of EFL learners and also the relationship between inference (lexical and global) and English (L2) reading comprehension. Further, it examined the types of lexical inferencing strategies used by the control and experimental groups. The overall results of the independent sample t-test revealed a significant difference between both experimental and control groups in terms of reading comprehension test. This finding indicates that there is a remarkable improvement in the performance of the experimental group in comparison with that obtained by their counterparts in the control group. This shows that the lexical inferencing strategies instruction did have a significant effect on the Saudi EFL students' reading comprehension test performance. Additionally, findings revealed that inference skills positively influence reading comprehension ability among EFL learners. Thus, the results of the present study are in line with the findings of other similar studies that have probed the impacts of lexical inferencing strategies on reading comprehension of EFL learners (Wang, 2011; Kaivanpanah, & Moghaddam, 2012; Chavosh and Davoudi, 2016; Shen, 2017; Yousefi, and Ahadzadeh, 2017; Safa and Kokabi, 2017; Sadeghi, Gilani, & Niyazi, 2018; Hassanzadeh, Tamjid & Ahangari, 2019). They all supported that lexical inferencing strategies instruction improved the EFL students' reading comprehension test performance. Collectively these results confirm the benefits of providing students with instruction in reading comprehension and lexical inferencing strategies.

The overall results also show that the total number of lexical inferencing strategies used by the experimental group was 1011 inferences, whereas the control group participants made 802 inferences. In their turn, the experimental group subjects outperform the control group participants in the number of inferences which represents 55.7% of the total number of strategies. The types of lexical inferencing strategies used by both the control group and experimental group level subjects, together with corresponding quantitative results are shown in the Table 6. This increase in the number of inferences made by the experimental group subjects is attributed to the instruction in lexical inferencing strategies. These results correlate with those obtained in other studies in that there is a relationship between learners' reading comprehension and their ability to succeed in inferring meanings of unknown words in reading comprehension tasks (cf. Buslon & Alieto, 2019; Yousefi and Ahadzadeh, 2017; Nassaji and Hu, 2014; Jelić, 2007; Paribakht and Wesche 2006, Qian 2005 and Nassaji 2004). These findings add to the general understanding of the complex nature of L2 lexical inferencing, and have shown the crucial importance of vocabulary knowledge for successful inferencing.

This study also supports the significant relationship between lexical inference ability and reading comprehension. This finding is compatible with that resulted from the studies conducted by Sadeghi et al., (2018), Buslon, & Alieto (2018), Chegeni & Tabatabaei (2014), Awani (2013), Tavakoli and Hayati (2011), Nakagawa (2006), and Seng (2007). Their justification for this finding is the participants' scores in reading comprehension test which showed much variation. As previously mentioned, the experimental group subjects' use of lexical inferencing strategies was higher than that of the control group learners, and their reading comprehension scores were also higher than that of the control group students. The degree to which the learners were able to infer word meaning successfully was related to the instruction that they receive in lexical inferencing strategies.

The findings of the present study also revealed that lexical inferencing strategies are important in reading comprehension and can contribute to the ability of EFL learners to understand the text more effortlessly (Van Zealand, 2014). This study also indicated that EFL learners who are more competent in inferring the meaning of unknown words from the context and immediate co-text are better readers and comprehend the deeper meaning of the text compared to those with lower lexical inferencing strategies. In addition to the ability of making informed

guesses about the immediate unknown words and facts within a text, being able to retrieve the underlying meaning of the whole text and bearing all key information in mind plays an important role in comprehending a passage. Hence, lexical inferencing strategies help readers create a comprehensive mental model (Sadeghi et al., 2012 and Buslon, J., & Alieto, 2019). Lexical inferencing strategies help readers understand the underlying meaning instead of the literal meaning, which should enhance comprehension of the written text.

Consequently, there was a strong and positive relationship between lexical inferencing strategies and reading comprehension in English among EFL learners. The results of this study also showed that teaching inference skills significantly affect reading comprehension ability. Explicit instructions and teaching methods to read efficiently also help learners to develop their reading comprehension.

Conclusion

The main purpose of this research study is, firstly, to investigate the effect of the lexical inferencing strategy instruction on the Saudi EFL learners' reading comprehension. Secondly, the present study sought to identify types of lexical inferencing strategies used by Saudi EFL learners in order to derive the meaning of unknown words from context. Thirdly, the study intends to explore whether there is a relationship between the types of lexical inferencing strategies used Saudi EFL learners and their reading comprehension. Sixty students participate in this study; control group (30 students) and experimental group (30 students). The data collected for the study were elicited by means of the following tools: Oxford Placement test, a reading comprehension task, reading comprehension test and think-aloud protocols. Moreover, participants read two passages containing 20 unknown words and attempted to derive the meanings of the unknown words from context. Introspective think-aloud protocols were used to discover the degree and types of inferencing strategies learners used. The results of the comprehension test showed that there was a significant difference between the means of scores gained by the experimental group and that of the control group favoring the experimental one. This finding also revealed that the use of the lexical inferencing strategies had significantly affected to students' reading comprehension performance. Moreover, results of the paired t-tests showed that lexical inferencing instruction had a statistically significant effect on EFL learners' reading comprehension development. The results of the verbal report indicate that both of the control and experimental group students used the four categories of lexical inferencing strategies when they performed a reading task, namely, form-focused, meaning-focused, evaluating and monitoring. The number of inferences used by the experimental group learners was higher than that used by the control group learners (1011 versus 802). The finding also displays that there is a strong a relationship between the type of lexical inferencing strategies used and EFL learners' reading comprehension. In sum, these findings add to the general understanding of the complex nature of EFL lexical inferencing, and have shown the crucial importance of vocabulary knowledge for successful inferencing.

Suggestions for Further Research

Considering the findings of this study, the following areas are worthy of further investigation.
1. A similar study can be carried out with female EFL students, and the results can be compared with those of this study to see whether the participants' gender may affect their pattern of lexical inference.
2. Bearing in mind that the number of subjects participating in the study was small, it is not possible to generalize the findings to a wider population. Therefore, in future research it would be necessary to include a larger number of participants.
3. Besides, it would be useful to do research into the lexical inferencing strategies used by students who have different purposes in studying English as a foreign language (e.g., science students).

References

Al Fraidan, Abdullah (2011) *Test-taking strategies of EFL Saudi university-level learners on two varieties of gap-filling vocabulary achievement tests*. Ph.D. Thesis. University of Essex, UK.

Amer, A. And Ghabelju, M.2013. Test taking strategies instruction and Iranian EFL learners' performance on international language tests. *International Journal of Applied Linguistics & English Literature* Vol. 2 No. 1; January

Anvari, S. and Farvardin, M. (2016). Revisiting lexical inferencing strategies in L2 reading: A comparison of successful and less successful EFL inferencers. *The Reading Matrix: An International Online Journal, VL - 16*

Awni Etaywe (2013). Lexical inferencing strategies by learners of English as a foreign language, Munich, GRIN Verlag, https://www.grin.com/document/353465

Bengeleil, N & Paribakht, T.S. (2004). L2 reading proficiency and lexical inferencing by university EFL learners. *The Canadian Modern Language Review*, 6 (2), 225-251.

Brown, H. D. (2007). *Principles of language learning and teaching*. New York: Pearson Education.

Buslon, J., & Alieto, E. (2019). Lexical inferencing strategies and reading comprehension in English: A case of ESL third graders. *Asian EFL*, 22(1), 73-94.

Cai, W. & Lee, B., P., H. (2010). Processing unfamiliar words: Strategies, knowledge sources, and the relationship to text and word comprehension. *The Canadian Journal of Applied Linguistics*: 15 (1). 122-145.

Chavosh, M., & Davoudi, M. (2016). The effect of explicit teaching of lexical inferencing strategies on the vocabulary learning among Iranian field-dependent and independent EFL learners. *Studies in Literature and Language,* 12 (4), 44-53. Available from: http://www.cscanada.net/index.php/sll/article/view/8296. DOI: http://dx.doi.org/10.3968/8296

Chegeni, N. & Tabatabaei, O. (2014). Lexical inferencing: The relationship between number and density of lexical items and L2 learners' reading comprehension achievement. *Journal of Language Teaching and Research*, 5 (2) , 306 -312.

Chi, F. & Chern, C. (1988). The study of English teaching and learning in senior high school. In Tavakoli, M. & Hayati, S. (2011). The relationship between lexical inferencing strategies and L2 proficiency of Iranian EFL learners. *Journal of Language Teaching and Research*, 2 (6), 1227 - 1237. doi:10.4304/jltr.2.6.1227-1237.

Edwards, (2007). Solutions: Placement Test Elementary to Intermediate. Oxford.

Haastrup, K. (1991). *Lexical inferencing procedures or talking about words.* Tubingan: Gunter Narr.

Hassanzadeh, Z., Tamjid, N., Ahangari, S. and Agudo, J. (2019). The effect of lexical inference strategy instruction on Iranian EFL learners' vocabulary depth and breadth. *Cogent Education, Vol.6, Issue1.*

Hagaman, J. L., Casey, K. J., & Reid, R. (2016). Paraphrasing strategy instruction for struggling readers. Preventing School Failure, 60, 43-52.

Jamil, A., Aziz, M. S., A. &Razak, N., A (2010).The utilization of test-taking strategies among female students in a tertiary institution. *GEMA Online Journal of Language Studies*, 10(3), 105-125.

Jelić, A.-B. (2007). Lexical inferencing strategy use by Croatian foreign-language learners. In J. Horváth & M. Nikolov (Eds.), UPRT 2007: *Empirical studies in English applied linguistics (pp. 245-254). Pécs: Lingua Franca Csoport.*

Julianna, J. (2017). The comparative impacts of using lexical glossing and inferencing strategies on students' reading comprehension. *Advances in Language and Literary Studies*, 9 (1), 1-4.

Ilter, I. (2018). Effects of the Instruction in inferring meanings from context on the comprehension of middle school students at frustration reading level. *Journal of Education.* Vol. 198(3) 225–239

Kaivanpanah, S. & Moghaddam, M.S. (2012). Knowledge sources in EFL learners' lexical inferencing across reading proficiency levels. *RELC Journal*, 43 (3), 373 - 391. Doi: 10.117/0033688212469219.

Kashkouli, Z. &Barati, H., &Nejad Ansari, D. (2015, A). An investigation into the test-taking strategies employed for a high-stake test: Implications for test validation. International *Journal of Research Studies in Language Learning*, 4(3), 61-72. http://dx.doi.org/10.5861/ijrsll.2014.852

Kispal, A. (2008). Effective Teaching of Inference Skills for Reading: Literature Review. National Foundation for Educational Research. ISBN 978 184775 141 6

Muikku-Werner, P. (2017). Lexical inferencing and the mutual intelligibility of Estonian and Finnish. *Nordic Journal of Linguistics*, 40 (2), 201 - 223.

Nakagawa, C. (2006). The effects of morphological and contextual clues on EFL readers' lexical inferencing. *ARELE: Annual Review of English Language Education in Japan*, 17, 151-160.

Nassaji, H. (2003). L2 vocabulary learning from context: Strategies, knowledge sources, and their relationship with success in L2 lexical inferencing. *TESOL QUARTERLY,* 37 (4), 645 - 670.

Nassaji, H. 2006. The relationship between depth of vocabulary knowledge and L2 learners' lexical inferencing strategy use and success. *The Modern Language Journal,* 90, pp. 387-401.

Nassaji, H. and Hu, H. (2014). Lexical inferencing strategies: The case of successful versus less successful inferencers. *System Volume 45*, Pages 27-38

Parel, R. (2004). The impact of lexical inferencing strategies on second language reading proficiency. *Reading and Writing: An Interdisciplinary Journal*, 17 (9) , 847–873.

Paribakht, T. S. (2005) The influence of first language lexicalization on second language lexical inferencing: A study of Farsi-speaking learners of English as a foreign language, Language Learning, 55(4), 701–748. https://doi.org/10.1111/j.0023-8333.2005.00321.x.

Paribakht, T. S. & Wesche, M. (1997). Reading and incidental L2 vocabulary acquisition: An introspective study of lexical inferencing. *Studies in Second Language Acquisition*, 21, 195-224.

Radojevic, N. (2009). *Exploring the use of effective learning strategies to increase students'reading comprehension and test taking skills.* Unpublished Master, Brock University, St.Catharines, Ontario.

Riazi, A. and N. Babaei. 2008. Iranian EFL female students' lexical inferencing and its relationship to their L2 proficiency and reading skill. *The Reading Matrix* 8 (1): 186-195.

Sadeghi, A., Gilani, L., and Niyazi, M. (2018). The effect of inference skills on reading comprehension among EFL learners. *Pakistan Journal of Language Studies*. Vol. 2, Issue 1

Safa, M.A & Kokabi, M.Y. (2017). The role of lexical inferencing and morphological instruction on EFL learners' reading comprehension development. *Iranian Journal of Applied Language Studies*, 9 (1), 1- 32.

Seng, G. H. (2007) The effects of think-aloud in a collaborative environment to improve comprehension of L2 texts, *The Reading Matrix*, 7(2), 29–45. http://www.readingmatrix.com/articles/ seng/article.pdf.

Shen, M.-Y. (2009). Technical university EFL learners' reading proficiency and their lexical inference performance. *Electronic Journal of Foreign Language Teaching - Center for Language Study*, 6 (2), 189 - 200.

Smith, P., Kim, D., Vorobel, O., and King, J. (2019). Verbal reports in the reading processes of language learners: A methodological review. *Review of Education*, Volume 7, Issue 2 Pages: 235-451 DOI: 10.1002/rev3.3170

Tavakoli, M. & Hayati, S. (2011). The relationship between lexical inferencing strategies and L2 proficiency of Iranian EFL learners. *Journal of Language Teaching and Research*, 2 (6), 1227 - 1237. doi:10.4304/jltr.2.6.1227-1237.

Shen, M.-Y. (2017). The role of text type and strategy use in L2 lexical inferencing. *International Review of Applied Linguistics in Language Teaching*, 56 (2), 1-21.

Stern, H.H. (1992). *Issues and options in language teaching*. Oxford: Oxford University Press.

Van Zealand, H. (2014). Lexical inferencing in first and second language listening. The Modern Language Journal, 98(4), 1006-1021. DOI: 10.1111/modl.12152.

Wang, Q. (2011). Lexical inferencing strategies for dealing with unknown words in reading—A contrastive study between Filipino graduate students and Chinese graduate students. *Journal of Language Teaching and Research*, 2 (2), 302-313.

Yousefi, M. and Ahadzadeh, M. (2017). Iranian intermediate EFL learners' vocabulary inferencing strategies: A qualitative study. *Theory and Practice in Language Studies,* Vol. 7, No. 7, pp. 533-539, July 2017 DOI: http://dx.doi.org/10.17507/tpls.0707.05