




Investigating the effect of visualization-based activities on developing the 6th grade Jordanian female pupils' reading comprehension skills

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ABSTRACT

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This study investigated the effects of visualization-based activities on improving the reading comprehension skills of 6th grade Jordanian female pupils. The study was applied to a sample of 46 pupils taken from Al-Qatrana Primary School for Girls, Education Directorate of Al-Karak Governorate. Two groups were formed; control and experimental groups; with 22 and 24 participants respectively. The quantitative method was used to investigate this study. Moreover, data was collected through the pre-test and the post-test of female pupils' reading comprehension skills which were conducted for this purpose. The analysis of data relied on independent t-tests applied with the aim of identifying the statistical significance associated with the two groups' achievement in reading comprehension. The results reflected the significant effect of using visualization-based activities in developing the reading comprehension skills of the 6th-grade Jordanian female pupils. This study concluded that visualization-based activities were more effective in teaching Foreign Language (FL) reading comprehension compared to the traditional method. Thus, this study helped to improve different skills among the current sample of students (of Al-Qatrana primary school for girls and would be applicable to other schools to study a foreign language with less difficulty and remove any challenges and difficulties that may come their way in learning a FL.

Contribution/Originality: It is the first study to apply the idea of visualization-based activities to Jordanian foreign language learners. Furthermore, this study shows how to use visualization-based activities effectively to develop reading comprehension skills among FL learners.

1. INTRODUCTION

The teaching, learning, and development processes of reading comprehension skills represent one of the modern topics that have captured the attention of researchers over the past two decades. In this respect, [Elleman and Oslund \(2019\)](#) pointed out the complexity of activities of foreign language (FL) reading comprehension which they regarded as complex cognitive tasks. This type of complexity is attributed to the fact that reading comprehension is the outcome of FL learners' linguistic comprehension and their ability to decode words. Moreover, reading comprehension includes various linguistic and cognitive processes such as memory, inference, monitoring, knowledge of vocabulary, etc. Reading comprehension also requires FL to extract and construct meaning via interaction with the reading text. Therefore, the knowledge, cognition, and linguistic ability of FL learners should be taken into account when designing reading comprehension activities. In this context, [Gambrell](#)

(2011) views visualization as a teaching strategy that helps to overcome the challenges faced by FL learners in reading comprehension. In a sense, visualization is a mental image that requires learners to make sense of the reading text and draw what they see in their minds. It does not only make learners more focused on the reading text but also motivates them to read the text via speculating the textual events. When learners share what they visualize with their classmates, their FL vocabulary is enhanced, and their teachers can judge their comprehension of the visualized text. This also enhances visualizing technology to increase reading comprehension of a foreign language, especially for non-native speakers. It helps them to understand and remember simultaneously and improve their ability to pronounce and remember new words (Will, 2018).

The importance of reading for FL learners is evident in the works of many researchers. In this respect, Ahmed et al. (2016) clarified that reading is crucial for better achievement among foreign language (FL) learners. Moreover, reading helps FL learners to enhance their FL vocabulary, develop their learning skills, and foster cognitive ability. This is highlighted by Bataineh and Alqatanani (2017) who emphasizes the importance of reading by stating that when reading is neglected there will be little space for successful FL learning. Besides, the complexity of FL reading is evident in that reading comprehension requires the intricacy of a number of factors without which FL learning success is impossible. Therefore, it is necessary to search for different strategies and alternative methods to traditional methods that help the ease of English language reading and learning various vocabularies as Suárez and Gesa (2019); Perez and Rodgers (2019); El-Esery (2023) and Ghalebi, Sadighi, and Bagheri (2020) explained in their works.

It is urging that Jordanian students in primary education schools need to develop their FL language skills as the recent research in this field has highlighted their weakness in English skills. Being prospective FL learners, Jordanian students are in dire need to read English texts so as to compensate the fact that they learn English in a non-native English-speaking country. In this context, Al-Damiree and Bataineh (2015) commented on the Jordanian FL learners' low levels of motivation. They stated that Jordanian FL learners are less motivated to learn English. Besides, they had little exposure to English texts. They also observed that FL instruction in Jordanian primary education schools heavily depends on teacher-centered methods. In this connection, Bataineh and Alqatanani (2017) strongly emphasized that the Jordanian FL teachers, in teaching reading skills, followed traditional teaching methods like reading silently and reading aloud. These two methods focus on limited reading skills such as scanning and skimming. At the same time, they neglect other reading skills such as creative and critical reading skills. In this context, Bataineh and Alqatanani (2017) emphasized that Jordanian FL learners had low levels of creative and critical reading skills.

However, the difficulty faced by Jordanian FL learners is not only related to creative and critical reading skills, rather it is also associated with general FL skills. In this context, some researchers viewed the difficulty in reading skills as part of the general language difficulty faced by Jordanian FL learners. For example, Al Rabadi and Bataineh (2015) and Bataineh and Al-Kofeiri (2018) concluded by emphasizing that Jordanian FL learners face difficulties to learn FL skills including reading. They obviously noticed that the greatest part of the difficulty faced by the 6th-grade Jordanian pupils in FL reading comprehension is associated with their poor knowledge of interacting with the reading passage. Thus, it was urged to look for methods that would deviate from the earlier teacher-centered approaches and adopt approaches that emphasize learner-centered practices. They are approaches that urge Jordanian FL learners to interact in the processes of teaching and learning. This indicates that there was an urgent need to investigate the effectiveness of using visualization-based activities to enhance the 6th-grade Jordanian pupils' reading comprehension skills.

1.1. Statement of the Problem

English is learned as FL in Jordan, and this means that Jordanian learners of English naturally face difficulties in developing various FL skills. Reading comprehension skills are among the FL skills that require much attention

and necessitate the adoption of certain effective methods and activities. Among those activities are visualization-based activities which are believed to be effective in developing FL.

This study is an endeavor to know the effectiveness of using visualization-based activities to develop the FL reading comprehension skills of a sample that includes forty-six (46) 6th grade Jordanian pupils who were studying English in Al- Qatrana primary school for girls, Education Directorate of Al-Karak governorate. The study was motivated by the argument that visualization-based activities can help the study population to develop their reading comprehension skills.

1.2. Questions

1. What are the participants' current achievement levels in FL reading comprehension?
2. Is there an obvious statistical difference between the achievements of the two study groups in FL reading comprehension in the posttest?
3. Is the use of visualization-based activities effective in increasing 6th grade Jordanian pupils' achievement level in FL reading comprehension?

1.3. Objectives

1. To know participants' current achievement level in FL reading comprehension.
2. To identify the difference between the achievements of the two study groups in FL reading comprehension in the posttest.
3. To know the effectiveness of using visualization-based activities to develop the 6th-grade Jordanian pupils' achievement in FL reading comprehension.

1.4. Significance

This study is a positive response to the Jordanian Ministry of Education's policy to develop the unsatisfactory proficiency level of Jordanian students in primary education schools. Thus, there is an urgent need for this study which will be very beneficial for Jordanian educators as it describes the phenomenon under investigation and provides suggested solutions to the problem. Its significance is also evident in its novelty and newness. It is also the first study to apply the idea of visualization-based activities on Jordanian FL learners. There are some studies that dealt with the role of maps-based activities and morphological awareness (Bataineh & Al-Kofeiri, 2018), but these studies did not investigate the effects of visualization-based activities in developing reading skills.

Moreover, this is the first study to shed light on the importance of using visualization-based activities to develop reading comprehension skills for 6th-grade Jordanian female pupils. Its mission is to provide generalizations on the effectiveness of using visualization-based activities to develop reading comprehension skills for FL learners. Curriculum designers can be greatly enlightened by the present study in including visualization-based activities that can be helpful to develop not only the 6th grade Jordanian female pupils' FL reading comprehension skills, but such activities would be useful for developing the reading comprehension skills of all FL learners.

1.5. Scope

This study is limited to investigating the effectiveness of applying visualization-based activities to develop the FL reading comprehension skills for 6th-grade Jordanian female pupils. It was applied on a sample of 46 female pupils from Al-Qatrana primary school for Girls, Al-Karak governorate.

2. LITERATURE REVIEW

Developing reading comprehension skills stands as an important topic of educational research. Many researchers have attempted to investigate certain methods and activities that would facilitate FL learners' learning

process and help them in developing their FL skills as a general topic and reading comprehension skills in particular. In this context, [Bataineh and Alqatanani \(2017\)](#) examined the role of using treatment based on maps to develop the creative reading skills of 57 Jordanian grade 10 students. Two groups were formed: control and experimental. Moreover, the experimental group included 28 participants whereas the control group included 29 participants. The maps-based treatment was used to teach FL reading comprehension for the experimental group. The treatment included two FL reading passages along with various thinking maps-based activities. The activities were designed to cover fluency, flexibility, elaboration, and originality. In contrast, the notes included in the Teacher's Book served as the source for teaching reading comprehension to the control group participants. The researchers designed a pretest and a post-test of creative reading skills and a semi-structured interview to collect data and compare between the results. The findings reflected that the activities based on thinking maps significantly helped the experimental group participants to actively take part in the process of creative reading. Moreover, the thinking maps-based treatment effectively helped the experimental group participants to add and generate new ideas. Furthermore, the experimental group participants' motivation to learn was increased. It was also revealed that the experimental group participants achieved higher scores in the creative reading skills test than the scores achieved by their control group counterparts. They also had more positive attitudes towards the use of thinking maps-based treatment for learning FL reading comprehension.

Also, among the strategies that were used to develop the reading skill and the use of different words that may contribute to raising the level of reading students for a foreign language is what was used by [Saleh and Ahmed Althaqafi \(2022\)](#). The researchers used the games educational as a strategy, especially for young students between the ages of five and six. The study sample consisted of 40 kindergarten students in the Kingdom of Saudi Arabia. The researcher divided the participating students into two groups, the first group was taught using educational games and the second group underwent traditional education. Pre and post-tests were used to examine this strategy. Through the results obtained, the researchers reached to improve students' performance and enhance participation for them, in addition to memorizing and understanding the words presented to them through educational games programs. The researchers recommended the application of educational games programs, especially for young students, which helps them to be creative.

In the same way, [Nurwulan, Khusaini, and Hamid \(2022\)](#) found that using various educational strategies such as video media helped in improving the performance of the students participating in the study sample and the mastery of memorizing multiple vocabularies. The researchers used 50 students in the fifth grade in a school of (Sekolah Dasar Negeri) SDN Kutajaya in Indonesia. Through the tests that the students were subjected to, it was shown that their reading performance improved, as well as memorizing different words and vocabulary, increasing their activity in the classroom, and improving their learning of the English language.

[Alghonaim \(2020\)](#) sought through his work to know the extent of the development of reading for the English language, through some activities presented to the students under study, since this language is a foreign language for them in the Kingdom of Saudi Arabia. The researcher took a sample of students from the College of English (Buraidah) in the Kingdom. It was divided into an experimental sample subject to home activities and before class. At the same time, the second group was subject to some instructions for reading in a regular way. Through this study, the researcher reached the superiority of the group that had undergone the activities and training over the group that received only the instructions. He also indicated the need to carry out the skills and activities that help improve the reading skills of the foreign language as it is a global and important language, especially in the academic and scientific framework, through his recommendation.

In a study conducted by [Sanati \(2020\)](#), on a sample from the English Language Institute in Iran for the purpose of verifying the extent of students' ability to visualize and read comprehension of a foreign language. A sample (40 students) was chosen after conducting the preliminary test of (100 students). After dividing them into two groups, the first group underwent a set of strategies that helped improve the level of visualization and understanding, and

the other group underwent training in traditional instructions that were needed. After using statistical analysis to analyze the results obtained by the students participating in both groups, the researcher concluded that the group subjected to auxiliary strategies for perception, understanding, and visualization outperformed the other group. He concluded that the visualization technique had a positive effect on the reading comprehension of the foreign language (English). The researcher also recommended conducting more research to know and discover the role of visualization technology in improving thinking and creative writing, as well as reading comprehension of a foreign language.

Another study was done by [Taj, Ali, Sipra, and Ahmad \(2017\)](#). It was a quasi-experimental study that mainly aimed to examine the technology's role in helping EFL learners develop their reading comprehension skills. The sample included 122 participants who were randomly selected from first-year students at a public university in Saudi Arabia. A pretest, as well as a posttest, were used to collect data. Two groups were formed; experimental and control groups. Technological devices were used to teach reading comprehension for the learners in the experimental group. The findings reflected that the experimental group members achieved higher levels of FL reading comprehension than those achieved by the members of the control group. Besides, the researchers emphasized the effectiveness of technology in teaching reading comprehension for FL learners. It was proved that technological devices effectively helped in reducing the anxiety levels associated with FL learning. Moreover, the use of mobile phones to learn FL vocabulary before getting actual lessons familiarized the experimental group members with the new vocabulary and enhanced their word power. In this respect, the multi-modal exposure to FL vocabulary ultimately helped the members of the experimental group to learn new vocabulary and enhance their reading comprehension skills. The researchers recommended that Saudi FL teachers should use the Internet in teaching so as to create effective classrooms for teaching and learning FL reading comprehension.

In another study conducted by the two researchers ([Al Roomy & Alhawsawi, 2019](#)) on a sample of health sciences students for the first level in the Kingdom of Saudi Arabia, in order to verify the students' awareness of the importance of using different strategies, whether linked to the computer or through the use of the mobile phone, to enhance their reading level. The researchers used the questionnaire distributed to the target group and the interviews with them. The results they reached showed that students who used different strategies that helped improve their reading skills had a high level of reading skills and reached the level of reading sentences and even understanding or interpreting them, unlike students who did not use any strategy to help them to read the foreign language (English). The researchers concluded the importance of using educational programs and technological materials that raise students' reading skills.

Some researchers focused on the significant effects of learners' morphological awareness in increasing the level of reading comprehension skills. Evidence is noticed in [Bataineh and Al-Kofeiri \(2018\)](#) who discussed the role that morphological awareness can play in enhancing the comprehension skills of a group of 10th-grade Jordanian FL students. A sample of 73 participants was purposively selected and divided into a control group which included 36 students and an experimental group which included 37 participants. The traditional method, which is based on Teacher's Book, was used to teach the control group members. An instructional program was used to teach FL reading comprehension for experimental group members during a period of 10 weeks. The members of this group practiced morphological activities that include defining stems, affixes, and compounds. Moreover, the morphological awareness instruction included quizzes, tests and worksheets. Two tests were designed to measure the pre and post achievements of participants in FL reading comprehension. The morphological awareness of the experimental group members, as the results revealed, effectively contributed to increasing their level of achievement in FL reading comprehension compared to the achievement of control group members. The results reflected that the morphological awareness program was significantly effective in helping the experimental group participants to develop their ability to recognize FL words. The researchers reported that among the experimental

group participants, those who had higher morphological awareness realized better achievement in FL reading comprehension.

But the above-investigated activities are not the only effective activities for developing reading comprehension for FL learners. In this respect, some researchers like [Banditvilai \(2020\)](#) studied the significant role of reading strategies to improve reading comprehension skills. Banditvilai studied the role that reading strategies can effectively play in improving and enhancing the reading comprehension skills of a group of learners from Kasetsart University, Thailand. The sample included 59 participants, majoring in sophomores, who registered for the compulsory English reading course. They were trained to effectively use the four reading strategies of skimming, scanning, predicting and questioning at the three reading stages; pre-reading, while-reading and post-reading. Four instruments were used to collect data; namely, pre and posttests to measure reading comprehension, a questionnaire to know the participants' attitude towards the four reading strategies and a semi-structured interview. A mixed method was adopted for analysis. Arithmetic means and standard deviations (SD) were calculated. The findings made it obvious that reading strategies significantly improved the participants' reading comprehension ability. Moreover, the sample members expressed their positive attitudes towards the four reading strategies which help them comprehend the reading passages. The participants' comprehension of the reading passages varied in the four reading tasks as per the difference in their background knowledge as well as the difficulty of the texts.

In the same context of increasing the level of learners' reading comprehension skills, some researchers pointed out the role played by interactive computer-assisted reading in developing learners' reading comprehension skills. In this regard, [Al-Kalefawi and Al-Amrani \(2021\)](#) examined the significant role and effect of using the interactive computer-assisted reading program in developing the reading comprehension strategies of six Arab English Foreign Language (EFL) students. The sample members were studying a course of English proficiency course at Geomatika University College. The participants' selection was attributed to the facts that they were classified as beginner learners of English on the basis of their low scores at the English placement test, and they had no previous knowledge about computer-assisted strategies to enhance reading comprehension. Qualitative data were elicited through different instruments, namely interviews, weekly reflection notes and observations. The interview questions helped to state the participants' mastery of reading comprehension strategies after attending Interactive Computer-Assisted Reading (I-CAR) program. Observations were collected while the participants attended I-CAR program to make sure that they followed the sequence of the tested program. The reflection notes contained questions related to twenty exercises included in the intensive proficiency program of I-CAR. The researchers found that the tested program was effective in developing the participants' cognitive strategies of FL reading comprehension. These strategies include the participants' ability to focus on meaning, use inferences in order to guess meaning and predict outcomes. Participants were also able to develop their metacognitive strategies. These strategies include self-monitoring, self-evaluation, self-management, selective attention and advanced organization.

The study conducted by [Yu, Zhou, Yang, and Hu \(2022\)](#) showed the positive effect of using the mobile phone as a means and strategy to improve the reading skill of foreign languages. The researchers conducted an experimental study on a group of university students in the English College, first level, by providing questionnaires and interviews to know the speed of comprehension and understanding of the development of reading skills using a mobile phone or reading from printed paper. Through the different statistical analyses such as Analysis of Variance (ANOVA) and t-tests, the results showed that reading speed and development of reading for FL were better using printed paper or hard copies by 79%. However, the students participating in this experiment indicated the mobile phone's effectiveness in developing reading skills in a foreign language because of the different functions and the various programs supported by the mobile phone that help to improve reading in a foreign language. Also, the researchers reached their conclusion on the effectiveness of using different methods and media to develop and enhance the reading of the foreign language. Therefore, this research is different from the previous efforts carried out on the topic of developing reading comprehension skills. The points of difference are associated with the type of

activities it investigates and the population it targets. That is, it is the first study to examine the importance of using visualization-based activities to develop reading comprehension skills for 6th-grade Jordanian female pupils.

3. METHODS

The quantitative method, which depends on descriptive statistics, formed the basis of analysis in the present research. In this respect, arithmetic means, standard deviations, and minimum and maximum marks of the participants' achievement in the pretest and the posttest were calculated. Furthermore, the data analysis relied on the Paired-Samples T-Test. Besides, the Independent Sample T-Test was used to reveal the significance of the two groups' achievement in FL reading comprehension.

3.1. Hypotheses

H1. All Jordanian 6th-grade pupils in Al-Qatrana primary school for girls are equal in their FL reading comprehension skills in the pre-test.

H2. Both the traditional method and the visualization-based activities have an equal impact on FL reading comprehension instruction.

H3. There is a similarity between the levels of achievement in the FL reading comprehension post-test of both groups.

3.2. Participants

Forty-six (46) Jordanian grade 6 pupils took part in the current study. They were selected from Al-Qatrana primary school for Girls, Education Directorate of Al-Karak governorate. Two groups were formed; control and experimental groups. The control group included 22 pupils while the rest 24 pupils formed the experimental group.

3.3. Procedure

Data collection was carried out during the second semester of 2020-2021. The reading comprehension test was applied to the sample that included 46 participants. The Cronbach's alpha coefficient of the test was 0.92 suggesting high reliability. Data were collected in two different sessions for both groups of participants. Each session lasted for 45 minutes and the reading comprehension pretest was conducted separately. The visualization strategy was adopted to teach the experimental group members, while the traditional method was adopted to teach the control group. In the visualization-based activities, the researcher gave the experimental group participants a demonstration model. The researcher read the title of the reading text and the first paragraph. The researcher sketched what he saw in his mind and labeled the pictures. The researcher reminded the experimental group participants that all pictures were acceptable. The researcher read aloud a paragraph and asked the experimental group participants to visualize and create pictures in their minds. The experimental group participants were encouraged to sketch what they visualized on paper and discuss it in pairs. The posttest was conducted towards the end of the second semester.

3.4. Data Collection Instruments

Data were elicited through the instruments of a pretest and a posttest of FL reading comprehension. Each test carried 20 marks and contained a reading passage with two parts of questions. Part 1 contained five multiple-choice questions while Part 2 included five true and false statements.

4. RESULTS AND DISCUSSION

4.1. Results

Table 1 presents that the participants of both groups achieved almost similar scores in the reading comprehension pretest. The minimum and maximum scores of the experimental group participants were 8-14

compared to 7-14 for the control group participants. The pretest-mean score of the former was 10.87 compared to 10.75 for the latter. The pretest standard deviation of the former (3.35) slightly differed from that of the latter (3.28). This indicates that the members of the two groups had almost similar achievements in the reading comprehension pretest in spite of the slight difference in favor of the experimental group. The finding led to the acceptance of the first null hypothesis that the participants' FL reading comprehension skills were equal in the pretest. The finding is similar to those reported by *Bataineh and Alqatanani (2017)*; *Taj et al. (2017)*; *Bataineh and Al-Kofeiri (2018)* and *Al-Kalefawi and Al-Amrani (2021)*.

Table 1 also reveals the improvement that characterizes the achievement of both tested groups in the reading comprehension posttest compared to the pretest. The posttest arithmetic mean of the experimental group participants increased to 20.96 while that of the control group participants improved to 13.87 in comparison to the pretest. The posttest-mean score of the former improved to 9-17 compared to 8-15 for the latter.

Table 1. Paired-samples t-test statistics.

Test	N	Mean	SD. deviation	Std. error mean	Minimum	Maximum
Posttest score (Control group)	22	13.875	5.735	0.470	8.00	15.00
Posttest score (Experimental group)	24	20.962	9.545	0.788	9.00	17.00
Pretest score (Control group)	22	10.752	3.286	0.534	7.00	14.00
Pretest score (Experimental group)	24	10.874	3.353	0.596	8.00	14.00

According to the descriptive statistics of **Tables 1** and **2**, the experimental group participants had better achievement in FL reading comprehension in comparison to the control group participants. The former had a higher mean score (20.96) and standard deviation (SD) (9.54) compared to (13.87) and (5.73) for the latter. This indicates that the variance in the experimental group members' achievement in the FL reading comprehension posttest was largely higher than the achievement of the control group.

Table 2. Paired-samples test.

Test	M	SD	N	Degrees of freedom (DF)	T-value	Sig.
Pretest score (Control group)	10.753	3.286	22	21	2.448	0.004
Posttest score (Control group)	13.875	5.735	22	21		
Pretest score (Experimental group)	10.874	3.353	24	23	24.153	0.000
Posttest score (Experimental group)	20.962	9.545	24	23		

In addition, **Table 3** of the Independent Samples T-Test showed the experimental group participants had a higher gained mean score (10.08) and standard deviation (3.54) compared to (3.12) and (0.63) for the participants in the control group.

Table 3. Independent samples t-test.

Groups	N	M gain score	Standard deviation (SD)	Degrees of freedom (DF)	T-value	Sig.
Control	22	3.12	0.63	21	20.05	0.000
Experimental	24	10.08	3.54	23		

4.2. Discussion

Table 1 showed that both experimental and control group pupils had almost similar achievements in the FL reading comprehension pre-test. This led to the acceptance of the first null hypothesis that all Jordanian 6th-grade pupils in Al-Qatrania primary school for girls were equal in their FL reading comprehension skills in the pre-test. Furthermore, the experimental group pupils had better achievement in the FL reading comprehension post-test due to the effectiveness of the visualization-based activities compared to the first group (control group) that used the traditional methods. So, the second and third null hypotheses were rejected. The obtained results were consistent with some studies such as the study by Gambrell (2011); Ahmed et al. (2016); Al-Damiree and Bataineh (2015); Bataineh and Alqatanani (2017); Mukhlif (2017); Taj et al. (2017); Bataineh and Al-Kofeiri (2018); Banditvilai (2020); Sanati (2020) and Al-Kalefawi and Al-Amrani (2021).

It was also found that the traditional method and visualization-based activities helped to improve the achievement of both tested groups in reading comprehension. However, the second group subjected to visualization activities that helped in improving the reading performance of the Foreign Language (FL) showed an improvement of the performance and effectiveness. This is indicated by the results of the post-tests for this group compared to the results of the post-tests of the first group (control group). Hence, the second null hypothesis which stated that (both the traditional method and the visualization-based activities had an equal impact on FL reading comprehension instruction) was rejected. The results of this study agree with studies reported by Gambrell (2011); Al-Damiree and Bataineh (2015); Bataineh and Alqatanani (2017); Mukhlif (2017); Taj et al. (2017); Bataineh and Al-Kofeiri (2018); Banditvilai (2020) and Al-Kalefawi and Al-Amrani (2021).

Table 3 noticed that the two groups significantly differed as the p-value was <0.05 and the third null hypothesis (that suggested a similarity between the levels of achievement in the FL reading comprehension post-test of both groups) was rejected. Therefore, the obtained results agreed with the results reported by Ahmed et al. (2016); Al-Damiree and Bataineh (2015); Bataineh and Alqatanani (2017); Taj et al. (2017); Bataineh and Al-Kofeiri (2018); Banditvilai (2020) and Al-Kalefawi and Al-Amrani (2021).

Based on the results, teachers of a foreign language can use different strategies, programs, and websites to improve the reading comprehension of FL, making learning this language easier and more fun. There are more examples that can help teachers teach this language by using visualization strategies such as encouraging students to draw a summary picture of the reading text according to their imagination or to ask them to exchange pictures to share their views about the reading text. Through this activity, students would actively participate in the reading comprehension instruction and could infer information from the reading text and highlight the important parts of the text. The teacher may also ask students to draw anything such as a farm, garden, animals, etc., and describe what they had drawn. A third activity could be an arrangement activity in which different groups of students can be assigned to visualize different parts of the reading text. Students can arrange pictures according to the sequential events of the reading text. There are various examples of the visualization strategy which FL teachers in Al-Qatrania primary school for Girls or other schools can adopt and adapt according to the needs of their students.

5. CONCLUSION

Foreign language teaching for non-native students is a complex and challenging task. Many students find it difficult to learn this language and understand its rules or pronounce its words properly. The teacher's role here is to remove this difficulty and make learning this language easier and more enjoyable. Teachers can use different strategies and activities to teach students FL, among which one strategy is visualization-based reading. Visualization activities help the students to become more active and develop their sense of the reading text by sketching the reading text events. The students can be encouraged to discuss and understand the reading text and develop collaboration by discussing the reading text details on one hand and reinforcing the student-teacher interaction on the other as was revealed in the current work.

6. RECOMMENDATIONS AND SUGGESTIONS

Based on the results, there are some recommendations and suggestions that were reached in this study help for further research:

1. Foreign language teachers in Al-Qatrania primary school for Girls (as in the case of this study) or other schools should consider ways to develop different forms of visualization-based activities to cater to their pupils' needs of developing comprehension of FL and reading texts.
2. Such a study can examine the impact of visualization-based activities on learning other FL skills among 6th-grade Jordanian pupils.
3. The findings of this study can be used to investigate the effect of visualization-based activities on developing the 6th-grade Jordanian male pupils' reading comprehension skills.
4. The findings of this study can be used at high level of educational levels such as secondary or university levels.
5. The findings of this study can be used to identify various factors affecting the development of FL reading comprehension skills.
6. It is recommended to use visualization-based activities for effective planning of FL lessons.
7. It is recommended to explore the different learning styles which Jordanian grade 6 students adapt to comprehend FL reading texts.

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