

Effect of Blended Learning Environment based Learning (Interactive - Experimental), the Level of Health Literacy Students

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ABSTRACT

Objective: This study evaluated the effect of training on integrated learning environment (interactive - Experimental), the health literacy of students in the sixth grade, took place. **Methods:** This quasi-experimental method with pre-test and post-test, and the test and control groups are implemented. Therefore, in this study, and in group Blended learning environments (interactive experiment), is used to provide educational concepts, and in the control group than the traditional way of teaching, and the current environment for educational use. **Results:** The results showed that a combination of teaching methods (interactive - Experimental), compared with the conventional method to form meaningful improvement in the level of health literacy (25. 448 = F, 0. 000 = Sig), literacy health (24. 189 = F, 0. 000 = Sig), health education (18. 371 = F, 0. 000 = Sig), and preventive education (8. 501 = F, 0. 005 = Sig), in groups were tested.

KEYWORDS: Blended learning, experiential interactive, health literacy, health literacy, health education, preventive education.

INTRODUCTION

By 1980, more training methods based on knowledge transfer, with a greater emphasis on learning outcome, not the process of learning. The purpose of the training, the graduates are able to receive information by certified professionals, and teachers - the only means of knowledge transfer students are passive - they transfer. Tanghanakanvand (2006), argues that in this situation, as transferring information to teachers and students as passive recipients of knowledge transmitted by the teacher, were known. This way, the lowest active participation of students, consider, and to change it, change the structure of education, have been proposed (Nafisi and Nowroozi, 2011, p. 128).

Recognizing the need for training, many efforts have been made by the researchers, to find ways for training, and the effectiveness of these methods in this field, put to the test. Among these efforts, in recent years much attention has been using a combination of education, training and teaching and learning activities. Introduction of integrated curricula, teaching more than the merits of the program returns to the disadvantages of traditional subject-oriented curricula. Traditional curricula, course content to students, dry, lifeless, abstract and non-compliance with the quality of learning in the natural environment offered (Aghazadeh, 1999). In addition, whatever the depth of the training increases, the separation of living increases. This approach to learning the next one being, belief without reason and competition, rather than collaboration leads (Shaebani, 2008, p. 89). So the idea that education programs, ideas still provides interactive learning, has been widely criticized, so that discomfort Whitehead stated that, due to indiscriminate accumulation of thick, stagnant and without the students thought they stopped (Mohrmohammadi and Ahmadi, 2001, p. 200).

Statement of problem

Health is one of God's blessings God has bestowed on man and obviously, it must strive to maintain human health as a personal and social value, according to the Constitution of the World Health Organization, and the views of all nations and to all schools, one of the most important and most basic rights, and human needs have been considered, and achieve the highest level of social goals, and national governments to account. (Best, 2005) Each country to achieve health objectives, expected actions at national level forecasts, and future prospects by drawing review and identify their health

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needs, determine the scope of the challenges, strategies and macro approaches, and methods executive action plan acts (Eskandari et al., 2005, p. 4).

Despite improvements in global health during the twentieth century, health disparities are increasing. Evidence suggests that the reduction of health inequalities requires action in the field of community health determinants such as income, education, employment, political power and other relevant factors (Magford et al., 2010). Among the factors considered, the training has always been considered a key point.

Schools as the main training base, including the requirements of the process of achieving health literacy, and basic institution in any country in the creation of wealth and health. Education as a key factor in reducing the gap between rich and poor has been learned, and we can say there is a strong correlation between poverty and poor health (World Bank, 1996). The relationship between poverty and poor health, is not a simple relationship. This relationship, a relationship is many-sided and two-sided. Poor health can be a catalyst for the spiral of poverty and poverty in turn could lead to the creation and continuation of poor health (Grant, 2005, p. 4).

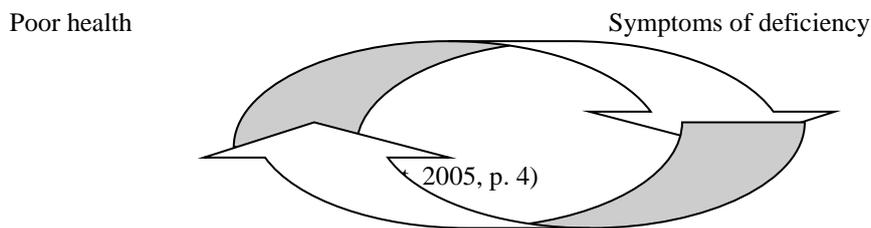


Figure 1: The relationship between poverty and poor health bilateral

Hence, it is vital that we know what the schools can, in equipping children with the knowledge and skills that they have, at the highest level, enabling the user to be active participants in shaping policies and ways that affect the health of individuals and society, according to (Ledger, 2001). Because of its impact on health and education, which is obvious, does not need any explanation. In this context, a large part of the international evidence clearly indicates that individuals with lower levels of education, the more likely to die at a younger age and are at risk of being compared to those with higher levels of education have (Higgins et al., 2008, p. 7).

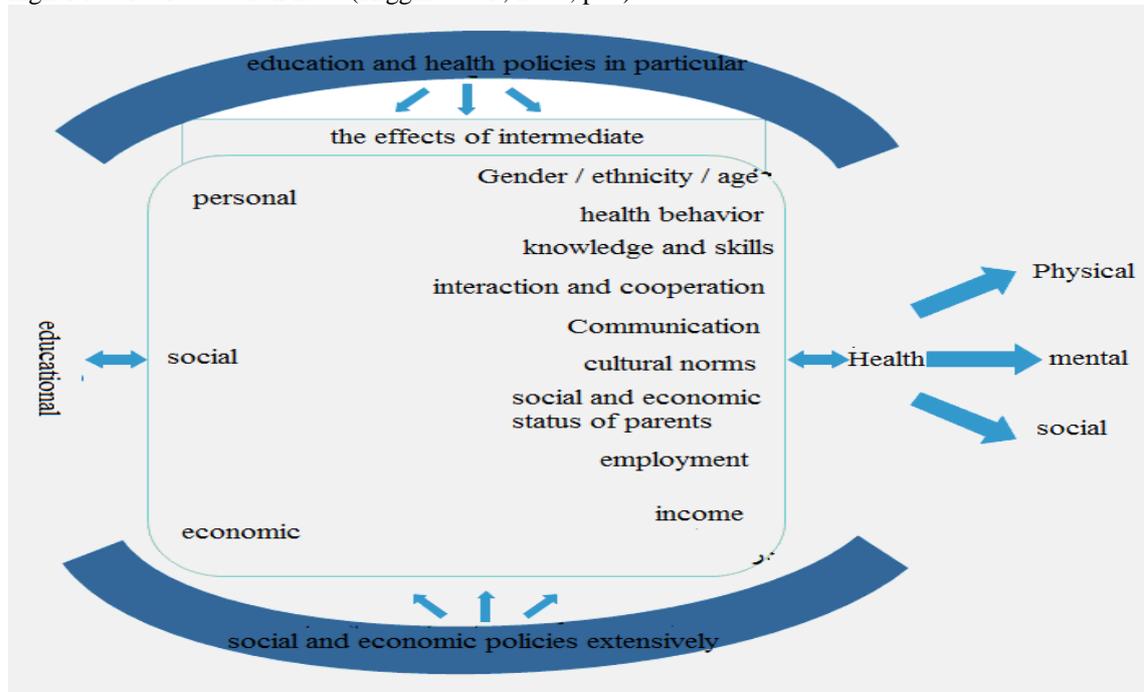


Figure 2: The relationship between education and health

Despite the importance of health literacy in individual and social life, studies indicate that, in general, in a low level of health literacy, and education level, the strongest correlation with the level of health literacy (Tehrani Bani-Hashemi et al., 2007, p. 1). Other studies suggest that eating habits in children and adolescents in our society, due to the low level of health literacy, and improper threat to this vulnerable age group (Kelishadi et al., 2005, p. 97). In this regard, the warning point, the analysis of the content of textbooks for elementary school-based health education component, indicating that each of the characteristics of the components, the balance is not considered (Izadi et al., 2010, p. 139).

And while the role of health education in schools, often in different ways, and is desired. The school education system, plays an important role in health education and promotion, in childhood and later plays, and improves students' personalities, attitudes, skills and knowledge of the (Izadi et al., 2010, p. 140). But despite all these things, and with all the importance that, in part related to the field of health education in schools, teaching and learning methods and techniques in this regard, has failed to take the necessary motivation, awakens students to learn. The problem stems from the fact that, in traditional teaching and learning methods, which today are known as passive methods, teacher role in the teaching process, and content expressed orally to the class and students without active role, just to hear her talk, and maintain the desired material. In such circumstances the groundwork for social development, academic achievement and intellectual development of students, not available. That's why today, active learning methods, and active learners a special place in the education debate has (Yaryary et al., 2008, p. 146). The use of active learning methods, such as the study of methods and ways, and many have been used. Although the use of a combination of learning methods, the method (interactive - experimental) none of the previous studies have not been studied. The fact is, the learning process does not happen in a vacuum, and the final product contains a variety of pervasive interactions with the world around him. Accordingly, the use of modern methods of active learning that is attractive, and functional basis in real-life experiences of students, the need is overwhelming. (Fallahian et al., 2012) Hence, the main issue of the present study was to compare the implementation of training, Blended learning environments (interactive experiment), and education in traditional environments and to assess the effects of these two methods of training, the promotion of health literacy students the sixth grade Sarpolzohab city, in the 2015-2014

Type and method of research:

This quasi-experimental research method, the pre-test and post-test, and the test and control groups are implemented. Therefore, in this study, and in group Blended learning environments (interactive experiment), is used to provide educational concepts, and in the control group than the traditional way of teaching, and the current environment for educational use.

Table 1: The research design used

Posttest	Independent variable	Pretest	Group
T ₂	X	T ₁	Experiment
T ₂	-	T ₁	Control

Research hypotheses:

- Blended learning-based learning environments (interactive experiment), the health education (health education) students, influenced.
- Blended learning-based learning environments (interactive experiment), the health education (health education) students, influenced.
- Blended learning environments based training (experimental interactive) on health literacy (preventive education) students, influenced.

The findings

First hypothesis:

Blended learning-based learning environments (interactive experiment), the health literacy of students, influence.

Table 2: mean and mean-adjusted analysis of covariance "health literacy"

Count	Error standard deviation	Average Adjusted	Average	Group
29	596 .0	25 .44	28 .44	Experiments (experimental interactive)
27	618 .0	88 .39	85 .39	Control (conventional method)

Above the average of the unadjusted and adjusted and standard deviations for the dependent variable (health literacy test scores), the two methods (experimental interactive teaching methods in the experimental group and the control group of the conventional method), show. Average adjusted treatment group (44 of 25) in the first place, and the mean of the control group (39, 88), is in second place. So we can say that, experimental interactive way of learning more influence on health literacy test scores of students have enjoyed.

Table 3: Analysis of covariance between Posttest "health literacy" groups

Impact factor	Sig	F	mean square	Degrees of freedom	Sum of squares	Change source
339.0	000.0	582.13	38.137	2	27.274	Corrected pattern
597.0	000.0	591.78	94.794	1	99.794	Constant
002.0	742.0	110.0	11.1	1	11.1	Pretest
324.0	000.0	448.25	41.257	1	41.257	Group
-	-	-	11.10	53	09.536	Error
-	-	-	-	56	100268	Total

One-way analysis of covariance, the comparison between the average of the grades in the above table, the moderating effect of health literacy between the two groups before the test. According to the results, because the row group (0.000 = Sig) is smaller than the significance level (0/05 = α), is that: (0.000 = p) with the (25.448 = F) Having said that, the null hypothesis is rejected and accepted research, also the room rate can be said to hold the pre-test, experimental interactive application method, in comparison with the conventional method of teaching in schools, about 32% of students in grades health literacy, defined and clarified.

The second hypothesis:

Blended learning-based learning environments (interactive experiment), the health literacy of students, influence.

Table 4: mean and mean-adjusted analysis of covariance "health literacy"

Count	Error standard deviation	Average Adjusted	Average	Group
29	554.0	4.40	45.40	Experiments (experimental interactive)
27	575.0	42.36	37.36	Control (conventional method)

Above the average of the unadjusted and adjusted and standard deviations for the dependent variable (health literacy test scores), the two methods (experimental interactive teaching methods in testing, and training in the conventional treatment group) showed gives. Note that for comparing the effectiveness of different teaching methods, the mean adjustment is used, because the average standard mode, and taking into account the comparison between the way there, seen that, Average adjusted test group (40, 4), in the first place, and the mean of the control group (36, 42), is in second place. So we can say that, experimental interactive way of learning more influence on health literacy test scores of students have enjoyed.

Table 5: Analysis of covariance between posttest "health literacy" groups

Impact factor	Sig	F	mean square	Degrees of freedom	Sum of squares	Change source
338.0	000.0	532.13	97.117	2	94.235	Corrected pattern
564.0	000.0	524.68	38.597	1	38.597	Constant
007.0	534.0	393.0	42.3	1	42.3	Pretest
313.0	000.0	189.24	87.210	1	87.210	Group
-	-	-	72.8	53	04.462	Error
-	-	-	-	56	83627	Total

One-way analysis of covariance, in the above table comparing the means of health literacy test scores between the two groups with adjustment for the effect of pre-test shows. According to the results, because the row group (0.000 = Sig), smaller than the significance level (0/05 = α) is that: (0.000 = p) with the (24.189 = F) Having said that, the null hypothesis is rejected and accepted research, also the room rate can be said to hold the pre-test, experimental interactive application method, in comparison with the conventional method of teaching in schools, about 31 percent of health literacy test score changes after the student, the determination.

The third hypothesis:

Blended learning environments based training (experimental interactive), health literacy affects students.

Table 6: mean and mean-adjusted analysis of covariance "health literacy"

Count	Error standard deviation	Average Adjusted	Average	Group
29	173.0	39.6	41.6	Experiments (experimental interactive)
27	179.0	32.5	3.5	Control (conventional method)

Unadjusted and Adjusted table averages and standard deviations for the dependent variable (health literacy test scores), the two methods (experimental interactive teaching methods in the experimental group and the control group of the conventional method), show. Note that for comparing the effectiveness of different teaching methods, the mean adjustment is used, because the average standard mode, and taking into account the comparison between the way there, seen that, Average adjusted test group (6, 39), in the first place, and the mean of the control group (5, 32), is in second place. So we can say that the way of interactive learning experience, the greater the impact on health literacy test scores of students have enjoyed.

Table 7: Analysis of covariance grades "health literacy" groups

Impact factor	Sig	F	mean square	Degrees of freedom	Sum of squares	Change source
312.0	000.0	005.12	31.10	2	62.20	Corrected pattern
527.0	000.0	101.59	75.50	1	75.50	Constant
065.0	061.0	675.3	16.3	1	16.3	Pretest
257.0	000.0	371.18	77.15	1	77.15	Group
-	-	-	86.0	53	51.45	Error
-	-	-	-	56	1999	Total

One-way analysis of covariance, in the above table comparing the means of health literacy test scores between the two groups with adjustment for the effect of pre-show. According to the results, because the row group (0.000 = Sig), smaller than the significance level (0/05 = α) is that: (0.000 = p) with the (18.371 = F) Having said that, the null hypothesis is rejected and accepted research, also the room rate can be said to hold the pre-test, experimental interactive application method, in comparison with the conventional method of teaching in schools, about 26 percent of medical students' literacy test score changes, the determination.

Fourth hypothesis:

Blended learning-based learning environments (interactive experiment), on preventive education affects students.

Table 8: mean and mean-adjusted analysis of covariance "preventive education"

Count	Error standard deviation	Average Adjusted	Average	Group
29	282.0	04.15	03.15	Experiments (experimental interactive)
27	293.0	85.13	85.13	Control (conventional method)

Unadjusted and Adjusted table averages and standard deviations for the dependent variable (grades preventive education), in both training (experimental interactive way in the experimental group and the control group of the conventional method), show. Average adjusted test group (15.04), in the first place, and the mean of the control group (13 of 85) in the second rank. So we can say that the way of interactive learning experience, the greater the impact on students' grades preventive education, has enjoyed.

Table 9: Analysis of covariance grades "preventive education" group

Impact factor	Sig	F	mean square	Degrees of freedom	Sum of squares	Change source
138.0	019.0	25.4	81.9	2	62.19	Corrected pattern
696.0	000.0	35.121	05.280	1	05.280	Constant
001.0	027.0	027.0	06.0	1	06.0	Pretest
138.0	005.0	501.8	62.19	1	62.19	Group
-	-	-	31.2	53	31.122	Error
-	-	-	-	56	11858	Total

One-way analysis of covariance, in the above table comparing the means of education, prevention and post-test scores between the two groups with adjustment for the effect of pre-test shows. According to the results, because the row group (0.005 = Sig) is smaller than the significance level ($0/05 = \alpha$), is that:

(0.005 = p) the amount (8.501 = F) Having said that, the null hypothesis is rejected and accepted research, also the room rate can be said to hold the pre-test, experimental interactive application method, in comparison with the conventional method of teaching in schools, about 14% of the variation grades preventive education students, the determination.

Conclusion

We hypothesized that, in the individual assumptions, the results show the effectiveness of teaching, based on integrated learning environment (experimental interactive) on health literacy, health literacy, health education and preventive education students, were studied. In explaining the results, we can train features Blended learning environments (interactive experiment), cited. Based learning in these environments, on the basis of empirical Interact being built. The principle is based on two basic principles of the theory of David Merrill (2002) that, in the study of problem-based learning model is presented. The interaction with other children in terms of education provided to students, the ability of other children who could well benefit. And experiential learning environment, which means providing the necessary conditions for real environments tailored to the student's personal life, it happens. This is the principle of integration, training in the basics of Merrill's perspective. In this approach the subject of education, not in the abstract but real life is derived from the students. Topics, based on the views and interests of students, and to the question posed. In this way, students find opportunities to engage with each other to solve problems, and learn the skills and knowledge to others. At the same time, they have learned to the issues that repeatedly, in a simulated environment like in real life, to learn and experience.

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