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The Effectiveness of a Cloud Computing-based Learning Program in Enhancing Students' Motivation to Learn Islamic Education in UAE

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ABSTRACT

The study aimed to investigate the impact of a cloud Computing-based learning program on enhancing students' motivation to learn Islamic education in the UAE. The sample consisted of (94) students from tenth grade, who were divided into two equal groups: An experimental group that studied the course using a cloud-based learning program and control group studied the same course by the usual way. To achieve the objectives of the study, the motivation measurement (pre-post) was applied. The results showed significant differences in the motivation measurement as a whole and all its dimensions, due to the teaching method in favor of the experimental group that studied the course through the cloud-based learning program. The results also showed no significant difference between the scores of the experimental group individuals on the post-motivation measurement due to the gender variable. According to these findings, the study recommended the activation of cloud-based learning strategies, especially in the future shifting towards the digital curricula.

Keywords: Cloud Computing, Motivation, Islamic Education, 10th Grade Students, UAE.

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INTRODUCTION

Given the current era of information revolution and scientific and technological developments, educational technology has provided many distinctive and effective ways in classrooms, providing strong learning and learning opportunities, namely: building applied skills, solving global real-world problems, interactive exploratory learning, Connecting students to different learning resources, and supporting communication outside classroom walls, helping to provide a rich collaborative learning environment to develop higher-order thinking and problem-solving skills (Cashman, 2014).

Cloud learning is one of the most important technological applications offered by cloud computing and is one of the latest technology solutions to improve learning and education and to raise students' thinking skills. Which uses virtualization technology and cloud computing extensively in the "infrastructure as a service" model, helping to save energy, cost, and space in data centers. Virtualization is the cornerstone of cloud learning (Bandar, 2013).

Islamic education has a distinctive character that distinguishes it from other types of education. It is characterized by a fundamental characteristic, as it is an inspired divine education from God Almighty. It is based on two authentic sources: The Holy Quran and the Noble Sunnah, and its ideas and principles are derived from them. The creation of the human soul and the knowledge of the full knowledge of their conditions and needs, and the secrets that they hide on humanity (Maayta, 2005). The Holy Quran called for a direct call for reflection and contemplation of the universe, and did not block Islam on reason, but called for its activation, and made it a door of the inference of the existence of the Creator and the greatness and unification. Praise be to Allah Almighty who contemplates the creation of the heavens and the earth and thinks about themselves and around them from the signs of God, that he named them the first of the hearts.

National standards for curriculum and evaluation in the UAE have emphasized the need to use modern teaching strategies, to develop thinking in all its forms, creative, critical and reflective, to invest technology through the Smart Learning program, to integrate into education through the effective integration of technology in all curricula, In addition to providing strong evidence supporting technology as an effective learning tool to enhance student learning and learning outcomes (MOE, 2016).

The current study of the effectiveness of a cloud computing-based learning program is designed to enhance students' motivation to learn Islamic education. Cloud computing services are uniform in form and content, and all users have easy-to-use interfaces and easy access. So that the process of maintenance, modernization, and management is a reliable and reliable entity. All contents are reviewed and verified that they conform to the original paper content in terms of health and completeness.

Problem Statement

As a result of the increasing interest of specialists in the field of education in the use of computer education, this interest has shifted to the creation and development of modern educational programs based on various

computer applications, and the development of modern methods and interactive methods to practice and implementation of the desired educational goals.

Although e-learning is generally flexible and interactive, it faces some challenges that need further research and study to identify the appropriate solutions and solutions to address them. Perhaps the most important of these challenges is the motivation to learn. Keller & Suzuki (2004) suggested that learners through electronic means need the motivation to work without withdrawing from learning.

The education of this subject is the most essential link in the formation of the Muslim personality, and its formulation from all aspects of mental, psychological, physical and social. In the teaching of Islamic education, the weakness of students in understanding and dealing with jurisprudential and Shari'a rulings has been observed. Many of them have dealt with the concepts of Islamic education superficially in the absence and practice of thinking of various types: Critical, creative and contemplative and the survival of Islamic concepts promoted by the curricula of Islamic education in the context of memorization, Without leaving a tangible impact on students. The researcher felt that there is an urgent need to find modern educational models that help students learn Islamic education and have the motivation to learn.

And in line with the global and local trends towards the use of computers in the field of education, and based on the recommendations of many studies (Al-Massaad, 2017; Chancey, 2016; Utami, 2017) Of computer applications, the problem of the study is to detect the impact of the effectiveness of a cloud computing-based learning program in promoting students' motivation to learn Islamic education.

Study Objectives

The study aimed to reveal the impact of the effectiveness of a cloud computing-based learning program in enhancing students' motivation to learn Islamic education.

Study Hypotheses

The study attempted to test the following hypotheses:

1. There are no significant differences ($\alpha \leq 0.05$) in enhancing the motivation to learn Islamic education among the tenth-grade students in the UAE due to the teaching method.
2. There are no significant differences ($\alpha \leq 0.05$) between the experimental group in the results of the motivation scale attributed to the gender variable.

The Significance of the Study

The current study draws on the importance of the subject matter, learning through cloud computing applications. The theoretical and scientific importance of the study is theoretically an enriching addition to educational and research literature in the design of a cloud-based learning model and its impact on promoting motivation for Islamic learning among students. It is also a platform for further studies on slides and other variables.

In practical terms, the study aims to provide teachers, students and those interested in technology with a cloud-based learning model in Islamic Education, in addition to benefiting from its tools and results in conducting similar future studies. He drew the attention of officials and decision-makers in the Ministry of Education to the role of applications of cloud computing in raising the level of educational output, academic, psychological and social alike.

Terminology

- Cloud Learning: Learning through a suite of tools and applications on the Internet, so that it can be accessed from anywhere and any device. These tools and applications are assembled in a virtual cloud platform used by the experimental group of students on Islamic education.

- Motivation to learn: This is the energy and desire that drives the tenth-grade students to learn the educational content from the subject of Islamic education. It has measured by the total grade obtained by the student is according to the scale prepared for this purpose.

Study Limitations

The results of this study are determined as follows:

- Temporal boundaries: This study was applied in the third semester of the academic year 2017/2018.
- Spatial boundaries: This study was implemented in a group of schools affiliated with the Department of Education and Knowledge in the Emirate of Al Ain in the United Arab Emirates.
- Human borders: The current study was limited to 10th-grade students.
- Objectivity border: The generalization of the results of the study will be determined by the tools of the study, the degree of sincerity and consistency, and the implementation procedures.

Theoretical framework

According to the National Institute of Standards and Technology (NIST) cloud computing is "a model for providing timely and appropriate access to the network to share a wide range of computer resources that can be deployed and deployed with minimum effort or interaction with the service provider" (Mell & Grance, 2011: 2). Nawawi (2015) sees it as a set of integrated computing services, involving the sharing of resources, resources, and software available by the service provider, with space for data storage, backup and user self-synchronization. These services can be divided into three levels, following:

- Service software: More end-user, such as e-mail systems, client relationship management applications, shared software and workflow management systems.
- Podium service: It consists primarily of libraries, intermediate programs, updates, and run-time tools that developers need to update software as a service. Platform technology as a virtualization service takes advantage of the "infrastructure as a service" layer to deploy and deliver software developed in virtual infrastructure sources as a service.
- Infrastructure service: The computer infrastructure provides storage space for the user. Instead of buying servers, software, data center

spaces, or network equipment, customers buy these resources as a completely independent service. This service is usually described on the basis of the computing benefit, the amount of resources used, and therefore the cost that will necessarily be reflected at the activity level.

Cloud computing has many applications, such as cloud storage, cloud software, social networking sites, conversation, search engines, and integrated reality. Cloud storage is one of the most important applications, which refers to the storage of user data on the Internet, so that this data is stored on servers of the service provider, through which the user can handle this data from retrieval, deletion, addition, or modification, Or sharing it with others with ease (Nawawi, 2015).

To be able to implement cloud computing in education, a set of requirements must be met: a personal device that allows Internet access, an operating system that allows access to the Internet, high-speed Internet connection that connects the user to his data and all the software he uses, and an internet browser that allows the use of cloud services (Yaseen, 2014).

Due to the technical advances in the Internet and the rapid development of cloud computing technologies, it is noted that educational institutions can create rich shared platforms in different learning environments, through which learning experiences can be supported and motivated to continue (AlJumeily, Williams, Hussain & Griffiths, 2010).

Based on it, cloud computing, its various applications, its excitement and suspense, and the multitude of modern social media and its uses, can create a rich environment to support learning experiences and promote motivation for learning. Several studies (Al-Mutairi & Obeikan, 2015; Lou & Wang, 2013) have confirmed the effectiveness of teaching using the cloud computing environment in student motivation development.

The motivation for learning is the focus of attention of educators in the field of education, as an internal situation that stimulates the student's behavior and leads to a specific goal. It also increases efforts and energy to achieve the goals and determines whether the student will pursue a particular task with enthusiasm and longing. It will work or will act with a kind of apathy and indifference. It will also identify the outcomes of enhanced learning, and the student will return to better scholastic performance (Al-Atum, Al-Jarrah & Al-Hamuri, 2015).

Students' motivation to learn is a prerequisite for managing their own learning (Boevé et al., 2016) and is one of the most important components of self-direction (Song & Hill, 2007). It is the reason why every effort is made (Kurt, 2005); therefore, motivation for learning is the real dimension to be taken into account and focused on in the learning environment (Dede & Argun, 2004). Learning environments that make students more active, and where students have sufficient capabilities, reveal their own values and enable them to test success and failure, affecting their motivation and promotion (Unsal, 2012).

It was believed that students 'motivation to learn was innate and related to the student's mental abilities. However, many old and modern researchers have shown that motivation for learning occurs as a result of family upbringing and training, influenced by early social interaction and organized formal education to meet students' needs. Which called for attention to the development of special programs that stimulate their ability and readiness to learn and think, and thus raise the level of achievement and self-esteem (Al-Maraj, 2013). Recent studies have shown that motivation among students is a key factor in increasing achievement in educational environments enhanced by technological developments.

Online learning and online learning, which have become part of the learning process together with technology, influence student motivation. There have been many studies on cloud computing applications and their impact on motivation. Lou & Wang (2013) conducted a study aimed to explore the use of cloud computing resources and applications in student achievement and motivation.

The study sample consisted of (132) students in professional and non-professional secondary school backgrounds who participated in the computer-aided design course in Taiwan, where they were divided into two groups: a trial group trained on the course using cloud computing applications, and a control group that received no training.

The results of the test and the momentum measure showed significant differences between the two groups for the experimental group, while the results indicated that there were no significant differences in achievement among students, but students with vocational school backgrounds had higher motivation for cloud computing applications.Al Sayed's study (2014) aimed to design a learning environment based on cloud computing applications, and to explore their effectiveness in developing the skills of scientific research, achievement, and motivation among postgraduates.

The sample consisted of (36) male and female graduate students at the Faculty of Education at Ain Shams University in Egypt. They were divided into two groups: a control group that studied the scientific research decision using a traditional internet site and an experimental group that studied the same course using a web-based learning environment Applications of cloud computing to achieve the objectives of the study, three tools were used: a collection test, an assessment card for scientific research skills, and a motivational scale.

The results showed the effectiveness of computing applications across the web in achievement, the development of scientific research skills, and increased motivation among students.

Al-Mutairi and Al-Obeikan (2015) conducted a semi-empirical study aimed at investigating the impact of teaching using the cloud computing environment in driving towards learning among students of the College of Education at King Saud University in Saudi Arabia. The study sample consisted of (32) students randomly distributed in two groups: experimental group (17 students) studied the course (ICT applications in learning and education) through the cloud computing environment, and the control group (15 students) studied the same course in the usual way. The instrument of study was a measure of motivation towards learning (tribal - post). The results showed statistically significant differences at (α 00,05) between the mean scores of the two groups (experimental and control) in the post-motivational scale and for the experimental group, indicating the effectiveness of teaching using the cloud computing environment in developing motivation towards learning among the students.

Hamdanah's study (2015) aimed to identify the degree to which teachers practice e-learning skills and their

relation to the motivation of their students. The sample consisted of (14) teachers and teachers of Arabic language teachers in Jordan and (292) male and female students. To achieve the objectives of the study, the researcher developed two tools, one for teachers, consisting of 62 paragraphs, divided into five axes: computer skills, internet skills and tools, electronic software skills, e-learning management skills and e-learning skills. And the other to measure the motivation of students towards e-learning, which consisted of (20) paragraphs.

The results showed that the degree of practice of Arabic teachers for e-learning skills was medium, and that students' motivation towards them was also medium. The results indicated that there was no relationship between the degree of Arabic teachers' learning of e-learning skills and the motivation of their students towards it.

The study of Mohawbi, Dodu and Kunduz (2016) aimed to know the effect of the guided discovery style in developing reflective thinking and learning motivation in secondary school students toward lessons of physical education and sports, In order to achieve the objectives of the study, an experimental method with quasi-experimental design is used, two tools are used in collecting data of the study: Reflective thinking scale and scale of learning motivation in lessons of physical education and sports. The results showed that the guided discovery style led to the development of reflective thinking, and learning motivation toward physical education and sports lessons in a sample's study.

The study of Shams al-Din (2018) sought to reveal the effectiveness of an educational program based on social constructivism. The model of Islamic education in developing the skill of dialogue among the students of the tenth grade in the light of their motivation to learn. The sample of the study consisted of (62) female students of the tenth grade in the lower classes divided into two divisions: an experimental division studied according to the model of learning (32 students) and the second was a female student according to the usual method (30 students) Towards learning (high, low) before starting the study.

The results showed that the experimental group exceeded the control group in the post-application of the skill level of dialogue and motivation for learning, while no correlation relationship was found between the experimental and control group average scores for the interaction between the skill level of dialogue and motivation for learning. Abu Tarboush's (2019) study aimed to identify the effect of differential teaching in the reverse class in the motivation of students to learn in life sciences and their attitudes towards it. The sample consisted of (49) female students of the tenth grade in Jordan. They were divided into two groups: the first experimental was taught in the differential teaching method (25 students) and the second was taught in the usual teaching method (24 students). The data were collected using two tools: the motivational scale for learning, and the trend scale. The results of the study showed that there were no differences in their attitudes towards the experimental group.

In the previous studies, there is a lack of studies on the applications of cloud computing in Islamic education and the scarcity of studies that examined the impact of cloud computing in promoting motivation to learn Islamic education.

The current study is distinguished from its predecessors in its goal of revealing the effectiveness of a cloud-based learning program to enhance motivation for Islamic learning, as well as the 10th-grade students in the UAE.

There is no doubt that this study will benefit from previous studies in several ways, perhaps the most important of which are: preparation of study tools, selection of methodology, in addition to the use of previous studies in the discussion and interpretation of the results.

Method and procedures

Methodology

The semi-experimental approach was used to demonstrate the effectiveness of a cloud-based learning program in promoting motivation for Islamic learning to suit the nature of the study and its objectives. The following diagram illustrates the design of the study:

Experimental Group	EG R $O_1 \times O_2$
Control Group	CG R $O_1 - O_2$

Where, the symbols above were refer as hollow: EG: The experimental group; CG: The control group; O_1: Tribal motivation scale; O_2: telemetry scale; × to experimental processing.

Study Individuals

Four schools were selected from secondary schools in the Emirate of Al Ain, two schools for males: Al-Ramah Secondary School for Boys and Al-Khazna Secondary School for Boys. The two girls were Al-Talea Secondary School for Girls and Al- For the proximity of these schools from the work place of the researcher, and to cooperate with the administration in providing facilities, in addition to the availability of technological possibilities. Where a division of each of the tenth grade students was chosen randomly and then distributed randomly into two groups: an officer who studied the scheduled semester from the curriculum in the usual way, and a pilot who studied the same course through cloud computing. Table (1) shows the distribution of the study sample.

Table 1: The distribution of the Individuals of the study due to (gender & treatment) variables

Group	Gender		Total
	Male	Female	
Experimental	23	24	**47**
Control	25	22	**47**
Total	**49**	**45**	**94**

Instruments of the Study

After studying the educational and research literature related to the subject of the study, two instruments were used, as follows:

The First Instrument: The educational model based on cloud computing applications

A. To view the nature of the Islamic education curriculum, some international experiences in teaching and learning, and the results of some local educational studies, and then determine the general objectives of the proposed model.

B. The objectives of the proposed program are to be achieved. The objectives of the proposed program

are to be taken into consideration in formulating the educational objectives. It describes the expected behavior of the student and can be measured And it reflects the learning output.

C. Determining the content and organization of the proposed program After defining the general and educational objectives, the researcher identified the content of the proposed program and organized it in proportion to the nature of the students, their level and the nature of the scientific material.

D. The researcher proposed a set of educational activities for each unit of the program, which can be divided into three groups: between oral and written classroom activities, behavioral activities, and homework, in the belief that the researcher class activities and practical exercises on the topics of Islamic education, an important step in the teaching of Islamic education, linking the theoretical and practical aspects of the scientific material. The more the student learns the theoretical aspect of the scientific material, and the more of its applications and work it was in his mind, and became part of his knowledge, values, beliefs, and behavior, and became able to employ them in his daily life correctly; so the researcher suggested a variety of activities and practical exercises, Individual, or in a sets system. The student's failure to implement the rule, the teacher explained the rule in another way, and discuss the student in it, and then give him the same exercises, or similar exercises.

E. Identify the appropriate teaching strategies to teach the teaching material, namely teaching according to the usual method, and teaching according to the proposed program based on cloud computing.

F. Evaluation strategies and tools, namely pen and paper evaluation strategy (test), communication assessment strategy (monitoring lists), observation strategy, narrative record, self-revision strategy (score scale), learning process description log, performance-based assessment strategy) as well as assessment strategies using software, tablets, digital Smartphone, and the Internet.

G. Build the proposed model in its initial form.

H. The proposed form was presented to a group of specialized and relevant arbitrators in the field of Islamic education curricula and teaching methods, and computer engineering (14) arbitrators (Appendix 1), in order to verify its validity to achieve its objectives. The arbitration aspects were: The relevance of program topics and vocabulary to 10th grade students, their relevance to program objectives, the relevance of teaching strategies, teaching aids and techniques to teaching educational content, the relevance of activities to achieve their objectives, and the relevance of S Evaluation strategies and tools to achieve their objectives, and the integrity of language, in addition to the technical issues related to electronic devices, software, and the Internet. The preliminary picture of the proposed model distributed to the arbitrators included a letter indicating the recording of any other comments that we believe contribute to the development and enrichment of the program.

I. Amend the proposed form in the light of the notes of the arbitrators, and finally, the researcher took it out in its final form after taking all their notes.

J. Preparation of the teacher's guide to teaching the scientific material according to the proposed model in its initial form. The teacher's guide contains two parts: the theoretical aspect which included the general planning of the proposed educational material, the introduction of the guide, the guide to dealing with the guide, the definition of the most prominent terms in the article, as well as general guidance to the teacher. The implementation of activities and classroom management, the steps taken to implement them and their management, the evaluation strategies and the proposed tools for each lesson, and the teacher's awareness of the vertical integration of the subject studied. If any, some common mistakes that students may make, some typical examples of the evaluation and its tools, as well as how the platform is used and its accessories, software and associated educational software.

K. Presentation of the teacher's guide on a group of arbitrators specialized in the field of Islamic education curricula and teaching methods, and the Arabic language. In the light of their views, the amendments they proposed were made.

The First Instrument: Motivation Measurement

After reviewing the educational and psychological literature and previous studies related to motivation, Sarhan's measurement (2015) was used to measure the motivation to learn Islamic education, which consists of (40) items divided equally into four dimensions: Participation with others, effectiveness, attention to school activity, and responsibility; in order to measure the level of motivation to learn Islamic education among students in the tenth grade.

Validity of the Motivation Measurement

To verify the content validity, the instrument was presented in its preliminary form to (12) referees from university professors specialized in psychological and pedagogical sciences to determine the extent to which the items are represented for the attribute to be measured, to ascertain the language and the validity of the phrases and to amend any items they deem appropriate. In the light of the arbitrators' views, the wording of some items was amended. The instrument was verified on a sample of (20) students from outside the study sample. Pearson correlation coefficients were calculated between the items and the total score and dimensions of the instrument (Table 3).

Table 3: Pearson correlation coefficients between the items and the total score and dimensions of the instrument

Item No.	Correlation with		Item No.	Correlation with	
	Dimension	Instrument		Dimension	Instrument
1	0.60**	0.61**	**21**	0.60**	0.62**
2	0.50**	0.48**	**22**	0.50**	0.48**
3	0.52**	0.40**	**23**	0.52**	0.40**
4	0.35**	0.32*	**24**	0.39**	0.32*
5	0.30*	0.29*	**25**	0.38**	0.33*
6	0.64**	0.52**	**26**	0.66**	0.52**

7	0.55**	0.49**	**27**	0.55**	0.49**
8	0.33*	0.49**	**28**	0.33*	0.49**
9	0.52**	0.41**	**29**	0.60**	0.61**
10	0.51**	0.48**	**30**	0.49**	0.51**
11	0.55**	0.55**	**31**	0.59**	0.43**
12	0.51**	0.41**	**32**	0.48**	0.48**
13	0.43**	0.37**	**33**	0.40**	0.36**
14	0.46**	0.47**	**34**	0.47**	0.40**
15	0.56**	0.45**	**35**	0.41**	0.42**
16	0.58**	0.56**	**36**	0.57**	0.56**
17	0.53**	0.41**	**37**	0.46**	0.40**
18	0.52**	0.47**	**38**	0.43**	0.42**
19	0.62**	0.60**	**39**	0.49**	0.40**
20	0.61**	0.59**	**40**	0.65**	0.63**
** Significant at (α≤ 0.01) * Significant at (α≤ 0.05)					

Table (3) shows that the correlation coefficients of paragraphs with dimensions ranged between (0.30-0.66) and (0.29-0.63) with the total score of the instrument, all of which are significant. Thus, the values indicate the quality of the construction of the items of the instrument.

In addition, the dimensional correlation coefficients were calculated with the instrument as a whole, as well as the calculation of the inter-dimensional coefficients, using the Pearson correlation coefficient (Table 4).

Table 4: Dimensional correlation coefficients with the instrument and the inter-dimensional coefficients

Correlation	Statistics	Participation with others	Effectiveness	Attention to school activity	Responsibility
Effectiveness	Pearson Corr.	**0.71**			
	Sig.	0.000			
Attention to school activity	Pearson Corr.	**0.76**	**0.70**		
	Sig.	0.000	0.000		
Responsibility	Pearson Corr.	**0.77**	**0.72**	**0.75**	
	Sig.	0.000	0.000	0.000	
Instr. as whole	Pearson Corr.	**0.90**	**0.87**	**0.89**	**0.88**
	Sig.	0.000	0.000	0.000	0.000

Table (4) shows that the values of the dimensional correlation coefficients with the instrument as a whole ranged from (0.87) to (0.90) and that the inter-dimensional correlation coefficients ranged between (0.71-0.77), all of which are significant at(α≤ 0.05). This is a good indication of the validity of the instrument.

Reliability of the Motivation Measurement

To verify the persistence of the motivation measurement, the internal consistency method was used by calculating the α-Cronbach on the scores of the survey sample for the instrument as a whole and for each of its dimensions. The total stability coefficient was (0.88). The internal consistency coefficients of the dimensions ranged between (0.57- 0.69) (Table 5). Thus, the instrument has an acceptable degree of stability.

After verifying the psychometric properties of the motivation measurement, the final form of it consists of (40) items measuring four dimensions: Participation with others, effectiveness, attention to school activity and responsibility.

Standard of the Measurement Correction

The instrument has measured according to the 5 Likert scales (Strongly Agree, Agree, Neutral, Disagree, Strongly Disagree), which are given (5, 4, 3, 2, 1) scores respectively. To make judgments on the scales, the correction criterion derived from the equation of (A'odah, 2010) was used (Table 5)

Table 5: Standard of the measurement correction

Mean	Motivation's Level
1.00 - 2.33	Low
2.34 – 3.67	Moderate
3.68 – 5.00	High

Results and Discussions

Group Equivalence

The equivalence of the control and experimental groups in the preliminaries of motivation for Islamic learning was verified by group and gender variables using (t-test) for two independent samples (Table 6).

Table 6: T- test for the equivalence of the control and experimental groups and gender

Variable	Variable Level	No.	Mean	Std. Deviation	T-Value	Sig.
Group	Control	47	3.43	1.01	0.098	0.932
	Experimental	47	3.41	0.96		
Gender	Male	45	3.39	1.00	0.286-	0.741

	Female	49	3.45	1.05		

Table (6) shows that the values of (t) are not significant at (α= 0.05) in the pre-test of motivation for students' learning according to the variables of group and gender. Where the value of (t) of the group variable (0.098) and the level of significance (0.932), which indicates the existence of homogeneity between students in the control and experimental groups in the tribal measurement. The value of (t) for the gender variable was (0.286) and the significance level was (0.741), which indicates a homogeneity among the students in the tribal measurement. Thus, there is equality between the two groups (control and experimental), and gender parity in the preliminaries of motivation for learning.

The results of the first hypothesis, which states: "There are no significant differences (α ≤0.05) in enhancing the motivation to learn Islamic education among the tenth-grade students in the UAE due to the teaching method."

To answer this question, the means and standard deviations of the tribal and remote measures were calculated on the total motivation scale according to the group (Table 7).

Table 7: The means and standard deviations of students' responses to the total pre- and post-traumatic measures according to the group

Group	No.	Pre- Test		Post- Test	
		Mean*	Std. Deviation	Mean*	Std. Deviation
Control	47	3.43	1.01	3.62	1.12
Experimental	47	3.41	0.96	4.37	0.84
Total	94	3.42	1.04	4.00	1.14
*Higher degree= 5					

Table (7) shows that there are apparent differences between the computational media in the tribal and remote indices on the total motivation scale according to the group. To find out if these apparent differences were statistically significant, one-way ANCOVA was used to measure the total range of the total motif according to the group after neutralizing the effect of their tribal measurement (Table 8).

Table 8: One Way ANCOVA Analysis of the total measurement of the total driving gauge according to teaching method after neutralizing the effect of their tribal measurement

Group	No.	Pre- Test		Post- Test	
		Mean*	Std. Deviation	Mean*	Std. Deviation
Control	47	3.43	1.01	3.62	1.12
Experimental	47	3.41	0.96	4.37	0.84
Total	94	3.42	1.04	4.00	1.14
*Higher degree= 5					

Table (8) shows that there is a statistically significant difference in the computational dynamics of the performance of the two groups of study on the total post modem thermometer at the level of (0.05 α) due to the teaching method, indicating the effectiveness of the cloud-based learning program in the performance of the tenth grade students Total Post- Motivation. To achieve this effectiveness, an ETA was found to measure the effect size to 0.737, which means that 73.7% of students' motivation variation is due to the cloud-based learning program, while 26.3% is due to other factors Uncontrolled. In order to determine for which differences are attributed, the modified computation and standard errors were extracted according to the group (Table 9).

Table-9: Modified computational arithmetic and standard errors of the total telemetry scale

Group	Post Modified Mean	St. Error
Control	3.66	0.212
Experimental	4.34	0.212

The results in Table (9) indicate that the difference in the computation of the performance of the two groups on the post-test of the total driving scale was in favor of the experimental group compared to the control group. Indicating the effectiveness of the cloud-based learning program in enhancing student motivation for learning.

This result confirmed the impact of cloud-based teaching on students' learning motivation. This can be explained, as Bruner (1966) points out to the preference of students' inner motivation, which makes them feel satisfied with their achievement, i.e. self-reward. What distinguishes e-learning as a whole from active learning of other learning methods is The motivation to learn is transferred from being an external motivation to an intrinsic motivation through the various activities of students, which means

moving from regular teaching based on explanation and presentation to teaching based on active interaction and positive participation by students in situations of questions and problem solving.

On the other hand, this finding can be explained by the fact that the use of cloud computing accelerates students' mental development by representing objects, simulating attitudes, and storing, retrieving, and presenting information in more attractive and vital ways than other mainstream educational media. The use of cloud computing as a modern way of teaching and learning has earned student's self-confidence and greater motivation to acquire new concepts, especially abstract ones, which are rich in the Islamic curriculum, making learning meaningful. Introducing concepts in an interesting and stimulating way to study, Animation, and video, in addition to the sound effects and colors used, thus providing a rich learning experience for students that cannot be obtained through regular teaching methods, arousing the student's thrill, thus stimulating their motivation to learn Nation, and to learn abstract concepts and subjects Islamic education in particular.

This result can be attributed to the activation of the benefits of e-learning, the use of its tools through cloud applications, the creation of an educational environment in which tools and learning resources are integrated in a way that provides flexibility and learning at anytime, anywhere, Inspire students' enthusiasm and curiosity, and help shape a positive direction for them, reflecting their motivation for learning.

This finding is also due to the fact that students' acquisition of the cloud environment as a personal learning environment easily navigates between different applications, with full control over their cloud environment, which has stimulated their enthusiasm and increased motivation for learning. Cloud by students during the application of the program.

This result may also be due to the ease of using cloud applications in terms of storing, storing, retrieving, referencing, and constantly modifying information, as well as exchanging it anytime, anywhere, and any device, which positively reflected student motivation towards learning through these applications; Sharing information and resources without using cloud computing consumes more effort and takes longer.

In addition, arithmetic and standard deviations of the tribal and remote dimensions of motivation dimensions were calculated according to the group (experimental, control) (Table 10).

Table 10: Computational dynamics and standard deviations of the tribal and remote dimensions of motivation according to the group

Dimension	Group	No.	Pre- Test		Post- Test	
			Mean*	Std. Deviation	Mean*	Std. Deviation
Participation with others	Control	47	3.50	0.98	3.64	1.14
	Experimental	47	3.46	1.12	4.22	1.18
	Total	94	3.48	1.05	3.93	1.16
Effectiveness	Control	47	3.32	1.10	3.59	1.11
	Experimental	47	3.34	1.06	4.35	1.07
	Total	94	3.33	1.08	3.97	1.09
Attention to school activity	Control	47	3.56	1.15	3.70	1.21
	Experimental	47	3.45	1.07	4.40	1.17
	Total	94	3.46	1.11	4.05	1.19
Responsibility	Control	47	3.42	0.88	3.57	1.13
	Experimental	47	3.40	0.96	4.49	1.11
	Total	94	3.41	0.92	4.03	1.12
*Higher degree= 5						

Table (10) shows that there are apparent differences between the computational dimensions in the tribal and the remote dimensions of motivation due to the difference in the group (experimental and control). In order to verify the intrinsic differences, the one-way analysis of the variant (One Way MANCOVA) (Table 11).

Table-11: One Way MANCOVA to verify the intrinsic differences

Effect	Multiple Test type	Multiple Test Value	Total (F)	Hypothesis df	Error df	Sig.	Eta- Squared η2
Teaching Method	Hotelling's Trace	3.109	51.246	4.000	85.000	0.000	0.709

Table (11) shows that the calculated "P" value is statistically significant (0.05 ≤), indicating an effect of the teaching method on the telemetry of the combined dimensions of motivation. To determine which dimensions caused this effect, ANCOVA was performed separately for each dimension according to the group variable after neutralizing the effect of their tribal measurement (Table 12).

Table 12: ANCOVA analysis according to the method of teaching on the post-dimensional measurement of motivation dimensions separately after neutralizing the effect of their tribal measurement

Variance Source	Skill	Sum of Squares	df	MeanSquares	F- Value	Sig.	Eta- Squared η2
Participation with others (Pre) (Accompanying)	Participation with others (Post)	0.897	1	0.897	4.192	0.134	0.045
Effectiveness (Pre) (Accompanying)	Effectiveness (Post)	1.530	1	1.530	12.436	0.000	0.124
Attention to school activity (Pre) (Accompanying)	Attention to school activity (Post)	1.342	1	1.342	6.073	0.042	0.065
Responsibility (Pre) (Accompanying)	Responsibility (Post)	1.570	1	1.570	10.673	0.000	0.108
Teaching Method	Participation with others	19.259	1	19.259	89.996*	0.000	0.505
	Effectiveness	24.461	1	24.461	198.873*	0.000	0.693
	Attention to school activity	22.322	1	22.322	101.004*	0.000	0.534
	Responsibility	27.486	1	27.486	186.978*	0.000	0.680
Error	Participation with others	18.832	88	0.214			
	Effectiveness	10.824	88	0.123			
	Attention to school activity	19.448	88	0.221			
	Responsibility	12.936	88	0.147			
Corrected (Total)	Participation with others	87.563	93				
	Effectiveness	82.284	93				
	Attention to school activity	96.265	93				
	Responsibility	78.580	93				

* Significant at (α≤ 0.05)

Table (12) shows statistically significant differences (0.05 ≤) according to the effect of the teaching method in all dimensions of motivation. For the two groups of study, the fundamental differences were calculated for the dimensions and standard errors according to the group (Table 13).

Table 13: Modified computational arithmetic and standard errors of post-dimension measurement of motivation according to group

Independent Variable	Group	Modified Main	Std. Error
Participation with others	Control	3.874	0.106
	Experimental	4.023	0.106
Effectiveness	Control	3.760	0.094
	Experimental	4.237	0.094
Attention to school activity	Control	3.818	0.108
	Experimental	4.277	0.108
Responsibility	Control	3.776	0.112
	Experimental	4.296	0.112

It is clear from Table (13) that the fundamental differences between the modified computational computation of all dimensions of motivation were in favor of the experimental group compared to the control group. The effect size was (5050), (6930), (0.534) 6800.), for each of the dimensions: (participation with others, effectiveness, attention to school activity, responsibility) respectively.

These results confirm a positive impact on the effectiveness of the cloud-based learning program in driving motivation for learning in all its dimensions. This result can be traced back to the ease with which students share tasks and share knowledge using concurrent cloud applications, providing a secure environment that fosters interaction, communication, attention, thought-provoking, challenging, and responsible. Which contributed to increased pleasure and low boredom among students, which had a clear positive impact on their motivation for learning.

This finding is also due to the fact that providing students with immediate feedback through the teacher's various cloud applications and is constantly associated with the process of learning and teaching has had a great impact on motivating students and increasing their motivation to continue their successful learning on the one hand. Involving students in providing feedback of good content, valuable to their peers through cloud computing applications, has generated their self-confidence and a sense of the importance of their learning, which has increased their motivation for learning.

This finding can also be due to the fact that some types of student activities through cloud computing may place it in an educational environment that includes challenges, obstacles, conditions and real commitments that are designed to be an active component of society. By posting some comments, posts, and duties on the cloud, it contributes to knowledge-building and dissemination and takes responsibility for oneself and others. Being responsible for the recipient, the feedback he provides, and the benefit he or she may have Recognizing the value of the task or activity, and thus positively affect its motivation.

In addition, using cloud-based learning as a new experience for students may have given them a new look at the curriculum in general, and the curriculum of Islamic education in particular, rather than those viewed by Islamic education as purely theoretical. In the practical applications, especially as this curriculum of Islamic education based on the theoretical and practical aspects together.

Moreover, the multiplicity and diversity of participatory tests and tasks, the different modes of interaction, the combination of individual and participatory study, self-assessment, self-knowledge and knowledge building, and the continuous knowledge and updating of results that have been provided by the cloud-based learning program may all have created a spirit of competition and motivation Learning.

On the other hand, this finding may be due to the fact that when students use cloud computing systems and applications, they feel ownership of the learning system, which helps to increase motivation to continue learning within the system and build knowledge and to implement tasks and projects in individual and group forms. In addition, the new electronic environment has given the student the implementation of his obligations to the learning community by contributing to the dissemination of knowledge, which enhances the responsibility. This finding was in line with the results of the 2014 study, which pointed to the effectiveness of computer computing applications across the web in increasing student motivation, and the Mutairi and Abekan (2015) study, which indicated the effectiveness of teaching using the cloud computing environment in driving motivation towards learning among students. They also agreed with the results of the Lou & Wang (2013) study, which indicated significant differences in the motivation scale between the control and experimental groups for the experimental group. This finding was also partially concurred with the results of my studies (Abu Tarboush, 2019; Hamdna, 2015), which indicated the effectiveness of computer-based programs in general in student motivation development.

Results related to the third hypothesis, which stated: "There are no significant differences (α≤ 0.05) between the experimental group in the results of the motivation scale attributed to the gender variable".

To validate this hypothesis, the computational and standard deviations of the experimental group's performance were calculated on the telemetric scale according to the gender variable (Table 14).

Table 14: Calculations and standard deviations of the scores of the experimental group in the post-motivational scale according to gender variable

Group	Gender	No.	Mean	Std. Deviation
Experimental	Male	23	4.39	0.83
	Female	24	4.35	0.85
	Total	47	4.37	0.84

Table (14) shows that there are apparent differences between the computational dynamics in the performance of the experimental group on the telemetry scale according to the sex variable, in order to verify the intrinsic differences, and then the use of the test for two independent samples (Paired Samples T-Test) (Table 15).

Table 15: T-test on the mean scores of the experimental group in the post-motivational scale due to the gender variable

Group	Mean	Std. Deviation	Variance	t-value	Sig.
Experimental	4.39	0.83	0.69	0.15	0.883
	4.35	0.85	0.72		

Table (15) shows that there is no statistically significant difference between (0.05 0.05) between the computational media of the experimental group on the post-motivation scale due to the gender variable. This demonstrates the validity of the teaching strategy using the cloud-based learning curriculum for both sexes. That is, both males and females can benefit from these teaching strategies using cloud computing in boosting their motivation to learn equally. This finding was consistent with the results of my studies (Lou, Wang &, 2013), which pointed to the effective use of cloud computing applications in driving male and female motivation.

Recommendations

In light of the findings of the study, the researcher recommends the following: Ministry of Education officials is interested in encouraging teachers to build educational software based on cloud computing.

Hold specialized courses for teachers in schools to motivate them to use existing cloud computing teaching strategies.

Dissemination of technical awareness among students and training them in the use of modern techniques in the teaching of Islamic education, and other materials, through the Internet, search engines, virtual dialogue rooms, discussion, and educational forums.

Further studies of the future of computer-based learning strategies in the teaching of Islamic education, especially cloud clouds, promoting motivation for learning, the development of reflective and creative thinking, and dealing with other variables and samples.

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