

The Role of Computer Games, as a Teaching Aid, in Learning Vocabulary and Spelling by Iranian EFL Learners

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Abstract

This study is an attempt to introduce computer games as a teaching aid in learning vocabulary and spelling by students of second grade of guidance school. For this purpose, five different games were used to give the students the opportunities to exercise the vocabulary and spelling games. The results indicated that there were statistically significant difference between the students who participated in the experiment and those who just followed the conventional course of the study at school.

Introduction

There is no way of ignoring the impact of computer in our society. As a consequence, the educational sector cannot leave the evolution of

educational computing to the direction of the suppliers. Computer can handle an impressive range of activities and perform programmed functions at remarkable speed. It can vary exercises each time they are done, move students along from easier to progressively more difficult exercises and, within limits revise its language to approximate that of learner. When students fail to answer questions correctly after repeated attempts, the computer can provide individualized instruction in the form of clues or explanations. Besides, students generally like working with computers and are able to learn many things better and more quickly than in a traditional classroom setting.

On the other hand, the impact of activities such as games on language learning process is of considerable importance. Steinberg (1986) states, "Everyone knows that games are fun, but some people think that they are only fun, lacking any pedagogical value. Games are available and enjoyable methods of achieving many educational objectives" (P.9).

Regarding the wide area of computer use and the use of games for language teaching, it seems profitable to combine these two techniques and provide a better situation for teaching.

Purpose of the Study

This study examined the effectiveness of computer games in language learning process. The following research questions were examined in this study.

1. Can computer games, as a teaching aid, help the Iranian EFL

learners to learn the words?

2. Can computer games, as a teaching aid, help the Iranian EFL learners to learn spelling?

Research Hypotheses

In order to investigate the above mentioned questions the following null hypotheses were posed:

1. Computer games cannot be used as an enhancing aid for teaching vocabulary to Iranian language learners.

2. Computer games cannot be used as a useful aid for teaching spelling to Iranian language learners.

Method

The design of this study follows an experimental design which has 3 characteristics: (1) experimental and control groups are present, (2) the subjects are randomly assigned to the groups, (3) a pretest is administered to capture the initial homogeneity among the subjects.

Subjects

To accomplish the task, over 80 students participated in the pretest of the study. The students were randomly selected from among the students of a female guidance school. In order to determine the proficiency level of the students a pretest was administered to all the subjects. According to the results of the test, 10 students out of 80 ones were excluded from the list. Finally 70 subjects were selected and

divided into two groups: 35 in experimental group and 35 in control group.

Instrumentation

As it was mentioned before, in order to estimate the general knowledge of the subjects prior to the study, a test which was developed and standardized by the researcher, was administered to the whole number of the subjects. The test consisted of two parts of vocabulary and spelling items which were presented in the forms of multiple-choice, completion and rearrangement. The test was composed of 60 items: 30 on vocabulary and 30 on spelling.

After 10 sessions of instruction for experimental group, a parallel test was given to all the subjects. It was composed of the same number of items as the previous one. The aim of this test was to estimate the lexical and spelling knowledge of the subjects.

Instructional Materials

The instructional materials used in this study consisted of 5 different parts. The first two games were used for practicing the vocabulary, and the other three games aim at practicing the spelling of the words learned in the previous games. The games are called "Flash Cards", "Matching", "Missing Letters", "Spelling", and "Word Guess".

Data Analysis

After the data were gathered, the means of control group and the

experimental group were compared with each other separately through t-test to assess null hypotheses which assume computer games cannot be used as an enhancing aid for teaching vocabulary and spelling to Iranian language learners. Then the scores obtained from pretest and post test of each of the control and experimental group were compared with each other from matched t-test to observe if there has been any significant improvement in terms of vocabulary and spelling on the parts of the students in the experimental group.

The results of this experiment is shown in the following tables in 4 analyses. The first analysis deals with the comparison of the two means of the pretest of the control and experimental group for vocabulary. As it is shown in the following table the t-critical is higher than t-value and we can conclude that the difference between the two groups is not significant and they are almost at the same level of lexical knowledge. The result is also the same for the spelling test.

Table. 1

The data derived from the pretest on vocabulary

	N	M	SD	T
Control group	35	12.91	2.30	.46
Experimental group	35	13.14	2.32	
D. F. = 68		p<.05 t-critical=2.000		

Table. II

The data derived from the pretest on spelling

	N	M	SD	T
Control group	35	13.18	2.6	.30
Experimental group	35	13.25	3.01	
D. F. = 68 $p < .05$ t-critical=2.000				

The second analysis contains the data obtained from the post test of the two group for vocabulary and spelling. In this analysis the two means of the two groups after the instruction were compared through t-test. As it is illustrated in the following tables the t-value for both vocabulary and spelling is higher than the t-critical and we are quite safe in rejecting the null hypotheses that assumes "computer games, as a teaching aid, cannot enhance the learning of vocabulary and spelling by Iranian language learners."

Table. III

The data obtained from the post test on vocabulary

	N	M	SD	T
Control group	35	13.02	2.26	4.35
Experimental group	35	14.82	2.4	
D. F. = 68 $p < .05$ t-critical=2.000				

Table. IV

The data obtained from the post test on spelling

	N	M	SD	T
Control group	35	12.97	2.26	
Experimental group	35	15.14	2.3	4.36
D. F. = 68	p<.05 t-critical=2.000			

The aim of the third analysis is to compare the two means of each group on pretest and post test for vocabulary and spelling separately. The obtained t-value from matched t-test is lower than t-critical and this means that there is not any significant difference between the scores of the control group for vocabulary and spelling on pretest and post test of control and experimental group.

Table. V

The data derived from the pretest and post test of vocabulary for E-group

	N	M	SD	T
Pretest	35	12.91	1.58	
Post test	35	13.2	1.58	1.2
D. F. = 34	p<.05 t-critical=1.671			

Table. VI

The data derived from the pretest and post test of spelling
for control group

	N	M	SD	T
Pretest	35	13.08	2.18	
Post test	35	12.97	2.18	.30
D. F. = 34 p<.05 t-critical=1.671				

In analysis 4, the data obtained on pretest and post test of both experimental and control group is discussed separately. The data obtained in this comparison through matched t-test shows that the t-value is higher than t-critical and we are quite safe in rejectiong the null hypotheses. The difference is statistically significant. This is support for the claim that computer games, as a teaching aid, can be used to enhance the vocabulary and spelling knowledge of Iranian language learners.

Table. VII

The data derived from the pretest and post test of control group
on vocabulary

	N	M	SD	T
Pretest	35	13.14	1.23	
Post test	35	14.82	1.23	8.4
D. F. = 34 p<.05 t-critical=1.671				

Table. VIII

The data obtained from pretest and post test of experimental group on spelling

	N	M	SD	T
Pretest	35	13.25	1.40	
Post test	35	15.14	1.40	8.21
D. F. = 34	p<.05 t-critical=1.671			

Conclusion

Learning languages with the help of computers is a new trend which in the long term may or may not prove really worth-while. But, while still in its experimental stage, it can highlight points whose applications extended for beyond the business of computer-assisted learning. These learning tools or activities have been underused because of lack of a systematic and principaled way to think about how to use them.

Considering the critical role of the computers as a teaching device, the findings of this research is of value to English language learners and teachers as well as curriculum planners as a whole. Therefore, the research attempted to introduce the advantages of computer-assisted instructions specially those containing games for making the teaching environment more pleasant and fruitful.

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