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The Effect of Flipped Learning on Islamic Education Achievement among United Arab Emirate' Tenth Graders and Their Attitudes Towards It

Adwan Mohammad Bani-Hamad
Department of Education and knowledge (UAE)

Mohammad abdulsalam alarood
Department of Education and knowledge (UAE)

Talal Ali Mohammad Alnaqbi
Department of Education and knowledge (UAE)

Abstract
This study aimed at finding out the effect of flipped learning on Islamic education achievement of tenth graders in the United Arab Emirates as well as their attitudes towards it. The study sample consisted of two sections of 10th grades for boys one as experimental group from Remah school consisted of (21) students taught by the flipped learning strategy and control group of (20) students from Alkhazna school taught by the conventional method, semi experimental design was used, where the achievement test prepared by researchers was administered on both groups, pre and post treatment, in addition to the scale of attitudes towards flipped learning which was administered on experimental group. Results showed statistically significant differences of ($\alpha = 0.05$) level in student's achievement where experimental out performed controls, further more strong positive attitudes towards flipped learning among experimental were found.
Keywords: Flipped learning, achievement, student's attitude, tenth grade.

Introduction

Recent years witnessed acute information revolution and great scientific and technological developments in all life aspects, however the great knowledge explosion and its applications forced educators to reconstruct and develop the whole teaching and learning process on new basics that are consistent with the new state, in an attempt to provide and interactive educational environment, which resulted in modern teaching strategies based on the use of technology and computerized educational programs that were used in teaching all study courses and materials in all educational stages, and these strategies proved their effectiveness and success in the educational process, specially, in Islamic education teaching.

Also national standards for curricula and evaluation in the United Arab Emirates (UAE). Emphasized the need for using modern teaching strategies instead of traditional teaching based on lecturing and memorizing , as well as taking care of higher order thinking skills including synthesis, analysis and assessment, in addition to the investment of technology through intelligent learning programs, inclusion in education through effective integration of technology in all study curricula and in all educational stages, as well as providing strong evidences supporting technology as an effective educational tool for reinforcing students learning and educational outcomes (Ministry of Education, UAE, 2016).

Furthermore, flipped learning is one of the modern solutions in treating traditional learning, developing students thinking skills, as well as providing a unique mix between two learning theories, which were considered as incompatible, vis a vis, traditional and active learning theories (Bishop & Averleger, 2013). And as such, it is a teaching strategy that includes using technology to take advantage from learning in the educational process, whereby teacher can spend more time in interacting, dialoging and discussing with students in the classroom and where students can see short videos of the lesson at home, saving the large part of time for content discussions in the class under the teacher's supervision (Robert, 2014).

Flipped learning idea originated on (2000), when baker presented his research paper at the 11th international conference on university teaching and learning, entitled: flipping the classroom: using teaching syllabus management tools through the web to be the guide and counselor, in which he proposed classroom system flipping, in which teachers uses web tools and curricula management programs through the web to present education through the internet, while students evaluate homework, whereby teachers, in the classroom have enough time for more deep with other student's interactive educational activities (Wikipedia, 2014).

Flipped learning can be defined as an educational program aiming at using modern technology and internet in a way that allows teacher to prepare lessons through video tapes or voice files or any other media, to be seen by students at home, or any other places, using their computers or smart phones or their I bads before attending the lesson; while allocating, at the same time, the class time for discussions, projects and exercises. Furthermore,

videos are important element in this teaching approach, where teacher prepares a video of about (5- 10) minutes and shares it with students on a web site or social communication sites (Zaoha, 2014).

However, flipped learning network (2014) defined it as an educational approach that allows shifting from group education to individualistic learning, resulting in increased dynamic and interactivity of educational environment, whereby teacher guides students during the application of the material concepts, and encouraging their creative participation, it is also form of inclusive learning that uses technology outside the classroom, by which teacher can spend more time interacting with students instead of lecturing.

Moreover, Educause foundation (2013) defined the flipped class as a model reflecting an ideal lecture that can be seen as homework. Zaoha (2014) believes that flipped class ensures the best initialization of teachers time during the lesson, to a great extent, where teachers assess students level of the beginning of the lesson, designs classroom activities through emphasizing the clarification of concepts and installing cognitions and skills, then supervises their activities and provides the suitable support for struggling students and so understanding and achievement levels become very high, because the teacher takes individual differences among learners into consideration.

Flipped class also reinforces learning, by technology, outside the study time to achieve the maximum amount of student's participation, and learning during the study time in the classroom, that is replacing direct teaching by ways of discovering and reviewing teaching materials outside the classroom through videos, readings or screen shots and so on. The following might be the most prominent features of flipped learning (Mazur, Brown & Jacobsen, 2015):

- It ensures the best utilization of the lesson time, which might allow time for inquiry based activities.
- It is student – centered and allows lesson repetition based on individual differences between learners.
- It provides interactive and cooperative activities concentrating on creation and inquiry, in the classroom.
- It allows teachers to exploit the classroom for guiding motivating, helping and building relationships between teacher and student, to a great extent.
- It transforms the student into researcher for his information resources, reinforcing self-learning, building experiences, communication and cooperation skills among students.
- It gives the student an incentive to prepare and get ready before the class time, through quizzes or writing short assignments at the web or solving work sheets.
- It provides a mechanism for assessing students' comprehension, where tests, and short assignments made by students is an indication for advantages and weakness points in their content comprehension, which helps teachers in focusing on.
- It provides students with complete freedom in choosing time, place and speed with which to learn.
- It provides students with instant (immediate) feedback by the teacher during the class time and gives teachers the possibility for teaching and remedy for struggling learners.
- It motivates social and educational communication among learners through working with small collaborative groups.
- It helps bridging the cognitive (knowledge) gap resulting from student's absenteeism from classes.

However, despite the desire for improving learning processes, and caring about flipped learning as an educational model, it still faces some challenges among which (Robert, 2014):

- Recording lessons requires effort and awareness by part of the institution or the producers of these lessons.
- The need for integrating basic components in the flipped learning model, as those related to its performance outside the class boundaries and those performed in the class to ensure students understanding a motivation.
- Introducing flipped learning model might mean additional work that requires new skills in teacher's performance.
- Some students might suffer missing face to face interaction with teachers, given that flipped learning is based on viewing the educational material and students have no opportunity to ask questions during presentation this loss feeling might increase, especially if they feel that their specific lectures are available to everyone on the internet.
- Lack of tools and availability degree for quick reception of video lectures or medias, in many cases.
- Give that educational material is transmitted in a less formal educational environment, some students might be less attentive and self-discipline (regulation) is influenced as compared with realistic direct learning.

Furthermore, there are several requirements for flipped learning, among which (Mustafa, 2015):

- Student's participation for their learning from the course either inside or outside the classroom.
- How to motivate students to benefit from the study course and their satisfaction on it.
- Connecting the course content with student's needs, so as use their attention.

- Student's trust with electronic learning sources.
- Designing participatory educational situations that are related to student's characteristics and motivate them to trust what they learn.
- Students need for varied techniques to support balanced performance through electronic learning environments.
- Students in self learning need continuous self-motivation to learning from the study course.
- Employing electronic learning strategies which provide motivators that induce students towards learning, where learning strategies in flipped learning differ in that they incorporate individual and group self-learning as well as they included face to face self-learning and web-based learning strategies.

Furthermore, Islamic education high-order objectives lie in building the believed personality in a comprehensive and balanced manner in its various dimension, helping student to get knowledge and acquiring skills and training on scientific thinking approach, and giving him suitable and beneficial attitudes and tendencies in addition to Islamic characteristics, so as to be modeled in his daily behaviors and social relationships, and enable him to self-actualization in a social framework, so as to get him prepared for current and later lives. However, these objectives cannot be achieved but with the preparation of good man who is able to take responsibility of earth building and promoting it through Allah's approach (Al-Khawaldeh and Eid, 2004).

Problem statement and questions:

Most teachers, in schools depend on traditional teaching method, through lecturing and information loading, however, and what student have to do, is memorizing and retrieving information, and remembering it on exams, which decreases the importance of these information among students and their care (or interest) in getting grades without considering the cognitive result through employing it in their working life, and which enable them in forming the needed thought attitudes.

Furthermore, based on what previous studies (Azzain, 2015; Mustafa, 2015; Mazur, Brown & Jacobson, 2015; little, 2015) which suggested the need for improving teaching methods according to available possibilities in every time and place and based on societies needs and abilities, as well as with international and local direction towards the use of computers and technology in education in general and in teaching methods in particular, this study came to find out the effect of using flipped learning strategy in achievement and attitudes to strategy in Islamic education among UAE tenth grades, through answering the following research questions:

1. Are there any statically significant differences a ($\alpha = 0.05$) level in students' performance means on the achievement test in Islamic education, due to teaching strategy (traditional vs flipped learning)?
2. What attitudes do students hold about flipped learning strategy?

Significance of the study:

Significance of this study stems from the subject it addresses; flipped learning strategy is a unique mixture between traditional and active learning theories. However, from the theoretical perspective, the study is one of the pioneering studies conducted in the United Arab Emirates, as the best of the researcher's knowledge, on the area of identifying the effect of flipped learning on Islamic education achievement and attitudes towards flipped learning strategy among tenth graders.

But, from the practical perspective, the study will provide educators and specialists with model for applying flipped learning strategy in Islamic education in addition to benefiting from its tools and results in conducting future similar studies, in addition to draw those in charge and decision makers in the ministry of education especially in department of education and knowledge –Abu Dhabi to flipped learning strategies and benefitting from its results in raising the level of educational academic, psychological and social outcomes in a similar way.

Research objectives:

The study aims of exploring the effect of flipped learning strategy in Islamic education achievement among UAE tenth graders and their attitudes towards it.

Constructs and operational definitions

- **Flipped learning:** it can be defined operationally as an educational strategy that is student - centered at department of education and knowledge - Abu Dhabi, but not on the teacher; in which students watch, short video lectures, at home or before coming to classroom, while exploiting at the same time the class time by providing active and effective educational environment by teachers, where students are directed towards discussing and applying what they learn.
- **Academic Achievement:** what student acquires from information and experiences that are related to specific educational content and objectives, and operationally is the degree (marks) achieved by students from responding to the items of the test prepared for this purpose.

Study limitations and limits

Study results are limited by the following:

- **Time constraint:** the study was conducted during the first semester for the school year 2017/ 2018.
- **Place constraints:** the study was conducted at Remah School and Al Khazna School from department of education and knowledge - Abu Dhabi, in the UAE.
- **Human constraints:** tenth graders.
- **Subject constraints:** study results generalization is constrained by study tool validity and reliability and application procedures.

Literature review and significant previous studies

An international interest in the study of modern teaching strategies based on modern technology to improve educational process, appeared during recent time, and among these strategies is the flipped learning strategy, where it appeared, from search results, an abundance of foreign previous studies addressing flipped learning. However, paucity of these studies appeared in the Arabic studies, and this can be considered a logical rational for carrying out this study. Among these studies are:

Pedrozza (2013) study which aimed at identifying student's attitudes towards flipped learning, the study sample consisted of (126) from three semesters in one American university, who were taught by flipped learning strategy for two years. To achieve study objectives a special questionnaire was used. Results showed that most students assured that flipped learning supported their learning, provided them with more opportunities in terms of interacting with their peers and with the teacher in an active learning environment, and it contributed to terminate assignments solutions in the class time, while (5%) of them indicated the decline of their motivation during flipped learning, while (6%) of them indicated that this kind of learning did not improve their way of learning.

Herreid & Schiller (2013) study aimed at identifying the extent to which science teachers use flipped learning in teaching and their attitudes towards it. The study was conducted a sample of (200) teachers. Results showed that (83%) of them used flipped learning and they reported several reasons that make them use flipped learning, among which providing sufficient time for student to work on devices and equipment available in the classroom only, enabling students who missed lectures to participate in activities and see lessons they missed and that flipped learning works on reinforcing students thinking in and outside that classroom and finally it increases their greater interaction in the educational process.

However, Schwankl (2013) study sought to investigate the effect of the flipped class in students learning and attitudes towards it. The study was conducted on a sample of (78) math students enrolled in integrations course (2) in Minnesota university, where two random sections were choosing; experimental taught by flipped class, and control taught by traditional method, and at the end of the semester the two groups were tested, as well as the application of attitudes scale on the experimental group. Results showed no statistically significant differences between control and experimental groups, however, experimental group scores were higher than those of controls. Results also showed that experimental group holds positive attitudes toward flipped class.

Bormann (2014) conducted a qualitative study through reviewing more than (51) research articles published during the last five years before his study, analyzing and assessing them to find out the efficiency of flipped learning on student's interaction and achievement. Results showed that flipped learning provides an interactive environment leading to better achievement and to greater qualification of learning in the 21st century.

Athewikh (2014) study sought to identify the effect of using flipped class for teaching computer course in self-learning skill. The study was conducted on a sample of (56) Saudi secondary female students, assigned to experimental and control equal groups, where experimenters studied computer skills at home using flipped class strategy and controls studied by the traditional method, where pre and post questionnaire was applied. Results showed an increase in self- learning skills among experimental group as well as the contribution of flipped class strategy in considering individual differences among students and their enthusiasm towards learning and finally most students approved the use of flipped learning in education.

Al-Balloshieh (2015) study aimed at investigating the effectiveness of flipped class in the development of Arabic language achievement among and attitudes towards it. The study consisted of (24) tenth basic graders in a school at Addakhlih governorate in Oman, who were assigned into two equal experimental, taught by flipped learning strategy and control taught by the traditional teaching method. To achieve the study objectives, an educational content, according to flipped class was prepared, a test in Arabic language and an attitude scale.

Results showed the effectiveness of flipped learning in improving learning, and it resulted in the forming of positive attitudes, among students, towards flipped class strategy.

Little (2015) conducted a qualitative study aiming at analyzing previous literature and studies addressing flipped learning in America and United Kingdom in particular. Results showed the effectiveness of flipped learning in improving achievement and participation in the classroom either in compulsory or high education; as

well as achieving great benefits for students.

Mazur et al., (2015) study aimed at identifying challenges facing flipped learning model. The sample consisted of (84) ninth graders in social studies at albert in Canada. Results showed the effectiveness of flipped learning based on three designs: group work, cooperative learning an ease of technology access. The study also suggested administering the model in other study materials and at all educational levels.

Azzein (2015) conducted a study aiming at identifying the effect of using flipped learning strategy in the academic achievement of education college female student at princess Noura Abdurrahman University. The study consisted of (67) female student of education college majoring in early childhood special education, who were assigned into (33) students taught by flipped learning strategy (experimental) and (34) taught by traditional method (controls). To achieve the study objectives, a test, containing most unit vocabulary, was prepared. Results showed the efficiency of flipped learning strategy in the educational process.

Haroun and serhan (2015) study sought identifying the effectiveness of flipped learning strategy in achievement and performance of electronic learning skills among bachelor students. The sample consisted of (115) university students from Al Baha university, college of education, who were randomly assigned into experimental (55) students taught by flipped learning approach and (60) controls taught the same course by traditional approach. To achieve the study objectives two tools; achievement test and electronic learning skills Checking cards, were prepared, which were pre and post administered. Results showed statistically significant differences between the two groups mean scores in the post administration for both test and checking card where experimenter outperformed controls.

Comments on previous significant studies

The above review, Showed that majority of these studies used semi experimental design, through the study of flipped learning strategy and its effect in achievement (Al – bloushieh, 2015; Azzain, 2015; Haroun and Serhan (2015), and attitudes towards it (Pedroza, 2013; Herreid & Schiller, 2013; Schwankl, 2013), and self – Learning (Athweikh, 2014), as well as identifying challenges facing flipped learning model (Mazur, Brown and Jacobsen, 2015).

We can also notice the paucity (scarcity) of studies addressing the effect of flipped learning strategy in Islamic education and its effect on achievement as well as its absence in the UAE context, for the best of the researchers, which called conducting such a study and increased its uniqueness, richness and significance.

The study also is a unique one for its objective represented by finding out the effect of flipped learning strategy in Islamic education achievement and students attitudes towards it, as well as in its population and sample.

Furthermore, this study undoubtly benefited from previous studies in preparing its tools, methodology choosing as well as utilizing previous studies in discussing and explaining its results.

Methods and procedures

Study population:

The study population consisted of all tenth graders in the schools of Department of Education and knowledge – Abu Dhabi in the UAE for the school year 2017 / 2018.

Sample

Convenience sampling method was chosen for they were near the researcher's work place, cooperation of the school's administrations in providing facilities and technological possibilities, where tenth grade section at Al khazna School assigned into control group taught by traditional method and tenth grade at Remah School assigned into experimental group, taught the same unit by flipped learning strategy.

Instruments

First: Islamic education achievement test

Researchers prepared (Pre, Post) achievement test to measure the extent to which tenth graders acquired constructs and skills listed in the designated study unit.

Second: Attitudes scale:

After reviewing attitudes related literature and research, an attitudes scale measuring attitudes on the experimental group, after finishing the educational program.

Third: Educational Material

Educational material was prepared by the following steps:

- Specifying the educational material (content) which included first unit from tenth grade assigned Islamic education-part one- in the UAE.
- Preparing educational material and was accomplished according to the following steps:

1. Subjects included in the unit were divided into subjects and educational content was phrased according

to flipped learning strategy, through designing and selecting the educational materials, videos, programs worksheets and subjects related assignments, to be presented on the web-site or through whats App created for this purpose.

- Study plans, for each of the scientific subjects, were prepared, with each plan containing a set of educational activities.
- The educational material and study plans were submitted to a panel of educational referees to make adjustments and modifications in light of their suggestions.
- To maintain research results accuracy and objectivity, researchers supervised teaching of both experimental and control groups, as an attempt to ensure heeping students from any other influence that might affect results of dependent variable.

Procedures

The following methodological procedures were followed:

- Reviewing research literature and previous studies related to flipped learning strategy as well as how it was used in teaching.
- Selecting first unit from Islamic education book, for its importance in our life and in nowadays in particular.
- Analyzing the study unit content, to specify concepts and skills contained in.
- Specifying educational activities used according to this study and with accordance to the assigned unit and its objectives.
- Preparing the educational material according to flipped learning strategy, preparing teacher guide to teach the assigned unit according to this study and a collection of worksheets as well as computerized materials (software, videos and power Point presentations).
- Preparing achievement test and attitudes scale.
- Getting task facilitation letter from Department of Education and knowledge –Abu Dhabi addressed to the intended schools.
- Test validity

Achievement test and attitudes scale were submitted to a panel of educational referees with expertise and specialization in teaching methods and educational technologies to make sure that questions were clear and clearly phrased, and some test items and scale attitudes, were rephrased and modified, according to their comments.

Calculating test questions difficulty and discrimination coefficients

Discrimination coefficient is defined as difference rate in the number of those responding correct on the item from both categories to the number of students in both categories (and mostly equals the number of students in any category). Table (1) shows difficultly and discrimination coefficient, of the test items.

Table (1)
Test items difficulty and discrimination coefficients

Item	Difficulty coefficient	Discrimination Coefficient	Item	Difficulty coefficient	Discrimination Coefficient
1	0.35	0.68	11	0.56	0.68
2	0.47	0.71	12	0.38	0.47
3	0.53	0.68	13	0.38	0.44
4	0.75	0.53	14	0.69	0.69
5	0.57	0.64	15	0.49	0.53
6	0.47	0.68	16	0.68	0.58
7	0.75	0.54	17	0.38	0.48
8	0.44	0.76	18	0.68	0.58
9	0.39	0.63	19	0.38	0.48
10	0.52	0.73	20	0.64	0.49

The above table showed that all test items have an acceptable difficulty coefficient, where they all were higher than. (0.34) and that test items have coefficient value greater than (0.40), suggesting that test item have good discrimination coefficient.

Reliability

Test reliability was computed using alpha – Cronbach value which was (0.852) which is a high reliability coefficient.

After validating test and computing its difficulty and discrimination coefficients, the test became ready to

administer. And was administered on the sample before the experiment to ensure their equivalency before the experiment, and results are shown in table (2).

Table (2)
Means, standard deviations and T value of experimental and control group on the pre – test

Group	N	Mean	S.D	T-test	Significance
Control	20	9.02	2.81	0.257	0.955
Experimental	21	9.29	3.66		

* Maximum score (20).

The above table shows no statistically significant differences between experimental and control groups mean scores on the pre – test, meaning the equivalence between experimental and control group achievement.

Methodology and design

The study aimed at identifying the effect of flipped learning strategy on Islamic education achievement among UAE tenth graders and their attitudes toward this strategy. Given the nature of the study, semi experimental design was used and the following chart shows the study design.

Experimental group EGRO1 X O2 O
Control group CGRO1 – O2

Where (EG) is the experimental group; CG is the control group; O1 pre achievement test; O2 post achievement test; (O_ Attitude scale; and x is the treatment.

Study variables

First: Independent variable (teaching method) and has two categories (traditional vs flipped learning).
Second: Dependent variables

- Achievement in Islamic education
- Attitudes towards flipped learning.

Results

First: result related to the first questions: Are there statistically significant difference at ($\alpha = 0.05$) level, between students' performance on the Islamic education achievement, due to teaching strategy (traditional vs flipped learning)? Independent samples T test, means and standard deviation, were used in answering this question, and results are displayed in table (3)

Table (3)
Means, standard deviation and T value of experimental and control group scores on the post test

Group	N	Mean	Standard deviation	T -value	Significance
Control	20	12.20	3.27	4.20	0.00
Experimental	21	16.00	2.32		

* Maximum score (20).

Table (3) showed statistically significant difference at ($\alpha = 0.05$) level, between experimental and control group mean scores on post achievement test where experimenters out – performed controls suggesting the effect of flipped learning on student's achievement.

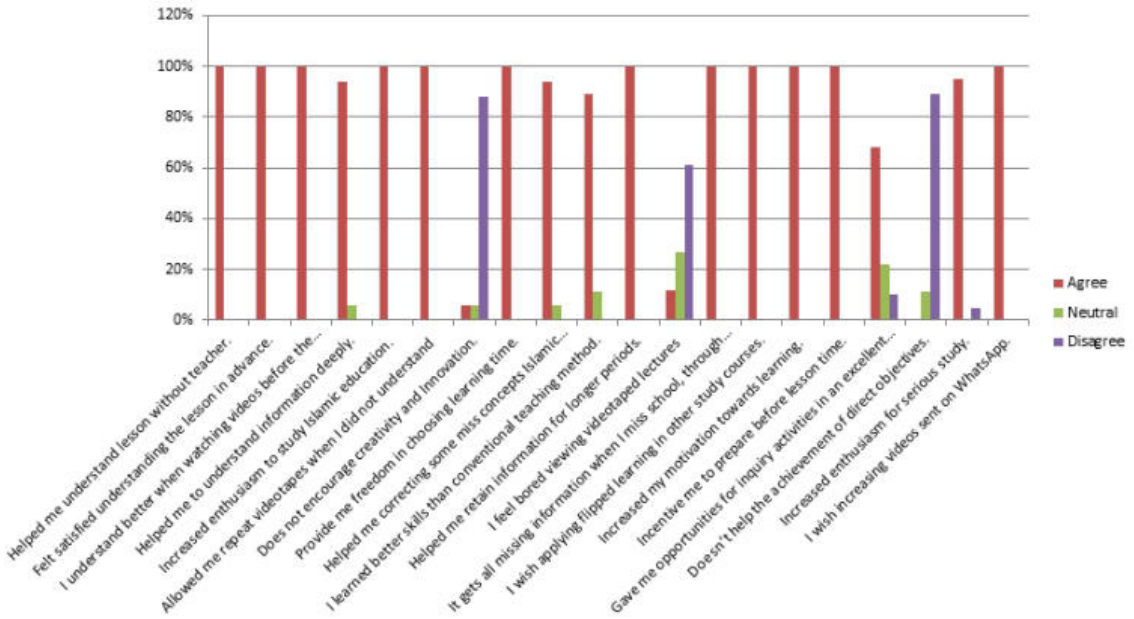
Second: Results of the second research question which states "what attitudes, towards flipped learning strategy, students have?"

Attitudes scale administered on experimental sample after being taught by flipped learning strategy, where the scale consisted of (20) items, included (17) of which positively phrased and (3) negatively phrased, the scale was developed to measure student attitudes within (5) themes, ranging from strongly agree to strongly disagree, percentages of experimental group answers were found, for each item as well as for the scale as a whole, table (4) below shows these results.

Table (4)
Percentages of experimental group answers on attitudes towards flipped learning scale

No.	Item	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
1.	Flipped learning helps me understand lesson at home and without teacher.	78%	22%			
2.	I feel satisfied knowing and under tending the lesson in advance.	72%	28%			
3.	I feel that I understand more and better when watching video lectures and power point show before the lesson.	89%	11%			
4.	Flipped learning helped me to understand information deeply.	56%	38%	6%		
5.	Flipped learning increased my enthusiasm to study Islamic education.	56%	44%			
6.	Flipped learning allowed me repletion of videotapes when I feel that I did not understand the subject.	72%	28%			
7.	Flipped learning does not encourage creativity and Innovation.		**6%**	6%	38%	50%
8.	Flipped learning provide me complete freedom in choosing learning time.	78%	22%			
9.	Flipped learning helped me correcting some misconceptions Islamic education.	73%	21%	6%		
10.	Using flipped learning, I learned better skills than from conventional teaching method.	39%	50%	11%		
11.	Flipped learning helped me retain information for longer periods.	50%	50%			
12.	I feel bored viewing videotaped lectures sent from my teacher.	**6%**	**6%**	27%	11%	50%
13.	It is possible to get all missing information when I miss school, through viewing videos and information on the E-mail or WhatsApp.	61%	39%			
14.	I wish applying flipped learning in other study courses.	39%	61%			
15.	Flipped learning increased my motivation towards learning.	56%	44%			
16.	Flipped learning provided me and incentive to prepare before lesson time.	83%	17%			
17.	Flipped learning allowed me opportunities for inventing and inquiry activities in an excellent manner.	35%	33%	22%	10%	
18.	Flipped learning doesn't help the achievement of direct objectives.			11%	39%	61%
19.	Flipped learning increased my enthusiasm for serious and consistent study.	75%	20%		5%	
20.	I wish increasing videos and power point presentations sent on Email and WhatsApp.	89%	11%			

Percentages of experimental group answers on attitudes towards flipped learning scale Bar chart:



Discussions

Discussion of results related to the first question:

Results showed the effectiveness of flipped learning on tenth graders at Ramah school in Department of Education and knowledge – Abu Dhabi, where experimental group out – performed controls in student achievement which is consistent with all listed studies in the current study. This might be attributed to the fact that flipped learning strategy employs modern technology in the best way, where video exempts made available for student on WhatsApp, so student can Learn in their own speed and in the suitable time and place, before coming to the classroom and this is in line with results of Bormann, 2014 and pedrozza (2013). However experimental group excellence over controls might be due to the fact that flipped learning strategy was one of the effective technological solutions in Helping students bridging the cognitive gap resulting from missing Lessons, where student can cover the scientific content they missed, which resulted in raising their achievement. This is in line with Herried & schiller (2013) and Athweakh (2014) studies, moreover excellence of experimental group over controls might be a results of student's preference to view video excerpts with ease at any place before coming to the classroom. This is in line with Azzain (2015) and Haroun and serhan (2015) studies.

Also, what improved the level of achievement in the experimental group is the best use of the period time through the interactive activities and the worksheets which used by the teacher. The teacher could fix the information in the student's minds very well and he could correct all the misconceptions that they have and this goes in line with (little,2015) study.

When the student is the center of the educational process, and is given full freedom and enjoyment of learning, it increases the student's sense of self-reliance and self-esteem, and raises his cognitive and emotional motivation, which increase its effectiveness and interaction with new methods during learning, (Bani Hamad, 2017). This is what the flipped learning strategy has achieved.

Discussion of results related to the second research question:

Results showed that experimental group attitudes towards flipped learning were positive, which is in line with results of Schwankl (2013) and Al-bloshieh (2015), where results showed that most students reported strongly that flipped learning supported and enhanced their learning method and deep understanding of their lessons, and this is consistent with pendroza (2013) study, flipped learning also provided them complete freedom in selecting learning time and repetition of video and information viewing to achieve the correct understanding, and obtaining missed information, due to being absent, through the information sent through e-mail or WhatsApp. This finding is consistent with Herried and Schiller (2013) study.

Furthermore, flipped learning corrected many of misconceptions in Islamic education, it also helped them retain information to longer period, increased their motivation towards learning through inquiry and inventiveness activities. Moreover, subjects expressed their wish to study other courses by this method as well as the increase of the number of brief videos and power point presentation sent by their teacher. Flipped learning provided them more opportunities in terms of interacting with their peers and teacher in an active learning

environment which means that flipped learning is one of the most important modern strategies to be used by teachers in their effective teaching, However, results showed that (12%) of students feeling bored in watching videos and power point presentation sent by teacher, while (6%) of them reported that this type of learning is not suitable for creativity and inquiry.

Recommendations:

In light of the results attained, the following recommendations can be made.

1. Holding training courses and workshops for teachers and students to train them on flipped learning strategy concept before its administration.
2. Encouraging educational field on the use of flipped learning strategy, given its positive effect on the development of student's attitudes towards the use of this kind of technology and benefitting from it in student's practical life.
3. Encouraging students on the use of flipped learning strategy in their teaching.

Study suggestions

Based on the study results the following suggestion were made:

1. Conducting a study on modern international attitudes in the area of employing flipped learning strategy.
2. Conducting a study of teachers and student's attitudes towards the use of flipped learning strategy.
3. Conducting similar studies on different specializations and major.
4. Conducting more studies on the use of flipped learning strategy in the Arab world.

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