WEB BASED E-LEARNING PROGRAM DICTATION AND ITS IMPACT ON ACADEMIC PROGRESS OF THE THIRD GRADE STUDENTS OF PRIMARY SCHOOL

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ABSTRACT

The purpose of this research is to study the effect of web based E-learning program instruction on academic progress of third grade students of primary school in dictation .This study is performed in the form of quasi-experiment. Statistical society included 62 third grade girl students of Mahdavi elementary school of region one in Tehran city education. Sampling in this study is done using random sampling method. Samples divided to two equal control and experimental groups. The experimental group was instructed dictation in three months using web based e-Learning program designed by the researcher and approved by the 16 relevant specialists in the ministry of education and universities. Control group was instructed using Traditional classroom method.

Analysis of obtained data using average and statistical independent t test of group results showed that there is a significant relationship between the use of e-learning program of dictation and academic progress of third grade students of primary school in dictation and its related elements including visual, auditory, movement skills. Similarly, there is a significant difference between academic progress of students who learned dictation using web based program and students who learned dictation using traditional method. In addition, there are significant differences between prerequisite capabilities in dictation including visual, auditory and movement skills in the experimental and control group post test. According to score differences in post test there are significant differences between experimental and control group dictation.

Keywords: web based e-Learning program, dictation, academic progress, third grade students of primary school.

INTRODUCTION

Simultaneous with changes in different scientific, cultural and social fields, changes in educational systems and its main components such as educational targets, teaching- learning methods, assessment methods, as well as changes in curricula and educational has been occurred (Beck, 2008, p. 109). Today it is expected that in educational systems, the teaching - learning order not be limited in the context of textbooks or school teacher but   have a comprehensive education, lifelong and always available . E-learning makes it possible (Idol, 2008, p. 9). By the same token, appearance of the world- wide Internet network and local or intranet has been caused dramatic changes in the world education systems .Web-based network has provided simple and easy access to educational resources for learners in everywhere and every time, even in remote and disadvantaged areas of the learning environment by creating home schools, and thereby has been caused   educational justice (Buckley, 2008 , p. 37) . Using this multimedia environment with the possibility of transferring data in the form of sound, images, text, painting and using the principles of Web design has caused interest and motivation in learners. Flexibility in designing content , being interactive, the use of group participation, individual education , independent learning are the other benefits of using e-learning which have multiplied learning motivation for audience by providing beautiful images, graphics and attractive sounds . In addition by using this tool, teachers are not the only source of knowledge transfer and his role will be as educational facilitators. Accordingly, many educational systems in recent decades have tried entering and using this new technology to improve learning with less time (Adelman,2005).

RESEARCH THEORETICAL BASIS AND BACKGROUND

Numerous studies and research reviews, indicate the importance of e-learning programs on students academic achievement which are mentioned in the following:

Considering the effect of internet and internet web based on learning English courses, Hillary (2000), Ruzzo(2000) concluded that using these facilities by students causes greater academic progress and these tools have improved English language skills of students . Delacal (2001) used a semi-experimental method in a semester assisted by the Internet to instruct English to students and at the end , observed scores of this study concluded that these tools increased student learning , collaboration and group participation and growth of language skills especially correct pronunciation of the words .

Scarr (2000) conducted a research regarding the impact of computers and network on language writing skills and concluded that computer programs and network lead writing skills development in students. Chuan Kung (2000) has a positive evaluation of Internet networks usage in conversation learning, comprehension, writing, expression and grammatical structures of language.

Timoie (2005) has expressed that combining language and computer curriculum improves student attitudes toward writing and spelling practice. Karen (2009) has considered the importance of the Internet application on spelling skill development. Jamshidi (1386) has a positive evaluation in his research on the effect of education with information network assistance on literature improvement in secondary school level. So it is very important to pay attention to language instruction by using new technologies including Computer and education network. Language consists of four main skills, and among them writing is the basic skill (Birjandi, 1379). Dictation is one of the types of writing.

Since writing the words incorrectly takes a different meaning, so writing the words correctly, especially in elementary grades is very important (Zandi, February, 2007). Also students must have capabilities as prerequisite elements for dictation as follows:

- ➢ Students should be able to hear well the sounds made by the teacher in the form of words and sentences, recognize the words exactly and understand the words. The word perception is associated with auditory memory.
- ➢ They should recognize them well, embody the words and letters imagination, embody the correct word in their mind which is related to visual memory and arrangement visual memory.
- ➢ They should write them correctly, writing constructive letters of the words, rewriting the word and appropriate word sequence which is related to movement memory. (Zandi, February, 2007).

Therefore this research has been done with the following objectives.

RESEARCH OBJECTIVES

Research Main Goal
Study the effect of instruction programs using web based e-learning network for dictation on academic achievement of the primary school students.

sub-goals
Review and compare the academic achievement of the third grade primary school students in dictation, using web based teaching and traditional teaching methods. Compare the effect of using web based instruction and traditional instruction on prerequisite skills growth in dictation skills of the third grade primary school students (including visual, auditory and movement skills)

RESEARCH QUESTIONS

Research Main Question
Is there a significant relation between web based e-learning program for dictation and academic achievement of the third grade primary school students?

Subsidiary Research Questions

1. Is there a significant difference between academic achievement of the third grade primary school students in dictation using web-based education and traditional education methods?
2. Is there a significant difference between dictation prerequisite skills including visual, auditory and movement skills of the third grade primary school students using web-based education and traditional education methods?

RESEARCH METHODOLOGY

Statistical Society, Sample And Sampling Method
Statistical society in this study includes all 62 third grade primary school girl students of Mahdavi educational complex, in region one of Tehran education. Statistical sample and society are equal .In this study, given that students have been accepted using entrance exam and are nearly identical considering their academic and family situation and other circumstances, so a simple random sampling method has been used. So that the students were divided into two equal groups, including 31 students in experimental group and 31 students in control group. The reason of selecting this

school was due to being equipped with computers and network site and students experience in working with computers.

Research Tools

In order to achieve the objectives of this research , web based e-learning program designed by the researcher has been applied to the experimental group which was approved by 16 educational technology experts, curriculum and linguistics experts at universities and education department .To measure academic achievement in two groups , tests made by the researcher using the content of third grade primary school book titled as" read and write" were applied and to test visual, auditory, movement skills , exercises of educational assistance books were applied confirmed by the Ministry of Education using specialists and related teacher comments .Content validity has been used to obtain tests validity , so that the tests were presented to 10 language experts and professors and after confirmation they were used.

Research Methodology

The study was implemented for one semester (three months) on the third grade primary school students , So that after the subjects election, the researcher with the help of the teacher, made a pre-test to determine the academic status of dictation and prerequisite skills for two groups of students using the content of literature book and its practices and instructional assistance sources approved by the Ministry of Education .Then, the experimental group students used web based e-learning program for dictation instruction , designed by the researcher in each session according to their computer familiarity and teacher guidance . Control group students were instructed as traditional. Program design method and its application conditions are as follows:

First, students with teacher guidance were placed in front of their computers in a local network program and were able to access the defined program and also could interact with each other.

At the beginning of each session, exercises were presented by the system in the form of instructional games for development of dictation visual, auditory, movement skills, using words and vocabulary of previous lessons and new lesson.

Then for dictation learning in that session, exercises in the form of interactive word-basis and sentence-basis games were presented by using visual dictation, group checking, tests in the form of puzzles, maze and individual or group tables.

In this program, assessment strategies were used such as multiple options, f and c, sort, drag, drop and dictation in the form of words and texts. In addition, special exercises were provided by the system, using teacher guidance and the automated system, based on the dictation errors of students to each of them. Each student was presented a workbook in each session with emphasis on her dictation errors by the system.

In each session the parents were notified of their child's academic status through a specific email that had been provided by the school. Furthermore the method of writing dictation using pens- paper tests was used once every two sessions. Assignments for group participation through the network and perform at home and sending to the teacher via email and the Internet were given at the end of each session. Students interacted through network with teacher and other students.

RESEARCH FINDINGS

For the purposes of this research, to evaluate and compare the effectiveness of web based instruction method and traditional instruction method on the students academic progress, independent t test has been used for two samples. Such that the control and experimental group students test scores were compared in pretest.

This analysis has been performed to determine initial differences and situation of dictation and its prerequisite elements between two control and experimental groups. The performed pretest, in this study includes four sub-tests covering listening skill, visual skill, movement skill and dictation skill.

In this study, the score of each sub-test and the total scores were calculated for pretest and the average score of two control and experimental groups for subtests and total scores were compared by using independent t test. Table 1 shows the results of this analysis.

Table: 1
Comparison of pretest scores for two experimental and control groups

TEST	control group	Experimental group	T-test	degrees of freedom	significant levels
Listening skills	0/732	0/639	1/233	338	0/217
Visual skills	2/782	2/776	0/634	338	0/525
Motor skills	0/305	0/324	0/448	338	0/653
dictation skills	1/289	1/234	0/402	338	0/686
Score	5/095	4/97	0/563	338	0/573

As can be seen there is no significant difference in pretest results of two experimental and control groups in sub- tests for visual, auditory, movement, dictation skills as well as pretest scores and due to no significant differences in the subtests results, for the next step to answer the subsidiary questions of research, the scores of subtests of control and experimental groups and dictation skill as well as post test score are compared using independent t-test. Table 2 shows results of t tests comparing the performance of experimental and control groups in visual, auditory, movement and dictation skill tests and total score of post test.

Table: 2
Comparison of experimental and control groups performance in post test

TEST	control group	experimental group	T-test	degrees of freedom	significant levels
Listening skills	2/966	4/434	7/983	338	0/001
Visual skills	4/160	4/747	4/750	338	0/001
Motor skills	0/465	1/124	12/603	338	0/001

dictation skills	2/223	2/931	7/024	338	0/001
Score	9/828	13/239	9/749	338	0/001

As the results of Table 2 suggests, the performance of experimental group significantly is better than the performance of control group which were traditionally instructed.

So there is significantly difference between necessary skills for dictation and dictation skills, between two experimental and control groups.

In order to answer the main research question based on the effect of network instruction on students dictation academic achievement and its constituent parts and a closer look on difference between web-based instruction and traditional instruction in their academic progress, independent t-test was used for average differences scores of pre-test and post test dictation and its constituent components in both control and experimental groups, which the analysis of each of them are described in tables described in the following paragraphs.

Table: 3
pretest and post test difference in experimental and control groups visual skill

sig	T	df	deviation amount	d	f	Groups
0/000	8/067	338	1/965	2/233	31	Control group
			1/584	3/795	31	experimental group

To measure students visual skill, exercises has been used to measure similarities and differences and writing the correct form of constructive letters of a word and its appropriate sequence. According to Table 3 it can be stated that there is significant difference between average difference of pretest and post test scores of experimental and control groups visual skill. And as can be seen in the table, t value calculated (8/06) is larger than the critical t and in addition it is significant in the alpha level of less than 0/001. It is necessary to explain that the difference between the two groups shows an increase in the amount of post test has occurred in both groups, but the increase was greater in the experimental group.

Average difference scores of the control group is 2/23 and the average difference scores of experimental group is 3/79. According to the results of table 3 it is found that dictation instruction assisted with web based learning program causes students visual skill development in dictation.

Table; 4
pretest and post test difference in experimental and control groups listening skill

sig	T	df	deviation amount	d	f	Groups
0/000	5/683	338	1/553	1/172	31	Control group
			1/788	2/204	31	experimental group

To measure the listening skill, exercises have been used to test auditory memory and

auditory detection. According to the results of Table 4 it can be can be stated that there is significant difference between average difference of pretest and post test scores of experimental and control groups listening skill and auditory memory and as can be seen in the table, t value calculated (5/68) is larger than the critical t and in addition it is significant in the alpha level of less than 0/001.

It is necessary to explain that the difference between the averages of two groups show increases in auditory skill in post test of both groups, but the increase was greater in experimental group. Average difference scores of the control group is 1/17 and average difference scores of experimental group is 2/20.

So according to the results of above table it is found that web based instruction implies growth in students listening skill.

Table: 5
pretest and post test difference in experimental and control groups movement skill

sig	T	df	deviation amount	d	f	Groups
0/000	7/640	338	0/556	0/227	31	Control group
			0/762	0/780	31	experimental group

To measure the movement skill, exercises have been used to write the correct form of constructive letters of a word, rewrite and its sequence and to measure the movement memory. According to the results of Table 5 it can be can be stated that there is significant difference between average difference of pretest and post test scores of experimental and control groups movement skill and as can be seen in the table, t value calculated (7/64) is larger than the critical t and in addition it is significant in the alpha level of less than 0/001.

It is necessary to explain that the difference between the averages of two groups show increases in auditory skill in post test of both groups, but the increase was greater in experimental group.

Average difference scores of the control group is 0/22 and average difference scores of experimental group is 0/78. So according to the results of above table it is found that web based instruction implies growth in students movement skill in dictation.

Table: 6
pretest and post test difference in experimental and control groups dictation

sig	T	df	deviation amount	d	f	Groups
0/007	2/732	338	1/114	1/355	31	Control group
			1/346	1/722	31	experimental group

To measure the dictation skill, some texts have been selected form the book titled as "read and write" and dictated. According to the results of Table 6 it can be can be

stated that there is significant difference between average difference of pretest and post test scores of experimental and control groups dictation and as can be seen in the table, t value calculated (2/73) is larger than the critical t and in addition it is significant in the alpha level of less than 0/001.

It is necessary to explain that the difference between the averages of two groups show increases in post test of both groups, but the increase was greater in experimental group. Average difference scores of the control group is 0/22 and average difference scores of experimental group is 0/78.

So according to the results of above table it is found that web based instruction implies learning growth in students dictation skill.

Table: 7
pretest and post test difference in experimental
and control groups total prerequisite skills and dictation

sig	T	df	deviation amount	d	f	Groups
0/000	8/580	338	3/881	4/989	31	Control group
			3/666	8/503	31	experimental group

According to the results of Table 7 it can be can be stated that there is significant difference between average difference of pretest and post test scores of experimental and control groups total dictation skills and as can be seen in the table, t value calculated (8/58) is larger than the critical t and in addition it is significant in the alpha level of less than 0/001.
It is necessary to explain that the difference between the averages of two groups show increases in post test of both groups, but the increase was greater in experimental group. Average difference scores of the control group is 8.50 and average difference scores of experimental group is 4/98.

As it was observed, the students learning progress in experimental group whom were instructed dictation using the web based learning program is more than control group students who had no access to computers and networks and instructed only using traditional method.

Thus, in response to research questions it can be said that there is a significant relationship between the use of information networks and students academic achievement in dictation and its prerequisite elements. Similarly, there is a significant relationship between academic achievement of both experimental and control groups.

DISCUSSION AND CONCLUSION

In the present research, the effect of instruction with assistance of e-learning programs on academic achievement and dictation prerequisite elements including visual, auditory, movement skills and compare it with traditional method was evaluated. Overall the findings suggests that there are significant differences between the post test scores of each of the dictation prerequisite elements and the total score in experimental and control groups. Also there are significant differences between average difference of the pretest and post test dictation and its constituent

elements scores in experimental and control groups. Remembered result demonstrates the effectiveness of dictation e-learning program on student's dictation learning outcomes and its prerequisite elements including visual, auditory and movement skills.

The results of this research with similar researches in the English language were compared and the following findings are obtained. In explaining the effect of network usage on constituent elements of dictation, the results showed that there are significant differences between students post test scores in experimental and control groups as well as scores differences between pretest and post test of two groups in visual section (including making pictures and words embody recognition), which have significant proportion with the Chuan Kung (2000) finding results.

In listening skill section and words correct pronunciation and word understanding, the results showed significant differences between post test scores of experimental and control groups, which are compatible with Delacal (2001), Timoie (2005), Karen (2009) finding results based on the effect of network usage on pronunciation and spelling skills growth.

Finding results of this research in the movement and dictation skills also represent significant differences between two experimental and control groups in post test. In addition the differences between two groups at pretest and posttest scores in dictation progress show a significant difference that are compatible with the Kendrasue (2001), Delacal (2001), Hilary (2000), Ruzzo (2000), Timoie (2005), Karen (2009), Jamshidi (1386) finding results. Based on this results It can be concluded that there is a significant relationship between the use of dictation web based e-learning programs and students academic achievement in the third grade of primary school and there is a significant difference between two groups which were instructed web based and traditionally. In other words, students who have used dictation web based e-learning programs had better academic progress in dictation and its prerequisite elements compared with students who have used the traditional method and that the use of program, improved their progress in learning. So the conclusion which can be reached is that the application of network as a new knowledge tool causes students teaching – learning quality promotion in dictation. So to enhance students dictation learning quality, practitioners and planners of education must conduct their efforts to design web based programs and integration of curriculum with computers and the Internet in order to develop the native language.

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REFERENCES

Adelman, L. (2005). Exporting e-Literacy Education. *Journal of eLiteracy.The journal f the Learning sciences,* **2**, 27-32.

Beck, E. C. (2008), Understanding Educational Change: A System Model Approch. Second North American Conference on the Learning Paradim,pp.109.

Bete, A. (2008). Open Learning and DistanceEducation. New York: Rutledge. Betes, A.W. Reader Respond. Department. Cause/Effect, pp.9

Buckley, M. (2008). Evaluation of Classroom-Based, Web-Enhanced for students. *The Journal of teacher Education*, pp.37

Chuan. Kung S.; & Chuo, T. (2002.) Student Perception of English Learning Through ESL/EFL Websites. *TESL-EJ.* 6(1), **http://www-writing.berekeley.edu/TESL-EJ/ej21/02.html**

Dela, Cal-Fasoni L. (2001). *A Technology to Enhance Teaching and Learning. Front Row Phonics: Acal Filed Test*, Mal. California State University.

Hilary, P. (200). Having Student Learn Basic Grammer Through Technology. *The journal of the computer assistant learning*, pp. 54.

Kendrasue, H. (2001) A Descriptive Analysis of a Computer Assisted Instruction Development English Program. *The journal of the computer assistant learning*, pp. 32.

Karen, T. (2009). Optimizing ICT Effectiveness in Instruction and Learning Multilevel Transformation Theory and a Pilot Project in Secondary Education. *The Journal of Computers & Education*, pp. 24-55.

Ruzzo, P. W. (2000). Teachning History Trough the Computer and Primary Source Documents: A Hands-on Approach to the Historians Craft Historical Inquiry. Proquest Digital Dissertations, pp. 39.

Timoe, R. (2005). Online Communication in School. *The journal of Educational Technology*, pp.137-155.

Zandi, B. (2007). *Method Of Teaching In Persian Language*. Tehran.samt publishing.