Comparison of the Effectiveness of Multi Media Trainings on the Crucial Role of English Teaching Using Linguistic Approach Among the Second of High School Students

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Abstract

The problem of forgetting the concepts of language is one of the main concerns of the teachers. The present study evaluates the effect of software Multi Media with linguistic approach on the crucial role of English teaching among the second of high school students. The present study is an applied-quasi experimental design and the purpose is the evaluation of the effect of language teaching by educational software Multi Media. The study population is all second grade high school students (girls) of district 1 of Tehran in the academic year 2015-2016 as 489. The sample size is 22 (experiment and control group) as being selected randomly among the second of high school classes. The present study is semi-experimental. For data collection, teacher-based academic achievement test as pre-test and post-test and English package are used. By SPSS software, t-test and ANOCA, the hypotheses are tested. Based on the present study, game plays important role in recalling book concepts. The present study showed that the effectiveness of software Multi Media on English learning (Grammar, structure of sentences, writing, comprehension, words and terms).

Key words: Education, Educational Software Multi Media, Multi Media Trainings, Language, Students

INTRODUCTION

Reading is one of the learning tools in the routine life (1). As one of the major methods of achieving knowledge, reading is one of the fundamental learning fields in primary school and this is the basis of future academic success (2).

Despite their natural intelligence, suitable educational opportunities and lack of emotional disorder, some students have reading problem as in the majority of academic failures; we can observe weakness in reading skills (3-5). On the other hand, with reading skill, the existing realities in the society show low ability of Iranian students in this skill (6).

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The basis of reading is decoding and the final goal of reading is comprehension and learning this skill is an important factor in the progress of educational trend of students (7). Reading is an activity involved in the complex cognitive processes in which the development of words and education is effective; comprehending is a process in which one's previous knowledge is involved (8).

Good reading requires that the students besides careful reading of text, use the comprehension strategies well (9) and by making a mental representation of the items can extract the meaning of words, sentences and texts (10). Despite the importance of comprehension in learning the textbooks, students have problem in this skill (11).

With the progress of new technology and production of educational software with multimedia capability, new opportunities are provided for students learning (12).

Presenting specialized educational content in the interesting multi-media space and computer educational Multi Media is one of the great achievements to create motivation, interest

Corresponding Author: Setayesh Kambiz, French lecturer at Imam Sadegh University, Phone: +(98)9122881795. E-mail: Kambiz485@yahoo.com and effect on education of students is important with positive effect on increasing accuracy and attention (13). During educational Multi Media, students have access to new mental concepts and achieve more and better skills.

The researchers believe that by selecting suitable and timely Multi Media, learning is possible for each student with any talent and ability (14). Computer educational Multi Media with amusing activities by creating challenge, curiosity and giving the control of game to the player can help to increase the internal motivation and interest for learning and this makes learning rapid, effective and stable for students (15).

Education with repetition and exercise besides receiving immediate feedbacks can make the student activate his previous knowledge to pass the different levels of game (16). For progress in game and achieving high scores, emotion helps the student to modify his playing method and he attempts to learn more (17).

Demirbilek & Tamer (26) in a study stated: The emotional and motivational features of Multi Media Trainings were good enticing factors to keep interest in formal and informal educational activities and we can expect that multi-media software Multi Media of students involve the inactive and low-motivation students as actively in educational and health plans.

The present study is aimed to evaluate the difference between recalling the concepts of language learning in the second of high school in experiment and control group using educational software Multi Media with language concepts and without language concepts. The study question is: Is there any difference between recalling the concepts of language learning in the second of high school in experiment and control group using educational software Multi Media with language concepts and without language concepts?

Study methodology

The present study is quasi-experimental wit pre-test and post-test. The study population is the girl students of second of high school in Tehran city. The study sample consists of two classes (22 students) as selected by convenient sampling method.

The second of high school students evaluated their annual language scores in the second semester and they were placed randomly in two classes as homogenized based on language scores. In this study, class is not classrooms; it is based on homogeneity of samples based on the score of language into two groups (experiment and control). It is worth to mention that the gender of all studied students is girl ranging 16-17 years.

After the end of tests in Khordad in academic year 2015-2016, pre-test questions including definitions and concepts of language in the second of high school are considered. The questions are 20 items and the learners were asked to select Yes if the definition is correct, otherwise choose NO.

It is worth to mention that pre-test and post-test were performed on three groups as follows:

- 1. Control group: There was no test and they spent the summer with personal amusement.
- Experiment group: They were exposed to educational software Multi Media in which language concepts were used. The study purpose is the comparison of the scores of three groups in post-test with the elimination of probable effect of pre-test.

It is worth to mention that due to the shortage of facilities as suitable computer site in the school of participating students in experiment group, they played at home with their PC and for those who didn't have PC; they were playing in the computer site of school on Mondays for 2 hours. To be sure whether the students play at home really or not, before the study, it is discussed about the purpose and study significance as face to face or by telephone with the parents of students and the follow up was continued periodically with the students and their parents regarding the study trend by telephone.

For covariance or control variable, pre-test was performed before presenting any education or applying independent variables to eliminate any unwanted probable effect on the dependent variable. As post-test was performed after 2 months, the end of Mordad, the effect of pre-test was reduced. For the stationarity of covariance (pre-test), Kuder-Richardson method was applied. As the questions were designed as true false in 20 items, it is worth to mention that the content of questions was the educational concepts in educational software Multi Media (Table 1).

The reliability index of pre-test is 0.83. To evaluate face validity, the questions are supported by a board consisting five expert teachers of language as the main members of Language of Tehran province. Post-test was the same as pre-test and it was taken two months after pre-test. We can ignore pre-test factor as threatening factors of internal validity. There is no subject loss factor in the study. In this section, the collected data are analyzed in control and experiment group in pre-test and post-test using t-test and ANCOVA covariance analysis. Table 2 shows the results of independent t-test between control and experiment group in pre-test stage. As shown in this Table, in four skills, significance level is above 0.05. It is concluded that the difference of pre-test scores of language learning skills is not significant based on the studied groups. It means

Table 1: The details of selected pre-designed Multi Media

Name of game	Applied field	Number of applications	Session
Upwords	Playing with English words and helping the structure of sentences	6	1-6
Quarto, Quoridor, Pentago, Ab alone	These Multi Media besides improving the knowledge of English words among the learners can increase healthy competition and improve patience of the learners	9	7-15
Civilization Series, anno series	By presenting exact details of different historical periods via English language can make a person familiar with the trend of progress of science, technology and ethics in civilizations	15	16-31
Scribblenauts	In this game, by writing each composition, a name and an attribute of the object is emerged and it is managed. The target group of the game is the learners from different ages and its educational aspect is unavoidable	4	32-36

Table 2: The comparison of the pre-test scores of learning skills of English language in control and experiment groups

Variable	Group	N	Mean	SD	t-test	Degree of freedom	Significance level
Writing	Control	22	9/0000	1/04654	0/710	42	0/482
•	Experiment	22	9/2045	0/85439			
Words	Control	22	7/6364	2/76105	-0/460	42	0/648
	Experiment	22	7/9545	1/70370			
Grammar	Control	22	8/4545	1/28090	-1/042	42	0/303
	Experiment	22	8/8182	1/01823			
Comprehension	Control		8/5455	1/76547	0/972	42	0/337
·	Experiment		8/0000	1/95180			

that two groups were similar before implementing the experiment.

Computer – Assisted Instruction (CAI) is Effective on Learning Grammar and Structure of English Sentences

As shown in Tables 3,4 and ANCOVA test, the average scores of grammar and structure of sentences in control group is 7.52 with standard deviation 1.51 and in experiment group 9.36 with standard deviation 0.80 and due to the difference of pre-test scores based on covariance analysis, pre-test scores were controlled (P=0.00, f=28.423) and after the control, it was defined that the observed difference between two groups was significant in terms of grammar skill and sentences structure (f=30.702, p=0.00) and the mean of scores in experiment group was higher. It is concluded that multimedia education is effective on learning grammar and structure of English sentences.

Computer – Assisted Instruction (CAI) is Effective on Learning Writing of English Sentences

As shown in Tables 5,6 and ANCOVA test, the average scores of writing in control group is 8.56 with standard deviation 1.42 and in experiment group 9.56 with standard deviation 0.56 and due to the difference of pre-test scores based on covariance analysis, pre-test scores were controlled (P=0.003, f=9.929) and after the control, it was defined that the observed difference between two groups was significant in terms of writing skill (f=9.047, p=0.004)

Table 3: Dispersion distribution of grammar and structure skill in control and experiment groups

Group	N	Mean	SD
Control	22	7/5227	1/51561
Experiment	22	9/3636	0/80448

and the mean of scores in experiment group was higher. It is concluded that multi-media

Computer – Assisted Instruction (CAI) is Effective on Learning Comprehension of English Language

As shown in Tables 7,8 and ANCOVA test, the average scores of comprehension in control group is 8.40with standard deviation 1.70 and in experiment group 9.18 with standard deviation 0.95 and due to the difference of pretest scores based on covariance analysis, pre-test scores were controlled (P=0.00, f=46.913) and after the control, it was defined that the observed difference between two groups was significant in terms of comprehension skill (f=13.419, p=0.001) and the mean of scores in experiment group was higher. It is concluded that multimedia education is effective on learning comprehension of English language.

Computer – Assisted Instruction (CAI) is Effective on Learning Words and Terms of English Language

As shown in Tables 9,10 and ANCOVA test, the average scores of words and terms in control group is 7.97with

Table 4: The results of covariance analysis of grammar and structure of sentences skill between control and experiment with pre-test scores control

Variance	Sum of squares	Degree of freedom	Mean of squares	F test	Significance level
Grammar and sentence structure skill (pre-test)	25/314	1	25/314	28/423	0/000
Groups	27/344	1	25/344	30/702	0/000

Table 5: Dispersion distribution of writing skill in control and experiment groups

Group	N	Mean	SD
Control	22	8/5682	1/42508
Experiment	22	9/5682	0/56264

Table 6: The results of covariance analysis of writing skill between control and experiment with pre-test scores control

Variance	Sum of squares	Degree of freedom	Mean of squares	F test	Significance level
Writing skill (pre-test)	9/611	1	9/611	9/929	0/003
Groups	8/757	1	8/757	9/047	0/004

Table 7: Dispersion distribution of comprehension skill in control and experiment groups

	<u> </u>		<u> </u>	<u> </u>	<u>'</u>
Group	N	Mean		SD	
Control	22	8/4091		1/70878	
Experiment	22	9/1818		/95799	

Table 8: The results of covariance analysis of comprehension skill between control and experiment with pre-test scores control

Variance	Sum of squares	Degree of freedom	Mean of squares	F test	Significance level
Comprehension skill (pre-test)	43/006	1	43/006	46/913	0/000
Groups	12/301	1	12/301	13/419	0/001

Table 9: Dispersion distribution of words and terms skill in control and experiment groups

3							
Group	N	Mean	SD				
Control	22	7/9773	1/95471				
Experiment	22	9/4091	-0/71774				

Table 10: The results of covariance analysis of words and terms skill between control and experiment with pre-test scores control

Variance	Sum of squares	Degree of freedom	Mean of squares	F test	Significance level
Words and terms skill (pre-test)	42/766	1	42/766	36/309	0/000
Groups	18/266	1	18 /266	15/508	0/000

standard deviation 1.95 and in experiment group 9.40 with standard deviation 0.71 and due to the difference of pre-test scores based on covariance analysis, pre-test scores were controlled (P=0.00, f=36.309) and after the control, it was defined that the observed difference between two groups was significant in terms of words and terms skill (f=15.508, p=0.00) and the mean of scores in experiment group was higher. It is concluded that multi-

media education is effective on learning words and terms of English language.

DISCUSSION AND CONCLUSION

As it was said, H1 is supported and it means that based on the findings of this study, multi-media education is effective on learning grammar and structure skill of English Language.

Computer-aided instruction systems are important in progress of education level. These systems help the teachers and students in personal, group education and class room, e-learning as educational tools (19-20).

The structure of sentences is a set of rules enabling us to combined the language words and bring as bigger components (21). Multi-media education can give information to the learner about the educational items and give the adequate experiences to the students, involve the learner in learning process and this leads to their active learning. In a study done by Hosseynayee (22), it was found that using multi-media builder software increasing the sentence and grammar skill in English language of students and this showed the success model in generalizing application of this definite composition of educational technology, teaching model in English language and generalizing the application of other useful software and teaching models.

The success model in generalizing the application of this definite composition of educational technology gives teaching model in English language and generalizing the application of other useful software and teaching models.

Kolikrador and Angel stated that technology could be used to remove unequal opportunities of students with different academic background to use the existing information in internet network equally (23).

The results of the study of Mehdizadeh (24) showed that using computer had significant effect on the increase of learning of students increased their interaction with each other and improved team work. The results of present study are consistent with the study of Stetter (25) and Koli, Krador and Angel and the study of Bashiri and Ataran.

The second hypothesis supported the effect of multi-media education on learning writing skill of English language.

This result is consistent with the study (27-30) and (30-34) without showing considerable difference in the mean of scores of the students who were trained by computer and this result is inconsistent with the results of study of Morgil Inci S & et al.(35) regarding the multi-media education and traditional method and this showed the lack of significant difference between experiment and control group. We can say one of the basic strategies of language is practice and repetition. Multi-media instruction can meet this demand.

The results of covariance analysis about the study hypothesis showed that by considering the pre-test scores as covariance variable, post-test scores showed significant difference between the students who used educational software Multi Media in which language concepts were used with the scores of the group taking 2 months of summer by educational software Multi Media without language concepts as an amusement game.

The interest of students to computer can increase the speed of learning and as learning is based on the learner motivation, simulation and using computer can bring success for the learners by creating curiosity as only using language concepts in game can raise some questions by the peers about the concepts or the personal curiosity of the learner is a stimulating factor to encourage him to search about the meaning of concept and referring to the second language book to find the solution.

These results are consistent with the results of (36-40). Based on the results of study and the rest of mentioned studies, Multi Media with their amusement aspect can play an important role in education.

Thus, the results of presents study are consistent with the results of study of Ghobari (40-42) in terms of effectiveness of educational activities on improving reading. The results of present study are consistent with the study of (43-46) in terms of effectiveness of Computer – Assisted Instruction: CAI on improving reading skills.

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