Effectiveness of Moodle System on the Achievement of a Course Among the History Department Students

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Abstract: The current study aimed to identify the effectiveness of the use of the moodle system on the achievement of the contemporary history of the Third World in the Department of History, Faculty of Basic Education, Babylon University. In order to achieve the aim, the researchers followed the quasi-experiment al approach and applied the research to a group of second stage students. They were 64 students divided into two groups of experimental and control equally. After analyzing the results, the experimental group showed superiority over the control group, i.e., the system of the model was influenced by the student's achievement. The researchers recommended several recommendations, for example, achieving tests by moodle system and shifting gradually to dispense with the traditional method of testing.

Key words: Achievement, Department of History Moodle, e-Learning, history of the contemporary Third World, experimental group, Babylon University

INTRODUCTION

The system of education is one of the components of contemporary society. The role of this system is not to bring and present information and to facilitate its sources for students but also to present and evaluate this information. In light of the flood of information, the rapid change and the rapid growth of knowledge that resulted from the information revolution we are now experiencing, the world has been living a great scientific and technological revolution that has had an impact on various aspects of life. Education has become called upon to seek new educational methods and models to meet many challenges at the global level including increasing demand for education, a shortage of educational institutions, information in all branches of knowledge as well as the need to take advantage of technical developments in the field of education. As a result, e-Learning has emerged to help the learner learn at the right place and time through interactive content based on multimedia (text-sound-image-animation) and on various electronic devices, so, e-Learning is a new type of education Imposed by the scientific and technological changes taking place in the world to this day.

Traditional methods and methods are no longer able to cope and the need to adopt another type of education, e-Learning which is a new trend and has become a modern and important tool through the spread of the internet has become urgent. It is necessary to have a management system supported in such a way as to ensure the control of the educational process effectively and clearly which gives clarity of vision in the ability to measure the effectiveness of the educational process on the Internet and the educational management systems and educational content including moodle. One of the most important e-Learning solutions is the basic software based on the management of teaching and learning activities in terms of courses, interaction, exercises, exercises and tests. Several studies have been conducted to find out how they affect the process of teaching and learning at the university and other educational institutions. For example, recommended Clarey (2007) the need to use the Moodle system in university education, aimed at identifying ways to employ model system by lecturers and develop its construction. The study of Moloney (2006) pointed to the importance of the system Moodle in education) In electronic education J.

The study of Marikar and Jayarathne (2016) student's overview of the student's online capabilities of course that we have implemented in the Moodle platform in Sri Lankan University and indepth understanding of e-Learning, found that there is an impact in the result.

Therefore, the researchers seek to know the effectiveness of the use of Moodle on the achievement of a course for students of the Department of History, Faculty of Basic Education in University of Babylon.

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Problem statement: The problem of searching the answer is limited to answering the following question; What is the effectiveness of the application of the Moodle test on the achievement of the course of history of the Third World contemporary students of the Department of History Faculty of Basic Education at Babylon University?

The research objectives: The current study aims to identify, the effectiveness of the Moodle test on the Achievement of Contemporary History of the Third World History of the Students of History Department, Faculty of Basic Education, Babylon University.

The research hypothesis S: In order to verify this, the researcher put the following zero hypothesis, there was no difference at 0.05 between the average achievement of Moodle pilot students and the average achievement of students in the control group who were tested in the traditional way in the contemporary Third World History course.

The research significance: The researcher expects that this research will gain importance through the importance of applying the means of e-Learning in universities. In general, this can be clarified in the following points:

Scientific importance: Utilizing the applications of e-Learning in assessing the achievement of courses for students of the history department and to know their effectiveness.

Practical importance: Analyzing the effectiveness of the application of the Moodle test on the achievement of the contemporary world history course for students of History Department, Faculty of Basic Education, Babylon University.

The research scope and limitation current search specifies:
- Students of the second grade studying in the Department of History, Faculty of Basic Education, University of Babylon in the academic year 2016/2017
- Moodle and traditional test scores in the Third World history course which is taught by the Department of History, Faculty of Basic Education, University of Babylon, second semester

Definitions of terms: In this section, definitions for the main terms are presented.

Effectiveness: Effectiveness is the degree to which something is successful in producing a desired result; success (Anonymous, 2010). The researcher defines the level of cognitive achievement as measured by the grades obtained by second grade students, Department of History, Faculty of Basic Education, after answering the terms of the achievement test using the Moodle system for the course of contemporary world history.

Moodle: Britannica defined it as an open source learning management system designed on the basis of education to help trainers provide an e-Learning environment. The researcher defines it as an electronic system through which second-grade students test the Department of History, Faculty of Basic Education to find out the extent of achievement of their degrees in the History of the Third World contemporary.

Achievement: Achievement is "measure the extent to which a student has profited from instruction and life experiences compared to others of the same age or grade" (Anonymous, 2013).The researcher is aware that the expected impact for second-grade students Department of History College of Basic education which is the average degrees of achievement decision of the history of the contemporary world today as a result of their test Moodle system.

Rapporteur of the contemporary history of the Third World: The researcher defines it as: topics in the subject of the history of the contemporary history of the Third World. The second semester is taught in the Department of History, Faculty of Basic Education.

Theoretical and previous studies
The concept of e-Learning: e-Learning is a method of learning using modern communication mechanisms from computer, networks, multimedia, voice, image, graphics, research mechanisms, electronic libraries as well as internet portals either remotely or in the classroom. The use of technology of all kinds in communicating information to the learner in the shortest time and effort. e-Learning is the most used term as we also, use other terms such as web based, electronic education, online learning, e-Instruction, education (Al-Ajrash, 2017).

Learning management systems: With the increasing progress in information expansion, the rapid spread of e-Learning in universities and educational institutions and the growing needs of the learner for rich multi-source environments for self-research and development, development and search for solutions to satisfy the

learner's desire and facilitate access to information and direct connection between him and the teacher.

The steps to progress to meet the desire of the learner have begun from the Internet and then the emergence of e-Learning which has revolutionized the field of education and then began e-Learning innovations that promoted education and gained a great push forward, in terms of motivation and students of traditional style and increase the enthusiasm of the teacher in terms of Break the routine in the educational process.

The educational process of this type has become an interesting interactive process in a continuous development as long as there is research and investigation of what is new in the world of e-Learning which has not limited to educational sciences but extended to other applied sciences (Kanninen, 2008).

Computer applications in education have a history that began in the 1950's and spread with the spread of personal computers. As maturity and change in the ways of computer use in education have evolved throughout history, many computer-related terminology has emerged in education, learning is one of the aspects of computer integration in education "that was accompanied by great welcome but sometimes misunderstood and used negatively (Watson and Watson, 2007).

Learning Management Systems (LMS) are a framework that encompasses all aspects of the learning process. The availability of the infrastructure that organizes the educational content, the learning objectives at the individual level and the entire educational level, make the development of the learning process meet these goals (Paulsen, 2003) and provides the information needed to oversee the learning process as well as not only the content exposure but also, the control of the course registration process and the classroom management process.

According to Brown and Johnson (2007), the use of a learning management system in the learning process provides many features, including a centralized learning environment, recordings and reports to improve performance as well as direct assessment. Change the product specifications, requirements and forms, allow the download of new products or services, allow students access to the same course and the same assessment materials and also provides the possibility to monitor the number of participants in the course at one point.

In addition, this system allows employees to manage updates and evaluations electronically and works on regularity and legal compliance. Because of the many advantages in the perfect learning management system, many systems are trying to emulate this system, different

among them with central features, some of which are owned by some of them such as WebCT, e-College, Learning Space and Blackboard and others are open source like Moodle, Claroline Ghane, ILIAS and Since, the current study is centered on the system of the model, the next part aims to define this system.

Moodle system: The Moodle is an open source software and is distributed under the GNU General Public License. This means that it is a free program that allows anyone to download and use it. This system works on any computer that supports PHP, e.g., Unix (Unix), Linux, Windows (Windows). It also supports databases that use MySQL. The language supported by Model supports many languages including Arabic. The average user has the option to modify the localization of the system's keywords as he sees fit (Paulsen, 2003).

Recently, in early May 2013, Moodle launched the Beta Version of the 2.4Moodle which adds a milestone to the rest of the learning systems, reviewed and explained (Aberdour, 2013):

- Open visa initiatives
- Initial formatting
- Program management feature
- Use upgrades and updates to course list

Advantages and potential of the Moodle program: The Moodle course provides full on-site training with the addition of new students, teachers and curricula. It offers a range of tools that will help teachers to disseminate educational content and control students including.

A tool for placing various subjects on the site: It provides the possibility of publishing more than one curriculum on the same site.

The tool to send tasks and duties to students: The teacher can put a task or duty to students in the curriculum and this duty is often in the form of research or paper work that students perform at home and then send them through the site in the form of a file.

Notes and notes for students: Teaching through the program can put notes or notes for students and students can discuss these notes with the teaching through the site.

Student reference tool: Teaching can place a set of references on the site that may be books or web sites with a profile.

The forum for dialogue between students and teachers or between the teachers themselves: The teaching through the program can create multiple forums in which students discuss with each other or their teachers or the discussion between the teachers themselves and can set special controls to enter the forum.

Referendum tool: A teacher can put a referendum on a question that is important, such as their understanding of a topic in the course.

Exercise and testing tool: Teaching through the site can create a group of exercises under different topics (creating a bank of questions) and then choose a set of questions and put them in each subject of the course:

- Question of right and wrong
- Multiple choice question
- Short answer question

The student knowledge tool for their grades: The program provides students with the ability to know the grades obtained, especially in the exercises and tasks or tools that have been pre-specified teaching degrees (Al-Ajrash, 2017).

Literature review

Previous studies: Aims study of Al-Yousef and Al-Musheeqh to identify the effect of the use of Moodle system on the second grade student's achievement in the English language course in Riyadh. The researcher used the quasi-experimental method to achieve the research objectives. The stories was designed electronically on the Moodle system and achievement test was designed on stories. Then the achievement test applied on a sample of 78 students, divided into two equal groups, one experimental and the other control.

The study found that there were statistical differences at the level of 0.05 among the average scores of the experimental group and the control in the post-achievement test for the benefit of the experimental group. Based on the result reached, it was recommended that the system should be applied in the design and teaching of the courses on this system.

The purpose of Dahlan study was to determine the effectiveness of an enhanced program in the Moodle system to equip the students of basic education at Al-Azhar University with the skills of daily planning of the lessons and their applications. In order to achieve this, 60 students from the basic education department chose to divide them into two equal groups, of the postgraduate students at Banha University. The study found that the achievement of the study was high and the researcher recommended using the model and avoiding the traditional methods (Dahlan, 2009).

MATERIALS AND METHODS

The researcher relied on the quasi-experimental approach because it is the appropriate method for the purpose of research aimed.

Experimental design: The researcher examines the effect of the independent variable on the dependent in order to ascertain the validity of a specific information or to try to arrive at generalizations that govern the effect of the dependent variable. Therefore, the researcher adopted an experimental design with partial control of two groups, one experimental and the other control, for its relevance and research objectives as can be seen in Table 1.

The research population and sample: Means all individuals or persons who constitute the subject of the research problem, from which the results of the research can be distributed. Therefore, the researcher must define the research community precisely and that the results of the research should be limited to the society from which the research sample was selected.

The current research community represents the students of the Department of History, Faculty of Basic Education at Babylon University for the academic year (2016-2017) of 366 students.

The class selected for the experiment was selected, so, the researcher chose random sampling method (B) to represent the experimental group that was tested in the Moodle system. A (A) was chosen to represent the control group that was tested in the traditional way. The number of students (64) was 32 students for the experimental group and 32 students as can be seen in Table 2.

Equivalence groups: Equivalent groups are composed of a control group and an experimental group and an analysis of the covariance or t-test was used to evaluate

Table 1: Experimental design

Groups	Dependent V.	Independent V.
Experimental group	Tested by moodle	Achievement
Control group	Traditional test	

Table 2: Research sample

Groups	No. of students
Experimental B	32
Control A	32
Total	64

Table 3: The mean, the SD and the t value (calculated and tabulated) of the two study groups in the 1st month scores

Group	No.	Mean	V	SD	df	Calculated	Tabulated	Sig.
						t-values		
Exp.	32	76.66	140.7	11.86	62	1.09	2.00	Not significant at 0.05
Cont.	32	73.53	119.5	10.93				

Table 4: Mean, SD and calculated and tabulated value of the results of the t-test for intelligence scores for students of the two groups

Group	No.	Mean	V	SD	df	Calculated	Tabulated	Sig.
						t-values		
Exp.	32	36.56	35.05	5.92	62	0.38	2.00	Not significant at 0.05
Cont.	32	36	31.7	5.63				

the groups in terms of particular variables (Gay *et al.*, 2009). Although, the researcher followed the random method in the selection of the two groups of research has been keen to make parity between them in some variables that may affect the results experiment.

Student's grades in the first month of thecourse: The researcher obtained the grades of the students of the research groups (experimental and control) from the examination committee record and after the adoption of the appropriate statistical treatments represented by the mean of 76.66 and the variation of (140.7) for the experimental group. The control group has an arithmetic mean (73.53), variance (119.5) (1.09) is less than the scale (2.00) with a degree of freedom (62). This indicates that they are not statistically significant, confirming that the two groups are equal in the first month as can be seen in Table 3.

Intelligence test (Raven): The researcher applied the John Raven test for the successive matrices to the Iraqi environment for measuring intelligence, in order to identify it with honesty and consistency. It has been relied on in many studies and it is one of the most famous tests that are free from the linguistic component, whether verbally or in the form of pictures and drawings. In 60 form divided into five sections (A-E) Each section (12) form (Kaplan and Saccuzzo, 2017).

After the correction of the responses, the average score for the experimental group was 36.56 while the average score for the control group was 36. When the t-test was used, the difference was not statistically significant (0.05) where the calculated t-value (0.38) is smaller than the tabular t value of (2.00) and the degree of freedom (62). This indicates that the two groups are equal in the IQ test and Table 4.

Extraneous variable: Brown (2002) described a set of extraneous variables that affect the correct interpretation of a statistical study.The researcher tried to adjust exogenous anddependent variables as follows:

Differences in the selection of sample members: Although, the sample was randomly chosen, the researcher attempted to control the differences in the selection of the sample members, the grades in the first month and IQ test scores and by making statistical equivalence among sample members in some variables that can have an effect on the dependent variable.

Measuring tool: The researcher used a standardized measuring tool (the achievement test) and applied it to the students of the two research groups (the experimental group and the control group) at the same time to measure the resulting change in their level of achievement.

Scientific material: The researcher identified before the start of the experiment the subject of the study of the students of the two groups of the two groups as they were unified, representing the 4th-6th subjects of the contemporary third world history which is in the second grade, the history section for the academic year 2016-2017.

The research instrument: The researcher used an achievement test instrument because this is important tool in the educational process and they are an advanced organized and planned process.

Formulation of test items: The test is defined as a structured procedure for measuring a characteristic through a sample of behavior (Salam, 2013). Since, the current research requires the construction of a test in order to know the effect of the system in the achievement compared to the traditional method and the absence of a ready test characterized by honesty and stability and covers the concepts contained in the decision of the researcher built a test based on the behavioral purposes that have been formulated.

The researchers used in the formulation of the test paragraphs a kind of objective tests is a multiple choice because it is one of the most flexible objective tests which can be used in the evaluation of educational goals of different levels of knowledge and helps to overcome the problem of correcting the answers of a large number of students (Allam, 2011).

Therefore, the researcher prepared (60) test paragraphs of this type, each of which is followed by four alternatives, one of which is correct and the other wrong. One class is assigned to the paragraph that the student answers correctly and zero to the wrong answer.

The validity of the test: After the researcher has built the test, it is necessary to know its validity. The validity of the test is one of the important means of judging its validity. Honesty is a good test specification and the test is honest if it measures what has been prepared for its measurement (Ebel, 1979). Since, the validity of the test indicates the possibility of inference degrees and decision-making accurately, the researcher may prove the availability of this property as follows.

Face validity: It is the general appearance of the test in terms of the type of paragraphs and how they are formulated as well as the accuracy of the instructions and the appropriateness of the test for the purpose for which it was developed, i.e., to what degree the test ostensibly measures for this reason, the researcher presented the test paragraphs to a group of experts in the educational and psychological sciences to express their opinions and observations regarding their validity and sound wording. In light of this, the wording of some paragraphs and alternatives was modified.

Content validity: In view of the procedures followed by the researcher by presenting a questionnaire to a group of specialized experts to determine the extent to which these paragraphs represent the content of the course material. The test was approved by the experts and by agreement of more than (80%).

Pilot test and sample statistical analysis: After the application of the survey and make sure the clarity of the instructions and paragraphs and the calculation of the test time, the researcher applied the test on the sample of statistical analysis and after the correction of the papers were arranged grades of students descending from the highest grade to the lowest degree for the purpose of statistical analysis of the test which includes:

Item difficulty coefficient: The purpose of calculating the difficulty of paragraphs is to keep the paragraphs with the appropriate difficulty in the final version of the test and to exclude the very easy or very difficult paragraphs because these two types do not allow the opportunity to identify the individual differences between students. The extent of their coefficient of difficulty between 0.20-0.80 (Brown, 1981). When calculating the difficulty factor for each multi-choice test clause, the researcher found that the coefficient of difficulty ranged from (0.25-0.75) and thus is considered viable.

Items discrimination coefficient: The item discrimination coefficient refers to the degree of discrimination between the high and low achievers of the students in the test. If the item is highly discriminating, the high achievement students answer it correctly while the low achievers do not respond correctly.

Brown (1981) indicated that an item is acceptable if its discrimination factor is 0.20 or higher. After calculating the strength of the discrimination of each of the test items, it was found that the discriminant force of the three levels is limited to 0.33- 0.66. This means that the test items are all good.

The effectiveness of the wrong alternatives: The wrong alternative is effective when it attracts a number of lower group students as the correct alternative than the number of students who choose this alternative in the upper group, so, if the wrong variant is negative it would be a good alternative (Allam, 2011).

After the researcher conducted the necessary statistical operations, he found that the wrong alternatives to the test paragraphs attracted a number of students in the lower group is greater than the students of the upper group and in light of that the researcher decided to keep the wrong alternatives as well.

Test reliability: There are several methods to calculate the stability of the test where the researcher used the method of stability of the method of fragmentation half of which is one of the most common methods to measure the stability of the test and to calculate stability in this way the researcher adopted the degrees of application of the statistical test was calculated stability using correlation coefficient (Pearson) It was corrected by Spearman Brown (0.87) which means that the test was highly reliable (Cortina, 1993).

Test application: The researcher told the students of the research groups that there is a test for them in the subjects they studied and then the researcher applied the test in the final version on them at the same time is Tuesday, 7/3/2017.

Statistical methods
t-test for two independent samples: This method was used to determine the significance of the statistical differences between the two research groups at the statistical equivalence and in the analysis of the results.

Person correlation coefficient: For the purpose of calculating the stability coefficient of the test in the mid-split. Spear man-Brown equation. The researcher used the equation to correct the correlation coefficient between the test segments (individual and marital vertebrates) after being extracted by the Pearson correlation coefficient.

Equation of the difficulty coefficient: To calculate each of the test paragraphs.

Equation discrimination coefficient: The researcher used this method to find the discriminating force coefficients of the test paragraphs.

Effectiveness of distractors: This method was used to find the effectiveness of the incorrect substitutes for the test paragraphs

RESULTS AND DISCUSSION

This study includes displaying the results reached by the researcher according to his hypothesis (There was no difference at 0.05 between the average achievement of Moodle pilot students and the average achievement of students in the control group who were tested in the traditional way in the contemporary Third World History course).

To verify the validity of this hypothesis, the researcher used the t-test for two independent samples to ascertain the difference between the mean and experimental control groups as shown in Table 5.

The mean of the experimental group (46.63) and its variance (37.95) while the mean of the control group which was tested (normal) was 41.22 and the difference was (50.41). This indicates that there are indicators of mean differences and variance For experimental and control scores, in the test conducted after the statistical analysis, the calculated t value (3.25) was greater than the scale value of (2.00) at an indication level (0.05) and the degree of freedom (62).

Thus, rejecting the zero hypothesis because the experimental group appeared superior to the control group that is the system of the model affected the achievement of students.

The results indicate that the experimental group that tested the system was superior to the control group which was tested using the normal method. This can be due to:

- Students interact with the electronic pattern in the tests because they believe the results are accurate
- The desire to know the results by the speed of response in the Moodle test

Table 5: t-test

Group	No.	Mean	SD	V	df	t-values Calculated	Tabulated	Sig.
Exp.	32	46.63	6.16	37.95	62	3.25	2.00	Significant
Cont.	32	41.22	7.10	50.41				at 0.05

- Feedback from the Moodle system helped students overcome the previous negatives in the answer
- The variety of options between question and question helped the students in the emotional stability that was unstable due to fear of using their answers by another student
- The student's desire to present their results electronically to other students helped them in the accuracy of the answer

CONCLUSION

This study is focused to identify the effectiveness of the use of the Moodle system on the achievement of the contemporary history of the Third World in the Department of History, Faculty of Basic Education, Babylon University. Thus, the conclusion can be drawn:

RECOMMENDATIONS

- The use of the system in the final tests and not limited to daily tests
- Training the teachers in the way to deal with the system and prepare questions
- Dependence on the system of teaching and not only to apply the tests through it
- Conducting tests through the system in times of non-working hours
- Assigning students electronic duties and not limited to tests through the system
- Conducting other studies on different sections and stages within and outside the college

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