

Evaluate the effectiveness of teaching methods with the use of smart boards on the self-esteem of students in first grade high school in Anar city

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ABSTRACT

The present study was to compare the effectiveness of teaching methods in course of work and technology with the use of smart boards and lecture method on academic achievement and self-esteem of students in first grade high school in Anar city. The population of this research is the all students in the first year of high school of first grade in Anar city in the academic year 2015-2014, that the number of those are 1044 people and of this group according to Cohen and Manion were selected the number of 120 people as an sample to the multi-stage cluster sampling. In this study, according to the variables studied and the type of data collected in order to describe them, were used of the measure of central tendency, dispersion and distribution of scores. In the statistical analysis stage due to the nature of the measurement scale, which is a considerable distance and hypotheses to analyze the data, as appropriate, were used of covariance analysis. The most important findings, which include the following, course education of work and technology with the use of smart boards, the most of the training in the traditional sense is to increase the self-esteem of male students. Interaction between the test conditions (test and control) and gender is significant and interactive variance between the time of measurement and gender explains education, at least, in one of the dependent variables between gender and test operation there is interaction. The effects of the trial action on the girls group were not significant. In the variable of academic achievement, the effects of action the trial is significant and the average experimental group in the posttest is larger than the control group.

KEYWORDS: Self-esteem, Smart Boards, New Technologies, Intelligent Teaching

1. INTRODUCTION

Today's world is a world of great transformation and imagines the future without the support of information technology and communications, it seems impossible. (Punie et al., 2006) In recent years, we have witnessed a revolution in information and communication, so that as a result of developments this century has been registered in the name of information and communications technology. (According to Taffler, 2010). All over the world, IT is developing a new revolutionary that new and significant capabilities has created in the range of human knowledge and to create tools that made change, the nature of work and life and to have followed broadly developments in all areas of social, economic and cultural, of course, teaching and learning, especially skill-based education is also not deprived of its effectiveness. (Karamipour, 2004). Education is the foundation for growth and development of human resources. Creating an education system, which is capable of training people to live in a changing world, is a top priority of modern society. In this regard, information technology is one of the important achievements of recent decades, which have an important role in self-esteem and quality of the teaching and with it, the potential to improve learning outcomes. (Duncan and Cator, 2013). "The effectiveness of any teaching model depending on the level of student engagement with learning opportunities. Continued every day the same teaching model often causes fatigue students. Learners' motivation has always been controversial, but today is faster this discussion, because of competition conducted in the attention of the students by the communications revolution the last 30 years. "(J., Ganisilver et al., 2001). E-learning as the modern educational technology is a modern phenomenon that has emerged in the era of information and knowledge-based society. Basic features of e-learning is interactive and communication property of it. What now, e-learning provide to us, is better practices for processing and giving meaning to data and recreate them. (Zarei, 2005). "Teaching is as dynamic and creative, which can cause learning commitment to learning" (Khorshidi et al., 2000) and does not accept realizing this, but by choosing a model or the appropriate teaching method. With this description, this study is in terms of learning more effective, more durable

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and easier in the classroom to the way of taking advantage of smart boards, so that he can review the effectiveness of this method on increase the student self-esteem.

Dramatic improvements in the era of information explosion is due to co-ordinate and optimize the use of all human senses, especially the sense of sight and hearing, because about 88 percent of human learning carried out by these two sense that their role in learning and deep understanding with the sustain content in mind than the other senses is much more. Such training stable by this senses are requires the use of special equipment and accessories, which it called educational media. (Educational tools). Such diversity means through inventions and discoveries that have been made under the influence and influenced the lives of people around the world, directly and indirectly, in a way that changed lifestyles and the effects of collisions and social relationships and behavior related to it, influenced by the customs and traditions and traditions and life of human civilization and gave it a new form. The invention of computers, satellites, television, radio, fax, video, and disk, mobile phones and conventional eliminates the boundaries that once separated the different people and cultures of the world, geographically, economically and politically and accelerate given the relationship between humans. (Ghourchian, Nader Gholi, 2000). The difference in educational media with smart boards with teaching aids is that educational media called to agents, equipment or tools, the entire content of education transfers to students, while teaching aids, which include objects, tools that are only part of the training will be used of them. (Ali Abadi, 1984). If a course, content, content delivery vehicles and teacher are known as a media and content receiver (student), education is implemented in full. If there are not any of the above factors, it is impossible to fulfill the training. So we can say training aids and educational media makes it easy to transfer content to learners. Thus, we can conclude that there are teaching aids, such as smart boards can enhance the learning rate and any of a variety of materials and teaching aids have played a significant role in teaching, learning and academic achievement. (Ali Abadi, 1984).

2. Importance and necessity of research

A student loves to learn a lesson pass a level and to the extent necessary and contemplate in a field, which is his favorite, so much of what was to expect the education system. This possibility in smart school will be readily available to students without it, which is harmful to his learning process and students. It may seem, increased interaction with students with computer tools to the decline of students' interactions with each other and with their teachers, as well, since the experience rather than memorizing information is more implementation on science, abstract science and human sciences, may be as much as science do not benefit from the smart tools. Education based on a smart board, these two weaknesses together has become a strong point. This means that in the human sciences and abstract sciences benefiting from group discussion of students to the weakness of human relations and the presence of a suitable tool for the acquisition of non-experimental science. The structure and architecture of the time in intelligent class, the students will be unlocked and the possibility of additional activities to them that would be suitable for the research group and run seminars and scientific areas and experience social interactions. Obviously, education is based on the smart board, also faced with challenges refers to some:

- ❖ Habits of students in traditional learning and industrial tests and teachers used to same methods.
- ❖ Teachers concern of the risk employment status due to their inability to provide the necessary training and sometimes impossible to know the true benefits of school.
- ❖ Lack of local models of smart classes and the need for equipment and large capital and the resistance of the parents of students.

Of course capital required for the facilities for training based on the smart board is lower than costs already spent in many private schools. But the most essential step in achieving the educational system after the consolidation of public opinion towards it is a fundamental attitude change in the basic definitions of education and of course in the implementation process uses of complete and accurate as have the possibility of modifying and development and conforms to the real needs of the educational environment. Now this software designed for limited and experimental and is running, but is not limited to schools that in their structure have the flexibility and boldness necessary to experience new methods of teaching and increase productivity. (Ivman, 2007).

3. The objectives of the study

3.1 The overall goal

The overall objective of the research: the effect of teaching with the use of smart boards on self-esteem and academic achievement in first grade high school students in Anar city.

3.2 The minor goals

1. Determine the effect of teaching, with the use of smart boards, on the student self-esteem.
2. Compare the effectiveness of teaching, with the use of smart boards, on self-esteem of male students than female students.

4. Hypotheses

1. Teaching with the use of smart board has a positive impact on the student self-esteem.
2. The effectiveness of teaching with the use of smart boards on self-esteem of male students is more than girls.

5. Defines the terms and concepts

5.1 smart board

A) Concept definition: It is the system that is made up of several media types, which may be visual, audio, text, video, audio, and animated images, which are used in order to deliver the message, interactive learning environments. (Shah Jafari, 2006).

B) Operational definition: A smart board in this study is the use of the boards, data and educational software in the course of business and technology to create engagement and achievement, educational goals, which handled the. (Educational multimedia).

5.2 Self-Esteem

A) Concept definition: a positive attitude towards their abilities and feel useful and being valued in the classroom and among classmates is the inner need all students at all levels of education and this sense, it could be one of the factors important academic success. This requirement is the same self-esteem, which it satisfies is leading to increased motivation and mental health. Self-esteem is related to personality development of students and has a considerable impact on the formation of his adult personality, because high self-esteem as adults are formed in childhood and adolescence and low self-esteem people's roots can be traced to their childhood.

B) Operational definition: In this study, self-esteem is measured using a questionnaire and then, analyzed by statistical software.

6. Literature

- International Association for Evaluation of Educational Progress (1989) about computers in education carried out research in two stages in 1987 and 1992, to assess the state of global computer application in terms of how to use computers, access to computers in schools, the nature of education in the field of computers, and to estimate the effect that computers on student and school curriculum. Participating in the study sample was representative sample of schools and elementary and secondary school teachers of the participating countries. Some of the results of the first phase of the study (1989):

- Countries have significant differences, in terms of access to the computer.
- There was not adequate hardware and software.
- Teachers are not adequately trained.

Some of the results of the second phase of the study (1992):

- More schools, compared to 1989 were equipped with computers.
- More hardware available in schools.
- All the students did not use a computer.
- Students learned more about computers outside of school.

In this study, it was observed strongly that in the field of technology, the teachers have a great impact on the students and they should combine technology in their teaching methods. (Nozok, 1997).

- Joni Tovoril (2000) in his paper as the teacher's role in the implementation of technology in education states that have a lot of experience, which students were familiar with certain applications such as your home to the used many of these programs. I am using this opportunity to learn from them and I am forced them to what they know to show to others. This provides opportunities for students to develop their leadership abilities and also noted that the teacher in the learning process is a partner with them and be their classmate and in fact, learn from each other, well I have experience students due to their self-esteem and confidence in use of technology, focuses to exploration, and because of that, the children pointing and clicking without fear of breaking something or loss of information. I always in such situations, I say to them: he and I knew it and I am forced them to what they have learned as well as demonstrate to me. (Pether, 2000).

- Delakol Fosouni (2001) also examined the impact of computer and internet use at learning and came to the conclusion that this tool, which enhances student learning, increases collaboration among them and improve their language skills in particular regarding the correct pronunciation of words.

7. Methods

In each study, the aim of selection methodology is to be specified to adopt the ways and means to achieve the objectives of the study, the more accurate, easier, faster and less expensive, which depends on the objectives, the

nature of the subject and research facilities. In the present study, due to the nature of the subject and purpose of the study used quasi-experimental methods with unequal comparison groups and work method is as follows:

At first, were selected 4 teachers in course of work and technology as experimental and control groups and the two teachers of work and technology in 6 sessions was teaching e-learning content to serve as the experimental group and from the 2 others were asked by speech, during the school year apply the teaching work and technology. Then, in the experimental group has been teaching the course with the use of smart boards (Smart Learning) and the control group were under common training at the lecture method. At the end of the school year from both groups will be taken tests academic achievement in course of work and technology and the results are compared. To investigate the relationship between two pattern teaching with each other and their impact on self-esteem and academic achievement. Picture of the plan is as follows. (The experimental groups, pre-test, post-test.)

T1 is pre-test, T2 is posttest, X1 is pretest of self-esteem, X2 is posttest of self-esteem and O is trial operation. (The use of smart boards).

$\frac{T_2}{T_2}$	$\frac{X_2}{X_2}$	O	$\frac{X_1}{X_1}$	$\frac{T_1}{T_1}$	Smart Group
					Presentations Group

7.1 The population

Population: is consisted of all high school first grade students in Anar city, using random sampling were selected 4 schools.

7.2 Sample size and sampling methods

Sampling method is multi-stage cluster to the this case from the high schools in Anar city selected four high school and between first grade classes, four classes were selected at random. Multistage cluster sampling method is more widely cluster sampling in this way, the population is divided into several layers of rank, so that the larger layer cover smaller layer. Researcher through the layers of larger selects multi-layer randomly, and at a later stage, a subset of selected layers, select a subset of randomly. Act of random sampling from the layer continues until the smallest sampling unit. (Khoramabadi and Erfani, 2010).

7.3 Research tools and data collection method

Data for the study were collected by questionnaire of self-esteem and achievement test and using the Internet, library, magazines. Data gathering is done in two ways: A) definitions of the library to get Internet access (databases, computer networks, satellite, etc.), similar articles and theses. B) The field consists of questionnaires and tests, questionnaires of self-esteem, which is set based on the Likert scale and measure students' self-esteem than course of work and technology.

- Self Esteem questionnaire

In order to collect information about self-esteem used the test "Self esteem", revised it. This test are consists of 58 questions to be answered yes and no. The test consists of four main domains and a polygraph subscales. The main factors of the test including the self-esteem of the public, social, family and school. The reliability of the test, Self Esteem estimated by Ganji by retest method (Test-Retest) and is reported to be higher than 0.7. The reliability of the questionnaire, again running on 30 people secondary-school students in Yazd province and then calculated the internal consistency coefficient and the coefficient alpha was equal to 0.82. Validity examined and approved by the experts and the content method. To examine the content validity of the questionnaire has been used from Table of contents-target and also with the many teachers of in course of work and technology has studied the compliance questions with headlines and made goals. To evaluate the reliability and validity of the test, after pilot tests of academic achievement on 5 students and calculate the reliability of the test by test break out, it was found that the correlation coefficient between the two halves of the test, about the following test is equal to vary from 0.85, that this coefficient, which indicates the high reliability of the test. Assigned to this study, we used of methods of descriptive statistics (including the calculation of the minimum and maximum scores, mean and standard deviation). Given that, the effect of independent variables (lecture, and teaching methods with the use of smart boards) and two dependent variables (self-esteem and academic achievement) have been studied in this research is to examine the research hypotheses were used of the test by analysis of covariance. Data analysis was performed with the use of statistical SPSS software.

8. Results

8.1 Description of data

Demographic variables

• Study groups

Table1. Status of participants according to the study groups

Reliable Percent	Frequency	Group
50	60	Experimental
50	60	Control
100	120	Total

According to the results presented in Table1, from 120 participants in this study, 60 patients (50%) were replaced in the experimental group and 60 patients (50%) were replaced in the control group.

• Gender

Table2. Status of participants according to the gender

Reliable Percent	Frequency	Group
50	60	Boy
50	60	Girl
100	120	Total

According to the results presented in Table2, from 120 participants in this study, 60 patients (50%) were boy and 60 (50%) were girls.

8.2 Hypotheses testing

Table3. Self-esteem variable descriptive indicators

Significance level	Degrees of freedom	Kolmogorov-Smirnov	Elongation	Tilt	Standard deviation	Mean	Number	Variable	Group
0.2	60	0.081	-0.86	-0.08	6.82	31.61	60	pretest of self-esteem	Experimental
0.2	60	0.1	-0.19	-0.44	6.6	34.88	60	posttest of self-esteem	
0.2	60	0.07	-0.5	-0.17	6.85	33.98	60	pretest of self-esteem	Control
0.2	60	0.11	0.83	0.39	5.69	30.26	60	posttest of self-esteem	

According to the Table 3 shows the descriptive indicators ranging self-esteem in pre-test and posttest. The results showed that in the variable of self-esteem, there is a normal condition.

8.3 Multivariate Wilkes Lambda index testing

Table4. Multivariate analysis index

Chi Eta	Significance level	error Degrees of freedom	Hypothesis Degrees of freedom	F	Wilkes lambda value	Effects
0.008	0.65	104	2	0.43	0.992	Effect of Gender
0.016	0.44	104	2	0.811	0.984	Effects of trials action
0.009	0.63	104	2	0.452	0.991	Interaction of Gender*Pre-test of self-esteem
0.001	0.93	104	2	0.065	0.99	Interaction of trials action* Pre-test of self-esteem
0.026	0.25	104	2	1.47	0.974	Interaction of Gender* trials action* Pre-test of self-esteem

Results related to covariance parity matrix showed that, M index box, statistically, is significant. ($P=0.002$, $F(142343, 9.3) = 2.855$, Box's $M=26.556$), as a result, is not established assuming the covariance equality, but because of the size of the groups assumptions against violation of it, is resistant and can be accepted on the assumption of equal covariance. (Tabachnik and Fidel, 2007, p. 252). Results Table 4 shows the effect of all the interactive effects of second order (Interaction of Gender*Education level and pre-test of self-esteem) and interactive effects of the first order (Gender*Pre-test of self-esteem, trials action*Pre-test of self-esteem) is not significant. In the results, there is a condition of equality or homogeneity of the regression lines in two groups.

A. Multivariate index

B. Variance homogeneity Index between groups

C. MANCOVA

Table5. Multivariate analysis index

Chi Eta	Significance level	error Degrees of freedom	Hypothesis Degrees of freedom	F	Wilkes lambda value	Effects
0.024	0.26	109	2	1.362	0.976	Pre-test of self-esteem
0.11	0.002	109	2	6.746	0.89	Effect of Gender
0.36	0.000	109	2	30.601	0.64	Effects of trials action
0.073	0.016	109	2	4.294	0.927	Interaction of trials action*Gender

Results Table 5 shows, interactions between experimental conditions (experiment and control) and gender is significant (Wilks' Lambda=0.927, $F_{(2,109)}=4.294$, $P=0.000$) is significant, and explains education 7.3% interactive variance between the time of measurement and gender. As a result, in least one of the dependent variables, there is interaction between gender, and trial operation.

9. Conclusion

Identify the effectiveness of teaching in course of work and technology with the use of smart boards compared with the lecture method on academic achievement and self-esteem of first grade high school students in Anar city was this study. There are several methods in the teaching-learning. Of what method applied for the course and when depends on the teacher and her ability to perform it. "The actual professional teacher", one who actually have competence in their work. He taught these three pillars, namely the recognition of the students, the subject matter and teaching methods, as well as efficient. He is fluent in on the various teaching methods and practices and according to the situation and subtle class is in the proper way to teach the class. (Callahan, translated by Ahmadi, 1996).

9.1 Teaching with the use of smart boards has a positive impact on the student self-esteem.

This study consistent and compatible with the study of Joni Tovoril (2001), Zolinker (2002) and Mahdian (2012). Self-esteem is the feeling of self-worth. This sense arises out of thoughts, feelings, emotions and experiences throughout life. Think about that are also intelligent or stupid, we feel that a person remain hated or loved or not to love. Thousands set up, evaluate and experience that we have of their cause to his have a pleasant feeling valued or conversely, unpleasant feeling of inadequacy. (Clemes and Bean, the translation of Alipur and Clark, 1994). A variety of factors impact on the student self-esteem, factors such as family support, availability of resources and the right conditions, culture and lifestyle, community, school and its facilities (Lopez, 2002). It can be taught with the use of smart boards provided these conditions and provides increased the student self-esteem.

9.2 The effectiveness of teaching with the use of smart boards on self-esteem of male students is more than girls.

Results of this study in line and consistent with the study of Sahebalzamani, Noruzinia, Alilo and Rashidi (2009), Dadpour and Panahi (2012), Seyfi Gandomani, Shaghaghi and Meybodi Kalantari (2011), (Mehdian (2012), Jafari Hajati (2006). Burke (2001), self-esteem knows his value judgments and feelings related to this judgment. He says, self-esteem a sense of competence and capability is meant to cope with the challenges of life and his own, worthy of consideration to achieve happiness. It seems that boys in it are more successful than girls and yourself, have more compatible with the environment and this issue has increased their self-esteem than girls.

9.3 Research suggestions

A) Practical suggestions

- ❖ According to the results, it is suggested smart learning method carried out in schools.
- ❖ It is suggested required equipment to carry out teaching multimedia cards are available in schools.
- ❖ In-service training courses in computer application to be held for teachers and law enforcement agents.
- ❖ Training and law enforcement be developed in accordance with the use of smart training.
- ❖ In evaluating the performance of teachers are considered to be the smart use of teaching methods, as an agent.

B) Research suggestions

- ❖ It is suggested the study of barriers to the development of smart education in schools.
- ❖ It is suggested that research on ways to increase the use of smart education in schools.
- ❖ It is suggested research in the field the effect of smart education on student's creativity.
- ❖ It is suggested that research be conducted on the development of smart education in schools leading countries, such as Japan, America and Malaysia.

9.4 Research limitations

A) The limits of researcher under control

- Limit quasi-experimental research method.
- Limitations of the survey to the students in Anar city.

B) The limits of outside researcher control

- Lack of awareness of student activities outside of school, during the project.
- Lack of awareness of family issues and emotional participant in the plan, during implementation of the project.
- Restrictions on access to sample more

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