

The Impact of Providing Computer Language Experience on the Reading Readiness among Preschool Children

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Abstract

This study aim to identify the effect of computer literacy on reading readiness among preschool children. The study sample consisted of (49) preschool children studying at the First University Kindergarten distributed into to two groups: experimental and control. The language experience of the experimental group was presented to students through using the computer for two years. A program has been designed for this purpose using the Multimedia Builder software. In order to answer the study questions, the mathematical averages, standard deviations, ANCOVA and MANCOVA analysis were used. The results of the study showed that there was an effect of computer experience in the six dimensions of reading readiness (visual recognition, auditory distinction, understanding, information, auditory recall, and visual recall) and this effect is related to the group variable. However, there were no statistically significant effect of sex variable over all the dimensions of the Reading readiness scale.

Keywords: language experience, reading readiness, computer, kindergarten children

1. Introduction

The Language is considered one of the most important elements of any society's culture. On it the process of transferring heritage from one generation to the next rely on. Kindergarten children need opportunities to explore in an open educational environment where the child feels reassured, self-assured and accepted by others. The opportunity for linguistic fluency and free expression of their thoughts and feelings (AlNashif, 2007). Language is not only a means thinking, expression and communication; it is a methodology and a system of thinking, expression and communication. It is not merely a form of an object, or merely an external vessel of idea or emotion, or value, but a functional relationship within the individual word, or between it and other words, constituting a special system and format with its own internal laws.

The stage of kindergartens is considered one of the most important stages in the child's age. The child from the age of 3-6 years begins to establish the foundations of his personality and his way of life according to the method in which the child was directed psychologically, socially, educationally and emotionally. And to draw on the experiences to which they are exposed, to grow and grow according to these experiences (Bergut, 2002). It gives him the opportunity to acquire many of the necessary skills to develop his skills and willingness to learn, and the ability to prepare for reading is an important stage to master the child's reading skills. The educators concerned mostly about early childhood stage and they emphasized its importance in shaping the personality of the child in the future. They assured the importance of giving the children's programs and experiences that have exceptional quality for the child and a rich environment that will gain linguistic, sports and social experiences.

The main concern of many educators who are working with pre-school children is to develop listening and speaking skills, not only for the importance of audiovisual and verbal discrimination, but also because they are connected to stimulating reading about subjects related to the home and kindergarten. Many linguists believe that it is important to Voice consideration to be learned, and this must be done in pre-school as a prelude to reading for the first grade (alnshef, 2007). Preparing for reading is considered one of the language experiences in kindergartens. it plays an important role in the process of learning and education in the future, and it's the importance is related

to the big effect of reading in the life of the individual, as a necessary for the acquisition of other sciences. The kindergarten is a typical place to develop and prepare this readiness through the programs and activities that is offered for the children, Children willing for reading is differ by different factors such as physical, mental, emotional and educational readiness (Garner, 1988). Factors affecting linguistic growth at this stage include sex, intelligence, experience and diversity, emotional disorders, physical factors, sound system integrity and sensory efficiency such as hearing. (1998) Reading is a complex process that does not stop at pronouncing letters and pronouncing them, but its purpose is to obtain the meanings contained in these letters and words, and to mix them with the child's previous experiences (Madkour, 2010). Education needs to reach a certain readiness before the child is trained to learn, but this readiness does not depend on the factor of maturity alone, but needs to find an appropriate learning environment to develop this readiness (Prophet, 2006)

Modern technology offers the children's enormous opportunities for the development of literacy skills. The computer provides children with an extensive information base. For example, there is an electronic book that encourages children to read and helps them in the process of word analysis and audio training. As the electronic book when compared to the traditional book it contains movement and sound, which help the child in the learning process more than the traditional book. There is a huge potential in educational tools, especially the advanced ones, such as computer software that are designed for pre-school children to develop different skills, abilities and concepts, especially language and science. Using these programs enable the child to read the word more than once and repeat it with the device, giving them the feeling that they can read and boast about it in front of the teacher and colleagues (Alnashif, 2007). The process of teaching kindergarten children requires teaching methods that focus on the use of the senses and the integration of children in the learning process and depends on play, movement, activity and fun. This fact can be addressed by introducing information technology into a learning environment for children of this stage and employing it appropriately (Wardle, Francis, 2000).

The appearance of computers in the field of education has created a new hope for improving language education. This device has enormous potential and includes a variety of tools that the teacher can use to provide language lessons in a new form and in an interesting framework that takeout the students from stereotypical and traditional language education and skills acquisition. The computer - the most advanced educational tool known up to date - has entered the teaching process of all subjects, including the field of languages, and some educational software has proven to be very effective in teaching literacy and grammar (Mjawer, 1998). The computer has the ability of immediate response, large storage, fast processing of information and the ability to analyze data led to the rapid spread of computers in the field of education. The benefits of using computers are many: promoting education or active participation, improving the quality of education, providing the learner with immediate feedback, helping to assess student responses, and not letting the student be embarrassed by his or her wrong answer (Al-Khairi, 2013). And the computer raises the student's activity and commensurate with the speed of learning and gives him the scientific material in the form of interesting programs and attractive frames with a variety of means of clarification and presentation methods distinct (Abdellah, 2008). One of the conditions for that should be exists in the multimedia programs is to be attractive in shape and in using images, preferably with sound and motion, and that the child can use without the assistance of an adult. The various educational media that are presented to pre-school child are rich in terms of the subjects, with movement, colors, sounds and implicit reinforcement of the child's abilities and skills. This is reason why the children's like them and it stimulates their thinking, perception, listening and speaking (ALNashif, 2007)

In Comaskey's study (2007), he studied the effect of a program based on randomized and organized division of sounds and its impact on early learning through the use of a computer program called ABRACADABRA for kindergarten students. The participants in the first school were randomly assigned to a randomized and organized random learning group. The second school was adopted as a control group. 10 hours of application of the program was activated with the usual classroom instructions. All participants were selected at the beginning of the study and then followed by following the instructions by using eight criteria to examine the change in word reading strategies and specific vocal skills. The results showed an improvement on the experimental group in terms of knowledge of letters and sounds and the task of reading accompanied by the great reliance on the interference of sounds in the integration of words and order of the letters of vow and then static.

In Larson (2007) she researched teaching computer literacy skills to kindergarten students and the perceptions of administrators and teachers. Where the perceptions of administrators and teachers were collected in a questionnaire on the computer aided teaching program in reading skills. The participants were administrators and teachers from four elementary schools in the same area of Texas. The experimental group (449) was a child. The Imagination Station experimental group underwent nine experimental weeks. The members of the control group were 1385 children from 13 schools in the region. The study found that the administrators and teachers reached the conclusion

that the development of their students in reading skills improved after the use of the program. The experimental part of the study found that there was a statistical difference between the experimental group and the control in the result of the reading evaluation was small and based on the small difference There is a practical difference between the two groups.

In the Cifelli study (2011), investigated the impact of computer use and its impact on interactive writing among kindergarten students, and the aim of this study was to compare the use of paperback writing with computer typing in an urban kindergarten. Children who use the computer may have more detailed reading responses and may use a better language to discuss these daily responses. The researcher observed and documented the use of seven children (4 boys and 3 girls) for computer and paper writing for 15 days during the school day. Study this hypothesis, the results showed That the children formed detailed work models when using paper writing and did not discuss more than their discussion of daily reading responses based on the use of computer.

Sandy (2006) analyzed statistically the impact of computer technology compared to the traditional method of kindergarten students up to grade 12 in the United States. Comparison between academic achievement, higher thinking skills, motivation and social skills. The study aimed at assessing the level of difference found between computer-directed students and the academic achievement outcomes of students who are directed by traditional means. Based on specific selection criteria, 31 studies were collected and analyzed. A total of (23) studies of this group were reviewed and reviewed systematically through approved analytical steps. Showed that students who were taught using computers had performed better than their peers who were taught in the usual way.

Saville (2008) conducted a study aimed at examining the impact of computer use on increasing the readiness of kindergarten children in Chicago. The program was prepared in the light of the problem solving and discovery strategies. The study sample consisted of 88 children in experimental and control groups. The experimental group studied the program on the control group studied in the normal manner.

2. Objectives of the Study

The present study aims to study the effect of presenting the linguistic experience through the computer on reading readiness among kindergarten children.

2.1 The Importance of Studying

The importance of the study comes from the novelty of the subject of the study, as the researcher did not find any study in Jordan dealing with the role of computers in providing linguistic experiences on reading readiness among kindergarten children.

The subject of the study comes to share the same interest with the Ministry of Education's in paying great attention to the kindergarten stage, opening kindergartens in public schools, and training kindergarten teachers in appropriate strategies to provide different experiences, including language, for children. The computer is considered an important device through which the linguistic experiences of children, because of the computer features in terms of sound movement, color and mental images of words and images.

2.2 Study Problem and Questions

The problem of the study emerged from the importance of kindergartens as the stage of preparation and readiness of the child for the life of the school, and this requires the provision of language expertise through modern strategies appropriate to the age range and attract the attention of students, and since this phase depends on the language has been essential to enable children to possess skills Which enable them to move to school with read readiness skills. Because the language in general and the education of young people from the beginning of their lives in kindergartens, so requires educators to increase attention to ways and methods of development in children, and when the kindergarten does not care to develop language skills in children, we find that children find it difficult to learn the language and other materials in the classroom the first of the educational stages.

Therefore, it was necessary to design many programs that could contribute to the development of children's reading readiness skills. As the computer has features that may not be available in other devices and tools, this study attempts to demonstrate the impact of computer literacy on reading readiness for children Kindergarten.

2.3 The Study Attempted to Answer the Following Two Questions

1. Is there a statistically significant difference at the level of significance ($\alpha = 0.05$) in the reading readiness level among preschool children due to the using of the computerized program (teaching using a computer designed program, teaching in the usual way)
2. is there a statistically significant difference at the level of significance ($\alpha = 0.05$) in the reading readiness level

among preschool children due to the interaction between the variable teaching method (teaching using computer program, teaching in the usual way) and gender of the child?

2.4 Definitions

Reading readiness: The child prepares for reading, and requires many skills including speaking and listening, audio discrimination, visual discrimination, reading inclination, and other skills according to his abilities and readiness. These skills are measured through a reading readiness test and include six sub-tests: visual discrimination test, audiovisual testing, comprehension test, information testing, auditory test and visual memory test.

Computer software: The computer software was designed using Multimedia Builder on a number of lessons including all Arabic characters with language training, words and sentences accompanying the sound taught during the first semester and the second semester of the 2014-2015 academic year.

Pre-School Child: A child who is a preschool teacher and is between 5-6 years old.

2.5 Study Determinants

-The study was limited to the children of the first university kindergarten in Amman who are studying in the preparatory class.

-Measurement of reading readiness skills was limited to skills: visual discrimination test, audiovisual test, comprehension test, information test, auditory test, visual memory test.

2.6 The Study Sample

The sample of the study consisted of children of the first university kindergarten in the capital governorate as a sample available and the number of people in the preparatory class was five people. Two groups were selected as random samples. The sample number in the two divisions was 49 children, which were divided into experimental and control groups. The experimental group provided linguistic expertise through the computer while the control group in the normal manner.

Table 1. Shows The distribution of the sample of the study

	control	Experimental	total
male	13	10	23
female	11	15	26
total	24	25	49

3. Study Tools

3.1 The Study Used Two Tools

First, the readiness test for reading: The readiness test for reading was prepared by Khader (1996) and was adapted to suit the Jordanian environment by the judges (2005). The test consists of six sub-tests that are applied collectively, except for the individual word comprehension test. The tests are:

1. **Visual discrimination test:** It is a collective test that measures the child's ability to match and distinguish different and similar shapes, letters, words and short sentences. It consists of (7) questions and (48) paragraphs.
2. **Audiovisual Testing:** A collective test that measures a child's ability to recognize the sounds of some spoken words and the sounds of letters that begin with these words. It is composed of two questions and (16) paragraphs.
3. **Comprehension Test:** It is a collective and individual test that measures the child's ability to understand the meanings of sentences and vocabulary. It includes two questions and 14 paragraphs. The first question consists of (9) paragraphs which is collective. The second question consists of (5) vocabulary, which is an individual test.
4. **Information Testing:** This is a non-verbal group test that measures the child's outcome from previous information derived from his / her local environment and includes two questions and (16) paragraphs.
5. **An auditory test:** an individual test that measures children's ability to audit, understand instructions and implement them, their ability to pay attention, recall a series of numbers, and remember short and long sentences, consisting of two questions and 13 paragraphs.
6. **Visual memory test:** It is a collective test that measures a child's ability to remember visually, understand and execute instructions, and his ability to pay attention by calling him to remember the image of a

letter, section or word among four units within a single paragraph written in the normal size, similar to a letter, The word is written on a large size card after the child is offered in advance for five seconds. This test consists of one question and 17 paragraphs.

The test was validated in two forms: first is the judges' honesty. The test was presented in its preliminary form to twelve arbitrators of educational and childhood psychology, measurement and curriculum. The paragraphs were amended based on their observations. They reported on the occasion of the test for the age group in terms of language and shapes. And the second method is the validation and verification, by calculating the correlation coefficient of the paragraph dimension and coefficient of correlation between the paragraph and the total mark of the test on a sample survey and ranged correlation between the dimension and the total mark between (0.73 - 0.92).

The coefficient of stability was calculated from the method of repetition by applying the tool on a sample from the outside sample of 21 children in the preparatory class and then it was applied two weeks after the first application and the total stability coefficient of the instrument was 88%.

Correction of the test: Each test of sub-tests is corrected by giving a sign if the child places a sign (×) on the correct answer and zero if the answer is wrong. Except for the second question of the comprehension test, which is an individual test. Each branch is given a sign (2) in case of knowing the meaning of the word, and (1) if it gives meaning to the meaning of the word. The total test consists of (111) paragraphs, and the total mark of the test (117).

Second: Computerized Program: A computer program designed through the Multimedia Builder program where characters and words were presented in shapes and pictures with motion and sound. The program was presented to five arbitrators in educational technology, child psychology and child-rearing.

4. Study Procedures

The study was carried out according to the following steps:

First: Two divisions of the First University Kindergarten of five were selected, one of which is experimental (providing linguistic expertise through computer) and the other is an officer (providing linguistic expertise in the usual way).

Second: Apply the tribal test to the reading readiness on the experimental group and the control at the beginning of the first chapter.

Third: Training the teacher on how to use the computer program.

Fourth: Provide linguistic expertise through the computer during the first and second semester of the academic year 2014/2015 for the experimental group while the linguistic expertise was presented in the usual way of the control group.

Fifth: Apply the post-test for the reading readiness of the experimental and control groups at the end of the second semester.

5. Study Approach

In this study follow the semi-experimental design according to the following design:

group	after	Experiment	before
Experimental	x	X	x
control	x	—	x

6. Statistical Analysis

The study questions were answered by calculating the mean and standard deviations of the study sample and the use of ANCOVA and the analysis of the multivariate variable variance (MANCOVA) to detect the effect of computer literacy on reading readiness among kindergarten children.

7. Study Results

In order to answer the first and second question, the tribal and remote arithmetic averages of the total score and the sub-scores of preschool children were calculated on the reading readiness test according to the variables of the group (experimental group studied using the computer, the control group was studied in the normal way), sex, To verify the statistical significance of the differences in the total score, and used the analysis of variance multivariate (MANCOVA) to verify the significance of differences in the sub dimensions of the scale, and the following is the presentation of these results:

Results related to the overall score on the reading readiness test.

Table 2. Mathematical Meanings and Standard Deviations in the Tribal and Post-Secondary Measures of the Total Degree of Preschool Children on the Reading Readiness Scale by Group and Gender Variables

After		Before			Gender	Group
Standard deviation	Mean	Standard deviation	Mean	number		
8.02	110.80	15.02	67.80	10	Male	Experimental
7.50	110.92	7.64	65.46	13	Female	
7.55	110.87	11.21	66.48	23	Total	
9.40	92.00	7.15	65.60	15	Male	control
8.45	90.55	7.94	65.91	11	Female	
8.87	91.38	7.34	65.73	26	Total	
12.81	99.52	10.76	66.48	25	Male	Total
12.96	101.58	7.61	65.67	24	Female	
12.79	100.53	9.26	66.08	49	Total	

Table (2) shows that there are apparent differences between the scores of the students' scores on the reading readiness test between the tribal and remote indices in the experimental and control groups and to determine whether the differences in the improvement between the experimental and control groups or the differences resulting from the interaction between the group variable and sex are statistically significant The ANCOVA analysis was performed.

Table 3. Results of ANCOVA analysis to indicate differences in reading readiness according to group and gender variables

Sig.	F	Average squares	Degrees of freedom	∑ Sqr.	variance
0.000	25.27	1169.92	1	1169.92	Summation group
0.000	94.20	4361.59	1	4361.59	
0.951	0.00	0.18	1	0.18	gender
0.452	0.58	26.69	1	26.69	group * gender
		46.30	44	2037.33	error
			48	7854.20	total

• *The first question*

Table 3 shows statistically significant differences between the two experimental groups (studied by the computer) and the control group (which was studied in the normal way). The value of (25.27), which is statistically significant at the level of $\alpha = 0.05$, These differences are in favor of the experimental group as shown in Table (3) where the modified experimental mean of the experimental group (110.57) was the adjusted mean of the control group (91.45), as shown in Table (4) Computerization has contributed to the development of reading readiness among kindergartens more than the usual way.

• *Second question*

Table (3) shows that there are no statistically significant differences due to the interaction between the variables of the group and gender, where the value of P (0.58) is not statistically significant at the level of significance ($\alpha = 0.05$). Indicating that the effectiveness of the computerized program in the development of reading readiness does not differ according to the sex of the child.

Table 4. The adjusted calculation averages for reading readiness among preschool children according to the group and gender variables

Standard deviation	Mean	Gender	Group
2.16	109.88	Male	Experimental
1.89	111.26	Female	

1.43	110.57	Total	control
1.76	92.26	Male	
2.05	90.64	Female	
1.35	91.45	Total	Total
1.39	101.07	Male	
1.39	100.95	Female	
0.98	101.01	Total	

The result can be explained by the fact that the presentation of the educational material through the computer worked to raise the attention of children and eager to follow the linguistic experience provided, because it contains attractive images and voice and movement, and this is consistent with studies that showed that providing expertise through the means and through the computer attracts the attention of children longer . The results of this study were consistent with the findings of the Comaskey study, 2007, Sandy, 2006, and Saville 2008. The results differed with the results of the Larson, 2007, Cifelli, As for the sex variable, the results of the study indicated that there are no differences in the results by sex. This can be explained by the absence of differences in this stage between males and females. The applied conditions for males and females were similar.

Results related to the sub-dimensions of the reading readiness test.

Table 5. Arithmetic Meanings and Standard Deviations of Kindergarten Kinds on the Secondary Dimensions of Reading Readiness Scale by Group and Gender Variables

Visual Memorization		Hearing Memorization		information		Understanding		Hearing discrimination		Visual discrimination			Gender	Group	Measurement
σ	\bar{x}	σ	\bar{x}	σ	\bar{x}	σ	\bar{x}	Σ	\bar{x}	σ	\bar{x}	n			
1.03	9.20	2.31	5.70	2.01	7.60	1.18	8.50	1.20	7.90	7.30	26.00	10	Male	Experimental	
1.94	8.38	1.36	5.77	1.38	8.08	1.78	7.00	1.83	7.00	5.12	29.23	13	Female		
1.63	8.74	1.79	5.74	1.66	7.87	1.70	7.65	1.62	7.39	6.23	27.83	23	Total		
2.25	8.73	1.25	6.13	1.22	7.93	1.71	7.93	1.36	7.47	4.32	27.40	15	Male	control	before
1.81	8.91	1.68	5.27	1.40	7.82	1.78	7.82	2.11	7.36	4.92	28.73	11	Female		
2.04	8.81	1.48	5.77	1.28	7.88	1.70	7.88	1.68	7.42	4.54	27.96	26	Total		
1.85	8.92	1.72	5.96	1.55	7.80	1.52	8.16	1.29	7.64	5.60	26.84	25	Male	Total	
1.86	8.63	1.50	5.54	1.37	7.96	1.79	7.38	1.93	7.17	4.93	29.00	24	Female		
1.84	8.78	1.61	5.76	1.45	7.88	1.69	7.78	1.63	7.41	5.34	27.90	49	Total		
0.99	15.90	1.57	11.30	1.51	14.60	1.05	16.00	1.03	13.80	4.38	41.50	10	Male	Experimental	
1.85	14.92	1.55	10.92	1.18	14.69	2.18	14.46	2.11	13.54	3.15	42.38	13	Female		
1.58	15.35	1.53	11.09	1.30	14.65	1.91	15.13	1.70	13.65	3.67	42.00	23	Total		
2.41	11.40	1.59	8.67	1.39	12.07	1.60	13.13	1.68	11.47	5.73	35.27	15	Male	control	after
2.44	11.82	0.92	8.36	1.43	11.36	1.87	12.91	2.16	11.36	6.77	34.73	11	Female		
2.39	11.58	1.33	8.54	1.42	11.77	1.68	13.04	1.86	11.42	6.06	35.04	26	Total		
2.97	13.20	2.03	9.72	1.89	13.08	1.99	14.28	1.85	12.40	6.00	37.76	25	Male	Total	
2.62	13.50	1.82	9.75	2.12	13.17	2.15	13.75	2.36	12.54	6.35	38.88	24	Female		
2.78	13.35	1.91	9.73	1.99	13.12	2.07	14.02	2.09	12.47	6.13	38.31	49	Total		

Table 5 shows that there are apparent differences between the numerical averages of the students' scores on the sub-dimensions of the reading readiness scale between the tribal and remote measurements in the experimental and control groups, and to determine whether the differences in the improvement between the experimental and control groups in the sub-dimensions or differences resulting from the interaction between The variables of the group and sex were statistically significant. The use of the analysis of the variable variance (MANCOVA) was performed. And the following are the display of these results:

Differences in Reading Readiness by Group and Gender Variables

Sig.	Error Degrees of freedom	Degrees of freedom	F	Hotelling's Trace	Variable
0.000	34	6	57.62	10.17	Group
0.632	34	6	0.73	0.13	Gender
0.466	34	6	0.96	0.17	Gender *Group

- *The first question*

It is also evident from Table (6) that there are statistically significant differences in the dimensions of the reading readiness scale between the experimental groups (studied by computer) and the control group (studied in the normal manner). The value of Hotling (10.17) and the value of (57.62) At the significance level ($\alpha = 0.05$), and to determine the sub-dimensions in which the statistically significant differences were found, the analysis of the common variation was performed. These results are shown below:

Table 7. Results of ANCOVA analysis to indicate the differences in the dimensions of the reading readiness scale according to the variable of the group

Sig.	F	Average squares	Degrees of freedom	Σ Sqr.	Variance
0.000	75.60	648.85	1	648.85	Visual discrimination
0.000	47.54	60.27	1	60.27	Hearing discrimination
0.000	33.61	61.70	1	61.70	Understanding
0.000	76.90	105.60	1	105.60	information
0.000	82.13	81.72	1	81.72	Hearing Memorization
0.000	106.83	175.26	1	175.26	Visual Memorization

Table (7) shows that there are statistically significant differences due to the group variable in all dimensions of the reading readiness scale. These differences were in favor of the experimental group in all dimensions as shown in Table (8).

Table 8. Modified Calculation Parameters of the Reading Readiness Dimensions of Kindergarten Children according to Group and Gender Variables

Standard deviation	Mean	Gender	Group	Dimensions	
1.01	42.09	Male	Experimental	Visual discrimination	
0.88	42.21	Female			
0.62	42.15	Total			
0.77	35.66	Male	control		
0.90	33.88	Female			
0.58	34.77	Total			
0.39	13.40	Male	Experimental		Hearing discrimination
0.34	13.90	Female			
0.24	13.65	Total			
0.30	11.42	Male	control		
0.35	11.38	Female			
0.22	11.40	Total			
0.47	15.39	Male	Experimental	Understanding	
0.41	15.08	Female			
0.29	15.23	Total			

0.36	13.02	Male	control	
0.42	12.89	Female		
0.27	12.96	Total		
0.40	14.80	Male	Experimental	information
0.35	14.55	Female		
0.25	14.68	Total		
0.31	12.11	Male	control	
0.36	11.29	Female		
0.23	11.70	Total		
0.34	11.60	Male	Experimental	Hearing Memorization
0.30	10.71	Female		
0.21	11.15	Total		
0.26	8.51	Male	control	
0.31	8.56	Female		
0.20	8.53	Total		
0.44	15.64	Male	Experimental	Visual Memorization
0.39	15.17	Female		
0.27	15.41	Total		
0.34	11.47	Male	control	
0.39	11.67	Female		
0.26	11.57	Total		

The improvement that is achieved in the dimensions of the scale can be explained due to many reasons: audio discrimination, visual discrimination, understanding, information, auditory memory and visual memory that the computer program was attractive to the attention of children and was provided linguistic expertise and letters and words were supported by images attractive accompanied with sound to pronounce the letter or section or word, Several times for understanding, remembering and increasing their attention.

- *Second question*

Table (6) shows that there are no statistically significant differences in the reading readiness due to the interaction between the variables of the group and sex, where the value of Hotling (0.17) and the value of (0.96), which is not statistically significant at the level of significance ($\alpha = 0.05$).

8. Recommendations

1. Using computer to provide diverse experiences for children in kindergartens.
2. Adoption of the Ministry of Education and kindergartens design of computer programs through which the diverse experiences of children in kindergartens.
3. Conducting similar studies to measure the effectiveness of the advancement of mathematical experiences through the computer for kindergarten children.

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