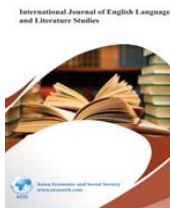




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### EXAMINING THE EFFECTS OF STRATEGY-BASED INSTRUCTION OF READING PASSAGES TO IRANIAN UNDERGRADUATE EFL LEARNERS

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#### ABSTRACT

*The present study aimed at exploring the possible effects of strategy-based instruction of reading passages to undergraduate Iranian EFL learners. The study particularly explored the effects of using SQR3 and TPS reading strategies on learners' reading performance. To this end, 60 EFL learners were selected and participated in this study. After homogenizing the learners, they were randomly divided to three groups; two experimental and a control group. Learners in the first experimental group (SQR3) surveyed, questioned, read, reviewed and recited the reading passages while learners in the second experimental group (TPS) group thought about reading passages and shared their comprehensions with the classmates. However, learners in the control group followed the traditional method of translating reading passages to Persian for comprehension. The reading section of IELTS Test, as an internationally validated test, was applied as the pre- and the post-test of the study to further check learners' reading comprehension. The paired-samples t-test and ANOVA analysis of learners' performances indicated that SQR3 and TPS learners significantly outperformed on their post-tests compared with their peers in the control group. The results certified the efficacy of strategy-based approach of teaching reading passages, namely SQR3 and TPS, in promoting learners' reading comprehension in academic Iranian EFL context.*

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**Keywords:** Reading comprehension, Reading strategy, Survey-based strategies (SQR3), Interaction-based strategies (TPS).

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## Contribution/ Originality

This study is one of the few studies which have investigated the efficacy of two recently-proposed reading comprehension strategies, namely SQR3 and TPS. The study has also tried to illuminate the possible differences these two reading strategies may bring about in Iranian academic context.

## 1. INTRODUCTION

When it comes to reading courses or comprehension activities, learners usually complain on the difficulty of the reading task; they lack an appreciation of reading passages, guidance for doing the tasks and an appropriate measure for correctness of mental process during the task. It is easily detectable that learners during reading time do anything except for the reading itself; they read without aims or guidance. In this regard, this study aimed at examining the efficacy of two types of recently-developed reading comprehension strategies, namely SQR3 (surveying-questioning-reading-reciting-reviewing) and TPS (think-pair-share), on learners understanding of the text passages in Iranian EFL context.

According to the related literature, reading strategy application and instruction effectively advance learners' reading comprehension (Geladari *et al.*, 2010; Jafari and Shokrpour, 2012; Rokhsari, 2012). Moreover, different reading strategies have been found to be fruitful in promoting learners' reading ability including prediction, concept mapping and summarizing (Braxton, 2009). According to Celce-Murcia (2001), reading helps learners in successful functioning as well as giving them sense of efficacy when having access to information. According to a number of studies, learners can optimize their comprehension and overcome their deficiency by applying different strategies and processes. Regarding reading techniques, strategies are problem-oriented techniques and approaches, which are employed to attain certain comprehension or production goals (Dechant, 1991). According to Rokhsari (2012), reading is not just the process of analyzing vocabularies and structures of the sentences; it needs different reading strategies to read successfully in English. Jafari and Shokrpour (2012) noted that strategy use is different in more and less proficient readers while more proficient readers use different types of strategies in different ways. According to Geladari *et al.* (2010),

The successful readers showed greater strategic knowledge, since they were more flexible in using both cognitive and meta-cognitive strategies and employed a wider range of more 'elaborated' strategies ... On the contrary; the less successful readers read slowly and showed more limited lower-level processes and strategies (p. 3768).

Focusing on different types of reading comprehension strategies, the efficacy of two less-studied practical types of reading strategies is put under investigation in this study. The first reading strategy is SQR3 which stands for survey, question, read, recite and review. In this reading strategy, learners are required to do a survey before starting the reading. Learners would go through the title, charts and review questions to have a general picture from the text (Davis, 2010).

Following that, they question “how”, “what” and “why” on the reading about their previous knowledge and the reading usage. Then learners will go through the first R and read the text carefully, in the second place they recite what they have said and finally learners review their understanding from the text.

The second reading comprehension strategy, TPS, denotes Think-pair-share activities. In this strategy learners are encouraged to think about a reading passage or question and then refine it through discussion with a partner (Davis, 2010). Firstly, learners should think individually on a text then share their ideas with a partner and finally share her or his discussion and understanding with another pair of students or a small group. Illuminating these two types of reading comprehension strategies, the study, accordingly, is in demand of exploring how these two strategies work on learners’ reading comprehension. Put it in a nutshell, the present study aims at investigating the effect of these two types of strategies on learners’ reading comprehension to assess whether these strategies can improve learners’ performances.

This was an attempt to explore the effects of two types of reading comprehension strategies on a sample of Iranian EFL learners. Specifically, the study takes a deep look into how SQR3 and TPS can improve learners’ text comprehension. Furthermore, the study compared the possible effects of these two strategies to suggest which one boosts Iranian learners’ performances more than the other. Following the objective of the study, the three main research questions are formulated as follows;

- Does SQR3 have a statistically significant effect on Iranian EFL learners’ reading comprehension?
- Does TPS have a statistically significant effect on Iranian EFL learners’ reading comprehension?
- Is there any significant difference between the performance of learners who experienced SQR3 and TPS during the course of the study?

## 2. LITERATURE REVIEW

Reading is one of the central skills for successful performances. Nunan (1993) referred to reading as “a matter of decoding a series of written symbols into their aural equivalents in the quest for making sense of the text. He called this process as the 'bottom-up' view of reading which is gradually developed as the reader goes on reading”. Similarly, Millrood (2001) described it as “a visual and cognitive process to extract meaning from writing by understanding the written text, processing information, and relating it to existing experience”. Following the definitions, it can be understood that reading is a complex cognitive process which tends to make a written linguistic text comprehensible in order to communicate ideas and findings.

### 2.1. Reading Strategies

While there have been different categorizations of language learning strategies, Oxford (1990) has proposed the most comprehensive and effective classification scheme of various strategies

which are employed by language learners within the broader context of reading strategies. According to Oxford (1990), there are six main categories of strategies as follows.

- *Cognitive Strategies* are mental processes which are utilized by learners to transform or manipulate the language. They can be in the form of note taking, paraphrasing, predicting, using context clues, summarizing, analyzing and formal practice with the specific aspects of L2 as sounds and sentence structure.
- *Memory Strategies* are technique which helps learners recollect and retrieve information from their long-term memory. This strategy includes creation of mental images through grouping and association, using key words and word association, semantic mapping, and putting new words into a context.
- *Compensation Strategies* are process taken to handle a situation such as inferencing, guessing, and using reference materials including dictionaries or the internet. Cognitive strategies directly interact with what is to be learned and is more related to a particular task and learning objective.
- *Meta-cognitive Strategies* are skills through which learners plan, arrange and evaluate their learning process. Attention, self-evaluation, organization, goal setting, practice opportunity seeking and self-monitoring are the various types of meta-cognitive strategies.
- *Affective Strategies* are strategies which aid learners through their language learning is the application of affective strategies such as self-encouraging and decreasing anxiety during learning.
- *Social Strategies* are techniques in which learners involve themselves and their learning with other people and peers. Cooperation, questioning, asking for correction and feedback are types of social strategies optimizing learners' both learning and comprehension the same as other strategies mentioned above.

According to Oxford (1990), successful learners use strategies in learning processes and teachers should improve learning by empowering learners to study learning processes and techniques. Regarding reading skill and reading process, reading strategies help readers perceive a reading task, identify textual clues and make sense of what they read and what they do when they could not understand the text. Van Keer (2004) defined reading comprehension strategies as “conscious, instantiated, and flexible plans readers apply and adapt deliberately to a variety of texts and tasks” (p.38). According to O'Malley and Chamot (1990), during reading a text cognitive strategies creating a framework bring meaning to the text, a direct manipulation of reading passage. At a higher level, meta-cognitive strategies entail the reflection during reading process. It helps learners assess themselves as readers and evaluate their knowledge and text processing concerning the complexity of the task and purposes and plans directing the reading process. It is worth mentioning that both cognitive and meta-cognitive strategies are overlapping processes which function simultaneously (Cadena, 2006).

### 2.1.1. Interaction-Based Strategy (TPS)

TPS which stands for Think-Pair-Share strategy is originated in Lyman (1987) work. According to McTighe and Lyman (1988), TPS is a cooperative strategy denoting “a multi-mode discussion cycle in which students listen to a question or presentation, have time to think individually, talk with each other in pairs, and finally share responses with the larger group”. TPS is among the most modern and applied cooperative strategies which have been used throughout the years and in different settings (Marashi and Baygzadeh, 2010; Khaghaninejad, 2014). TPS is applied to activate students’ background knowledge about the instructional situation and encouraging learners to engage in classes of any size. Fisher (2005) states that “rather than using a basic recitation method in which a teacher poses a question and one student offers a response, Think-Pair-Share is a multi-response strategy, applicable to all learners”. It can be inferred that TPS as an effective strategy is applicable in all kinds of learning settings with learners of all ages and abilities.

As it seems, TPS is a much focused activity which heighten learners’ active engagement in the class and help them to share opinions and polish their thinking. In Lyman (1987) words, TPS is a “classroom learning activity that provides students with an opportunity to think about a key question, idea, issue, or notion and share their thoughts with a partner before discussion in a small or large group. What is worth highlighting is that TPS promote social skills of learners and involve them more in class discussion and consequently upgrade their meta-cognitive awareness while implementing TPS (Lyman, 1987). According to El Salehi (2013), Lyman’s strategy provides learners with many advantages. In the first place, it motivates individual communication and involves the whole class. It stimulates silent learners to answer questions or complete the practice with a pair in place of standing in front of the students. Listening to groups’ discussion in doing task and gathering their replies at the end, teachers and instructors can evaluate learners’ comprehensions. Highlighting group activity, Fisher (2005) argued that,

Working with a partner should also give a child confidence to work in bigger groups. For the child helped by another, the benefits can be considerable. Tutors can gain intellectual benefits in different ways. Putting their skills and knowledge to some purpose will help to consolidate their knowledge, fill in gaps, find new meanings and extend their conceptual framework.

According to Karge (2011), the cooperative nature of this technique aids learners have interest in the subjects covered. Furthermore, it plays the role of a path for learners to tap into related previous knowledge. This learning activity creates an excellent chance for the teacher to evaluate learners’ understanding of the given subject. Whereas the groups are working on the questions, the teacher can move around the class to indicate the level of comprehension of each learner and the group entirely. Besides, teacher can use this time to inform learners of his/her feedback. Accordingly, TPS is so strong and productive in structuring learners’ thinking and their discussion in order to be applied in the class.

### 2.1.2. Survey-Based Strategy (SQR3)

It was 1941 that Robinson has published *Diagnostic and Remedial Techniques for Effective Study* and introduced a new study strategy referred to as SQR3. According to Robinson (1941), “contrary to the opinion of many students, the way to achieve effective study is not by more study or more determined concentration, but by changing the quality of the study method” (p. 1). Robinson (1941) claimed that learners are required to be patient when learning a study skill. Study skills may be learned fast; nevertheless, they must be worked with, molded, and practiced before they are mastered (Robinson, 1941). Acting on his belief that learners required an operative study skill technique, Robinson (1941) introduced the SQ3R technique. He utilized the psychological outcomes from a multitude of experiments concentrating on indicating single isolated technique applied for promoting inclusive understanding and retention (Robinson, 1941). An abbreviation, SQR3, was applied to capable easier retention, in addition to permitting a fast and simple reference. SQR3 indicates a thorough step-by-step framework of what a learner should complete and attain during reading.

Robinson (1941) undertook two experiments to assess the effectiveness of the SQR3 technique. The first study was led with a sample of learners registered in a “how to study” course. The reading ability and comprehension of learners were determined through their reading rates and a pre-test. At the beginning of the research, the learners’ reading grades were in the 34<sup>th</sup> percentile, and the average comprehension level was in the 43<sup>rd</sup> percentile. The learners were taught on how to use the SQ3R strategy and allowed several days to exercise applying the technique. Afterward, learners participated in a second examination in order to be compared with the original results. The analysis revealed a significant improvement in both learners’ reading grade and comprehension. The reading grade augmented 22 percentiles, placing the learners in the 56th percentile, and the comprehension accuracy improved 10 percentiles, placing learners in the 53rd percentile (Robinson, 1941). The second experiment Robinson (1941) investigated the efficiency of the study skill when applied to become ready for a test. The learners were asked to utilize their own pre-organized study practices to be ready for a test. Following that, learners were provided with attest in which the average number of incorrect responses was 15. The learners were subsequently instructed the SQ3R study skill technique and given a second test of same difficulty. Analyzing the scores, it was indicated that the average amount of incorrect responses decreased to six (Robinson, 1941). As a self-regulated strategy, SQR3 led to generating various reading strategies. Artis (2008) explained the different adaptations of this technique.

Table-1. Self-regulated Reading Methods

Method	Description
SQ3R (Robinson, 1941)	<i>Survey, question, read, recite, and review</i> —This strategy focuses on improving students’ comprehension when reading complex materials and serves as a foundation for many newer reading strategies.
	<i>Continue</i>

PQ4R	<i>Preview, question, read, reflect, recite, and review</i> —This strategy encourages students to internalize and personalize information to achieve higher order thinking.
FAIRER	<i>Scan for facts, ask questions, identify major and minor details, read, evaluate your comprehension, and review</i> —This strategy attempts to build comprehension with greater reading speed.
SQ10R	<i>Survey, question, read, reflect, review, repeat, rethink, reintegrate, rehash, renote, rehearse, and reread</i> —Created for remedial readers, the extra steps in this strategy are designed to help students who process information more slowly to comprehend complex reading materials.
SQ6R	<i>Survey, question, read, reflect, review, rehash, rethink, and reevaluate</i> —Emphasis is placed on thinking about the topic as a whole and how various ideas and information fit within the larger framework.

## 2.2. Focusing on SQR3 and TPS Studies

Reviewing the related literature, there reveals a plethora of studies reported on reading strategies and its effects on learners' reading comprehension (Khodadady and Khaghaninejad, 2012; Khaghaninejad and Kaashef, 2014). Concerning the application of TPS and SQR3 in language development, however, there is a lack of enough empirical researches. Carss (2007) argued that in spite of Lyman (1987) observation and stress on the success of the technique and the findings of action research studies, many exploration of thinking phase and pair talk as elements of TPS can be found but not many studies on TPS as a teaching and learning tool. The same is true for SQR3. Anyhow, in the following, a report on the studies done and their results and implications will be presented.

Baumeister (1992) was the first person empirically and solely assessed the effect of using the TPS on oral language, reading comprehension and learners' attitude. Baumeister (1992) divided one hundred and seven third grade learners to three treatment condition groups: waiting time, TPS, or regular instruction. She employed 3-5 second wait time intervals and each group participated in four reading classes applying the related instructional order. Learners read the assigned text and after that TPS was combined into the post discussion. Instructors specified six questions of which three were vital. Four lessons were thought to be sufficient to both overcome the newness impacts and effect change in learning behavior. The study specifically focused on frequency, length and deepness of answers to different question types. The written recall and learners' attitude toward the different elements of the lessons were explored to compare students' comprehension.

The analysis of findings revealed that that wait time intervention and TPS intervention significantly improved learners' quality and quantity of their responses. However, TPS revealed an improvement in the learners' comprehension either. The textually implicit questions which entail synthesis or summarization of information were noteworthy developed. It can be because of cooperative communication between peers in combining details from different parts. Moreover, findings reported a slightly less positive attitude of the TPS group compared to the other group but

it was argued that maybe this was due to the newness of the strategy. Concerning assessing TPS, [Baumeister \(1992\)](#) suggested a longer treatment time to explore the impacts of the intervention more thoroughly. She furthermore recommends study into the application of the strategy with different age groups, types of students, text types and content areas.

In a different study, [Pardosi \(2013\)](#) explored the improvement of learners' achievement in writing narrative text by using think-pair-share strategy. 28 learners participated in this study. The data were collected conducting Classroom Action Research with two cycles and six meetings. The instruments for collecting data were writing test for quantitative and diary notes, observation sheet and interview sheet for qualitative data. The findings showed that the learners' writing narrative text score developed from the orientation test to the cycle 2 test. It denotes that there is an enhancement of learners' writing narrative text if it is taught by using think-pair-share strategy.

In another study, [Andik \(2013\)](#) examined how TPS method can develop reading comprehension of the first grade learners. According to the analysis of findings, the mean score of learners' reading comprehension was improved from 65.85 to 90. It denoted that TPS significantly enhance learners' reading comprehension. [Carss \(2007\)](#) explored TPS effects during guided reading lessons. The study selected 6 classrooms with two intervention groups, each enclosing six children. One group was reading above their chronological age and the other below. Control groups reading at these levels were also used. Three variants of Think-Pair-Share were implemented during the eight week intervention; Predict-Pair-Share, Image-Pair-Share and Summarize-Pair-Share, and the research centered on the impacts of the intervention on reading comprehension. The findings highlighted the positive effects of the technique on reading attainment, particularly for those learners' reading above their chronological age. Moreover, oral language use, thinking, meta-cognitive awareness, and the development of reading comprehension strategies were marked. Concluding the study, Crass (ibid) asserted that the study implied "the versatility of the Think-Pair-Share strategy as a tool to foster conversation, and one that can be adapted to suit the learning focus and the needs of particular groups of students" (p. iii).

With regard to the impact of SQR3, literature has similarly reported a dearth of experimental studies. Working with disabled learners, [Alexander \(1985\)](#) explored the effect of SQR3 on oral retelling the printed expository materials read by three intermediate-grade learning disabled learners. Story retelling, study characteristics, and answers to comprehension questions were the measures of the study. Results indicated the positive effect of SQR3 on learners' retelling. Teachers' guidance and help were thoroughly disappeared so that during post-test learners applied the method easily and rapidly while gaining their highest scores for retelling.

[Baier \(2011\)](#) explored whether integrating SQ3R into fifth grade learners' science reading strategies would improve their overall comprehension. The researcher adopted both qualitative and quantitative methods. The study indicated that "SQ3R significantly improved fifth grade students' overall comprehension scores of expository texts. The study also indicated that 46.9% of the students used in the study had a preexisting reading strategy. The most common preexisting reading strategy was note taking. It was found that 68.7% of the students used in the study would



use the reading strategy SQ3R in the future” (p. i). Working with marketing students’ reading comprehension, [Artis \(2008\)](#) strongly suggested that learners should apply SQR3 during their reading as the process happens autonomously, and learners can retain more information.

### 3. METHOD

#### 3.1. Participants

To conduct the study, 60 Iranian undergraduate EFL learners attending a reading comprehension course were recruited. Participants mostly aged from 21 to 25 and were from both genders. Inspired by "intact group design" [Hatch and Farhady \(1981\)](#), the scores of their previous reading course, were employed to homogenize them. Students, then, were randomly assigned to three groups of experimental 1 (SQR3), experimental 2 (TPS) and control groups. To begin with, students were asked to take a reading pre-test for gaining certitude that they have been at the same level of reading comprehension ability. Following that, they went through treatment sessions and in the final session they took the same test once more as the post-test. The possible different performances on the post-test were analyzed statistically.

#### 3.2. Materials and Instruments

This study has been a pure experimental study which delved into the possible effects of reading strategy employment on learners’ reading attainments. To teach learners, instructor applied the book *Mosaic 1 Reading* written by [Wegmann and Knezevic \(2002\)](#). The Mosaic 1 is a well-known book in Iran utilized in English institutes and university for teaching reading skills. The book has flexibility and ease of use, the texts are accompanied with a variety of skill-building practices, lively activities and interesting, and practical information about life. Moreover, the book provides learners with authentic reading selections in an attempt to aid them enhance skills for reading in a meaningful rather than a mechanical way. This approach allows learners to effectively tackle other academic texts ([Wegmann and Knezevic, 2002](#)).

The reading section of IELTS Test was applied as the pre- and the post-test. The test was taken from Cambridge Practice Tests for IELTS published by Cambridge University ([Jakeman and McDowell, 1996](#)). IELTS test was selected as the main measure of reading evaluation in this study inasmuch as it is a standard means of assessing learners’ language ability. The test consisted of three passages of forty one questions. Learners were asked to carefully read the passages and answered questions in 60 minutes.

#### 3.3. Procedure

In the beginning of the study, learners were asked to take a pre-test for gaining certitude that all the participants are at the same level of reading comprehension ability. Moreover, the test was taken as a pre-test for further analysis. Then the students were randomly divided to three groups of Experimental 1 (SQR3), Experimental 2 (TPS) and Control group. In the first experimental group learners worked on reading passages through using SQR3 strategy (surveying, questioning,

reading, reciting, reviewing). In the other experimental group, learners went through TPS reading comprehension strategy (thinking, pairing, and sharing). The last group was control group. This group received the traditional method of translating passages into Farsi for comprehension. They have not benefited from any reading comprehension strategies during the course of study.

At the end of the semester, learners took a post-test in order to see the possible effects of these two strategies on Iranian EFL learners. The whole semester took in 14 weeks, two sessions each week, the first week and the last week were the sessions of pre- and post-tests and the remained sessions were worked with different activities in each class. A brief explanation of class activities in each group has been tabulated below:

**Table-2.** The Class Activities in Experimental Group 1 (SQR3)

	<b>Activity</b>	<b>Minute</b>
1	Surveying the passage	10 minutes
2	Questioning the passage	10 minutes
3	Reading the passage	30 minutes
4	Reciting the passage	20 minutes
5	Reviewing the passage	20 minutes

**Table-3.** The Class Activities in Experimental Group 2 (TPS)

	<b>Activity</b>	<b>Time</b>
1	Thinking about the passage	15 minutes
2	Finding a pair and discussing with pair	25 minutes
3	Reading the passage	30 minutes
4	Sharing information	30 minutes

**Table-4.** The class activities of the control Group

	<b>Activity</b>	<b>Time</b>
1	Instructors talked about the reading	10 minutes
2	Reading the passage	45 minutes
3	Translating the passage for comprehension	30 minutes
4	Asking due questions from the learners	10 minutes

## 4. RESULTS AND DISCUSSION

The study aimed at exploring the probable effect of applying reading strategies on the reading development of learners. Reading is an essential and indispensable skill in language learning process. According to Nunan (1993) reading strategies help learners direct their learning and boost their reading attainments. In this regard, the study assessed how SQR3 and TPS can overshadow the learners' reading skill. Following that, learners were randomly assigned to different groups and went through treatments to further be assessed on the reading skill.

### 4.1. Results

The first research question of the study explored whether SQR3 has any effect on learners' reading performances. Before starting the experiment, student participated in a pre-test. Following

that, students in the first experimental group went under SQR3 treatment. At the end of the treatment, students were replicated the same pre-reading test to delve the possible differences. Table 5 depicts the result of comparing the performance of SQR3 group on the pre and post-test.

**Table-5.** The Paired-Samples *T*-Test of SQR3 students on the pre- and the post-test

Paired Samples Test									
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 1	Pre-PostSQR3 -	-7.46	6.67923	1.49352	-10.59	-4.34	-5.00	19	.000

Table 5 reveals that learners have statistically outperformed in their post-test (*sig.*=0.00). it is concluded that learners have shown significant differences after the treatment. The study proved that the reading strategy SQR3 significantly improved learners’ reading abilities. Accordingly, it is confirmed that SQR3 has statistically significant effect on Iranian EFL learners’ reading comprehension. The second research question explored how TPS as another reading strategy could affect learners’ reading functioning. Similar to their peers in the first experimental group, the students in the second experimental group were taken a pre-test prior to the study. Then, they were taught to apply the TPS techniques during their readings. At the end of the semester, they were taken the post-test. Table 6 presents the statistical comparison of TPS participants’ performances on the pre and post-test.

**Table-6.** The paired-samples *T*-Test of TPS students on the pre- and post-test

Paired Samples Test									
		Mean	Std. Deviation	Std. Error Mean	Lower	Upper			
Pair 3	Pre – Post TPS	-6.85	2.53989	1.5678	-8.059	-5.665	-12.06	19	.000

Table 6 confirms that the differences between pre- and post-test of TPS learners are statistically significant (*sig.*=0.00). According to this Table, TPS treatment meaningfully influenced learners’ reading ability and helped them get higher scores. The last question of the study investigated whether there are significant differences between performances of students in the first SQR3 and the second TPS experimental groups. To further explore the differences between the performances of students in the three groups, an Analysis of Variance (ANOVA) test was run.

**Table-7.** The ANOVA of the post-test of three groups of the study

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	448.633	2	224.317	8.739	.000
Within Groups	1463.100	57	25.668		
Total	1911.733	59			

As Table 7 indicates, there are significant differences between performances of three groups on their post-tests ( $F=8.73$ ,  $p=0.00$ ). In this regard, the Post Hoc Tests were implemented to know which groups' differences are significant. The results were showed in Table 8.

**Table-8.** The post hoc tests of post-test of three groups of the study

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
SQR3	TPS	1.85000	1.60214	.485	-2.0054	5.7054
	ControlG	6.50000*	1.60214	.000	2.6446	10.3554
TPS	SQR3	-1.85000	1.60214	.485	-5.7054	2.0054
	ControlG	4.65000*	1.60214	.014	.7946	8.5054
Control G	SQR3	-6.50000*	1.60214	.000	-10.3554	-2.6446
	TPS	-4.65000*	1.60214	.014	-8.5054	-.7946

It is simply understandable from Table 8 that control students have shown statistical significant differences with students in SQR3 ( $p=0.00$ ) and TPS groups ( $p=0.01$ ). However, students in the two experimental groups, SQR3 and TPS, in this study have not revealed significant differences. Performing well after the treatment, the study shows that both treatments, SQR3 and TPS can significantly improve learners' reading abilities.

#### 4.2. Discussion

Baier (2011) similarly explored the impact of SQR3 on fifth grade learners' science reading strategies. He found that the students' mean scores were 5.44 out of 10 or 54.4%, and after SQR3 treatment, their overall comprehension score on the post-assessment was 6.41 out of 10 or 64.1%. Baier (ibid. p. 39) argued that "when students were instructed how to use SQ3R for five days, the average of the entire class' overall comprehension score improved ( $t = -2.41$ ,  $p = .01$ ). There was a significant difference between students' overall pre-assessment scores and post-assessment scores". According to these findings, instructing SQR3, even for a short time, will significantly change the way learners read and upgrade their comprehension.

Working with disabled learners, Alexander (1985) repeated the application of SQR3 in retelling the printed expository text. The study proved that learners responded to a higher mean number of items correctly during the treatment, and even in follow-up conditions. According to Alexander (1985) "three learning disabled students were able to retell more information following the introduction of a systematic study technique than they were able to retell when they were given extra study time and used their own random study methods" (p. 266). It can be concluded that SQR3 techniques motivate learners to continue to struggle reading and comprehending the passages. Explain the significance of SQR3, Artis (2008) argued that SQR3 is the kind of techniques applied independently and privately, due to this fact, these techniques aids deficient readers successfully cope with strong negative feelings they often receive in their reading

homework. Supporting the same results, Carss (2007) probed the effectiveness of collaborative interaction, TPS, on developing learners' independence and participation. He argued that "all the students in both groups talked about having more time to think and get their answers ready and also about learning from what their partners said. The chance to rehearse their ideas with a partner enabled them to explain to the group more effectively and confidently" (p. 85). The thinking phase of TPS cultivate students' learning and develops it by means of pair and group sharing which entails active engagement of learners in discussion and enrich their level of opinions and ideas. Moreover, group reflection is another criterion of TPS which can be seen in peer interaction. It makes learners take risks and communicate their opinions with larger group since they have already tried out their thoughts with their pairs.

Generally speaking, the present study proved the positive impacts of the TPS and SQR3 on reading attainment. Positive effects on aspects of oral language use, thinking, meta-cognitive awareness, and the development of reading comprehension strategies can be noted from present and previous studies. The present study similarly proved that SQR3 and TPS help Iranian EFL learners to get the main ideas and supporting details and improve their thinking skills.

## **5. CONCLUSION**

The present study originated an attempt to explore the effectiveness of using reading strategies for improving Iranian EFL learners' reading abilities. For this to happen, two recent and founded reading techniques were selected, i.e., SQR3 and TPS. Learners of the study were randomly divided into three groups: the first experimental group received SQR3 treatment, the second experimental group received TPS treatment, and the control group who received no treatment.

According to the findings, reading strategies proved to have positive effects on learners' comprehension and participation. They are means to activate learners' thinking skills, nurture communicative skills, make learners focus, intensify collaboration, learning from each other, construct meaning and prompt interpersonal interactions. The study's results suggested that these reading strategies facilitate learners' comprehension of the content of learning and broaden their insights. Instructors should engage learners in interactive discussion to promote the links between skills and thinking and the construction of meaning from text. According to Carss (2007), "teaching strategies promoting cooperative learning are particularly useful and TPS has been shown to successfully support the development of students' comprehension, and awareness and use of comprehension strategies" (p. 106). Students are needed to apply strategies and be skilled observers to monitor passages to have accurate interpretation. The application of TPS enables this to happen as the learners are capable to discuss in pair interactions as well as in the whole class.

Moreover, teachers should be selective to adopt the most suitable materials related to the learners' learning. They have to create many practices to engage and motivate learners not only in learning reading skill but speaking, listening and writing skills. Through using these techniques, instructors can make the learners active and enthusiastic in order that they feel comfortable and spirit in the class. The confidence and efficacy in learning optimize learners' beliefs in their

capabilities which ultimately result in improvement in their competence (Nourmohammadi and Izadi, 2011).

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