Comparing Traditional and Networks-Based Education Systems on Learning English Language Course in High School First Grade Students

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Abstract: The aim of the present study is comparing traditional and networks-based education systems on learning the English language course in high school first grade students. Thus, 340 first grade female students were placed in the two experimental and control groups. English course was trained as lecture method and using information networks to the experimental group and the control group was only trained as lecture method. The experiment lasted for a semester and research tool was a researcher-made test as pre-test and post-test, which was used to evaluate the students learning. Data was evaluated using independent groups t-test. The data was analyzed in the 0.001 alpha levels and two-tailed t. The results of data analysis showed that there was a significant difference between applying information networks and progress in learning English language course. Furthermore, the results showed that there was a significant difference in the post-test of both control and experimental groups in various sections of the English language course such as writing, reading comprehension, words and phrases meaning, and grammar. The results showed also that there was a significant difference between the difference between pre-test and post-test scores of experimental and control groups and the course components.

1. Introduction

Global developments in information and communication technology and technology education expand particularly learning opportunities and accessing to educational and training resources as it is not basically conceivable with traditional tools and methods, employing the new technology not only accelerate and facilitate the teaching and learning as well as promote effective management of educational systems but also has led to many changes in the common concepts and principles in traditional educational systems, so, importance and reliance on predetermined books and syllabus for each class and every course, evaluating teaching methods, estimating the effectiveness and learning and teaching rates, the role and value of the course assignments and periodic examinations and the relationship between teacher and student have been altered by utilization of information and communication technology. Therefore, it is necessary for the society and particularly the education system, that are interested in the successful development of student and his position in the community and are concerned about him, to take advantage of the development in this field. Internet and computer information networks are among the innovative technologies that can be used for more and better student learning with careful consideration and understanding the capability of these facilities.

Changes in the social system of the Internet are undeniable. It has even changed the way students and teachers interact and teaching method at various levels of education. It has mainly raised the ability to conduct research by students and share their findings with others. Nowadays, kids are also dependent on the internet for homework and social relationships. Online social networks have undoubtedly a very effective role in the development of specialized and general training. However, much online content have not yet achieved a reasonable degree of scientific validity due to lack of scientific supervision, social networks are one of the online realm that their countless users attempt spontaneously to teach and transfer their specialized and general knowledge to others. Students expect to expand their learning domains beyond the boundaries of the classroom at any moment they need to ask question or have relationship with the teacher. Email, chat and online meetings promote the way the students communicate with their teachers and their lessons; this is a positive point for future education and training and all thank to the Internet, web and Virtual Social Networks.

Teachers and educational technology experts need to engage in study and research on a variety of media and learning needs, convert their scientific findings into practical plans and projects so that they can respond to specific problems in their classroom, their training activities and their school. This kind of

group and individual activities in schools and other educational establishments lead not only teachers and technology education experts into active teaching and learning-centered but also convert them into experienced, innovative and creative experts, by the way, the required technology naturalizes gradually in Education and we can soon turn traditional and unilateral teaching methods to active, dynamic and autonomous teaching methods using new technologies as the results such self-appointed experts research and achievement.

Most curricula that implement traditionally in school and are still partly implemented are teacher-centered and do not conform to the talents, abilities, needs and learning styles of students who differ. Applying computers and the Internet enables teacher to teach using new teaching methods, and having a wide range of programs and training methods and centralizing student's role considering the individual differences and greater attention to the student's needs, interests and talents can be effective in eliminating or reducing the educational gap.

Thus, many school systems in recent decades tried to improve learning with minimal time through entering and using the new technology. Research and surveys conducted in this field suggested mostly the usefulness of this tool in better learning and saving teachers and student's time. For example, a number of studies conducted in this field are as follows:

Hillary (2000) concluded that the students achieved greater educational achievement benefiting from these facilities and improved English language skills by investigating the effects of the Internet and networks on learning English. Ruzzo (2000) investigated the effect of computer-assisted instruction and information networks resources and found that these tools could increase the students' understanding. He stated that computer technology could be effective in teaching - learning field as it was used properly due to the high capabilities than other learning tool.

According to Beck (2008) computers are playing various roles in schools. They help to teach and facilitate the study of difficult material as well as create opportunities for students in applying technology, and these tools are useful for homework writing. Chuan and Chuo (2002) in his research investigated the impact of web-based training on high school students. Experimental group was trained using animation and the control group was trained using traditional method. Results indicated that the experimental group performance was more than average and better than the control group.

Chan Kendrasue (2001) investigated the impact of various networks in learning different parts of English language including conversation, reading

comprehension, writing, expression and grammar structures and concluded that using these tools could increase learning different parts of English language and generally learning English language. Hajailan (2003) in a research conducted in the University of Saudi Arabia investigated the impact of using internet and computer as an auxiliary tool in English language teaching and stated that these tools saved teaching time and enhanced students learning.

The main problem is that is there a significant difference between applying information networks and the student's English language learning and different sections of writing, reading comprehension, words and grammar based on different researches conducted in this field?

Research Method:
Statistical Population, sample and sampling
The statistical population was all high school students of Qeshm. The statistical Sample was 340 first grade female students. Sampling method included all first grade students in Tarbiat high school who were selected as experimental group, a total of 170. Tarbiat high school was selected because it was equipped with computer and information network. Then, 170 first grade students from Najmieh high school were randomly selected as control group.

Najmieh high school was selected because of the proximity of the two schools to maintain social and economic similarities.

Research Tools:
The researcher prepared a standard test from English language book based on experts and teachers; the test was written and included totally 20 questions, every question consisted of multiple parts. Content validity was used to obtain test validity as the test was prepared and confirmed by experts and teachers and retest method with an interval of two weeks was used to obtain test reliability with reliability degree of 0.73. Furthermore, Kuder Richardson method was also used to obtain retest reliability which was 0.72.

Methods:
The study was conducted for a three-month semester in English course on first grade students in high school. As after selecting subjects, the students were tested by researcher at the beginning of April to determine academic achievement of English language lessons as pre-test and the test was replicated at the beginning of June as post-test. In this research, the teacher was received the required training on information networks, especially in teaching English language before the start of the semester. The students were also learned how they could work with computers in Computer Basics Course in the last

semester. But the essential contents were also trained intensively in two sessions. During the study, the teacher offered briefly the subject matters using lecturing method in the first twenty minutes in each session and then asked the students who sat behind the computer to search in the information networks that their addresses were entered before. In the class and during applying the information networks, the teacher guided the students as necessary and helped them to find useful subjects. At the end of each session, the teacher gave homework to the students on teaching materials and asked them to do their homework using internet resources and participating with other students and sent e-mail to the teacher.

Results:

T-test for two independent samples was used in data analysis stage to investigate training method using information networks comparing traditional method. That is, the students in the experimental and control groups were compared in terms of the pretest scores. The analysis was performed to determine the primary differences between the two experimental and control groups. Pre-test consisted of four sub-tests of writing, reading comprehension, vocabulary and grammar. In this study, the score of each sub-test and the total test were calculated and the control and experimental group's average in sub-tests and the total scores were compared using t-test. Table 1 showed the result analysis:

Table 1: Comparison of pre-test scores in the experimental and control groups

test	control group	Experimental group	T	Degree of freedom	Significant level
Comprehension	0.733	0.639	1.233	338	0.218
Vocabulary	2.861	2.776	0.635	338	0.526
Writing	0.305	0.325	0.449	338	0.654
Grammar	1.195	1.239	0.403	338	0.687
Total score	5.095	4.981	0.564	338	0.573

As could be seen, there was no significant difference in pre-test of both control and experimental groups in sub-tests including comprehension, vocabulary, writing and grammar, and the total score of the pretest and because there was no significant difference in the sub-tests, in the next step, the independent t -tests were used to compare the experimental and control groups in the above mentioned sub-test scores. Table 2 showed the results of t-test comparing control and experimental groups in the sub-tests of writing, vocabulary, grammar, reading comprehension, and total score of pre-test.

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

test	control group	Experimental group	T	Degree of freedom	Significant level
Comprehension	2.967	4.435	7.984	338	0.001
Vocabulary	4.161	4.748	4.750	338	0.001
Writing	0.466	1.125	12.602	338	0.001
Grammar	2.232	2.930	7.023	338	0.001
Total score	9.827	13.239	9.749	338	0.001

As the results in Table 2 showed the experimental group performance was significantly better than the control group that was traditionally trained.

Independent t-test was used to determine significant level and investigate the effect of training using information between the difference averages of pre-test and post-test scores in the two groups and the analysis was explained in the following tables.

Table 3: The difference between pre-test and post-test in reading comprehension section

Groups	Frequency	D value	Standard deviation	Df	T	sig
Control	170	2.233	1.965	338	0.067	0.000
Experimental	170	3.795	1.584			

Based on table 3 could be found that there was a significant difference in the comprehension between the difference pre-test and post-test scores in experimental and control groups. As could be seen in the table, the calculated t value (8.06) was greater than the t critical and it was significant at alpha level

of less than 0.001. Furthermore, the difference between the two groups showed that there was some increase in post-test in both groups, but the rate of increase was higher in the experimental group. The average differences between the control group scores and the experimental group scores were 2.23 and 3.79, respectively. Therefore, the above results suggested that learning using information networks increased student learning in comprehension component.

Table 4: The post-test difference in the words and phrases meaning in the control and experimental test groups

Groups	Frequency	D value	Standard deviation	Df	T	sig
Control	170	1.172	1.553	338	5.683	0.000
Experimental	170	2.204	1.788			

Based on table 4 could be found that there was a significant difference between the average difference of pre-test and post-test scores in experimental and control groups. As could be seen in the table, t value (5.68) was greater than the t critical and it was significant at alpha level of less than 0.001. Furthermore, the difference between the two groups showed that there was some increase in post-test in both groups, but the rate of increase was higher in the experimental group. The average differences between the control group scores and the experimental group scores were 1.17 and 2.20, respectively. Therefore, the above results suggested that training using information networks increased student learning in words and phrases component.

Table 5:The difference between pre-test and post-test in the writing section of both control and experimental groups

Groups	Frequency	D value	Standard deviation	Df	T	sig
Control	170	0.227	0.556	338	7.640	0.000
Experimental	170	0.780	0.762			

The results of table 5 showed that there was a significant difference between the average difference of pre-test and post-test scores in experimental and control groups in History of Literature section. As could be seen in the table, t value (7.64) was greater than the t critical and it was significant at alpha level of less than 0.001. Furthermore, the difference between the two groups showed that the post-test value increased in both groups, but the rate of increase was higher in the experimental group. The average differences between the control group scores and the experimental group scores were 0.22 and 0.78, respectively. Therefore, the table results suggested that training using information networks increased student learning in writing component.

Table 6 : The difference between pre-test and post-test in the grammar   section of control and experimental   groups

Groups	Frequency	D value	Standard deviation	Df	T	sig
Control	170	1.355	1.114	338	2.732	0.000
Experimental	170	1.722	1.346			

The results of table 5 showed that there was a significant difference between the average difference of pre-test and post-test scores in experimental and control groups in grammar section. As could be seen in the table, t value (2.73) was greater than the t critical and it was significant at alpha level of 0.001.

Furthermore, the difference between the two groups showed that there was some increase in post-test of both groups, but the rate of increase was higher in the experimental group. Therefore, the table results suggested that training using information networks increased student learning in grammar component.

Table 7 : The difference between pre-test and post-test in total English language course in the control and experimental groups

Groups	Frequency	D value	Standard deviation	Df	T	sig
Control	170	4.989	3.881	338	8.580	0.000
Experimental	170	8.503	3.666			

As could be seen in table 7, there was a significant difference between the average of pre-test and post-test scores in experimental and control groups in total English language course. As could be seen in the table, t value (8.58) was greater than the t critical and it was significant at alpha level of less than 0.001. It should be noted that although the mean value increased in both groups, the rate of increase in the experimental group (8.50) was higher than the control group (4.98).

Therefore, the above results indicated that there was a significant difference between the average differences of pre-test and post-test scores in both experimental and control groups, and as it was observed the experimental group learning who were trained English language lessons using information networks was higher than the control group students who did not access to computers and information networks and were only trained through traditional method. Thus, in response to the main research question could be said that that there was a significant relationship between using information networks and student achievement in English language course.

Discussion and Conclusions

In the present study, the effect of training using information networks on the achievement of English language course including reading comprehension, vocabulary meaning, grammar, and writing was studied. In general, the findings indicated that there was a significant difference between the score of each components of English language course as well as the total score in post- test of control and experimental groups. Furthermore, there was also a significant difference between the average difference of pre-test and post-test scores of both control and experimental groups in English language course and its components. These results indicated the effectiveness of information networks on Learning English language and its components including reading comprehension, words and phrases meaning, writing, and grammar. Thus, the findings of the present study were in agreement with the results of earlier research. The impact of using information networks on the constituent sections of the English course showed that there was a significant difference between pre-test and post-test scores of students in the control and experimental groups and also the difference of pre-test and post- test of both groups in the reading comprehension section. These findings conformed to the results of Chuan. Kung and Chuo(2002) and Fenfang (2003) who stated that information networks helped the teacher in explaining the contents, review, and coordination between contents, made learning richer, more effective, more interesting and more alive for students and helped learners in more and

better learning. Fenfang said that new technologies such as computers were, in fact, an antidote against mere verbal learning that its use reduced the use of words or phrases regardless of meanings. The results showed also a significant difference between the post-test scores of the experimental group in the words and phrases meaning. Furthermore, the results showed that students in the experimental group who had used the information networks had better performance in the words and phrases meaning than the students in the control group and information networks enhanced students learning in the words meaning section. Students could easily find the meaning of every word and phrase in the shortest time using different dictionaries. The result conformed to the results of Fenfang (2003). The results indicated also that there was a significant difference in post-test scores between both control and experimental groups in writing section. Moreover, there was a significant difference between the difference in the pre-test and post-test scores of the two groups. Based on the significant difference in both the post-test scores of experimental and control groups and the difference between the pre-test and post-test scores of the two groups in grammar section could be concluded that information networks increased student learning in the grammar section. It should be added that using electronic tools such as computers and information networks with presenting a variety of color and animated grammar tables, word formation, order of words in a sentence, creation of verb form using the images, shapes and graphs facilitate learning grammar skills and encourage and motivate students to learn.

These findings conformed to the results of Chuan. Kung and Chuo(2002) and Fenfang (2003). The results showed a significant difference between the post-test scores of English language course in both control and experimental groups. Furthermore, there was a significant difference between the difference between pre-test and post-test scores of English language course in both experimental and control groups. Thus, based on the results analysis it can be concluded that applying information networks enhance student learning in the English language course. Information networks, as new tools, have the potential to transform teaching and learning and we can promote the quality of the teaching - learning in educational systems by using these tools properly.

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