

The Effect of Using Some of E-learning Strategies in the Teaching of Islamic Curriculum and in the Development of Systematic Thinking among Secondary School Students in Jordan

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Abstract

The study aims to identify the impact of the use of certain e-learning strategies in the teaching of Islamic curriculum and the development of systematic thinking of the first secondary grade students in Jordan for the academic year 2014/2015, using a quasi-experimental approach. The study sample consisted of (252) male and female students and (44) male and female teachers. On the one hand, the results of the study, from the point of view of male teachers showed that the highest percentages of strategies of e-learning that can be used in teaching the Islamic education and the development of systematic thinking were in favor of the strategy of PowerPoint. On the other hand, the results, from the point of view of female teachers, went in favor of the strategy of written texts. The study also showed that there are statistically significant differences between students of study groups in terms of their academic achievement which went in favor of female students who studied by using the strategy of PowerPoint with the average of (4.50) and the standard deviation of (1.62). Moreover, the systematic thinking went in favor of male students who have studied using the strategy electronic code, with the average of (4.61), and the standard deviation of (1.57). Finally, the results showed that there is a significant impact of e-learning strategies on the development of systematic thinking of the students of the first secondary grade.

Background and the Importance of the Study:

Education today witnesses an unprecedented distinct development in the use of strategies and means of educational quality by virtue of scientific and technological progress. As a result, educational institutions have focused on these strategies of attaining knowledge and its geometries, as well as their role in provoking students' minds to absorb these stunning information technological changes. Such shift has also created a sort of balance between the national culture of the indigenous people and the flow of knowledge in the light of the development of globalization to preserve the roots of the national identity of students. As the third millennium approached, the Ministry of Education in Jordan held training sessions for all teachers of secondary and elementary phases. Their aim was to integrate technology in the educational process by employing multimedia in teaching. This process is much considerate to the provision of material and moral incentives for distinguished teachers who skillfully use technology in the classroom and learning environment which, in turn, will provide students with the desired benefits and prepare them to cope with the scientific and technological changes in learning according to the policy of the Ministry of Education. The Ministry's policy calls for employing information and communication technology in education. Two projects were implemented: Queen Rania Al-Abdullah of IT project, and the project of computerizing the content of textbooks using the e-learning system (Eduwave) (Alharsh et al., 2009).

The e-learning is considered as one of the leading applications of integrating the technology in education. The e-learning is the use of electronic media and computing in the process of transferring information to the learner. The use of technology accelerated teaching and learning strategies, whether with self-motivated learner, or under the guidance of a teacher (Keller, 2008). The motivation is a process-oriented toward learning and increasing the learner activity in e-learning environments (Hartnett et al., 2011).

The e-learning system of multimedia is directly related to systematic thinking, which is defined as the thinking that focuses on the scientific contents fitted together through integrated systems in which all relationships appear between concepts and topics, making the learner able to recognize the overall picture of the contents of viewed systems, so it focuses on the whole compound, which consists of a set of components connecting with each other with relationships that are reciprocal in influence and dynamic in interaction (Obaid, & Afanah, 2003, p. 63).

Also, the systematic thinking includes skills of analyzing the key systems and subsystems and understanding the relationship between them, as well as integrating parts into unity (Menoufi, 2002). Such analysis proficiency emphasizes the need to use teaching strategies that contribute to the development of skills of systematic thinking (Zubaidi, 2011). Many studies affirmed the importance of e-learning in education as the study of Adyienka and et al.(2005) which aimed to evaluate the use of information and communication technologies by secondary schools in Nigerian secondary schools. The study used the survey applying the descriptive approach. The study sample consisted of (700) teachers who teach in private secondary schools in the city of Ibadan in Nigeria. The study found out that the most important electronic media used in education rank as follows: the computer, video, digital cameras. The study of Abdul Karim (2008) analyzes the use of e-learning in the schools of Riyadh. The study sample consisted of (297) teachers and the results showed the most important use of e-learning methods was the school's website and e-mail, whereas the study of Salamah (2005) addresses the impact of the use of the internet on the academic achievement of Al-Quds Open University students.

The results of the study showed that students who used the internet were better in performance than students who studied in the traditional way. Moreover, the study of Abdul Karim (2006) aimed to evaluating the e-learning in schools of Jeddah for the intermediate and secondary stages in which the researcher used the descriptive approach. The results of the study showed the existence of differences that is relatively simple for the sake of the electronic method. Lightfoot (2006) conducted a comparative study between learning through e-mail and learning through lecturing, using the descriptive survey approach, in addition to a questionnaire as a tool for data collection. The study sample consisted of (596) male students, and the results of the study showed that students who used the e-mail are more interconnected with the teacher and students than those who learn in a traditional lecture.

Hassini (2006) conducted a study to measure the effectiveness of students' learning in the Faculty of Engineering in the course of action research by e-mail. The results of the study showed that learning through e-mail helps to improve the process of learning. The results also showed that the students' answers in the achievement test were derived from the e-mails that have been sent by their teachers. This indicates the effectiveness of e-mail in the process of learning and construction of knowledge. Similarly, Kim (2008) conducted a study that aimed to identify the effectiveness of using the e-mail in the effective learning. The study presented a proposal that leads to the design and development of the organized procedures for the use of e-mail in the process of learning as an effective means. Such steps analyze the learner's needs as well as provide a suitable environment for the process of learning. The results of the study showed that using the e-mail supports the e-learning. Also, the aim of the study, conducted by Mihdhar (2013), is to measure the impact of a proposed electronic entry on the development of creative writing skills for high school students. The study sample is made up of (60) female students divided into two groups: one is experimental that teaches individuals through the electronic entry and the other is integral. The results of the study showed that there are statistically significant differences in the post-test strategy for the skills of writing, fluency, originality and flexibility belonging to the experimental group.

Alderchore's study (2011) aimed to identify the effectiveness of using a computerized slide program in teaching the subject of geography to the tenth grade students. The study sample consisted of (71) female students in Darya secondary school in Damascus. The sample is distributed on two groups: an experimental group and an integral group, using two tools of test and measuring trends. The results of the study showed the existence of statistical differences in favor of the experimental group in their academic achievement and a prevailing trend towards using a computerized slide program in the process of learning. Osprey's study (2013) aimed to design a presentation program for the achievement of the tenth grade students in the subject of geography and their attitudes towards it. The study followed the descriptive analytical approach, using the tools of achievement test and of measuring trends. The study sample included (180) male and female students. The results showed the presence of statistically significant differences when the achievement test is used for the sake of the experimental group and the students' attitudes towards using PowerPoint programs are high with the average (4.53).

As for the systematic thinking, the study conducted by Al Kamel, (2003), aimed to stand on how to deliver the systematic thinking to students. The study sample consisted of (200) male students of 9th and 10th grades. The results of the study showed the students' achievement as high in the field of building samples with increasing teachers' experience in the use of computers in education. Also, the study of Afaneh (2004) aimed to investigate the effect of using certain metacognitive strategies in teaching on the development of the systematic thinking in the eighth grade of Gaza students. The study sample was made up of (177) male students divided into two groups: one is experimental and the other is integral. The results showed the presence of statistically significant differences in favor of students who have studied with the metacognitive strategies.

Moreover, the aim of Jurica and Head's study (2009) is to test the thinking process for primary school students when using computer simulation as a means of learning. The study sample consisted of (11) male students and two teachers with a twenty-year- experience in teaching. The results of the study showed that the computer simulation develops the systematic thinking in students by applying the knowledge they have learned. This current study is consistent with the previous studies in its emphasis on the importance of employing e-learning in education. However, it differs from previous studies since it addresses four strategies of e-learning strategies spread over eight experimental groups. Four of them are females and the other four are males in order to determine its impact on the academic achievement and on the development of systematic thinking. Thus, this study was to determine the most effective method in teaching the human civilizations for secondary school students, and its contribution to provide students with systematic thinking patterns to elevate their mental abilities through using the e-learning as one of multimedia systems.

The Research Problem:

Through the work of the two researchers in the secondary education, it is noted that the teachers of Islamic education are dependent on delivering a speech and dictation in their teaching. Sometimes, they only use one of multimedia means. Due to the lack of study-within the limits of knowing – they have shown interest in such topic, so this study came up with the following key question that represents the problem of the study: "What is the effect of using some of e-learning strategies in teaching the subject of the Islamic civilization and on the development of the systematic thinking of the students of the first secondary class in the governorate of Mafraq?"

This problem can be addressed by answering the following questions:

1. What are the e-learning strategies proposed to be used in teaching the Islamic education course to secondary school students from the point of view of male and female teachers in the governorate of Mafraq?
2. Are there any statistically significant differences at the level of significance ($\alpha = 0, 01$) among students of the experimental groups in the post-test of achievement due to the variables of strategy and gender?
3. Are there any statistically significant differences at the level of significance ($\alpha = 0, 01$) among students of the experimental groups in the post-test of systematic thinking due to the variables of strategy and gender?
4. Are there any statistically significant differences at the level of significance ($\alpha = 0, 01$) among students of the experimental groups (males and females together) in the post-test of academic achievement and its reflected systematic thinking?

Importance of the Study:

The importance of the study is in the following:

1. Raise the motivation of teachers and supervisors in charge of teaching the Islamic curriculum to pay attention to the employment of educational technology in the teaching the topics of Islamic education.
2. This research provides a planned study unit prepared with a variety of strategies such as e-learning strategies which contribute to the improvement of the level of student achievement, as well as develop their abilities in systematic thinking.

Objectives of the Study:

This study aims to achieve the following objectives:

1. To identify some of the e-learning strategies that can be used in teaching the subject of the Islamic civilization from the course of Islamic education to students in the first secondary grade.
2. To develop the academic achievement among students in the first secondary grade in the governorate of Mafraq as they use certain e-learning strategies during their studies of the Islamic education.

3. To measure the development of systematic thinking among students in the first secondary grade in the governorate of Mafraq as a result of using some of the e-learning strategies during their studies of the Islamic education.

Limitation of the Study:

The current study is limited to the first secondary students, the scientific branch, in the governorate of Mafraq, and the unit of the "Islamic civilization" prescribed in the book of Islamic education for the academic year 2014/2015. The study is confined to some of the following e-learning strategies: PowerPoint, e-mail, interactive video, written texts, and electronic entry.

Methodology of the Study:

This study used the quasi-experimental approach to follow the experimental groups system. These steps are followed in order to answer questions of the study:

1. Access to the literature and previous studies related to the use of e-learning strategies and those that focused on the systematic thinking and how to measure it.
2. Choose the content of the study (the unit of the Islamic civilization) from the book of the Islamic Education and analyze its content to determine the concepts and terms that it contains.
3. Prepare the teacher's guide to teach the chosen content using the five e-learning strategies and worksheets for each lesson of the unit.
4. Prepare the two tools of the study which are achievement test and the systematic thinking and make sure of their credibility and validity.
5. Select the study sample which includes eight experimental groups.
6. Apply the two pre-study tools on the experimental groups of the study.
7. Teach the proposed unit to the experimental group, according to the e-learning strategies.
8. Apply the two post-study tools on the experimental groups of the study.
9. Monitor the results to be statistically treated and interpreted.
10. Make recommendations in the light of the results that have been reached.

Preparation of Teacher's Guide:

The teacher's guide was prepared to teach the unit of "Islamic civilization" using some of the e-learning strategies. The procedures of preparing the teacher's guide have passed through the following steps: determining the overall objectives of the unit, determining the behavioral objectives of the unit, and planning to teach every subject from the unit using selected e-learning strategies. Moreover, this guide has been introduced to a group of arbitrators in the curriculum, teaching methodology, and e-learning in order to verify the validity and integrity of formulating the objectives and linking the used actions and activities to selected e-learning strategies. It also measures how much they are suitable for the students of first secondary grade.

The preparation of the two tools of the study:

The two tools of the study including the test of academic achievement and the systematic thinking passed through the following points:

- (A) The aim of the two tests: the academic achievement aims to stand on the students' performance of the achievement test for the concepts of the Islamic civilization unit, which are measured by the mark that students obtain, as well as measuring students' performance on the test of systematic thinking in the first secondary students (study sample).
- (B) Formulating vocabularies for the two tests: the vocabulary of the two tests has been developed in the form of multiple-choice, including (40) paragraphs for each test.
- (C) Reliability of the two tests: the initial form of the two tests, that includes (45) paragraphs for each test, was displayed to the same arbitrators in the Jordanian universities. It has been tested in the field of curricula and teaching methods as well as the Islamic education and e-learning to express their opinion about the validity of the two tests' vocabulary and the credibility of their formulation and how they are suitable to the first secondary students. All notes taken by the arbitrators were taken into account.

(D) the validity of the test: The validity of the test is measured by testing and re-testing each of the tests on a sample of (104) male and female students from the community out of the study sample, using the method of Kurds Pichardson, and finding that it is equal to (0.88) for the achievement test. On the other side, it is equal to (0.85) to the test of the systematic thinking, which indicates a high degree of validity.

The community and the study sample:

The community of the study consisted of all first secondary students and secondary school teachers in the governorate of Mafraq for the academic year 2014/2015. The study sample was selected from four classes of the first secondary grades for females, in addition to five classes from the first secondary grades in males' schools in the governorate of Mafraq. The number of the study sample was (252) male and female students, distributed as follows: (127) male students and 125 female students. The study sample consisted of (44) male and female teachers, distributed as follows: (23) male teachers and (21) and female teachers.

The equal experimental groups:

It was ascertained that experimental groups are equal in variables: (achievement in the Islamic education, and the development of systematic thinking), it is noted that there are not statistically significant differences between experimental groups (males and females) at the significance level ($\alpha = 0,01$) in the two tests of the Islamic Education and the pre-systematic thinking.

Teaching the unit: After the pre-application of the two tests: the academic achievement and the systematic thinking, e-learning strategies were randomly distributed on the study samples. These strategies include PowerPoint, e-mail, interactive video, written texts, and electronic entry. Some meetings have been held with male and female teachers of the first secondary grade to illustrate how to use e-learning strategies in teaching the unit of the Islamic civilization. After making sure they can skillfully use these strategies in teaching, they started using the five strategies of teaching as the following: PowerPoint, e-mail, interactive video, written texts, and electronic entry. Teaching this unit lasted for (45) days, three classes a week, and (50) minutes for each class.

- Dimensional application of the study tool: after the completion of teaching the unit to experimental study groups, the two achievement tests and the systematic thinking were dimensionally applied on the experimental study groups.

Discussion and Results

The answer of the first question: What are e-learning strategies proposed to be used in teaching the Islamic curriculum and the development of systematic thinking to secondary school students from the point of view of male and female teachers in Mafraq Governorate?

Table 1: E-learning strategies proposed to be used in teaching the Islamic curriculum and the development of systematic thinking to secondary school students from the point of view of male and female teachers in the governorate of Mafraq

e-learning strategies supposed to be used by teachers	Percentage of female teachers in the development of systematic thinking	Percentage of female teachers in teaching the Islamic curriculum	e-learning strategies supposed to be used by teachers	Percentage of male teachers in the development of systematic thinking	Percentage of male teachers in the in teaching the Islamic curriculum
Smart board	70%	75%	CDs	74%	70%
Photoshop	78%	72%	Email	83%	72%
Interactive video	80%	84%	Electronic entry	79%	88%
Hypothetical chapters	62%	62%	Photoshop	68%	65%
Cartoon	70%	67%	PowerPoint	79%	93%
Written texts	85%	83%	Interactive video	76%	80%
Computer simulation	68%	71%	Written text	81%	79%
Conversation	71%	75%	Mobile	64%	77%
PowerPoint	78%	90%	Conversation	68%	57%
Electronic entry	79%	81%	Hypothetical chapters	55%	53%
Email	80%	77%	Smart board	73%	74%
Mobile	72%	69%	Cartoon	75%	76%
CDs	74%	79%	Computer simulation	72%	76%

It can be seen from Table 1 that the PowerPoint strategy scores the highest percentages of e-learning strategies from the male teachers' point of view. This percentage is (93%) for male teachers and (90%) for female teachers.

The reasons of having such high percentages here are attributed to the ease of using such program in terms of adding, saving, retrieving slides and coordinating multiple formats or deleting them, followed by the strategy of electronic entity by (88%) of teachers, followed by the interactive video with (84%) for the benefit of female teachers.

The strategy of written texts scores the highest percentage of e-learning strategies with a percentage of (85%) from the viewpoint of female teachers. This is attributed to the ease of its use and its availability in computers, as well as it can be easily recognized for all electronic educational process in terms of writing, drawing, and copy and paste. It is followed by e-mail strategy with (83%) for male teachers, and this result is consistent with the studies of Adeyinka et al., (2007) and Abdul Karim, (2008), which emphasized the importance of e-learning in education. To answer the second question: Are there significant differences at the level of significance ($\alpha = 0, 01$) among students of the experimental groups in the post-test of achievement due to the variables of strategy, gender? The averages and standard deviations for grades of students of the experimental groups of the post-test of achievement due to the variable of strategy are shown below in Table (2):

Table 2: the differences between the averages of performance of the experimental groups in the post-test of achievement attributed to the variable of students (male and female)

Experimental group	Female students			Male students		
	M	SD	Num	M	SD	Num
PowerPoint	4.50	1.62	26	4.30	2.41	25
Email	4.43	1.03	24	3.17	1.97	26
Interactive video	3.75	1.34	26	3.98	2.01	25
Written texts	3.97	1.57	24	4.00	1.56	24
Electronic entry	3.68	2.01	25	4.18	1.13	27

Table (2) shows the existence of differences between the average performance of the experimental groups in the post-test of achievement for male and female students. The arithmetic average for the performance of the first experimental group (strategy of power-point) was (4.30), and the standard deviation was (2.41) for male students. On the other side, the average of female students was (4.50), and the standard deviation was (1.62). In addition, the arithmetic average of the performance of the second experimental group with (E-mail strategy) was (3.17), with the standard deviation of (1.97) for male students, and the average of (4.43) for female students, and the standard deviation was (1.03). The arithmetic average of the performance of the third group (interactive video strategy) was (3.98), with the standard deviation of (2.01) for male students. The average was (3.75) for female students, and the standard deviation was (1.34). The arithmetic average for the performance of Group D (the written texts strategy) was (4.00), and the standard deviation was (1.56) for male students. The average for female students in this strategy was (3.97), and the standard deviation was (1.57). Group E, electronic entry strategy, arithmetic average was (4.18), and the standard deviation was (1.13) for male students. As for female students, the average was (3.68), with the standard deviation of (2.01).

To ensure the validity of other variables that may affect the study procedures and the results of post-test for male and female students, the variance analysis was used that adjusts the impact of the pre-test to post-test results, and (Table 3) illustrates this:

Table 3: The results of variance analysis associated with the grades of students in post- test achievement

Male students						Female students					
Source of variation	Sum of Squares	Df	Mean Square	F	Sig	Source of variation	Sum of Squares	Df	Mean Square	F	Sig
Teaching strategy	6942861	3	271,196	12,204	*0,01	Teaching strategy	5813746	3	316.157	13.167	*0,01
Mistake	7371.538	122	30,173			Mistake	6813.243	122	29.268		
Total	201251.301	124				Total	35794.271	124			

Level of significance ($\alpha = 0,01$)

It can be seen from Table (3) that the value of significance (F) was (12,204) for male students and (13,167) for female students which is statistically significant at the level of ($\alpha = 0.01$). This means that there are statistically significant differences between the study groups in the post-test of academic achievement for male and female students. Comparing table (3) to table (2), we notice that there are significant differences between the study groups in the post-test of the academic achievement for male and female students. These differences go in favor of the experimental group who studied with the strategy of PowerPoint that went in favor of female students with the average (4,50) and a standard deviation (1.62). This may be due to the fact that the strategy of power-point is based on principles of the possibility of adding video clips, audio kinetics and many other effects that can be transferred with multiple effects including many diagrams and samples. The strategy of PowerPoint has multiple ways in the form of brochures or transparent slices or small slices in automatic timing. In addition, it has diversity in the slide movement that can be displayed in ways that raise students' motivation to learn.

The result of this study is consistent with the study of Alderchore, (2011) which confirms the effectiveness of using a computerized slide program in teaching the subject of geography that is related to topics of the Islamic civilization.

To answer the third question: Are there significant differences at the level of significance ($\alpha = 0,01$) between the students of experimental groups on the post-test of systematic thinking due to the dimensional variables strategy and gender? The averages and standard deviations for students' grades in the experimental groups of systematic thinking test due to the variable of strategy are shown in Table 4.

Table 4: shows the differences between the averages of experimental groups' performances in the post-test of thinking systematic strategy attributed to the variable of students (male and female):

Experimental group	Female students			Male students		
	M	SD	Num	M	SD	Num
PowerPoint	4.23	1.47	26	4.11	1.64	25
Email	4.59	1.25	24	3.92	1.61	26
Interactive video	3.98	1.67	26	4.30	1.46	25
Written texts	3.64	1.33	24	3.86	1.81	24
Electronic entry	4.14	1.26	25	4.61	1.57	27

Table (4) shows the existence of differences between the performance average of the experimental groups in the post-test of thinking systematically for male and female students. The arithmetic average of the members' performance of the first experimental group (males) with the (strategy of PowerPoint) was (4.11), and the standard deviation was (1.64). The average for female students was (4.23), and the standard deviation was (1.47). Also, the arithmetic average for the performance of the second experimental group of male students using (the email strategy) was (3.92), with a standard deviation of (1.61). And the average of female students was (4.59), with a standard deviation (1.25). The arithmetic average of the performance of the third group (the interactive video strategy) was (4.30), with a standard deviation (1.46). Here, the average for female students was (3.98), and the standard deviation was (1.67). In comparison, the arithmetic average of the performance of Group D (the written texts strategy) was (3.86), with a standard deviation (1.81). Here, the average of females was (3.64), with a standard deviation (1.33). The arithmetic average of the performance of Group E (strategy of e-entry) was (4.61), with a standard deviation (1.57), and the average of female students was (4 .14), with a standard deviation (1.26),

To ensure the validity of other variables that may affect the study procedures and the results of post-test for male and female students, the variance analysis was used to adjust the impact of the pre-test to post-test results and (Table 5) illustrates this:

Table 5: Results of variance analysis associated to students' grades in the pre-test of systematic thinking

Male students						Female students					
Source of variation	Sum of Squares	Df	Mean Square	F	Sig	Source of variation	Sum of Squares	Df	Mean Square	F	Sig
Teaching strategy	5943176	3	254.247	10.183	*0.01	Teaching strategy	6386941	3	294.239	11.249	*0.01
Mistake	6137.483	122	28.246			Mistake	5342.193	122	28,670		
Total	316482.194	124				Total	46782.375	124			

Level of significance ($\alpha = 0, 01$).

It can be seen from table (5) that the value of significance (F) was (10.183) for male students and (11. 249) for female students which is statistically significant at the level of significance ($\alpha = 0.01$). That means there are statistically significant differences between the study groups for the post-test of the systematic thinking for male and female students. Comparing table (5) to table (4), we notice that there are significant differences between the study groups of post-test systematic thinking in favor of male students in the experimental group that studied with the (strategy of e-entry) , with the average (4, 61) and a standard deviation (1.57).

This is due to the fact that strategy of electronic entry is based on principles of the possibility of exchanging the letters between the teacher and students as well as the students themselves. It also helps to build an integrated educational system and to identify the variety and different articles of the professional editors Moreover, the possibility of controlling the e-entry to be used anywhere and to make more accessible via the internet with multiple means increases its validity. This study is consistent with the result of Jurica and Head's study (2009) which showed that the computer programs simulation develops the process of systematic thinking. However, the study conducted by Mihdhar (2013), shows the impact of e-entry in the development of thinking, originality and flexibility skills.

The current study concludes that the experimental group that studied using the e-mail strategy went in favor of female students with the average of (4.59) and a standard deviation (1.25). This is due to the fact that the e-mail strategy is based on a system of electronic programs which intermix in parts and multiple functions that contribute in the building of a systematic thinking among students. The result of this study is consistent with the study of (Lightfoot, 2006) that affirms the use of the e-mail. It makes the systematic communication between the teacher and students more effective. It is also in accord with the study of Hassini, (2006) which states that the e-mail has a role in the construction of knowledge. Furthermore, the study is consistent with the study of Kim (2008) which contributes to the development of organized actions that support e-learning.

To answer the fourth question: Are there significant differences at the level of significance ($\alpha = 0,01$) between the students of the experimental groups (males and females together) on the test of the academic achievement and the systematic thinking? The averages, standard deviations and the value of (T) were measured for students' grades of experimental groups (males and females together). The following table illustrates this:

Table 6: Averages, standard deviations and the value of (t) showing the results of post application for the test of academic achievement and systematic thinking (male and female together)

Averages and standard deviations and the value of (t) the results of the post application to academic achievement test					
Groups	M	SD	Num	t	Sig
Power-point	4.40	2.02	51	7.3	*0.01
Email	3.80	1.50	50		
Interactive video	3.87	1.68	51		
Written text	3.99	1.57	48		
Electronic entry	3.93	1.57	52		
Averages and standard deviations and the value of (t) the results of the post application to systematic thinking test					
	M	SD	Num	t	Sig
PowerPoint	4.17	1.56	51	6.2	*0.01
Email	4.26	1.43	50		
Interactive video	4.14	1.57	51		
Written text	3.75	1.57	48		
Electronic entry	4.38	1.42	52		

The results of table (6) show that there are statistically significant differences between the average of students' grades in the experimental groups (male and female) on the achievement test. They are in favor of the PowerPoint strategy, with the average of (4.40) and a standard deviation of (2.02). Moreover, there are significant differences between the average of students' grades in the experimental groups (male and female) to the test of systematic thinking, which was for the benefit of students using the e-mail strategy, with the average of (4.26), and a standard deviation of (1.43).

To find out the extent of the effect of using the e-learning strategies (independent variable) on the development of systematic thinking (dependent variable), the extent of effect was calculated as shown in the following table:

Table 7: The value of (η^2) and value of (d) the corresponding and degree of effect

Independent factor	Dependent factor	ETA value 2 (η^2)	Value of (d)	The degree of influence
Strategies of e-learning	Systematic thinking for males and females	72%	3.25	High

As one can notice in table (7), the value of (η^2) is (72%) of the total variance of the dependent variable (systematic thinking) due to the independent variable (e-learning strategies).

This means that there is a significant impact of e-learning strategies in teaching the unit of the Islamic civilization on the development of systematic thinking for the first secondary students. This impact has been attributed to the common principles between them, which led to the correlation between the characteristics of interactive electronic media and systematic thinking.

Recommendations:

In the light of the outcome of the study, its limits, and approach, the researcher can provide the following recommendations:

- Holding training courses for teachers of the Islamic curriculum, who are still working to train them on the use of e-learning strategies in the teaching and learning processes.
- The need for teachers of the Islamic curriculum to focus on the use of PowerPoint strategy to increase the academic achievement.
- The attention of teachers of the subject of Islamic education to using strategies of electronic entry and e-mail for the development of systematic thinking.

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