

EFFECTIVENESS OF VISUAL PERCEPTION SKILLS TO IMPROVE READING PERFORMANCE OF ELEMENTARY SECOND GRADE STUDENTS WITH LEARNING DISABILITIES

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ABSTRACT

The aim of this study was to determine the effectiveness of visual perception skills, improving reading performance in second grade elementary school students with learning disabilities. This quasi-experimental method with pre-test - post-test control group. The study sample of all second grade elementary school students in the academic year 2012-2013 refer to the center of learning disabilities enrolled and a sample of 30 individuals who were selected based on the sampling and random assignment to experimental and control groups were replaced. Groups twice a week for two months were visual perceptual skills training intervention and the control group received no training. Data collection instruments, the Wechsler Intelligence Test for Children and evaluation form was read. ANCOVA results indicate that the visual perception skills, improve reading performance of students with learning disabilities, and consequently the ability to read, it makes significant progress. Hence, this method can be useful as a method of intervention for students with reading problems in the field of visual perception are difficult to be applied.

KEYWORD: Learning Disabilities, Visual Perception Skills, Functional Reading

Learning disorders are common disorders of childhood. Some children, despite normal growth in all of its physical transformation, they begin to read and write when they are in serious trouble. These children have normal IQs almost senses of sight and hearing and elderly, environmental and educational facilities are relatively good and extreme deprivation are emotional, but there are fundamental difficulties in one or more areas of their curriculum.(Ahadi et al,2009)

The most common learning disability, is a reading disorder, or Dyslexia.(.Sadock, & Sadock,2011) Reading as an essential skill in community-based learning, both in school and outside it. (Feriari et al,2000)

British psychological society (1999) Dyslexia is defined as a person because of the incomplete development of mind and word reading and spelling correct a lot of problems to face. These problems result in neurological impairment or lack of intelligence is not suitable learning opportunities and this can impact on academic achievement and activities of daily reading. (Miller,2005)

The most important skill in reading comprehension and learning needs of students. Ability of comprehension, interpretation and inference of textbooks and other educational materials, students will become familiar with new ideas and information and better ways

of thinking and learning to live better. As it comes from foundations and framework for reading literacy, reading comprehension, writing and knowledge-oriented values, meanings of words, phrases, sentences and get to know the meaning and purpose of the message that is made using verbal cues and codes wrote it.(Jabbari et al, 2009)

The analysis has shown that education and phonological awareness during the preschool period, a significant impact on reading growth during the first class. Children who had received training and phonemic awareness, almost as much as a full standard deviation (0.86) was higher than those in the control group were in operation. However, most children with reading disabilities are not identified until the third or fourth grade and do not receive appropriate and timely training.(Lyon, 2002)

Reading comprehension and a psychological process - linguistic and visual information based on the reader's knowledge and phonological and semantic rules. In other words, reading a testing process, including the use of sign language in the reader's expectation that the information received from the perceptual processing and to approve, reject or correct decisions to be checked. Reader to build a bridge between the text and its meaning should print a series of processes, in particular the ability of visual perception and other cognitive abilities

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(memory, attention, and organization), linguistic knowledge and past experiences to enable. Actually read the product's cognitive abilities, language, knowledge and skills in reading ability. (Siahkalroody et al, 2009)

Visual perception is a key factor in the learning process, and from the age of three years and a half to seven years of change and growth is most. (Miller, 2001) Visual perception, especially with school assignments, reading, communication, because it requires the detection, recognition and understanding of each word is a word and requires clean. (Yarmohammadian, 2012)

In recent studies, it has been said that the causes of defects in visual perception through visual recognition of letters and numbers is low, resulting in decreased reading vocabulary. (Havil et al, 2005)

Narimani and Rajabi. (2005) In their study of factors associated with learning disabilities difficulty remembering, less use of repetition and practice, poor visual memory, poor mental control weaknesses noted in auditory detection. They also stated that these students had more behavioral problems than normal students and in terms of visual perception - moving from weaker normal students. In another study, Ashtari, Shirazi. (2004) phonological awareness and rapid naming in dyslexic and normal children were examined and compared. And showed significant differences between dyslexic and normal in these skills are dyslexic groups in both skills are weaker than normal.

The study investigated the prevalence of reading disorder in the University Elementary third and fourth grade students concluded that the prevalence of reading disorder among third and fourth grade students of Shahrekord primary schools, a relatively high and more students are reading disorder, girl students but there is no significant difference between the prevalence of reading disorder among third and fourth grade students.

RESEARCH HYPOTHESES

Visual perception skills to improve basic reading skills of students with learning disabilities have an impact. Visual perception skills to reduce common errors students with learning disabilities affect reading.

RESEARCH METHODS

The research design was a quasi-experimental pre-test - post-test control group in the case of the intervention group and the control group is not

implemented and the dependent variable is the post-test reading ability in children with reading disorder scales the population of the study consisted of second-grade elementary school students with learning disabilities in the 2012-2013 academic year based on the instructor recognize the basic skills of reading problems were common errors and Learning Disorders Center, Mobareke city were referred. Sample, based on the adequacy of the sample size were tested designs, including a number of 30 second grade students of elementary that method of sampling the selected enrollment at the center of learning disabilities and with random assignment to test and control groups, matched and were replaced. In the center of learning disabilities, dyslexia diagnostics, the first student from the school due to difficulties in identifying consonants and vowels, consonants and vowels combined, and the combination of ability and spelling ability as well as common errors, replace, delete, Repeat, adding the word and the word was read, Were introduced, and then the students in terms of visual and hearing difficulties and mental retardation, were examined and to exclude the possibility of mental retardation, children Wechsler test was used. Each week, two sessions during 15 sessions (45 minutes per session) individually to each student's visual perception skills were taught. In addition to the visual perception skills of various teaching methods such as using picture cards and Education... The variety of games to enhance the ability of visual perception and learning materials such as puzzles, memory cards, maze, rings and rods etc. were used. At the last meeting of the first session of the pre-test and post-test. Criteria in the study sample included: Average and above-average intelligence, visual and auditory senses intact, having a reading disability. The following instruments were used to collect data.

Wechsler intelligence scale for children- revised (WISE-IV)

This test revised form IQ test Wechsler Children, Third Edition (1991), which has produced Wexler (2002) for children 6 to 16 years old. The fourth edition of the Wechsler intelligence test for children measuring general intelligence and four index scores, including verbal comprehension, perceptual reasoning, working memory and processing speed provides. This test Abedi, honest and Rabie (2009) on a sample of Iranian children and to adapt the norm to have access. Subtests in the retest reliability ranging from 0.65 to 0.95 and alpha reliability coefficients from 0.71 to 0.86 have been reported.

READING TEST

Czech preliminary assessment of reading disorder reading list for students by Dekhoda (2009), BS in Special Education in Isfahan has been prepared and includes basic skills (knowledge of vowels, consonants knowledge, the ability, the ability to combine consonants and vowels and spelling ability) and common errors (delete and add words, replacing words, repeating words or phrases, not recognizing basic sight words and word reading) this Czech table listing the item (1) which includes the basic skills of reading, the student was asked and answered the wrong table number and percentage of data was recorded. The item (2) to assess the degree of difficulty in reading and common errors, the text of the lessons taught by the school based on psychometric principles confirmed by relevant experts disorders center

Table 1: Results of ANCOVA effect on the visual perception skills of basic skills in reading scores

Variables	Square Total	Degrees of freedom	Mean Squares	F	Significant	The effect of	Statistical power
Pretest	601.143	1	601.143	38.143	**0.001	0.586	1
Group membership	4741.367	1	4741.367	300.846	**0.001	0.818	1
Error	425.523	27	15.760	-	-	-	-

As shown in the above table, after deleting synchronized variables on the dependent variable and the factor F calculated, it is observed that the adjusted mean scores of basic reading skills of participants by group membership (experimental group and control group), there are significant differences in post-test. ($p < 0.01$)

Therefore, the first hypothesis was confirmed. The visual perception skills to increase basic skills in

Table 2: Results MANCOA visual effects skills training component mean scores on basic skills in reading

Name of test	Amount	F	DF Hypothesis	DF Error	Significant (P)	Squares	Statistical power
Wilks Lambda test	0.174	18.017	5	19	0.001	0.826	1

As can be seen in the table above, the test of significance level, indicating that after the test phase component of basic reading skills (knowledge of consonants and vowels recognition, the ability, the ability to combine consonants and vowels and spelling ability),

Visual perception skills in relation to experimental and control groups, the experimental group

of learning and teachers were selected based and assessment of students' reading based on the number and type of errors were recorded and performed. In this study, the Cornbrash's alpha reliability of the Czech List of Scale Reading 0.72 were determined and validity of the 5 experts and professionals working in the identification and treatment of dyslexia, learning disorders center of activity confirmed.

RESEARCH FINDINGS

First hypothesis: visual perception skills of basic reading skills to elementary school students with learning disabilities have an impact.

The results of the analysis of covariance of post-test scores of experimental and control groups were shown in Table (1).

reading scores of elementary students with learning disabilities have a significant effect on the post-test experimental group. The effect of the post-test 81.8 per cent. As can be seen, the basic skills of reading groups in total mean scores significantly higher than the control group. The results of the analysis of post-test MANCOA components of basic reading skills in both experimental and control groups were shown in Table (2).

than the control group had a reduction in mean ($F=18.017, p < 0.001$).

To realize the differences, the results in Table 4 MANCOA analysis has shown that differences in efficacy or equal to 0.826 percent. The 82.6% of individual differences in component scores in basic reading skills (knowledge of consonant vowel recognition, power

sector, the ability to combine consonants and vowels and spelling ability) is related to the effects of group membership. Close to a representative sample of sufficient statistical power.

Second hypothesis: visual perception skills of elementary students with learning disabilities in reading conventional error reducing effect.

The results of the analysis of covariance of post-test scores of experimental and control groups were shown in Table (3).

Table 3: Results of covariance analysis skills, visual impact on the level of common errors in reading scores (total)

Variables	Square Total	Degrees of freedom	Mean Squares	F	Significant	The effect of	Statistical power
Pretest	1406.210	1	1406.210	24.044	**0.001	0.471	0.997
Group membership	3289.714	1	3289.714	56.248	**0.001	0.676	1
Error	1579.123	27	58.486	-	-	-	-

As shown in the above table, after removing the effect of synchronization variables on the dependent variable and the factor F is calculated, it can be seen the adjusted mean scores of the participants on the basis of common errors reading group membership (experimental group and control group), there are significant differences in post-test.($P < 0.01$) Therefore, the second hypothesis was confirmed. The visual perception skills of elementary

students with learning disabilities in reducing common errors reading test groups have a significant effect. The effect of the post-test 67.6 percent. If errors are found generally popular singing groups in mean scores significantly lower than the control group.

MANCOA post-test analysis of reading components common errors in both experimental and control groups were shown in Table (4).

Table 4: Results MANCOA visual effects skills principal component scores obtained on common errors in reading

Name of test	Amount	F	DF Hypothesis	DF Error	Significant (P)	Squares	Statistical power
Wilks Lambda test	0.261	8.002	6	17	0.001	0.739	0.997

As noted in the above table is the significant level of the test, indicating that Common errors in post-test reading (replacing the words, repeating the word or words, add words, word for word reading) in relation to experimental and control groups, the mean of the experimental group than the control group decreased.($F=8.002$, $P < 0.001$)

To realize the difference MANCOA analysis in Table 7 shows that the difference in efficacy or equal to 0.739 percent. The 73.9% of individual differences in reading scores for common errors (delete and replace words, repeating the word or words, add words, word for word reading) is related to the effects of group membership. Close to a representative sample of sufficient statistical power.

Table 5: Results MANCOA visual effects skills principal component scores of the common errors in reading

Variables		Square Total	Degrees of freedom	Mean Squares	F	Significant	The effect of	Statistical power
Deleting the words	Group membership	67.507	1	67.507	17.468	**0.001	0.443	0.979
	Error	85.020	22	3.865	-	-	-	-
Replacing the words	Group membership	99.226	1	99.226	9.826	**0.005	0.309	0.850
	Error	222.159	22	10.098	-	-	-	-
Occurrence of the word or phrase	Group membership	0.147	1	0.147	0.130	0.722	0.006	0.064
	Error	24.864	22	1.130	-	-	-	-
Add words	Group membership	28.307	1	28.307	16.654	**0.001	0.431	0.974
	Error	37.393	22	1.700	-	-	-	-
Word for word reading	Group membership	130.388	1	130.388	17.222	**0.001	0.439	0.977
	Error	166.562	22	7.571				

DISCUSSION AND CONCLUSIONS

This study aimed to evaluate the efficacy of visual skills on reading performance of elementary students with learning disabilities, second base, was conducted, Showed that visual perception skills have basic reading skills - identifying vowels, consonants knowledge, the ability, the ability to combine consonants and vowels and spelling ability - and common errors - delete the words, replacing words word for word reading and adding words to the students improve. Covariance analysis showed that the first hypothesis sync after deleting variables on the dependent variable and the factor F calculated, it is observed that the adjusted mean scores of basic reading skills of participants by group membership (experimental group and control group), there are significant differences in post-test($P<0.01$). The increased scores on basic skills in reading and visual skills of elementary students with learning disabilities have a significant effect on the post-test experimental group. The effect of the post-test 81.8 percent. Also in connection with the retail component was observed between the mean adjusted cognitive scores vowels, consonants knowledge, the ability, the ability to combine

consonants and vowels and spelling abilities of participants based on group membership (experimental group and control group control), there is no significant difference in post-test($P<0.01$).

The increasing recognition of visual skills training vowels, consonants knowledge, the ability, the ability to combine consonants and vowels and spelling skills of elementary students with learning disabilities have a significant effect. The analysis of covariance showed that the second hypothesis sync after deleting variables on the dependent variable and the factor F is calculated, it can be seen that adjusted mean scores of the participants read the common errors based on group membership (experimental group and control group), and there are significant differences in post-test($P<0.01$).

Thus, the increased visual skills common errors in reading scores of elementary students with learning disabilities have a significant effect on the post-test experimental group. The effect of the post-test 67.6 percent. Also in connection with the retail component was observed after removal of synchronization variables on the dependent variable and the factor F is calculated, it can be seen that adjusted mean scores for omission of

words, substitute words, add words, word for word reading of the participants in terms of group membership (experimental group and control group), there are significant differences in post-test ($P < 0.01$).

Therefore, the decrease in visual skills omission words, substitute words, word for word reading and adding words to elementary students with learning disabilities have a significant effect. It can be said that the present study has been able to teach these skills to children, weaknesses and limitations of the visual children of largely resolved and subsequently improve their reading performance. The limitations of this study, follow-up tests were not using it primarily for long-term impact of interventions, there seems to be a necessary follow-up tests. Because the follow-up period, a more accurate indicator of improvement and consolidation of people to improve the loses. The findings of this study suggest that teachers of children with learning disabilities in children to promote learning skills such as visual perception and the visual field, the sequence of visual, visual memory, the visual and the perception from the attention cleaned freely. Also with regard to the effectiveness of visual skills training is offered to staff in-service training of teachers, training on improving visual skills dyslexic students to be teachers. The researchers also suggested, in the case of visual skills in the different age groups and other learning disabilities (math and writing) as well as between boys and girls to study acting.

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