

# The Impact of Using Storyboards on Improving Reading skills of Third-Grade Students with Reading Disabilities in Jordanian Context

**Haitham Abuzaid**

Al Balqa Applied University  
Ajloun, Jordan

**Murad Al Kayed**

Al Balqa Applied University  
Ajloun, Jordan

**Abstract.** This study aimed to identify the effect of using the storyboard method on improving the reading skill of third-grade students with reading disabilities in Jordan. Many Arabic language learners with reading disabilities cannot distinguish between Arabic letters that look similar in the graph but have different pronunciations. The present study investigated the impact of the storyboard method on learning the skill of distinguishing between Arabic letters that look similar in form but those pronounced differently. The sample of the study consisted of (40) students with reading difficulties assigned equally into an experimental and control group. The experimental group consisted of 20 male and female students taught using the storyboard method, and the control group consisted of 20 male and female students taught using the traditional method. The findings of the study showed that the storyboard method improves the ability of students to distinguish between Arabic letters that look similar in written form but pronounced differently better than those involved in the traditional way of teaching. The study also found out that gender did not affect learning reading skills. The researchers recommend the use of the storyboard method in teaching different language skills.

**Keywords:** Storyboard; reading disabilities; reading skill; teaching, Arabic

## 1. Introduction

### 1.1. Overview

Learning disability is a global educational problem that is not related to a specific society or language. Hallahan & Kouffman (2012) defined learning disability as a term used to refer to a group of heterogeneous disorders that

appear in the form of disabilities in the acquisition and production of many skills, such as listening, speaking, reading, writing, thinking, etc. These disorders are caused by dysfunction of the central nervous system that occurs during different periods of life. They also may be accompanied by problems in the behaviors of organization, perception and social interaction. Learning disabilities may coincide with other disabilities (sensory, mental or serious emotional disorders) or with certain external influences (cultural disparities or inadequate teaching).

Reading skill is considered one of the difficult skill to acquire or learn. Reading is defined as an emotional and mental process that includes the recognition of symbols, words, and drawings received by the reader. Reading requires the reader to link between sounds and letters (Al-Batayneh, Al-Rashdan, Al-Sabailah & Abdul Majeed, 2018; Al-Dahini, 2017; Al-Salama, 2017; Al-Alwan & Al-Tal, 2013; Talafha, 2010; Saidi, 2009). Reading skill consists of several basic components that students need to master. The first one is phonemic awareness which is the ability to know the sounds of letters. The second one is phonetics which is learning the association of sounds to written letters. The third one is fluency which refers to the ability to read a text coherently and quickly. The fourth one is the recognition of the meaning of words and their use in the context. The fifth one is comprehension which refers to the ability to understand texts (Dweikat, 2017; Al-Salama, 2017; Lerner & Jones, 2014).

Scholars proposed different methods to assess the reading capacities of students using formal and informal tests, such as observation, child profile assessment, tests of silent reading and re-narration. After the assessment, students are categorized according to their reading level into three levels. The first one is the Independent Level in which students recognize 95% of the words and answer 90% of comprehension questions correctly. The second level is the Instructional Level in which the students master reading skills up to 75%, which means that they need help. The third level is Frustration Level in which the student reads with obvious difficulties (Al-Batayneh et al., 2018; Karima, 2016; Lerner & Jones, 2014; Ghoneim, 2012).

Based on the previous classification it is clear that the students who belong to the third level are classified as having a reading disability (Dyslexia) which was coined by German neuroscientist Berlin (1872). It refers to a phenomenon in which students cannot read at a level of their classmates, cannot learn reading through normal teaching methods, and cannot read letters, words or sentences correctly (Abu Daqqa, 2012; Talafha, 2010; Abu Tammam, 2004). Reading disability is the most common type of academic learning disability. Eighty percent of students with learning disabilities have reading difficulties. (Al-Salama, 2017; Al-Dahini, 2017; Abdullah, 2013; Jabayib, 2011, Al-Kahali, 2010; Saidi, 2009; Ali, 2005).

There are many reasons for the occurrence of reading difficulties. Physical factors include neurological functional dysfunctions, problems in audio or visual processing, and genetic characteristics. Psychological factors include linguistic disorders, attention disorders, and cognitive disorders. The socio-economic factors include the economic and social level of the student and the relations within the family members. The educational factors include the teacher, teaching

methods, school, curriculum, and problems related to phonological awareness, fluency, and comprehension. There are also reasons related to linguistic structures such as syntactic, semantic and morphological problems (Dweikat, 2017; Al-Dahini, 2017; Al-Abdallat & Al-Smadi, 2016; Talafha, 2010; Lerner & Kline, 2006).

### **1.2. The problem of the study**

Jordanian students at the first three stages lack competence in reading skills as it is confirmed by the survey conducted by the Ministry of Education in the Hashemite Kingdom of Jordan in 2012. This study found out that only 17% of students can read and solve arithmetic problems. Al-Dahini (2017) also found out that (83%) of the second-grade students with learning disabilities have a deficiency in identifying letters and relating letters to sounds. These results raise alarm to the fact that much effort should be done to enhance learning skills including reading skills of students especially those who are in the first grades. Any difficulty in acquiring/learning the reading skill is considered a major obstacle for students to succeed in school. It is worth noting that individuals with reading difficulties need special programs because traditional programs are not always effective. Therefore, the present study attempted to investigate the effect of using the storyboard method in improving the reading skill of Jordanian third-grade students with reading disabilities by focusing on Arabic letters that look similar in written form but pronounced differently, as this skill is crucial in improving reading skill in general.

### **1.3. Aim of the study**

The present study aimed at investigating the effect of the storyboard method on improving reading skills among third-grade students with reading disabilities in Jordanian schools. The study concentrates mainly on the abilities of students to distinguish between Arabic letters that look similar in written form but pronounced differently, such as خ[x], ح[7], ج[j], ث[th], ت[t], and ب[b]. The study also design stories for the Arabic letters in question and adopt them in teaching reading skills to third-grade students with reading disabilities. It also examined whether gender affected the achievements of students with reading disabilities in reading skills.

### **1.4. Questions of the study**

The study aimed at answering the following questions: What is the effect of the storyboard method on acquiring the skill of distinguishing between Arabic letters that look similar in the written form but pronounced differently?, What is the effect of the storyboard method on acquiring the skill of distinguishing between letters that look similar in the written form but pronounced differently in the verbal/oral test?, What is the effect of the storyboard method on acquiring the skill of distinguishing between letters that look similar in the written form but pronounced differently in the written test? And what is the impact of gender on the acquisition of reading skills among students with reading disabilities?

### 1.5. Importance of the study

The present study is very important for many reasons. First of all, students with learning disabilities need educational programs to develop their reading skills to raise their academic achievement. Secondly, it enables teachers in schools to use a new teaching method for third-grade students. Thirdly, this study targets a group that constitutes a large part of the students with learning disabilities.

## 2. Theoretical background and previous studies

### 2.1. Theoretical background

Reading disability is the most common type of learning disabilities among school students in general and students with learning disabilities in particular. Scholars distinguished between two types of reading difficulties (dyslexia): auditory dyslexia and visual dyslexia. People with auditory dyslexia have difficulty in remembering and sequencing auditory symbols, whereas people with visual dyslexia have difficulty in distinguishing between letters that look similar in the written form (Kamhi & Katz, 1998). The difficulty of distinguishing between letters that look similar in spelling but pronounced differently, such as خ[x], ح[7], ج[j], or ث[th], ت[t], ب[b] caused by cognitive dysfunction which causes reading words incorrectly (Al-Smadi & Al-Shamali, 2017; Rabah, 2017; Kanaanah, 2013; Al-Khatib, 2009; Lerner, 2000).

The scholars suggested several methods to enhance reading skills which were divided into two parts: the first group focused on decoding and reading symbols, while the second focuses on the perception of meaning (Mercer & Pullen, 2008). Besides, many reading educational programs address three levels of reading. The first level is development reading which focused on the development and sequence of reading. The second level is corrective reading which focuses on correcting errors that may appear in the level of developmental reading. The third level is remedial reading which is based on teaching directly and individually those whose reading level is undeveloped after being subjected to developmental and corrective reading. This level involves therapeutic reading programs to accelerate the student's reading level (Dweikat, 2017; Al-Abdallat & Al-Smadi, 2016).

One of the therapeutic reading programs used in this study is the storyboard method. Varvel & Lindeman (2005) states that "storyboards are a means to graphically represent layout, organization, content, and linkages of information to create a conceptual idea of the information, location, meaning, and appearance" (p. 1). Storyboard makes use of words and images to convey the meaning of a story in chronological order (Essley & Rocci, 2008; Doherty & Coggeshall, 2005). This method is based on the multisensory approach which presents the content of storyboard via multiple sensory channels (sight, hearing, touch, and kinesthetic sense). Phonological Awareness is also used in this method to train students on using the phonetic system of letters and syllables. Abraham (2008) proposed that the storyboard method is very beneficial because students learn their lessons in linguistic and visual representations of data.

The storyboard is a kind of audio and reading literature and one of the most valuable methods in teaching students because the student listens and reads with enthusiasm and pleasure. Zabel, 1991 states that "Storytelling ... is enjoyable, and can be used anywhere and at any time". Storyboards support reading skills since they motivate students to group words with each other to create a meaningful story. Additionally, stories develop students' mental abilities such as remembering, imagining and thinking, and language skills (Al-Shablawi, 2017; Ghanayem, 2016; Kanaanah, 2013; Al-Khatib, 2009; Lerner, 2000).

The storyboarding method as a teaching method is very important since it focuses on audiovisual perception and requires the use of more than one sense in the learning process which in turn makes students learn more easily. It also improves verbal abilities and thinking skills and provides a great opportunity for creativity and imagination of students. It also reduces boredom in students' learning situations and improves students' fluency through re-narrating the storyboard (Al-Shablawi, 2017; Atili & Nasr, 2015; Mansi, 2015; Lerner & Jones, 2014; Carbo, 2013; Yang, 2011).

For the success of the storyboard method in the teaching of students, it must be taken into account several things, such as the mental and linguistic level of the student. The content of storyboards must be taken the real situations and they must be formulated in a simple language and presented interestingly. The use of images, sound effects, and body language in an effective way were also taken into consideration in preparing these storyboards (Al-Shablawi, 2017; Atili & Nasr, 2015; Al-Khatib, 2009).

## **2.2. Previous studies**

When reviewing the previous studies in the use of the storyboard method in teaching language skills, the researchers found some studies that showed positive effects of reading storyboards on developing phonological awareness among kindergarten and second and fourth-grade students (Rabahah, 2017; Al-Juhani, 2015; Bably & Awwad, 2010). Other studies demonstrated a positive impact of using storyboards in developing reading comprehension skills (Tetri, 2016; Morris, 2005), while others demonstrated the effectiveness of the storyboards method in developing some literary skills among fourth-grade students (Jaber, 2015). Other studies found out that the storyboard was an effective instrument used in improving the oral competencies of students (Isbell, Sobol, Lindauer & Lowrance, 2004). This method was very beneficial in improving reading and communications skills as it linked meanings and emotions with words (Mokhtar, Abdul Halim & Kamarulzaman, 2010)

Other studies also confirmed the positive impact of the truncated storyboard method on the academic achievement of sixth and fourth-grade students in writing skills (Muhy, 2015; Khalaf, 2004). Mohammed (2015) found out that the storyboard method enhanced the development of artistic expression skills of kindergarten children. Al-Shablawi (2017) also showed that using storyboards has a positive effect on the linguistic fluency of first-grade students. Additionally, Atili & Nasr (2015) found out that teaching narratives in stories improved the imagination skill of fifth-grade students. El Zemiti (2013) also

found out that storyboards improved the grammatical competence of students. His study showed that the students who studied grammar using the storyboard method performed better in the post-test/grammar test than those who taught traditionally. Maulida, Eliwati & Sumbayak (2017) found a positive impact of storyboard on the ability to read narrative texts.

Bruce (2011) found out that storyboards helped students in enhancing their brainstorming skills because it makes think about how they wanted to frame their images. In another study, Naar (2013) used storyboards to help six limited- proficient students of English to enhance their reading comprehension of English novels. The findings showed that storyboards affected positively the reading skills of English language learners with limited language proficiency. Husnin, Din, Karim, Norman & Hamdan (2013) Found out that storyboards are considered authentic and natural data that had a positive impact on student's creativity and learning.

Based on the previous studies, it is clear that a limited number of studies focused on the use of storyboards on enhancing different language skills. Moreover, the researchers did not find any study that investigated the role of storyboard in enhancing the reading abilities of students with reading disabilities in the Jordanian context. Thus, the present study aims to fill this gap by investigating the impact of storyboards which make use of pictures and simple narrations to enhance the skill of distinguishing between Arabic letters that look similar in the written form among students with reading disabilities. Mastering this skill will eventually improve the reading skill of these students.

### 3. Methods

#### Sample of the study

The sample of the study consisted of 40 male and female third-grade students with reading disabilities in the schools of the Directorate of Education in the Ajloun Governorate in Jordan. They were divided equally into the experimental group and the control group. Table 1 shows the distribution of individuals according to their gender and school.

**Table 1: Distribution of participants based on School and gender**

Group	School	Gender	Total
Experimental	- AMERIA SECONDARY --SCHOOL	Female	5
	- Hashemite Elementary Girls	Female	5
	- Ezzedine Osama Elementary Boys	Male	5
	- Ain Janna Secondary Boys	Male	5
Control	-Khawla Bent Al Azwar Elementary	Female	5
	- Alkarama elementary school	Female	5
	- King Nasser elementary school for Boys	Male	5
	- Khalid Bin Al Waleed Elementary Boys School	Male	5

### **Instruments:**

The following tools were used in this study:

**Achievement test:** The test was designed to measure the ability of students to distinguish between letters that look similar in the written form and pronounced differently to diagnose the weaknesses in this skill. Both the control and experimental group sat for a pretest and post-test to measure whether the new method affected positively learning reading skills among students with reading disabilities. The test consisted of (8) activities divided into two sections: the oral one consisted of (6) activities marked two points for each, and a written section consists of two activities marked 6 points for each. Anyone who got a score lower than (12) points were considered having difficulty in the skill of distinguishing between letters that look similar in the written form and pronounced differently

**The validity of the test:** The test was verified by a jury composed of (10) university professors specialized in special education, Arabic language, curricula, teaching methods, measurement and evaluation, educational supervisors of learning difficulties, and Arabic teachers. The final version of the test was prepared after taking into consideration the comments of the jury.

**Correction of the test:** The time of performing the test was 30 minutes. In the first section (the verbal section), the examiner was given one point if he/she circled the desired letter, and thus the highest point was 12 and the lowest was zero. In the written section, the examiner was given two points if the letter heard from the teacher was written. Thus, the highest mark was (12) and the lowest was zero. The total mark of the two sections was 24 points.

**Training Program:** The program aims to improve the skill of distinguishing between letters that look similar in the written form and pronounced differently among third-grade students who are enrolled in the learning resource rooms in the Ajloun governorate. The program, which is based on a multisensory strategy and the use of the storyboard style, consisted of activities that help students to acquire the skill in question.

**The justification of the program:** The review of previous studies in the field of improving the reading skill of students with learning disabilities emphasized the importance of using the storyboard method in addressing learning disabilities. The current program meets the needs of students by training them on the skill of distinguishing between letters that look similar in the written form and pronounced differently ( خ[x], ح[7], ج[j], ث[th], ت[t], and ب[b] ) by using the storyboard and suitable teaching activities (worksheets). This program helped them to distinguish between the letters effectively and write them and pronounce them correctly.

**Content of the program:** The program included 30 Training sessions in which the experimental group got involved, five sessions per week. The duration of the session was one class. The training program lasted (6) weeks. Table 2 shows the mechanism of implementation of the program each week in terms of activities and skills. This training program is repeated for six weeks.

**Table 2: The implementation of the training program per week**

Number of sessions	Skill	Activities carried out in the session	Number of classes
1	Distinguishing between letters with similar auditory features.	Narrating the story of a certain letter, showing pictures, conversing with the students, and re-narrating the story.	1
2	Distinguishing between letters that look similar in pronunciation	Presenting a box containing objects that begin with the required letter, making the student guess these objects, and presenting these objects a reward if they know them.	1
3	Distinguishing letters that look similar visually	Worksheet 1 for the required letter was done in the first week by the student.	1
4	Distinguish between letters using touch	Activities were given to students to distinguish the required letter by forming the letter using the sand table, wool threads, shearing, and pasting.	1
5	Distinguish similarly-written letters	Students did worksheet 2 for the required letter.	1

**Validity of the content of the training program:** The content of the program was verified by a jury composed of (10) professors who made sure of the relevance of the picture to the subject of the story, simplicity of vocabulary used in the body of the story, the integrity of sentences and linguistic structures, and the suitability of activities, methods, teaching methods and worksheets. Some paragraphs had been amended and deleted in the light of the observations received from the professors.

#### **Study Procedures:**

To collect and analyze the data, the following steps were followed:

1. The approval of conducting the study at the schools was obtained.
2. The researchers trained the teachers to implement the study by participating in three sessions for three days. In the first session, the storyboard method was introduced. In the second session, the application of the method was explained by presenting a training sample. In the third session, teachers were trained on how to supervise the students and to provide feedback to the students.
3. The experimental and control group sat for the pretest.
4. The training program was implemented for (6) weeks during the second semester of 2018/2019.



5. After the end of the training program, both groups (the experimental and control groups) sat for the post-test.
6. The post-test was corrected and the total marks were extracted for each student. The results of pre and posttests were calculated to extract the results.

#### 4. Results and discussion

To verify the equivalence of the experimental and the control groups before conducting the study, the Independent Sample T-Test was used. Consider the following Table:

**Table3: Results of the experimental and control group in the pre-test**

	Total mark	Group	Mean	Standard deviation	T	Statistical significance
Pre-test	24	Control	7.55	1.05	1.42	0.16
		Experimental	8.10	1.37		

Table 3 indicated that there are no statistically significant differences between the experimental and control group since the p-value is more than 0.05. Thus, the two groups had the same linguistic knowledge before conducting the study.

#### Results related to the questions of the study:

##### 4.1. Results related to the first question: what is the effect of the storyboard method on acquiring the skill of distinguishing between Arabic letters that look similar in written form but pronounced differently?

To answer the previous question, Independent Sample T-Test was used to find out whether there were statistically significant differences between experimental and control groups, as shown in Table 4:

**Table 4: Results of the experimental and control group in the post-test**

Group	Teaching method	Mean	Standard deviation	T	Statistical significance
Control	Traditional method	9.15	1.27	20.43	0.00
Experimental	Story method	9.75	1.94		

The data in Table 4 revealed a statistically significant difference between control and experimental groups ( $P$ -value= .00) in favor of the experimental group since the mean of the experimental group is higher than the mean of the control group. These results suggested a positive impact of using the storyboard method on improving the skill of distinguishing between letters that look similar in written form but pronounced differently by students with reading disabilities.

#### 4.2. Results related to the second question: what is the effect of the storyboard method on acquiring the skill of distinguishing between letters that look similar in written form but pronounced differently in the verbal/oral section of the posttest?

To answer this question, an independent test T-Test was used to investigate whether there were significant differences between the experimental and control groups. Consider Table 5:

**Table 5: Results of experimental and control groups in the post-test (verbal/oral part)**

Group	Teaching method	Mean	Standard deviation	T	Statistical significance
Control	Traditional method	5.25	0.55	24.28	0.00
Experimental	Storyboard method	10.75	0.85		

Table 5 showed a statistically significant difference between control and experimental groups in favor of the experimental group and the difference was less than 0.05. This indicated that students with reading disabilities who taught using the storyboard method showed improvement in the verbal/oral aspect better than the control group who are exposed to the traditional method. These results are expected because of the advantages of the storyboard method in satisfying the needs of students' imagination and curiosity (Al-Shablawi, 2017), and their needs of guidance, love, success, independence and social appreciation. Meeting these different needs contributes to the development of the cognitive abilities of students, and the improvement of their verbal/oral abilities because the storyboard method attracts the attention of students to the correct pronunciation of sounds. The results were in line with other studies, such as Rabahah (2017), Al-Shablawi (2017), Al-Juhani (2015), and Bably & Awwad (2010). All of the studies showed a positive impact of the storyboard method on the development of phonological awareness and language fluency of students in the first grades.

**4.3. Results related to the third question: what is the effect of the storyboard method on acquiring the skill of distinguishing between letters that look similar in the written form but pronounced differently in the written section of the post-test?**

To investigate the impact of the storyboard method on acquiring the skill of distinguishing between letters that look similar in the written form and pronounced differently in the written part of the post-test, a t-test was used to find whether there are statistically significant differences between control and experimental groups in the post-test. Consider the following Table:

**Table 6: Results of the experimental and control group in the post-test/ the written part**

Group	Teaching method	Mean	Standard deviation	T	Statistical significance
Control	Traditional method	3.90	1.21	11.73	0.00
Experimental	Storyboard method	9.00	1.52		

The data in Table 6 indicated a statistically significant difference between the control and the experimental groups in the post-test in favor of the experimental group since the difference was less than 0.05. This indicates that there is a positive impact of using the storyboard method in improving the skill of distinguishing between letters that look similar but pronounced differently among the students with reading difficulties in the written part of the test. These results are expected because of the advantages of storyboards which help students to remember the letter very easily. These results were consistent with the results of other studies, such as Muhy (2015), Mohammed (2015) and Khalaf (2004). All of these studies traced a positive impact of using storyboards on the development of the performance aspect (written) of the students in the elementary stage.

**4.4. Results related to the fourth question: what is the impact of gender on acquiring the reading skill of students with reading disabilities?**

To answer this question, Independent Sample T-Test was used to find out whether there were statistically significant differences between males and females of the experimental group in their performance in the post-test. Consider the following Table:

**Table 7: Results of the experimental group in the post-test based on gender variable**

	Gender	Mean	Standard deviation	T	Statistical significance
Verbal part	Male	10.80	0.92	0.26	0.80
	Female	10.70	0.82		
Written part	Male	8.20	1.48	0.99	0.06
	Female	9.80	1.14		
The test in general	Male	19.00	2.00	1.83	0.08
	Female	20.50	1.65		

The data in Table 7 revealed that there were no statistically significant differences in the post-test in the verbal and written sections between males and females in acquiring the skill of distinguishing between letters that look similar in the written form and pronounced differently. This means that gender did not affect learning reading skills. The researchers attribute this result to the fact that the storyboard method draws the attention of all students regardless of gender and motivates them to learn in a healthy and friendly environment.

## 5. Conclusion

The current study explored the impact of the storyboard method in improving the reading skill among third-grade students with reading disabilities in Jordanian schools. The study focused on the skill of distinguishing in writing and speaking between Arabic letters that look similar in the written form but pronounced differently, such as خ[x], ح[7], ج[j], ث[th], ت[t], and ب[b]. The study found out that the storyboard method improved the reading abilities of students by developing the skill of distinguishing between Arabic letters that look similar in written form and pronounced differently. The experimental group who taught using the storyboard method performed better than the control group in the oral and written test. The study also found out that gender did not affect the learning of reading skills of students with reading disabilities. The study came up with many recommendations. Firstly, there is a need to implement the storyboard method to improve the reading skill of students with reading disabilities in Jordan. Secondly, there is a need to reduplicate this study by investigating the impact of storyboards on other language skills, such as writing and speaking. Thirdly, training courses and workshops should be held to train teachers to design and use storyboards in their classes.

## References

- Abraham, S. (2008). Storyboarding; Comics, graphic novels, and engaging learners. *Multimedia&Internet@Schools*, 15(3), 7-25.
- Abdullah, S. (2013). *The effect of an educational program based on the use of interactive whiteboards in developing reading skills among students with learning difficulties in Jordan* (Unpublished Ph.D. thesis). International Islamic Science University, Jordan.
- Abu Daqqa, N. (2012). Learning difficulties in reading among elementary stage students in Ramallah and Al-Bireh Governorate in Palestine - a survey study. *An-Najah University Journal for Research (Humanities)*, 26(7), 1557-1584.
- Abu Tammam, B. (2004). *Reading problems among students in resource rooms and their relationship to some variables* (Unpublished Master Thesis). Amman Arab University for Graduate Studies, Jordan.
- Al-Abdallat, S., & Al-Smadi J. (2016). Comparing the effectiveness of direct teaching and mutual teaching strategies in improving reading comprehension skills among students with learning disabilities in reading (dyslexia). *Journal of Educational Sciences Studies*, 43(1), 525-547.
- Al-Alwan, M., & Al-Tal, S. (2013). The effectiveness of a training program in teaching reading skills and among students with learning difficulties. *Al-Quds Open University Journal*, 1(1), 131-162.
- Al-Batayneh, O., Al-Rashdan, M., Al-Sabailah, O. A., & Majeed A. (2018). *Theoretical and practice learning difficulties*. Amman, Jordan: Al Masirah House for Publishing and Distribution.
- Al-Dahini, R. (2017). *Dyslexia and distinctive behavioral indications for third-grade students* (Unpublished MA thesis). Islamic University, Gaza.
- Ali, S. (2005). *Difficulties in learning to read and write, Diagnosis and treatment*. Kuwait, Kuwait: Al Falah Library for Publishing and Distribution.
- Al-Juhani, A. (2015). The effect of the story-telling strategy on developing listening comprehension skills on second-grade school students in the Kingdom of Saudi Arabia. *International Specialized Educational Journal*, 4(1), 188-202.
- Al-Kahali, S. (2010). *Difficulties in learning to read, diagnose and treatment*. Kuwait, Kuwait: Al Falah Library for Publishing and Distribution.
- Al-Khatib, A. (2009). *The Resource Room as an educational alternative for people with special needs*. Irbid, Jordan: Modern World for Publishing and Distribution.
- Al-Salama, W. (2017). *Difficulties facing students of an intermediate stage in learning the skills of reading and writing in Jordan from the viewpoint of their teachers* (Unpublished Master Thesis). Al-Bayt University, Jordan.
- Al-Shablawi, S. (2017). The reality of the use of the story by Arabic language teachers in teaching and its effect on language fluency among first-grade students in the holy Karbala governorate. *Journal of the College of Basic Education for Educational and Human Sciences*, 1(32), 786-803.
- Al-Smadi A., & Al-Shamali, S. (2017). *Modern concepts in learning difficulties*. Amman, Jordan: Al Masirah House for Publishing.
- Atili, T., & Nasr, H. (2015). The effect of teaching Islamic education with oral and electronic narration strategies in improving the visualization skills of elementary stage students in Jordan. *Jordanian Journal of Educational Sciences*, 11(4), 525-537.
- Bably, J., & Awwad, A. (2010). The effectiveness of a training program in developing vocal awareness skills and its effect on improving reading speed among students with learning difficulties at the elementary stage in the State of Qatar. *Childhood and Education journal*, 3, 65-85.

- Bruce, D. (2011). Framing the Text: Using Storyboards to Engage Students with Reading. *English Journal*, 100(6), 78-85.
- Carbo, M. (2013). Powerful best reading practices for struggling readers. *Instructional Leader*, 26(5) 7-5.
- Dweikat, D. (2017). *The effect of a computerized training program in literacy education on the achievement of sixth-grade primary students with learning disabilities* (Unpublished Master Thesis). Yarmouk University, Jordan.
- Doherty, J., & Coggeshall, K. (2005). Reader's theatre and storyboarding: Strategies that include and improve. *Voices From the Middle*, 12(4), 37-43.
- El Zemiti, A. (2013). The use of the storyboard in teaching grammar and its effect on developing achievement for fourth-grade students. *Journal of the Faculty of Education, Port Said University*, 14(1), 814-838.
- Essley, R. L., & Rocci, A. (2008). *What Are Storyboards?* <https://www.scholastic.com/teachers/articles/teaching-content/what-are-storyboards/>
- Ghanayem, A. (2016). *Curative programs for learning disabilities*. Amman, Jordan: Al Masirah House for Publishing and Distribution.
- Ghoneim, A. (2012). *Educational games and their impact on addressing reading and writing difficulties for fourth-grade students in Jordan* (Unpublished Master Thesis). Al-Fasher University, Sudan.
- Hallahan, D., & Kouffman, J. (2012). *Exceptional learners: Introduction to Special education*. New Jersey, USA: PrenticeHall Inc.
- Husnin, H., Din, D., Karim, A., Norman, H., & Hamdan, A. (2013). Assessing Authentic Learning via Storyboarding: A Malaysian Perspective. *Asian Social Science*, 9(16), 46-53. doi:10.5539/ass.v9n16p46
- Isbell, R., Sobol, J., Lindauer, L., & Lowrance, A. (2004). The Effects of Storytelling and Story Reading on the Oral Language Complexity and Story Comprehension of Young Children. *Early Childhood Education Journal*, 32, 157-163. doi:10.1023/b:ecej.0000048967.94189.a3
- Jabayib, A. (2011). Difficulties in learning to read and write from the viewpoint of teachers of first-grade students. *Journal of Al-Azhar University in Gaza, Humanities Series*, 13(1), 1-34.
- Jaber, W. (2015). *Teaching methods, planning, and educational applications*. Amman, Jordan: Dar Al-Fikr.
- Kamhi, A., & Kats, H. (1998). *Reading Difficulties: An Evolutionary Linguistic Perspective*. Damascus, Syria: The Arab Center for Arabization.
- Kanaanah, M. (2013). *The effectiveness of the pictorial strategy in learning similar Arabic letters among students with learning difficulties in Jordan* (MA thesis). Yarmouk University, Jordan.
- Karima, B. (2016). Dyslexia and its relationship to academic achievement for students: the second year of primary school as a model. *Generation Journal of Humanities and Social Sciences*, 17(1), 209-234.
- Khalaf, M. (2004). *The effectiveness of a program based on the use of the story in developing reading skills and written expression for fourth-grade primary school students* (Unpublished Ph.D. thesis). Amman Arab University for Graduate Studies, Amman, Jordan.
- Lerner, J. (2000). *Learning Disabilities*. Boston, USA: Houghton Mifflin Company.
- Lerner, J. and Jones, B. (2014). *Learning difficulties and minor related disabilities: modern teaching characteristics and strategies*. Oman: Dar Al-Fikr Publishers and Distributors.

- Lerner, D., & Kline, F. (2006). *Learning Disabilities and Related Disorders: characteristics and Teaching strategies*. Boston, USA: Wadsworth Publishing.
- Mansi, N. (2015). *The effect of the book recorded on the skill of vocal reading among third-grade primary students with learning difficulties in the Irbid Kasbah Directorate of Education* (Unpublished Master Thesis). Yarmouk University, Jordan.
- Maulida, Eliwati, & Sumbayak (2017). *The effect of Storyboard on reading narrative text-ability of second-year students of SMAN 9 Pekanbaru*. <https://media.neliti.com/media/publications/203313-the-effect-of-storyboard-technique-on-re.pdf>.
- Mercer, C., & Pullen, P. (2008). *Teaching students with learning problems*. New Jersey: Pearson.
- Ministry of Education. (2012). *Introductory brochure for parents, the reading promotion program within the Early Reading and Mathematics initiative*. Amman, Jordan.
- Mohammed, H. (2015). The storyboard and its impact on developing artistic expression in kindergarten. *Journal of the College of Basic Education, University of Baghdad*, 21(92), 425-448.
- Mokhtar, N. H., Abdul Halim, M. F., & Kamarulzaman, S. Z. (2010). The Effectiveness of Storytelling in Enhancing Communicative Skills. *Procedia Social and Behavioral Sciences*, 18(1), 163-169. doi:10.1016/j.sbspro.2011.05.024
- Morris, C. (2005). *Teaching special education reading and writing by Gardner way on line*. Retrieve from <http://www.igs.net/cmorris>
- Muhy, Z. (2015). The effect of the dialogue method on the achievement of sixth-grade students in the written expression course. *Journal of Educational and Psychological Research*, 44(1), 287-311.
- Naar, J. (2013). Storyboards and Reading Comprehension of Literary Fiction in English. *HOW, A Colombian Journal for Teachers of English*, 20(1), 149-169
- Rabah, M. (2017). *Study skills of students with learning difficulties in the Lower Galilee region* (MA thesis). Yarmouk University, Jordan.
- Rabahah, E.(2017).The impact of using reading storyboards and writing Journal activities on Print and phonemic awareness of Jordanian Kindergarten children. *Journal of Educational and Psychological Studies*, 11(1), 736-748.
- Saidi, A. (2009). *Introduction to dyslexia, a training program to treat reading difficulties*. Amman, Jordan: Al-Yazouri Publishing and Distribution House.
- Talafha, A. (2010). *Building an educational program using multimedia and measuring its effectiveness in developing reading and writing skills for students with learning disabilities at the primary stage* (Ph.D. dissertation). Arab Amman University, Jordan.
- Tetri, M. (2016). *The effect of employing digital stories in developing reading comprehension skills for third-grade students* (Unpublished Master Thesis). Islamic University of Gaza, Palestine.
- Varvel, V. E., & Lindeman, M. (2005). *Online courses as learning scripts: Using storyboards in online course design*. Retrieved from [www.ion.uillinois.edu/resources/pointersclickers/2004\\_09/storyboard.pdf](http://www.ion.uillinois.edu/resources/pointersclickers/2004_09/storyboard.pdf)
- Yang, J. (2011). *Storytelling as a teaching method in the ESL Classroom* (MA thesis). Kristianstad University, Toronto, Canada.
- Zabel, M. K. (1991). Storytelling, Myths, and Folk Tales: Strategies for Multicultural Inclusion. *Preventing School Failure*, 36, 32-34. doi:10.1080/1045988x.1991.9944582

## Appendix 1

## Transliteration symbols for Arabic vowels and consonants

Arabic alphabet	Symbol	Example	Meaning
ء	2	2amal	hope
ث	th	Tha3lab	fox
ج	j	Jamal	camel
ح	7	7_ub	love
خ	x	Xubz	bread
ذ	dh	Dhahab	gold
ز	z	zi:t	oil
ش	sh	Shams	sun
ص	<u>S</u>	<u>s</u> ayf	summer
ض	<u>d</u>	<u>d</u> ayf	guest
ط	t	t i:n	mud
ظ	TH	THuhr	noon
ع	3	3abd	slave
غ	gh	gharb	west
ق	q	qalam	pencil
و	w	ward	rose
ي	y	yawm	day
ا (فتحة)	a	kataba	he wrote
و (ضممة)	u	kutub	books
ي (كسرة)	i	sin	tooth
مد طويل / اى	a:	ka:tib	writer
ضممة طويلة و	u:	fu:l	beans
كسرة طويلة ي	i:	fi:l	elephant
Diphthongs	aw	mawt	death
(أصوات علة مركبة)	ay	bayt	house