

The Effect of Using an Educational Website in Achievement of Bachelor Students in the Course of Basic Concepts in Mathematics at Al al-Bayt University

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The study aimed to detect the effect of using an educational site on the Internet in the collection of bachelor's students in the course of basic concepts in mathematics at Al al-Bayt University, and the study sample consisted of all students in the course basic concepts in mathematics in the first semester of the academic year 2014/2015 and the number (60) students, has been divided into two groups control group (30) and experimental (30) and randomly, studied the first officer in the traditional manner, and studied experimental second using an educational site on the Internet, was given two test achievement, after the end of the trial period, was to make sure validity and reliability of achievement testing, the study found the following results: There were statistically significant differences ($\alpha \leq 0.05$) in the collection of undergraduate students in the course of basic concepts in mathematics at Al al-Bayt University attributable to the method of teaching and in favor of educational site on the Internet. There are also significant differences ($\alpha \leq 0.05$) in the collection of bachelor's students in the course of basic concepts in mathematics at Al al-Bayt University, attributed to the sex variable in favor of females.

No statistically significant differences ($\alpha \leq 0.05$) in the collection of bachelor's students in the course of basic concepts in mathematics at Al al-Bayt University, attributed to the interaction between teaching method and sex of the students.

In light of these findings the researcher recommends the adoption of a number of recommendations.

Introduction

The information and communication of effective methods used in the creation of all students learning environment technology, and can be employed in the university environment, so as to provide for the students they teach courses at any time they want content, and communicate with the instructor

The aim of the dialogue with the teacher to get the relevant article of study information, and enables communication and information technology Students to take advantage of the internet to obtain additional information related to what they teach in school courses different.

Communications and information technology has entered all areas of life and has become affect directly and indirectly on activities exercised by the individual at home and at work and at school, at the university, and some studies suggest that research and technology communication and information in everyday life expands and increases its impact day after day, which means it affects the daily activities of the individual in (Joktas, 2012) his scientific and practical.

The use of information and communication technology requires the introduction of new technology in the educational system in order to improve quality Education, and some studies suggest that the integration of technology into the curriculum and difficult process imposed on teachers Possession of computer skills, as well as to change their attitudes towards the use of technology in education, and the provision of infrastructure in educational institutions in order to achieve the desired success of the merger.

Live human being atheist Twenty-century technological revolution in information technology, and the most important of which software, and network World Wide Web. The internet has entered all areas of life, including the educational process and scientific research, as well as Ready-made software in various branches of mathematics; this software has been tied up in education to be part of the methods mathematics teaching. (Shehadeh, 2015).

Courier sees that (2007) e-learning as a "creative way to present stationed around the learners an interactive environment, and designed in advance Very nicely, so it is available to anyone, anywhere, anytime, using the characteristics and sources of the Internet and technology Digital conformity with the appropriate instructional design of the learning environment of open and flexible distributed principles.

Kilani as (2006) pointed out that computer education programs is a kind of learning types are remotely connected to the students. A variety of electronic media such as the Internet or a computer or satellite or laser CDs, in order to facilitate the process of teaching and learning, including students interact with their teachers. (Shehadeh, 2015).

Mathematics and need a lot of practice and application in order to master the skills and understand the concepts, and the connection between these skills and concepts, hence the availability of adequate opportunities

for exercise makes student learning of mathematics is possible. The student is matched solve problems Its capabilities, and then gradually move to the most difficult issues after they have mastered the previous learning needed to be resolved, and therefore, the dread of Mathematics and lack of confidence in the ability to learn gradually go away. Geo-Gebra program and indicates that the student himself up to the concept of Sports before it reaches the concept of the teacher. (Electronic program guide for Geo-Gebra, 2012).

Problem and Questions of the Study:

Despite the efforts of the development of the teaching staff in universities to train faculty members centers especially new ones, in providing them with technological skills and employment in their lectures, but these efforts have not paralleled field research at the level of higher education, so that, studying the effectiveness of the internet in mathematics education.

The study determined the problem to know the effect of using an educational site on the internet in teaching a course in basic concepts mathematics for undergraduate students at the University of House compared to the traditional way, through answering the following questions:

1. Are there significant differences in the collection of undergraduate students in the course of basic concepts in mathematics due to teaching method? (Traditionally, the Internet)
2. What sex variable impact on academic achievement among students in the bachelor's course in basic concepts of mathematics at Al al-Bayt University?
3. What is the effect of interaction between teaching method and gender in academic achievement among students in the bachelor's course in basic concepts of mathematics at Al al-Bayt University?

Objective of the study and its importance

This study aims to identify the impact of the use of mathematics education site on the internet in the teaching course concepts basic math, students in the bachelor's Al al-Bayt University, which is expected to emphasize the importance of using the Internet in developing the educational process in higher education institutions.

It also may be useful in the development of new teaching methods in mathematics increase student achievement and reflected positively on the educational process, And perhaps serve the development of the teaching staff in universities and centers that train faculty members on teaching methods and new strategies include the use of the Internet in university teaching, which contributes to increase the effectiveness of methods University teaching.

Perhaps this study encourages educational websites designed to help students to learn at any time and in any place, thus contributing to raising the motivation they have to learn mathematics, which makes the Internet in the field of education is not a luxury, But the quality of opportunity for learning and education.

Hypotheses of the study

- 1) There were no statistically significant differences ($\alpha \leq 0.05$) in the collection of undergraduate students in the course of basic concepts in mathematics in Al al-Bayt University attributable to variable teaching method.
- 2) There were no statistically significant differences ($\alpha \leq 0.05$) in the collection of bachelor's students in the course of basic concepts in mathematics in Al al-Bayt University attributable to variable sex.
- 3) There were no statistically significant differences ($\alpha \leq 0.05$) in the collection of undergraduate students in the course of basic concepts in mathematics in Al al-Bayt University, attributed to the interaction between teaching method and sex of students

The study of terms

Internet: network linking computers in different countries of the world, and allow the exchange of information between users Network, linked to global sources of information. Educational site: a collection of web pages designed to teach a course in basic concepts of mathematics, and Thread on the Internet, and is used by undergraduate students in the course of basic concepts in mathematics at Al al-Bayt University. Collection: knowledge, terminology and concepts acquired by the learner as a result of passing through the experience of learning and teaching process, and it measured the mark obtained by the student in achievement test prepared by the researcher for the purposes of this study. Undergraduate students: they Almentzmon students in all undergraduate programs and enrolled in a course of basic concepts in mathematics ESF in Al al-Bayt University. Basic Concepts in Mathematics: A list of concepts offered by Department of Curriculum and Teaching at the Faculty of Educational Sciences at Al al-Bayt University , which for undergraduate students, is devoted to him three credit hours.

Determinants of the Study:

This study was limited to undergraduate students enrolled in a course in basic concepts in mathematics Al al-Bayt University for the first semester of the academic year 2014/2015. It is determined by the results of this

study on the nature of the educational site designer and the subject on the internet.

Previous Studies:

To find out the effectiveness of the online collection of university students with the decision of differential equations, Joffe aimed study (2000) the study sample consisted of 46 male and female students studying at the American University Colorado, were distributed to the experimental and control groups: (20) students experimental group and 25 students to the control group. The results of the study pointed out there is statistically significant differences at ($\alpha = 0,05$) between the means of the experimental and control groups in favor of the experimental group, has been interpreted by the researcher to build a website that gave them direct applications on the subject. To know the impact of online education as a strategy to two groups of students (Shiratuddin, 2001) also aimed study Malaysians studying information systems, and underwent the experimental group to learning courses via the Internet, and the control group is considering using the textbook, and the results of the study pointed to the existence of the impact of online learning on student performance in Positive and increased their knowledge, and study recommended the introduction of online strategy and teaching essential source contributes to the enrichment process Education and give students the skills.

Radadi study (2008) was aimed at detecting the teachers and supervisors attitudes towards the use of e-learning in teaching of mathematics in middle school, and study sample consisted of all mathematics teachers and supervisors, have led the study that the use of teachers and supervisors for e-learning and software large and with a high degree. Which aimed to identify the views of experts and specialists in the field of e-learning (Kanuka, K. 2008) In a study And the impact of information technology on teaching methods based on websites on learning experiences provided in techniques institutions of higher education in Canada. The study used a questionnaire and interview in the process of collecting data from respondents, and noted results that affect e-learning in higher education institutions: to provide greater opportunities for students and lecturers to interact, And thus improve the learning quality of courses for students.

It aimed to identify the impact of the use of e-learning to engage students low (Lee, 2010) In a study conducted by the achievement in Taiwanese universities in learning activities based on problem solving and in learning and self-organized activities provided in the special programs at these universities, and study sample consisted of 102 students from the first year in one of Taiwan's universities. The study used a questionnaire tribal and other dimensional in order to detect the perceptions of students' low achievement on the impact of learning using e-learning for their participation, the results of the study indicated that there is a clear impact on the e-learning low student achievement trends and increase the level of achievement. Has aimed to disclose the relationship between the use of e-learning and the quality of learning (Navarro, R. 2012) The study and education for students of Spanish universities, the study sample consisted of 126 male and female students, and study results indicated a relationship Positive and statistically significant between the use of e-learning and the quality of education, and that e-learning was able to improve the collection of university students in various courses.

That aimed to detect the effect of using the online process of learning and teaching in education (Jamal pour, 2006) the study showed the importance of using the Internet in the educational process as a way of supporting distance learning, and the possibility to be resolved Replace traditional education, especially in materials that require more thought because of the availability of information technology. The study also showed the importance of reconsideration of the use of information technology, especially the Internet in universities. The study also concluded that the importance of the Internet in improve the quality of teaching and learning, and taking into account individual differences among the educated, and the Internet can be considered a means for discussion and encourage students on self-assessment, and the use of the Internet in homework. The aim of the study (Abu loom, 2005) to detect the effect of the teaching of computer material online about the effectiveness of self computer with pre-service teachers, and the study included 97 male and female students, the study showed the presence of the effectiveness of the teaching culture computer using the Internet and in terms of statistical at $\alpha = 0.05$, as shown improvement and development of self-efficacy and development towards computer.

Through a review of previous studies, we can say:

- Most of which dealt with the importance of using the Internet and using them in the learning and teaching process, did not specify the degree and impact of services provided online.
- Most of the previous studies have shown the impact of Internet use in the educational process, especially when compared with the traditional method.
- What distinguishes this study from previous ones, they tried to detect the effect of using the Internet to increase the achievement of the bachelor's students, which may increase the use of the Internet in university teaching

The Sample of Study:

The study sample consisted of all students enrolled for the course in the basic concepts of mathematics in the first semester of the year 2014/2015 and the university's (60) students, has been divided into two groups control

group (30) and experimental (30) and randomly, and Table 1 shows the breakdown by sex variable and way of teaching, so that the control group studied using the traditional way (lecture and discussion), while the experimental group studied using the Internet.

Table (1) of the study sample distribution by sex and way of teaching

Sex and way	Female	Male	Total
Control	18	12	30
Experimental	18	12	30
Total	36	24	60

Tools of the Study:

To achieve the objectives of the study was the development of the following tools:

- 1) Design an educational site on the Internet: The researcher has designed a special education site to teach the course contents basic concepts in math-oriented according to the regulars.
- 2) Achievement test: The test measures student achievement in the preparation of the contents of the course, according to the following steps:
 - Determine test objectives to be achieved.
 - Specification Table includes determine the weights of each paragraph in the test in terms of content and level of preparation.
 - Building through the paragraphs of the test specification translation table cells in the light of the content and level of each cell.

The test on the number of arbitrators from specialists show, it has taken their views, and so the test was considered enjoys the truth.

It was also to ensure the stability of the test through its application to an exploratory sample of those who have studied the course in the previous semester and then re-apply on the same sample after two weeks, and calculate the Pearson correlation coefficient between the students' responses in both times, reaching reliability coefficient (0.83), was considered appropriate for the purposes of the study.

Results of the Study and Discussions:

This study aimed to investigate the impact and effectiveness of the educational web-site to teach a course in basic concepts of mathematics content, and the application procedures of the study and then make a statistical analysis according to the Statistical Package for Social Sciences (SPSS). The results of the study showed the following: Table 2 shows the means, standard deviations, to perform the study sample (control and experimental) on the test grades tribal and taught by teaching and by the way, gender.

Table 2

The sample of the study on the test grades taught by tribal and according to the way of teaching and gender performance

After standard deviation	After mean	Before standard deviation	Before mean	number	gender	Group
14.7	76.0	12.2	22.4	12	Male	Control
12.6	79.6	9.8	23.1	18	female	
13.4	78.2	10.6	22.8	30	Total	
14.4	73.1	10.9	14.7	12	Male	Experimental
10.5	87.8	12.3	25.3	18	female	
14.0	81.9	12.7	21.0	30	Total	
14.3	74.5	12.0	18.5	24	Male	Total
12.2	83.7	11.0	24.2	36	female	
13.7	80.0	11.7	21.9	60	Total	

The table (2) shows there is no difference in mean total on the test grades tribal control group (22.8), And experimental group (21.0), and in favor of the control group, meaning that the control group in the best performance of the Group Experimental, that there is also a difference between the arithmetic mean of the test overall grades tribal for males (18.5) and females (24.2), and in favor of females. It has been tuning these differences statistically using covariance analysis.

The table also shows (2) that there is a difference between the arithmetic mean of the test overall grades taught by the control group (78.2), And experimental group (81.9), and in favor of the experimental group, that is, the experimental group perform better than the performance of the Group Control, and that there is a difference between the arithmetic mean of the test overall grades taught by males (74.5), and female (83.7), teams of (9.2) in favor of females.

To find out whether these differences between averages are statistically significant at the significance

level $\alpha = 0.05$ It has been taught by the achievement test data were analyzed using analysis of covariance, in order to adjust the differences statistically to the pre-test. And Table 3 shows the results of this analysis.

Table 3

Covariance analysis accompanying the results of the performance sample of the study on the test grades taught by

Level of significance	Value (f)	Mid squares	Free degree	Total squares	Sources
0.00	356.37*	9056.41	1	9056.41	Participant
0.00	18.54*	471.06	1	471.06	Methods of teaching
0.02	5.94*	150.96	1	150.96	Gender
0.80	0,07	1.74	1	1.74	Effectiveness the way with gender
		25.41	55	1397.77	Mistake inside groups
		187.76	59	11077.93	Total

Results concerning the answer to the first question: which reads as follows?

"- Is there a statistically significant in the collection of bachelor's students in the course of basic concepts in mathematics due to differences teaching method? (Traditionally, the Internet). "

It has emerged from this question the following hypothesis:

No statistically significant differences ($\alpha \leq 0.05$) in the collection of bachelor's students in the course of basic concepts in mathematics In Al al-Bayt University attributable to variable teaching method.

The results of the analysis of covariance table (3) to perform the study sample on the test grades taught by the presence of a statistically significant difference ($\alpha \leq 0.05$) in the collection of undergraduate students in the course of basic concepts in mathematics due to the method of teaching through educational site on the Internet, reaching statistical value (F) calculated (18.54), which is statistically significant at the level of ($\alpha \leq 0.05$), as the results of the study on the posttest appear in the table (2) that the differences belonging to the experimental group, It was the middle of arithmetic (81.9), while the arithmetic mean of the control group (78.2). It can be attributed to the method of teaching through educational site on the Internet based on the interaction between the learner and material on the site, also allows students review course material on the site many times without feeling embarrassed and bored, and adapt to the scientific level of the student, which the student can learn absorbed by the speed and correct mistakes without feeling ashamed of his colleagues, as well as they take to the principle of promotion and encouragement which corresponds to the good response to the student. These things increase the motivation to teach students at which it increases in academic achievement. And way of teaching through the educational web-site rich multiplicity of examples and exercises, linking theoretical knowledge abstract practical and sensible application, which establishes the concepts in the minds of students, and that increases academic achievement.

The results of this study agreed with some studies on the effectiveness of teaching through an educational website,(Navarro & Rodriguez, 2012), (Shiratuddin, 2001),(Joffe, 2000), (Jamalipour, 2006),(Radadi 0.2008), (Abu loume, 2005), (Lee, 2010), (Kanuka, K.2008), The results of this study agreed with the orientations of the(NCTM) National Council of Teachers of Mathematics in the United States of America, of the need to use technology in math education.

Results concerning the answer to the second question: which reads as follows:

What is the impact of the variable of gender in academic achievement among students in the bachelor's course in basic concepts of mathematics at the AL al -bayt University?"

It has emerged from this question the following hypothesis:

No statistically significant differences ($\alpha \leq 0.05$) in the collection of bachelor's students in the course of basic concepts in mathematics in al al-Bayt University attributable to variable sex. Seen from the table (3) that there are statistically significant in the collection of bachelor's students in a course in basic concepts of differences mathematics attributed to gender, reaching statistical value (F) calculated (5.94), and this value is statistically significant at the level of Significance $\alpha = 0.05$ Results of the study on the post-test as shown in the table (2) that the return differences in favor of females, reaching their midst arithmetic 83.7 while the mean for males 74.5. And that this result can be attributed to the female that more serious attention and study in general than male students in most courses university, In addition, the results of the students at the university and in the normal position better than male students. Note that the network concerned with the development of online students' abilities regardless of their gender, and that it was not aimed at a particular class of students without the other.

The results of this study does not agree with the study (Alshdevat, 2007) which indicated no differences between the sexes is due to learn gender learner, nor do they agree with the study (Abu Raya, 2010), which indicated the presence of differences and in favor of male students.

Results related to answer the third question: which reads as follows:

"- What is the effect of interaction between sex and teaching method in academic achievement among students in the bachelor's course in basic concepts of mathematics at the University of the house?"

It has emerged from this question the following hypothesis:

No statistically significant differences ($\alpha \leq 0.05$) in the collection of bachelor's students in the course of basic concepts in mathematics in Al al-Bayt University, attributed to the interaction between teaching method and sex of the students. Seen from the table (3) that there is no statistically significant differences in the collection of bachelor's students in a course in basic concepts of differences Mathematics is due to the interaction between teaching and Gender way, reaching statistical value (f) calculated (0.07), and this value is not statistically significant at the significance level ($\alpha \leq 0.05$). This result is attributable to the opportunities that are in front of the sexes and equally it provided by this study, and they were subjected to the same conditions and variables, add this to the teaching methods used focused on the development of students' skills and different abilities regardless of their gender, which seeks to increase academic achievement.

The results of this study are consistent with both: study (Alshdevat ,2007), and the study of (Abu Raya, 2010). In light of the results of this study, the researcher recommends the following:

- The use of teaching method using the Internet in university teaching in mathematics and other detective school.
- Design and provide educational sites on the Internet for various courses in the bachelor's Plan.

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