

The Effectiveness of Computer Use in Acquiring Grammatical Concepts and Developing Reading Skills for Second Intermediate Schoolgirls

Thurya Ahmed Khalis Shaalan Al-Shimary^{a*}, Falah Saleh Hussein Al-Joubory^b, ^aUniversity of Al-Hamdaniya, College of Education, Department of Educational and Psychological Sciences, ^bUniversity of Tikrit, College of Education for Human Sciences, Department of Educational and Psychological Sciences, Email: ^{a*}falahaljobori@gmail.com

The goal of the current research is to identify the effectiveness of computer use in acquiring grammatical concepts among middle second graders and developing their reading skills. The research sample consisted of 70 female second intermediate students who were selected intentionally from Kirkuk city for the year 2018-2019. They were then divided by the researchers into two equal groups: the first experimental group of 38 students studied the subject with the use of a computer, and the second group of 32 students studied the subject in the usual way. In order to achieve the goal of the study, the researchers prepared two tools: the first was a test of grammatical concepts, which was formed by 30 objective paragraphs relating to conformity and marriage. The choice of multi-alternatives and all these paragraphs are divided equally into 10 grammatical concepts to measure the elements of the particular concept. The researchers verified the validity of the test as well as the psychometric characteristics. The second tool was the measure of the trend towards the reading material. In the test's final version of 29 paragraphs, 14 positive and 15 negative, each paragraph was followed by three alternatives (always - sometimes - rarely). The researchers also verified the accuracy of the scale and the characteristics of the Seiko metric and its stability. The researchers then prepared a number of study plans for both groups: experimental and traditional. The researchers then carried out the research experiment, after which they applied the sample data of the research, which was processed statistically using the T test for two independent samples. It was found that (1) there is a statistically significant difference between the average acquisition of grammatical concepts in the members of the experimental and traditional groups, which was in favour of the experimental group; and

(2) that there is a statistically significant difference between the average development of reading skills for female students of the experimental research groups and the traditional towards the reading material, which was for the benefit of the experimental group.

Key words: *Computer Use, Grammatical Terms Acquisition, Second Intermediate Schoolgirls, Reading Skills.*

Problem of the Study

The researchers found that challenges were posed by the nature of each subject, particularly the study of the Arabic language. Its problem is not new, but appeared 1400 years ago. This problem in hearing and measurement was one of the reasons for the weakness of students in the acquisition of grammatical concepts. The lack of computer use also caused a major problem in educational institutions and led to a decrease in students' abilities to acquire grammatical concepts. Our schools today often strive to achieve the highest scientific level among students by developing the skill of reading and by building their personalities using the latest information technology. It is the duty of the learners of Arabic grammar and reading to establish and develop their electronic abilities, and thereby enhance their abilities to learn classical Arabic, despite their personal interests and idiosyncrasies.

The teaching profession is based on scientific foundations of specialised knowledge involving specific teaching skills and codified practices, which have been applied in many local studies including those by Khasawna (2011), Al-Shoura (2013) and Hamid (2016). The use of computers has become a recent trend in teaching because of its role in these modern teaching methods and strategies, and in light of the resistance of Arabic learners to traditional teaching methods. The researchers also believe that interpreting the effectiveness of computer use may yield good results and take into account the individual differences between students. Many studies have been conducted in this area, including Al-Farihat (2004), Bani Yasin (2005) and Al-Sa'adun (2003).

By thorough observation, it is found that students in general have no problem in terms of the success or failure of this subject. However, there is a weakness in understanding the main and sub-grammatical concepts as well as difficulty in applying them, which reflects negatively on their application of the classical Arabic language. In a continuous context, the researchers noted that there are appropriate directions for students towards learning and studying this subject and dealing with its vocabulary. This trend does not live up to the level required in their daily lives. The researchers sought to confront this problem, which takes into account the development of Arabic language teaching and the development of reading skills through modern teaching strategies, as well as the development of reading skills that makes it easier for students to understand their grammatical concepts. This includes the application of computer reading skills. Thus, the problem of research can be crystallised by the following question: What is the

effectiveness of computer use in acquiring grammatical concepts in second intermediate graders and developing their reading skills?

Significance of the Study

The researchers believe that today's world has been transformed into a small village as communication between different cultures has been facilitated by the communication and information revolutions. In the current era, which is called the digital age, e-education is an important base, and will depend on State-of-the-art technology from computers, internal networks and Internet networks. It can be said that today's world is a world full of images and sound across platforms. Furthermore, knowledge has become not only the process of transferring information from teacher to student, but also involves how the student receives this knowledge mentally. The use of computers enables the student to take greater responsibility in the educational process through exploration, expression and experience, so that the student becomes an educator and the teacher the student. Although most of the research in this field has demonstrated the superiority of computer use in raising the efficiency of the educational process, it is one of the most prominent contributions that can be made to a profession that continues to rely on intensive human effort in motivating students to learn and activating their participation through the use of Computer (Mustafa, 2018).

Arabic language is also an important anchor of human societies as it works to guide individuals and formulate society. Thus, it works to create and achieve something important in the life of the individual in terms of his behaviour and orientation towards the community in general. To change the behaviour of the individual towards the desired trends works to achieve a lot of scientific experiences for him. All of it is done by relying on a set of measures designed to measure its effectiveness. This is the tool through which we learn all other sciences (Al-Kubaisi, et al., 2011: 3).

Undoubtedly, the role of grammar is important for the building and continuation of the Arabic language. Grammar maintains the word and its content. It has become known among grammar scholars that linguistic structure is relatively stable and may change within the framework of meaning and significance. However, grammar is relatively constant. The study of Grammatical rules is an essential means of correct expression in the understanding of ideas and meanings (Mere'i, 2002: 80). Regarding the concepts, they are one of the issues related to the subject of revealing the qualities and indications associated with the scientific subject, therefore it is not possible to view the learning of the concept as the ability to generalise, or the ability to organise these indications, or combine them under the name or position or accident, i.e. the ability of the learner to put the profile features and examples in one category (Ibid: 128).

The significance of the study is illustrated by the following:

- 1- The role of computers in learning Arabic and acquiring grammatical concepts.
- 2- Increasing the effectiveness of the acquisition of grammatical concepts when compared to the traditional methods of teaching.
- 3- Developing reading skills among middle-class second graders.

Aims of the Study

The study aims to identify the effectiveness of computer use in acquiring grammatical concepts in middle second graders and developing their reading skills.

Hypotheses

- 1- The study assumes that there is no statistically significant difference at the level of indication (0.05) between the average acquisition of grammatical concepts among the students of the experimental group who studied according to the use of the computer and the average traditional group that studied the subject according to the usual method.
- 2- The hypothesis is that there is no statistically significant difference at the level of indication (0.05) between the average development of female students' skills for the experimental research groups and the traditional towards their reading skills.

Study Limits

- 1- Human limit: second intermediate schoolgirls in middle schools Al-Efaah for girls.
- 2- Spatial limit: intermediate and secondary schools for girls in the Kirkuk Provincial Education Directorate.
- 3- Time limit: first semester of the 2018-2019 academic year.
- 4- Knowledge limit: the first three units of the Arabic language book to be taught to second intermediate students, first edition, 2018.

Theoretical Aspects

Using Computer in Teaching

The method uses computers to provide educational content with its explanations, exercises, and interactions, which are then followed-up in part or comprehensively in the classroom or remotely by advanced programs stored in the computer or over the Internet. This is in order to prepare a classroom from an asynchronous distance without commitment to a specific place and is based on self-learning and the interaction between learner and teacher (Mazen, 2004: 23).

It is also clear that there are various opinions and concepts when using computers, and that computer learning and software designed for a specific educational purpose enables the learner to interact with the material, and obtain feedback (Musa, 2005: 167).

Benefits of the Use of Computer in Teaching

- 1- Increase the possibility of communication between students, the teacher, and the school.
- 2- Virtual instant forums such as discussion boards, chat rooms and social media.
- 3- Computers provide students with the full opportunity to learn because they can send their opinion and voice through the available communication tools.
- 4- Easier access to the teacher and faster responses.
- 5- The possibility of determining the appropriate teaching method for the student to receive the scientific material in the way that suits him.
- 6- Different teaching methods allows students with difficulty to concentrate.
- 7- Helps to repeat the scientific material for slow learners.

Reading Skills

Reading skills should develop in the students through reading lessons at different levels of education. Neglecting to teach these skills at some point leads to the failure of learning in the stages that follow. Learning how to read is a gradual growth process that depends on the continuous development of the basic skills of reading. Students should therefore be committed and diligent in order to achieve the maximum possible success in learning (Fathi et al., 1996: 279).

Basic reading skills can be understood as an intellectual linguistic process with two mechanical physiological aspects. A classification of basic reading skills includes the following:

- 1- Skills related to the mechanical physiological aspect of the reading process (skills involved in defining and pronouncing written language symbols).
- 2- Skills related to the intellectual and mental aspect of the reading process (reading skills) (Al-Naqah and Waheed, 2002:212).

Methodology

Study Design

The experimental designs of the partial adjustment have been adopted. These are the design of the experimental and traditional groups with Pre- and Post-Tests, as represented in Table 1:

Table 1: The Implemented Design

N	Group	Pre-Test	Independent Variable	Dependent Variable
1	Experimental	Reading Skills	Effectiveness of Using Computer	Grammatical Concepts Acquisition and Developing Reading Skills
2	Traditional		Traditional Method	

Study Environment

Study Population

The research community consisted of all the average second-grade female students studying in the Kirkuk governorate centre for the 2018-2019 academic year. 6,531 students were narrowed to 87 from intermediate and secondary schools for girls.

Study Sample

The researchers intentionally selected their sample from members of the research community, who are second grade intermediate schoolgirls in Al-Efaah Intermediate School for girls, to represent the research sample. The number of female students in the two divisions was 85: 40 in Group A and 45 in Group B. 2 female students in Group A were excluded, and 13 were excluded in Group B. The number of the sample became 70 students: 38 were in Experimental Group A and 32 were in Traditional Group B as described in table (2).

Table 2: Distribution of Study Sample

Group	Total	Number of Students		
		Before Exclusion	Excluded	Sample
A	Experimental	40	2	38
B	Traditional	45	13	32
Total	2	85	15	70

Equality of the Sample

Before the experiment began, the researchers were keen to equalise the two research groups by the following:

- The time age calculated in months.
- Arabic grades for the first middle grade.
- IQ test scores.
- Grades of the reading skills scale pre-material.
- The school level of parents.

The researchers obtained data for the previous variables of the school card for female students, in cooperation with the school administration. The information that was not recorded in the card was obtained from the students themselves. The arithmetic average and the standard deviation was extracted according to it. The T test for two independent samples and the data and values are included in table 3.

Table 3: T-Test Results of Sample Equality

Variable	Group	Number	Mean	Std. Derivation	T-Value	
					Calculated	Table
Time Period (Month)	A	38	158.947	4.006	1.072	At 0.05 significance and 68 degrees of freedom
	B	32	158.000	3.252		
First Class GPA	A	38	73.342	12.342	0.768	
	B	32	75.781	13.818		
IQ Scores	A	38	34.0526	6.6655	1.206	
	B	32	35.7188	4.4376		
Reading Skills	A	38	63.1842	6.7498	0.910	
	B	32	61.9688	3.6938		

Planning

The researchers prepared two study plans: one according to the use of computers and the other according to the traditional way. Each were devised for a 45 minute long lesson. These plans were presented to a number of specialists who have knowledge and experience in this field. Some modifications have been made to the study plans for the research groups (experimental and traditional).

Study Tools

- Grammatical concept test: The researchers devised an objective test of grammatical concepts. The test consisted of two types of objective tests, namely matching, pairing and multi-choice. 30 paragraphs were distributed on 10 grammatical concepts to measure the basic elements of the concept. The researchers have verified the sincerity of the test and its Seiko-metric characteristics from the ease of the paragraph, its distinction, the effectiveness of its replacements, as well as its stability.
- Reading Skills Scale: The researchers decided to create a reading skills scale by drafting paragraphs that will measure reading skills according to the concept of reading. There are two types of reading: open reading and the other is silent. The total paragraphs of the scale

comprised 30 paragraphs, 50 paragraphs and 15 paragraphs for the speaking; and 15 paragraphs for the silent, which were selected according to the Likert method of three levels: always - sometimes – rare. The estimation of responses for this scale is given between 3-2-1 to positive paragraphs, and 1-2-3 for negative paragraphs. The researchers have verified the sincerity of the scale and its Seiko-metric properties as well as its stability in two ways: replay and by applying the Alpha-Cronbach equation.

Statistical Equations

T-Test for two independent samples: the researchers used the test for two independent samples in the process of parity between the students of the research groups and the discriminatory strength of the trend scale paragraphs and testing for the research hypotheses.

Results & Discussions

The results of the study show the following:

First: The results of the first zero hypothesis. To verify and test the hypothesis, the researchers extracted the arithmetic average and the standard deviation of the acquisition of grammatical concepts in the experimental and traditional groups, and then applied the T-test. The hypothesis and the result are included in table 4:

Table 4: Results of the T-Test for the means of both groups

Group	Num ber	Means			Std. Derivation	T-Value	
		Pre	Post	Difference		Calculated	Table
A	38	63.184	69.736	6.552	3.853	5.889 1.997 at 0.05 significance	
B	32	61.968	64.000	2.0313	2.177		

It is clear from the table that the calculated T value was 5.889, which is greater than the t-scale value of 1.997 at the indicative level of 0.05. This means that there is a statistically significant difference between the development of average reading skills in the two groups at the benefit of the experimental group. Thus, the zero hypothesis is rejected and accepted is the alternative: there is a statistically significant difference between the average development of reading skills for the experimental and traditional groups.

The researchers attribute this result to the effectiveness of computers within the class for students of the experimental group, which participated in a safe and encouraging learning environment enriched by the practice of reading, discussion, dialogue and the exchange of ideas. The exchange of opinions leads to the promotion and development of reading skills and the desire to participate in its details. This is guaranteed by the use of computers, which has

transformed the classroom environment into an encouraging environment with greater access to results, dialogue, classroom discussion, and information. All this generated motivation in the students to develop reading skills. On the other hand it is clear that the traditional group also had growth in reading skills but to a lesser extent than the experimental group. This gives an indication that the researchers were also interested in the members of the group.

The researchers believe that the students, by virtue of the use of computers and their family orientation towards computer education, have had a positive effect. The students of the experimental group love this subject and respect it because it is a subject that involves electronic learning.

Conclusions, Recommendations and Suggestions

Conclusions

- 1- The effectiveness of computer use in acquiring grammatical concepts in second-grade students is average in the experimental group and is balanced by their peers in the traditional group.
- 2- Computers in the development of reading skills is effective for the second intermediate class schoolgirls when compared to their peers in the traditional group.
- 3- The possibility of employing reading skills in teaching Arabic language subjects should be scheduled for second-grade students for Iraqi schools.

Recommendations

In light of the results of the research, the researchers recommend the following to the authorities involved in the educational process:

- 1- Hold training courses by the General Directorate of Education in Kirkuk for Arabic teachers on modern teaching strategies based on reading skills and computer use.
- 2- Focus the attention of Arabic teachers to grammatical concepts and give them a key role in teaching.

Suggestions

To complete the current research, the researchers suggests conducting the following future studies:

- 1- Measure the effectiveness of a computer-based teaching programs on the development of reading skills to give Arabic teachers effective teaching skills.
- 2- Measure the impact of computer use on the achievement of middle second-grade students of Arabic language and the development of meditative thinking skills.



REFERENCES

- Ibrahim, H. I. (2001). Measure the Trend towards Mathematics and its Application to Students Teachers in the Faculty of Education of Damascus University, Damascus University Journal, Vol. 17(2).
- Abu Jado, S. M. A. (2003). Educational Psychology. Al-Meseeer Publishing House, Jordan.
- Al-Jubouri, F. S. H. (2015). Arabic Language Teaching Methods in Light of Comprehensive Quality Standards. Dar Al-Radwan, Amman, Jordan.
- Salama, A. A. (2004). Development of Scientific Concepts and Skills and Ways to Teach Them. Dar al-Fikr, Amman, Jordan.
- Shehata, H. and al-Najjar, Z. (2003). Dictionary of Educational and Psychological Terms, Egyptian-Lebanese House, Cairo, Egypt.
- Fathi Younis, et al. (1996): Teaching Arabic Language Foundations and Procedures, Saad Samak Printing, Cairo, Egypt.
- Al-Kubaisi, H. O., Abdul Sattar, H. & Al-Alussi, A. (2011). Grammar Education for the Second Grade. General Directorate of Curricula, Ministry of Education, Iraq.
- Mazen, H. M. (2004). Our Curriculum and E-Learning Technology and Networking to Build the Arab Information Society: A Vision for the Future. 16th Scientific Conference. Teacher Training Held on July 21-22. Volume one. Egyptian Society for Curriculum and Teaching Methods.
- Merhi, T. A. & al-Heela M. M. (2002). General Teaching Methods. Al-Maisara Publishing and Distribution House, Amman, Jordan.
- Mustafa Joudat Saleh (2018). The Concept of Education Technology in the Information Age. Available at the Education Technology Portal at <http://www.mostafa-gawdat.net> date 24-6-2018.
- Al-Musa, A. al-Mubarak, A. (2005). E-learning Foundations and Gestures, Al-Abikan Library, Riyadh, Saudi Arabia.
- Al-Naqa Mahmoud Kamel, Wahid Al Sayed Hafez (2002): Teaching Arabic language in general education, Part 1, Al-Ifih Library, Cairo, Egypt.
- The Free Encyclopedia Wikipedia (2018) at <http://en.wikipedia.org/wiki/SCORM> date 21-1-2019.