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**COMPARISON OF EFFECTIVENESS OF RECIPROCAL TEACHING AND  
LINGUISTICS GAMES TO IMPROVE THE ACCURACY AND READING  
COMPREHENSION OF STUDENTS WITH SPECIAL DISORDER OF READING**

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**ABSTRACT**

The purpose of this study is to evaluate the effectiveness of Reciprocal Teaching and linguistics games on the accuracy and reading comprehension of Male students with reading disorder. The design of this study was pre-test and post-test with a control group. The study population consisted of second grade male students of elementary school that in centers of learning disorder of Yasouj city in 2013-2014 were diagnosed with reading disorder. The sample consisted of 45 people who were randomly assigned to three groups of 15 subjects in two test groups (Reciprocal Teaching, and linguistics games) and groups (Witness) were selected. To gather the data of Diagnostic Reading Test (Shirazi and Nili Poor) was used. To analysis data of variance analysis was used. The results showed that reading skills through Reciprocal Teaching and linguistics games improve the accuracy and reading comprehension in students with reading disorder. In general, Reciprocal Teaching is more effective.

**Keywords: Reciprocal Teaching, Accuracy, Reading Comprehension, Reading Disorder**

**INTRODUCTION**

Learning Disabilities<sup>1</sup> is a general term that refers to a heterogeneous group of

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<sup>1</sup> . Learning Disabilities

disorders with significant problems in learning and using the skills of listening, speaking, reading, writing, thinking, and math disability becomes apparent.

These disorders are inner in people and is thought to be due to malfunctions of central nervous system. According to presented statistics, 30 percent of school-age children as a group with learning disorders have been identified and classified. The basic belief is that people with learning disabilities, has the potential to scientific activities, but in acquisition of scientific skills commensurate with their potential have problems. Learning disabilities can cause problems with language, memory, listening, speech conceptualizing, reading, writing, spelling, math and motor skills at various levels and compounds (Ghorbanpour *et al.*, 2013). One of the most common learning disorders is disorder in Dyslexia and reading. Studies have shown that about 5 to 10 percent of students, especially males, have a reading disorder and in modern societies, Less skill that as reading is to be important for success in life (Anna-Lind, Kristen & Jenifer, 2009)<sup>2</sup>. students with reading disorder Although often have high intelligence, they cannot have good academic achievement and with difficulty continue their education or drop out, which

in turn have social, economic, cultural and psychological - emotional damage for them and the community. (DSM, IV.TR).<sup>3</sup>Children who have difficulty learning to read often have a negative view toward their competence, and are uninterested in education. The disability in reading causes that these students in elementary school are willing to do anything except reading, and in adulthood to their Self-Worth in relation to the problems that have in reading are concerned (Mc Nulty, 2004, translated by Alizadeh *et al.*, 2011)<sup>4</sup>. Children with severe reading disorder, often in the early stages of learning of reading and children with Mild reading disorder, in understanding and reading comprehension skills have some shortcomings. The transition from the primary reading steps to complicated and complex reading is concurrent with more Prominent activity of right hemisphere than to the left hemisphere. Therefore, cognitive disorders, the primarily shape of reading and Linguistics disorders, are distorted complex shape of reading (Bakker and Vonk<sup>5</sup>, 2003 Gough & Tunmer<sup>6</sup>(1998), the main component of reading as decoding and reading comprehension are known

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<sup>2</sup>Anna-Lind, Kristen & Jenifer

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3. DSM-IV-TR

4Mc Nulty.

1-Bakker and Vonk

6 Gough & Tunmer

(Halahan et al., 2005, translated by Alizadeh et al., 2001). Evidence suggests that this simple approach provides a detailed description of the ability to read and ultimate goal in learning is reading comprehension. (Ghobari Banab et al., 2012) Reading requires that students about phonemes, syllables, words, reading process and how to combine voices with each other, have abilities and skills. They also be able to answer questions about the sentences and be able to keep sentences well enough in their mind in order to be able to implement it. When the students should identify the main theme of a story, Should be able to attention to the aspects related to what they read, and on the portion that is their favorite, but not related to the main theme not emphasized. In addition, it requires that students use meta cognitive strategies and attention skills, to a large degree. (Wilder and Williams<sup>7</sup>, 2012, quoted from Halahan,). Since the consequences of reading disorder in many cases negatively affected the mental health and self-esteem in children, these students are disappointed in their Curriculum abilities and with traditional methods of education of normal children are not able to learn, and require special assistance (Omidvar, 2005). To address these challenges, and in line with

education and rehabilitation of children in addition to conventional healing and educational methods, technology creates new opportunities in the field of reading, And cause the creation of new facilities and capacities in research and education in the areas of reading (DeFrance<sup>8</sup> et al. 2010). On the other hand, the most important engagement of children in the life is game. The child learns and grows in the context of the game. Experts consider the main feature of the game that it is Enjoyable (Sohrabi Shegefti, 2011). Game makes learning process enjoyable for the children, as well as will lead to his satisfaction of basic and infrastructure needs (Ray<sup>9</sup> et al., 2007. Therefore, for children the reading disorder that doing homework related to reading is boring and unpleasant, associating his educational activities in the form of the game will be very interesting. Linguistic is an approach that study the relationship between human language, his mind and social and physical experiences. By studying the language, we can understand the nature and structure of human mind. In this view assumes that language reflect thought patterns and characteristics of the human mind (Rasekh Sahand, 2009).

One of the other educational methods that have been invented for teaching Cognitive

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7 Wilder and Williams

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8 DeFrance

9 Ray

and metacognitive strategies is Reciprocal Teaching method. In this method, try to teach four strategies of asking question, summarizing, predicting and explaining complex issues to students. In this method, students work together in groups and engage in discussion. Reciprocal Teaching methods cause improve of reading comprehension of Students with mental retardation and high school students (Hart and speece<sup>10</sup>,1998.Schünemann et al(2013)<sup>11</sup> conducted a study entitled "self-regulatory integration in Reciprocal Teaching of whole class and an analysis of mediator, moderator of the incremental effects on reading comprehension of fifth-grade ".The results showed that students who with self-regulatory and Reciprocal Teaching are taught together than students who only with Reciprocal Teaching is taught in terms of reading comprehension have better progress. Shahidi (2013) in a study investigated the effectiveness of linguistics play therapy on speed and accuracy of students reading with reading learning disorder. The results showed that linguistics games on the phonological awareness and accuracy and reading comprehension is effected but on the reading speed is unaffected .Asghari Nekah and colleagues (2013) in a study

entitled "Introduction to the design of computer educational games with Linguistic approach In the area of learning disorders that conducted, they concluded that computer educational games and applied software that based on modern theories of pathology of learning disorders are designed, can stimulate and enrich phonological problems and grammar and reading comprehension and reading speed of students with learning disorders. By taking into account the multiple dimensions of this disorder and its high prevalence in modern times, it is important that the knowledge gathered in the etiology level, the therapeutic interventions and the development of new methods to help these children to be employed.Further study of the corners of linguistics games and Reciprocal Teaching can lead to more effective application and development in learning disorders, particularly in reading disorder. Therefore, study the effectiveness of two methods; linguistics games and Reciprocal Teaching on improving students reading disorder is necessary.

## METHODOLOGY

The study method is pre-test and post-test with a control group. The study population consisted of second grade boy students of elementary school that in the learning disorders centers of Yasouj city in 2013-

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<sup>10</sup>- Hart and speece

<sup>11</sup>Schünemann et al

2014 were diagnosed with reading disorder. With regard to having complete list of students with learning difficulties in Yasouj, first 45 students with learning disorder randomly were selected. In the second stage these 45 people randomly divided into three groups of 15 subjects (two test groups and one control group) were replaced. Age, sex, educational level and intelligence were controlled variables, and the groups were matched in this respect. The following tools were used to gather information:

**Shirazi and Nilipour reading diagnostic test:** This test is an individual test consists of reading text and complementary tests, which was built in 2004 by Shirazi and Nilipour. This test consists of three unfamiliar story tasks (text) and researcher with Persian book of the second class, that the first is guide text To familiarize students with how performing the test and two other text (text A and B) are matched texts.

**Performance Methods:** After the selection and placement in completely randomized into three groups of 15 subjects (two test groups and one control group). Of People of three groups pretest were taken. Then the people of test group number one in ten 50 minute sessions of linguistics games were participated, as well as those in the test group number two in ten 50 minute sessions with Reciprocal Teaching were participated. During this period, the people of control group received no intervention. After the end of the meetings, from People of three groups Posttest were taken. In addition, the results of pre-test, post-test of groups were compared with each other. Educational intervention in this study include linguistic training programs and Reciprocal Teaching. Summary training sessions as follows. Table 2 linguistics games and Table 2 Reciprocal Teaching program is provided.

**Table 1: Sample of teaching program of linguistics games**

Providing games method	Skill Area
<p>By hearing the sound tell the animal's name and some tools and food</p> <p>On the cards, find the words that their ends like to each other, first or two letters before the end is the same.</p> <p>with jumbled letters make words. with use of the symbol of y that put for letters make word write a word that has 5 letters and its third letters is for example be P</p> <p>Invert words and build a new word</p> <p>Find the letters you hear in the table. with letters write the word.</p> <p>Complete the incomplete words.</p> <p>Write a letter and ask the student to write meaningful words.</p>	<p>Awareness</p> <p>Phonology</p> <p>Diagnosis</p> <p>End of term word</p> <p>Awareness</p> <p>Phonology</p> <p>Word-making</p> <p>Entry titles</p>
<p>Put the images together that a meaningful story is created.</p> <p>Write the appropriate word for vacancies</p> <p>solve the following Question (math Question)</p>	<p>Reading comprehension (text)</p> <p>Accuracy</p>

**Table 2: Examples of Reciprocal Teaching program**

Providing games method	Skill Area
<p>A text to proportion of children reading is selected and we want them to find the words in the text.</p> <p>We write a word frequently in the text and ask them not to read the word.</p> <p>Listen when reading the text and answer the questions</p>	Strengthening Accuracy
<p>Read the text and be able to design the question and ask the rest of the group.</p> <p>Examiner reads text without sound and implement the shorthand strategy. Then with help of students implement this strategy</p> <p>We tell the name of a story and ask the students before reading Predict What is the reason for choosing this name?</p> <p>Group Representative read the text and ask the members of group to choose suitable name for story.</p>	<p>Ask</p> <p>Summarizing strategy</p> <p>predicting</p> <p>And reading</p> <p>comprehension</p>

**RESULTS**

Table 1 shows the mean, standard deviation, accuracy and reading comprehension of test groups in Posttest.

**Table 1-4: Mean and standard deviation of the studied variables in the pre-test and post-test stage**

Standard deviation	Mean	Groups	Assessments	Variables
1/44	5/50	Linguistics games	Pretest	Reading accuracy
1/75	7	Reciprocal Teaching		
1/55	6/17	control		
1/42	7/20	Linguistics games	Posttest	
2/10	8/60	Reciprocal Teaching		
1/50	6/40	Control		
9/441	28	Linguistics games	pretest	Reading comprehension
11/87	38/67	Reciprocal Teaching		
9/42	29/20	control		
8/74	30/33	Linguistics games	posttest	
12/83	41/80	Reciprocal Teaching		
9/75	28/80	control		

**Table □: mixed analysis of variance for the accuracy of reading variable**

$\eta^2$	p	F	df	MS	SS	changes Sources
0/	<0/001	111/88	1	31/21	31/21	Time effect (within-subjects)
0/46	<0/001	18/05	2	5/04	10/07	interactive effect of time and group
0/17	<0/020	4/29	2	22/04	44/07	Group effect

As reported in Table 3, the data analysis showed that in the variable of reading accuracy, the main effect of time (  $0/ = 2\eta$ ,  $0/001 > p$ ,  $111/88 = F$ ) as well as the interaction between time and group (  $0/46$

$= 2\eta$ ,  $0/001 > p$ ,  $18/05 = F$ ) statistically at  $0/01$ , and the main effect of group (  $0/17 = 2\eta$ ,  $0/020 > p$ ,  $4/29 = F$ ) , statistically at  $.0/05$  is significant .The results of this test indicate the changes in the mean of the

scores of reading accuracy of subjects that had received the linguistic games intervention, with subjects that had received the Reciprocal Teaching intervention statistically had differences

( $0.05 > p$ ); In this way, Reciprocal Teaching intervention more linguistics games intervention improve the accuracy of reading.

Table 4: Mixed analysis of variance for the reading comprehension variable

$\eta^2$	p	F	df	MS	SS	changes Sources
0/50	<0/001	41/90	1	64/18	64/18	Time effect (within-subjects)
0/44	<0/001	16/81	2	25/74	51/49	interactive effect of time and group
0/21	<0/006	5/74	2	216/61	2486/87	Group effect

As reported in Table 4.4, the data analysis showed that in the reading comprehension variable, the main effect of time ( $0/50 = \eta^2, 0/001 > p, 41/90 = F$ ) The main effect of group ( $0/21 = \eta^2, 0/006 > p, 5/74 = F$ ), and interaction of time and group ( $0/44 = \eta^2, 0/001 > p, 16/81 = F$ ) statistically at 0/01 is significant.

The results of this test showed changes in scores mean in reading comprehension of subjects that had received linguistics games intervention, with the subjects that had received Reciprocal Teaching intervention were statistically had significant differences ( $0.05 > p$ ); in this way that the Reciprocal Teaching intervention more than linguistics games intervention improve the reading comprehension.

## DISCUSSION AND CONCLUSION

The present study with aimed to compare the effectiveness of linguistics games and

Reciprocal Teaching to improve accuracy ability and reading comprehension of students with reading disorders was performed. The results showed that after a period of teaching linguistics Games and Reciprocal Teaching, students reading skills (Accuracy and reading comprehension) with reading disorder significantly increased, but overall Reciprocal Teaching was more effective. These findings with the findings of studies in the field of Reciprocal Teaching on the reading performance of students with reading disorder, including (Schünemann *et al.*, 2013; Daemi, 2012, Sheikh and Ahmadi, 2012, Dehghani *et al.*, 2007; Izadi, 2007, Biyabangard and colleagues, 2001) are consistent, and All emphasized on this matter that the Reciprocal Teaching improve students' reading. Reciprocal Teaching is the use of meta-cognitive skills to develop and

enhance understanding of children in reading. Reciprocal Teaching requires that teachers and students are taking turns that leads to two-way dialogue that its aims is to reveal the meaning of the text. As well as, Advocates of this approach also emphasizes that teaching should take place within a social context. Reciprocal Teaching considers process of (asking questions, summarizing, predicting and explaining) during teaching and are taught to students. As well as, The results of this study with the results of several studies on the effectiveness of linguistics games on the reading performance of students with reading disorder for example (Shahidi, 2012, Asghari Nekah and colleagues 2012-2013., Azami et al., 2007; and Webernan Arison, 1997) are consistent.

The underlying logic of linguistics games is that by providing a combination of targeted activities, for children exciting opportunities for Repetition and practice of linguistic is provided. Therefore, play therapy with using games and activities that involve stimulation of children for use and recognition of phonemes syllables and stimulate the production of sounds and phrases. And by mixing them with positive emotions and through interaction with children and interaction with the play therapy creates situations and places that improve skills such as language skills,

linguistic and phonological and As well as, makes learning enjoyable for children, And provides motivation for language learning and learning. Among the limitations of this study is that only covers second grade male students that in the learning disorders center of Yasouj city were diagnosed with reading disorder, other cities and other grade seven the girls has not studied, as well as socio-economic situation can have a significant impact on learning disorders, That this variable also was not examined or addressed. It is suggested that in further research is another example of the student populations as well as of women population elected to situation of reading disorder in them are studied, And relevant interventions on them are performed and the results have more ability to generalize and in periods of several months follow-up are done in order to determine the effectiveness of interventions process over time. This study showed that Reciprocal Teaching and linguistic games improve reading speed, reading accuracy, and also improve reading comprehension of students with specific disorder of reading. Therefore, toward those administering recommended that more attention be paid to this matter, and in the teaching of these children of linguistics games and especially Reciprocal Teaching more are used.

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