

The Effective of Flipped Classroom Instruction on Students' Academic Performance in Dubai Private Schools

أثر تطبيق الفصل الدراسي المقلوب على تحصيل الطلاب في مدارس دبي الخاصة

by

ALI OSAMA RASHID

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Abstract

This study aims to investigate the extent of the impact of applying the FCI flipped classroom method on the student's academic level and academic achievement in private schools in Dubai. The study also investigates teachers' opinion and their views on the effectiveness of applying FCI and whether it can be used in various subjects and stages of the study. This study was conducted in Dubai in the private school sector, where 51 teachers were involved from two different schools that follow the American curriculum in the education system. The mixed approach (MMR) was also followed in the research method, where a questionnaire was used for the data collection in the quantitative approach, and the focus interview (FGD) was used for the qualitative approach. To collect data, the researcher prepared a questionnaire consisting of 25 open-ended questions and 3 other open-ended questions. In addition to holding a discussion session through the ZOOM application with a group of teachers. A paper was prepared to contain a set of (6 questions) related to the research objectives on the application of the flipped classroom, and the participants took the time and space necessary for discussion. The results were collected and analyzed through the SPSS program, and the results showed that the use of the flipped classroom method in Dubai Private Schools has a positive impact on both the academic level of students, the work of classroom activities, the promotion of teamwork among the students, the transformation of the teacher's role from lecturer to directed to students during The educational session. There were also some opinions indicating that the technical problems related to the Internet and the problems of electronic devices may impede the work of the students of distance learning, and some opinions preferred to reserve the flipped classroom method on literary subjects more than scientific materials.

الملخص

تهدف هذه الدراسة الى أستقصاء مدى تأثير تطبيق طريقة الصف المقلوب FCI على مستوى الطالب الأكاديمي ووتحصيله الدراسي في المدارس الخاصة في دبي, وكذلك تستقصي الدراسة رأي المعلمين ووجهة نظرهم حول مدى فعالية تطبيق الصف المقلوب FCI وهل بالإمكان استخدامها في مختلف المواد والمراحل الدراسية.

وقد أجريت هذي الدراسة في مدينة دبي في قطاع المدارس الخاصة حيث تم مشاركة 51 معلم ومعلمة من مدرستين مختلفتين يتبعان المنهج الأمريكي في نظام التعليم. كما وتم إتباع النهج المختلط (MMR) في أسلوب البحث, حيث أستخدم الإستبيان لمجمع البيانات في النهج الكمي, وتم العمل بالمقابلة المركزة (FGD) للنهج النوعي. ولجمع البيانات قام الباحث بإعداد إستبيان مكون من 25 سؤال محددة الإجابة و3 أسئلة أخرى مفتوحة الإجابة. بالإضافة الى عقد جلسة مناقشة عبر تطبيق ZOOM مع مجموعة من المعلمين والمعلمات وتم إعداد ورقة عمل تحتوي على مجموعة من الأسئلة (6 أسئلة) متعلقة بأهداف البحث حول تطبيق الصف المقلوب وأخذ المشاركون الوقت كامل الحرية والمساحة اللازمة للمناقشة.

تم جمع النتائج وتحليلها من خلال برنامج SPSS, وقد أظهرت النتائج بأن إستخدام طريقة الصف المقلوب في مدارس دبي الخاصة لها تأثير إيجابي على كل من مستوى الطلبة الأكاديمي, عمل الأنشطة الصفية, تعزيز العمل الجماعي لدى الطلبة, تحويل دور المعلم من محاضر الى موجهة للطلبة خلال الحصة التعليمية. كما وكان هناك بعض الآراء أشارت الى أن المشاكل التقنية المتعلقة بالأنترنيت ومشاكل الأجهزة الألكترونية قد تعيق وتؤثر على عمل الطالب عن بعد, واطا كانت بعض الآراء تفضل تبيق آلية الصف المقلوب على المواد الأدبية أكثر من المواد العلمية.

Dedication

To my dear parents and to my beloved wife.

Acknowledgement

I express my sincere gratitude to all the support I got from all the great people who surrounded me through the journey of doing this job. First, I would also like to truthfully express my heartfelt gratitude to my supervisor Pro. Sufian. I honestly appreciate all the patience, dedication and support he offered in revising my draft and for the worthy and constructive comments

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List of Abbreviation Used

FCI	Flipped Classroom Instruction
MMR	Mixed Method Research
FGD	Focused Group Discussion

Chapter 1: Introduction

1.1 Study Background

The present movement in the educational activity profession has teachers inverted down crosswise the country. This tendency is noted as the “inverted schoolroom” or the “flipped classroom.” The inverted classroom, as the title informs, it is a period where the public lecture and the schoolwork has been turned. In some other language, the grooming troubles usually realized at house are worked on in the classroom, where the straight message usually granted throughout period hour is granted as schoolwork through telecasting speech, study portion, or any opposite straight specification transportation performing. Yet, this opinion would germinate into a many significance kind of teaching.

Here are numerous concepts around what basically the inverted schoolroom really is. Few concepts active the inverted schoolroom are that the learners expend the whole time in fore of a personal computer screen, learners study without anatomical structure, telecasting substitute the instructors, undergraduate or students study in separation, or that an inverted schoolroom is an online class. An impressive inverted schoolroom is same that, the instance usually exhausted teaching, is utilized for in-period actions, troubles, conversation, and the classify programs. The majority meaningful education in an insolent schoolroom happen as a sum of economic activity of the special period (Tucker 2012). The straightway of learning of students as a home assignments or homework has been transferred in the form of video lectures, an artifact, a handout, a product, a PowerPoint, or a collection of these among another.

Though in the learning profession attending the inverted schoolroom are integrated. Many professional regards the insolent schoolroom be the coming modular of learning method (Bergmann, Overmyer, & Wilie, 2012). Different professional view the insolent schoolroom be the running movement which faculty be saved to be an ineffectual and unsuitable sort of instruction (Bergmann, Overmyer, & Wilie, 2012).

Successive and rapid alteration has been observed in the International system of education in the current era. The interest of developing and developed nations in using the novel strategies related to teaching and learning procedure and the reforming in the procedure of teaching and learning shows the impacts of such alterations. Therefore, several nations tried to make reforms in the teaching procedures with the aim to face the enhanced outcomes from the vast alterations in field of information and knowledge. Those such challenges need doing an inclusive review of a system of education in most of the nations in the globe. This results help to determine the novel methods to update and develop the procedures of teaching. They also state that every learner can learn as well as reach to the level of proficiency, if the atmosphere of learning as well as teaching procedures are suitable to her or his requirements and capabilities. These methods also emphasize on the role of the learner as well as make her or him the central process of learning. One of the up-to-date strategies as well as the approaches in the model of flipped –classroom. Tully (2014), he stated that the flipped classroom is one of the significant strategies as well as pattern of the learning and teaching which enables the teacher and student communication through using the techniques of technology. The method of flipped-classroom has the capability to develop the basic alterations in the institutions and educational structure.

Sams and Bermann (2012) reported the idea of the flipped teaching space that it means what's completed by way of a traditional book learning which is done throughout the class timings as well as what's completed throughout the classroom time as a traditional learning which is completed at home. Additionally, the content information is presented to learner outer the classroom time by the help of techniques of technology including the video through which the teacher elaborates some information or lesson of the book. Alzwekh (2014) reported that the current approach of teaching is the flipped-classroom which uses the enhanced tools funnily as well as smartly with a purpose to meet the requirements of the learners at the current period of time. Additionally, the flipped-classroom concept is rooted upon the flipped learning tasks among home as well as classroom through enhancing the efficiency role of the current techniques of the technology in the teaching as well as learning procedures. The two scholars named Rhodes and Delozier (2017) explained the flipped-classroom in a way that it's the practice of teaching which happens through handing over the lectures outer of classroom as well as dedicating the class-

room time to various activities of learning. In such practice, the learners are accountable for rereading the entire equipped materials. In this exemplary, the teachers ready the lessons in the form a video or any other source such as multimedia through which the students could read it at their homes or other place through the help of their mobile phones or tablets before the classroom time whereas the period of the class talk is advocated for the practices, home-assignments, activities and exercises.

The earlier descriptions highlight the idea of the flipped teaching space which means that the procedures of learning and teaching in the home as well as in classroom through triggering the role of the current technique of the technology in presenting and preparing the lessons of the book. That's why the teacher is ready with the material through which she or he can elaborate the novel info by the help of using visual-multimedia, audio as well as the responsive assessment with the intention to accessible it for the learner before the lecture. The teaching role acts as a mediator as well as learners' motivator to learn from the materials prepared before the lecture.

The used of the inverted schoolroom has the possibility to be an impressive and advantageous way of instruction. Exchange straight teaching (the stated written display or transfer of message or a work) from the starting time of period with telecasting speech determined external of the schoolroom permits much period-time to be utilized for the progressive education. Progressive education includes actions, communications, students-created contents, autarkical trouble determination, investigation-based education, and the forecast-based education (Bergmann, Overmyer, & Wilie, 2012). This utilized period-time which makes the schoolroom surrounding which utilize the cooperative and the artist education; merging with the straight message which is utilized outside from the schoolroom (Tucker 2012). The ratio of these personalized incident can be magnified in inverted classroom through use of activeness, making undergraduates who are progressive scholars (educating by attractive in analytic thinking, chemical process, and judgement), instead of active scholar (education by the absorption of collection from proceeding, perception, and data point) (Minhas, Ghosh, & Swanzy, 2012; Sams, 2013). The active education of the inverted schoolroom happens during the telecasting speech outside of class, achievement up in lecture time for an active education (Tucker, 2012). Peaceful education has been saved to create improved Medaille than the peaceful education (Minhas, Ghosh, & Swanzy, 2012).

Cooperative education is a type of education when two or more than two people study something jointly, keeping one another responsible for their learnedness (Roberts, 2004). Cooperative education can make undergraduates who are much endowed in their personal education, formulating to precede in command to run into the demand of one's peers (Roberts, 2004). Although the class action, debate, and class troubles determination, an inverted schoolroom can succeed an advanced level of cooperative education.

The inverted schoolroom as well as includes the conversion of the instructor role. In a conventional course, the instructor can be represented as the "wise on the phase" that described the content in attractive paths in feeling that undergraduate will give work and learn the collection (Bergmann, Overmyer, & Wilie, 2012).

The other persons who reported on the inverted classroom was managed by Toto and Nguyen. In this inverted classroom, scholar viewed a half hour telecasting speech preceding to active to course. In the outcome, here was an additive available clip in course, which was tired utilize actual-world instrument and attractive in functional concerned (Toto & Nguyen, 2009). What is expected from the students in the classroom is to interact with the instructor and their peers, apply and practice the knowledge, and to use the opportunities provided to improve their learning performance and higher order thinking skills (Wiginton, 2013).

1.2 Statement of the Problem

The central problem to be researched in the proposed study is that the Flipped Classroom Instruction has the positive effect to increase the students' academic achievement in the UAE private sector, in comparison to the traditional class. The use of the flipped classroom as an alternative to the classic learning model has been increasingly attracting the attention of educators and researchers. The advancement in technological tools such as interactive videos, interactive in-class activities, and video conference systems paves the way for the widespread use of flipped classrooms (Johnston, 2017). Moreover, Studies in related literature show that videos are often used as a means of teaching outside the classroom, while interactive tasks in which the students are actively participating are used as in-class activities (Basal, 2015; Graziano, 2017; Herreid &

Schiller, 2013; Hsu, 2017; Lage, Platt, & Treglia, 2000; Roehling, Root Luna, Richie, & Shaughnessy, 2017; Song & Kapur, 2017; Zengin, 2017). In recent studies, the impacts of the FC Instruction on students' academic performance, engagement, stimulation and learning outcomes have been investigated. Studies have shown that the FC approach enhances student's learning performance (Baepler, Walker, & Driessen, 2014; Davies et al., 2013; Janotha, 2016; Sun & Wu, 2016; Talley & Scherer, 2013; Wiginton, 2013; Zengin, 2017; Zhonggen & Wang, 2016), produces enhanced learning outcomes (Chen Hsieh, Wu, & Marek, 2017; Gillispie, 2016; Kong, 2014; Smallhorn, 2017) and increases student motivation (Chyr, Shen, Chiang, Lin, & Tsai, 2017; Graziano, 2017; Smallhorn, 2017; Wiginton, 2013; Yılmaz, 2017).

In the last years, several research studies have focused on the impacts of FC Instruction environment on students' academic achievements, one of which was conducted by Zengin (2017). In this study, the learning environment was designed using the FC Model alongside Khan Academy and free open source software (Zengin, 2017). The aim of this research was to investigate the impact of the FC Model on students' academic achievement and reveal their opinions about this model (Zengin, 2017). The participants of the study included 28 students in the Mathematics Teaching Program at a state university in Turkey, and the results of the study revealed that the FC learning environment, designed using both Khan Academy and mathematics software, doubled the students' academic success (Zengin, 2017). Moreover, it was found out that this learning approach facilitated student learning, enabled visualization in mathematics teaching, and contributed to permanent learning (Zengin, 2017).

As a basis for this study, the researcher identified three key problems that demanded this investigation:

First problem is to highlight the benefits and the advantages of the flipped classroom on students' achievement, in addition how this strategy will improve students' academic performance.

Secondly are the teachers' opinions in Dubai private sector against or support the Flipped Classroom Strategy.

Thirdly clarifying the misconceptions about what flipped classroom in fact is. Some misunderstanding about the flipped classroom are that students work without a framework, students spend most of the time in front of screens, presentations and videos replacing teachers, no social communication, or the flipped classroom is an online seminar.

1.3 Purpose and Questions of the Study

The use of the flipped classroom Instruction as an alternative to the traditional learning has been increasingly attracting the attention of researchers and educators in different disciplines recently. In UAE there is a serious concern to develop the education system through using the new strategies and approaches that will support learners and increase their progress and attainment. Therefore, the Flipped Classroom method is one of the new approaches that attract educators and researchers in UAE to improve the students' academic achievement, critical thinking, group working, and discussion skills. It is even asserted that the flipped classroom, which is used to create effective teaching environments at schools, is the best model for using technology in education (Hamdan, McKnight, McKnight, & Arfstrom, 2013). Bishop and Verleger (2013) contended that a flipped classroom is an educational technique which consists of two significant components: (1) the use of computer technologies such as video lectures and (2) the involvement of interactive learning activities.

The purpose of this study is binary. First, it targets to investigate the effectiveness approach of Flipped Classroom Instruction on students' academic achievement. Second, it discloses the teachers' opinions about the FCI itself.

The major research questions in this study:

Although this approach addresses to the needs and wants of learners in the 21st century and displays modern solutions to instant pedagogical issues, it is substantial that more research has been carried out to investigate the effectiveness of the FCI. Regardless of the fact that many studies have been conducted on FCI, there is not enough number of quantitative and qualitative researches regarding the effect of this new model of study on the students' academic

achievements, teaching processes, and learning process. Therefore, in order to identify the effects of the FC Instruction on students' academic achievement, this study aims to answer the following research questions:

To what extent does teachers' responses agreed that the Flipped Classroom Instruction affect students' academic performances?

What are the opinions of teachers about the Flipped Classroom Model?

1.4 Significance of the Study

The importance of this study as (Bergmann & Sams, 2012) explained is the FC Instruction is a new pedagogical model where the instructor shares predetermined digital resources with students through a platform outside the classroom, and related content is also taught through this outside platform asynchronously. While inside the classroom, high critical thinking discussion, interactive problem solving, peers collaborative, class based activity, and integration practices.

The FCI focused on transforming the classroom from teacher-centered learning to student-centered learning, and support student-centered learning to be at the heart of the education system, to maximize the students' role, give them the chance to talk, collaborate, communicate, discuss, and be more engaged in the class, and on the other hand to give the teacher a great role to be a facilitator having more time to monitor students and more close to them. "This creates the face-to-face time to have a "much deeper interaction" between the teacher and student as they engage and interact on case studies, and discuss particular problems" (Leckhart & Cheshire, 2012; Gerstein, 2011).

In addition, the FCI strategy will change the students from dependent learners to be independent learners, to take the responsibility of their tasks at home, through playing the lesson videos and take notes, prepare questions to be discussed with their classmates. The flipped classroom

approach focuses on learners learning and it put more responsibility on students' shoulders. Therefore, through applying flipped classroom approach we are actually flipping the bloom taxonomy's pyramid in which will give more time and support during the class time to the high skills levels such applying, and analysing, while before the class at home time the stages of remembering and understanding will be done there. This strategy will give chance to the students to develop their higher skills though collaborate, class based activities, debates, and experiments.

Holmes, et al. (2001) considered that collaborative learning was "an approach to learning in which students not only construct their own knowledge as a result of interaction with their environment but are also actively engaged in the process of constructing knowledge for their learning community". Flipped classroom will turn the class from inactive learning environment to an active learning one, by engagement, group working, participation, peers learning, and students will turn from listeners to participators. In addition, the flipped strategy will promote an environment which raises the interaction among students and between students and teachers.

Personalized learning will be active by using the flipped classroom method as students can rewind, pause, and re-watch the online materials at their own pace, since the advantage of using videos is that learners have the ability to control the media at any time, like review some parts that are misunderstood, which need further reinforcement or those parts that are more interested. Generally, positive impact of using flipped classroom approach is obvious and most of the educators admit that. Additionally, the impact of affect learners in different levels such as: communication skills, social skills, problem solving skills, higher critical thinking skills, self-confident, independency, and satisfaction will be easily monitored. In addition, the flipped classroom approach gives teachers more time to assist students through replacing lecture by online videos. As a result, technology will help struggling students, develop classroom interaction and support flexible instruction.

1.5 The Structure of the Dissertation

This study paper made up of 5 main chapters. The study starts with the introduction that emphasize the value of Flipped Classroom Instruction on education filed, present the background of the study, then reports the research problem, and it illustrates the purpose and questions of this study, lastly it emphasizes the significance of the study. The second chapter illustrates the theoretical framework and literature review of Flipped Classroom Model and the advantages and disadvantages of applying it. The third chapter addresses the methodology and approach used to collect data in the current study, in addition to the population and the sample of the study. Instruments, research approach, ethical considerations, and delamination also are presented in chapter three. The fourth chapter set a description of the analysis of the data and the key findings of the study. At last, the 5th chapter illustrate a summary of the study and states the conclusion as well as the recommendations and limitations.

Chapter 2: Theoretical Framework and Literature Review

2.1 Theoretical Framework

In the course of the most recent couple of many years, with the quick advancements of mobile technology, and the development of online media, there has been a gradual utilization of innovation in the classroom. One of the methodologies for technological combination into the classroom is through flipped learning. This pedagogical approach has become progressively well-known and there is a developing group of literature that is exploring the implementation of this showing approach in the different classrooms. “the flipped classroom is a pedagogical approach which moves the learning contents taught by teachers’ direct instruction to the time before class in order to increase the chances for the students and teacher to interact. Therefore, teachers would have more time to guide the learning activities and solve students’ problems in order to promote the learning effects” (Hwang, Lai, and Wang, 2015).

The theoretical framework section contains the amended Bloom’s Taxonomy by Lorin Anderson in the 1990’s which is the process of learning from a knowledge acquisition to critical thinking activities was amended by Lorin Anderson in the 1990’s. This revised version of Bloom’s Taxonomy is related to the Flipped Learning in that the transmission of the data, which is the reason of learning, is gotten freely and outside of classroom; while the assimilation of information, which requires more critical thinking happens during classroom under the direction of the teacher or mentor. As well Vygotsky’s Social Constructivism Theory (1978), finally According to the Piagetian cognitive constructivist theory, to reach a higher level of learning, students need to interact with peers with the main mechanism driving development being “cognitive conflict” to reach accommodation of knowledge.

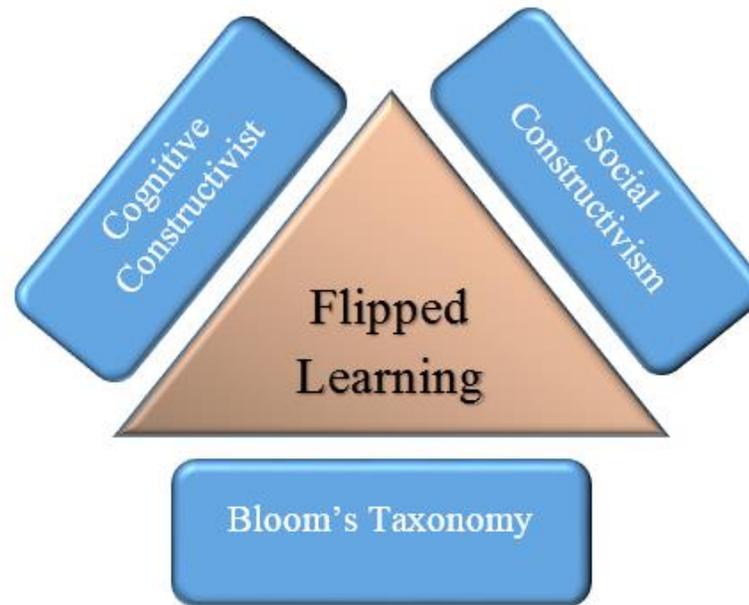


Figure 1: Theoretical Framework

2.2 Introduction

The activity of the inverted schoolroom as an option to the conventional educational round has been progressively pull the attraction of analyzer and professional. The progression in technical instrument such as mutual telecasting, mutual in-class action, and telecasting meeting schemes cover the means for the general usage of insolent schoolroom (Johnston, 2017). This is equal declared that the inverted schoolroom, which would utilize to make an impressive instruction surround at schools, is the excellent version for the exploitation discipline in learning (Hamdan et al., 2013). Examination active the insolent schoolroom looks in various fields regarding the knowledge schemes (Davies et al., 2014), engineering science, social science, and humanistic discipline (Kim et al., 2014), mathematical learning (Zengin, 2017), & English constitution (Zhonggen, 2016).

2.3 Flipping Classroom

The FC version is a fresh pedagogic version where the teacher's assets preset integer document with the scholar direct the program outer the schoolroom, and the connected contented is also instruct direct to the outer programmed serial (Bergmann & Sams, 2012). The flipped classroom, or inverted classroom, reverses traditional education: the teacher delivers the content outside the classroom with videos prepared by him/her, and uses class time for active learning by having students collaborate and interact with each other (Mok, 2014).

Hence, educators are much proactive in the course, inner the description finished a broad reach of schoolroom project (Mazur and Crouch, 2001). Verleger and Bishop (2013) attend that an inverted schoolroom is a learning method that correspond of the binary important element: (1) The usage of computing machine advancement such as broadcasting speech and (2) the participation of the interactional educational actions.

Furthermore, teaching should consider four leading elements in command to be titled as the inverted Schoolroom (FLN, 2014). First, profession should reconstitute the education situation and time in a negotiable manner, consider the various and class demand and necessarily. Secondly, the teachers' demand to learn the list in comprehensive, accept a learner-midway approaching and supply easy education possibility and action reflective a special education society for the particular set of scholars. Third, the learners should continuously support path of the struggling stage of the table and the record taken over by the scholars as well as their progression, and they also apply passive education scheme that will increase abstract knowing of the scholar. Lastly, the teacher should be an occupational group professional who regularly supervisor students in their education procedure, instantly supply students, and evaluate learner product.

Learning is related to profession display that the broadcasting is frequently utilized the way of instruction outside the schoolroom, piece interactional project in which the scholar is passively involving utilized as in-class action (Graziano, 2017; Basal, 2015; Hsu, 2017; Lage, Platt, & Treglia, 2000; Zengin, 2017; Roehling et al., 2017; Herreid, 2013; Song, 2017). Progressive condition and scholar-middle education can be ensuring direction the usage of telecasting that

keep scholars' attending and change is them to focus on the complacent (Schiller and Herreid, 2013). Attractive benefit of the profession, teachers both make telecasting crucial and brand usage of the opened accession telecasting acquirable on the net (Sherer, 2011).

With the activity of the teachers or their class fellow, the scholar moves the program-generated educational actions to implement the abstractive cognition (FLN, 2014). What would be expectable from the learners in the schoolroom is to move with the teacher and their fellows, implement and exercise the cognition, and to usage the possibilities supply to better their educational presentation and the high command thoughts ability (Wiginton, 2013). In another language, it is important that the teachers implement progressive educational schemes to change educators to succeed their obligation, self-management, and educational procedures (Wiginton, 2013).

The organic rule of FC Form is to assure major understanding and combining of the contented, which is knowing by the learners inside schoolroom, receiving the counseling of the teacher outside the schoolroom (Herreid & Schiller, 2013). Subsequently hold bunched on the subject's spell perception to the speech or look the telecasting inside the schoolroom, the learners impute them which avail the applied programmed and move with the teacher in the schoolroom.

2.4 Implementing Flipped Classroom Strategy

Shorman (2015), he showed that the flipped classroom approach mainly emphasized on inverting or flipping procedures of learning and teaching. Through this way the new method of learning created in the traditional environment of teaching. Thus, the learners return to her or his home and done their home tasks. Furthermore, the execution of flipped classroom approach capable the learners to learn new knowledge at their house from various educational related websites and tools of the technology as well as the information shared through their teachers. For instance, the teachers record a video of five to ten minutes and share it in the classroom. While they can also use other tools of technology to promote the flipped classroom including YouTube, Ted conversations, Khan-Academy, the educational-games, social-media websites, multimedia as well as other educational-websites or i-Tunes universities.

According to Ozdamli and Asiksoy (2016), they explained that the approach of flipped classroom is a form of learner central method. That's why the students can vigorously learn the knowledge of lectures at any place and time with the help of their smart mobile phones, computer, tablets or Ipads. These tools of technology capable the students to listen or watch the recorded lecture videos at any time and understand the new knowledge. Additionally, it's also possible to skip those portions of information in the recorded video in which they are already mastered whereas it's also probable to take notes of the lectures. By executing the strategy of flipped classroom, the individuality dissimilarities of the learners can also be considered, the performance can also be enhanced, the tedium will be vanishing as well as the learning excitement and enjoyment will upsurge. After studying the lecture materials, the students join the physical setting of the classroom willingly to implement on what they've learned before the classroom lecture at their home. The lecturers begin with assessing the understanding level of the learner as well as rereading the materials which they learned at their home. After that they perform the activities as well as the cluster based tasks in the classroom in place of raking the classroom period in the inactive listening of the tutor's elaboration. The home tasks don't occur in flipped classroom as a learners administer actions which are the home tasks in the classroom.

Alzain (2015) presented that the unification of these technologies in the nature doesn't accomplish the flipped classroom strategy. Thus, therefore it's require to understand the criteria or basics through which a successful flipped classroom is creating. Those such measures include; (1) the learning culture is mostly focused on the learner who turn into the central procedure of learning and teaching. (2) The tutor finds out the material which the learners will learn outer of the classroom with the intention to invest the period in the classroom by implementing whatever is prepared by the learners. (3) The tutor role in the flipped classroom is higher compare to her or his role in the traditional system of learning. In the classroom, the lecturer gives instant feedback to their students and also assist in the additional activities as well as the assessments of their efforts.

2.5 Flipped Learning Obstacles

While the model of flipped classroom has several benefits. According to Tully (2014), he presented few problems linked to the execution of the strategy of the flipped classroom. Such challenges are that the strategy of teaching is depending the utilization of the technological devices and internet at the homes of the learners. Thus, therefore it's challenging for those learners who don't have such tools of technologies to get advantage from the strategy.

Additionally, it needs an inspired teacher who is interested and willing to follow the progress of the learners. These needs provide extra hour to work as well as the effort of the lecturer. In addition to it, the lecturer should be specialized in assimilating the current tools of technology in the educational system. Thus, therefore the execution of the strategy could be challenging for the teachers who are unable or not capable of using the skills of interaction and technology.

Some of the problems might face the procedure of teaching and learning though by executing the tools of technology in the classroom. Such problems are; (1) the deficiency of the software and tools in preparing and recording the lectures. (2) The deficiency of the skills of the educators by using the tools of the technology competently to create the teaching procedures, inspiration and also interacting with learners. (3) The persistence of the educators to follow-up the traditional approach in the process of teaching. Moreover, those educators can also be persuaded by presenting effective practices of implementing the technology in the classroom comparatively to the traditional approach.

Because of the significance of this strategy of learning and education, the educational minister of UAE is responsible for the improvements in the educational system of different fields. It also gives satisfactory training to educators to understand the use of advanced and current methods of teaching. This purpose of this training is to assist and contribute to increase the delivery level of knowledge of a learner and also enhancing their motivational level to deliver the knowledge easily.

2.6 FC Impact on Students' Learning

In the past learning, the treaty of the FC Form on the learner presentation, meeting, educational results, and condition have been examining. Learning soul shown that the FC approaching raised the learner's studying presentation (Sun & Wu, 2016; Baepler et al., 2014; Zengin, 2017; Davies et al., 2013; Talley & Scherer, 2013; Janotha, 2016; Wiginton, 2013; Zhonggen, 2016), developed increased studying results (Chen et al., 2017; Smallhorn, 2017; Kong, 2014 and Gillispie, 2016;) and increased the learner motivating (Yılmaz, 2017; Chyr et al., 2017; Smallhorn, 2017; Graziano, 2017 and Wiginton, 2013).

However, about the investigation declare that the FC Form emphatically smash the learners' studying and there are also learning which had non discovered expected supportive personal effects. E.g., Smallhorn (2017) did not found a discernible growth in the learners' theoretical action. In other work managed by Kim (2014), which declared that here was no information that the FC Theory modify to develop the learner scores. Likewise, in the report by Sun and Wu (2016), the usage of the FC Form did not smash the instructor-learners' fundamental interaction and studying spirit.

2.7 Flipped Classroom and Students' Academic Achievement

Recently, the focus of numerous researches was on figuring out the effect of flipped classrooms (FC) environment of learning on the academic achievements of students. Zengin (2017) was the one amongst who undertook study to examine the effect of FC model on the academic accomplishment of students. In his study, the environment for learning was developed considering the FC model including free access soft forums and Khan Academy. A total of 28 students anticipated in the study from a background of Math teaching programs of a Turkish government university. The outcomes revealed that the learning approach via FC model doubles the academic achievements of students. Furthermore, it has been observed that FC aided the learning and visualization of students in Math teaching and alongside the FC model impacted the permanent learnings of students.

Apparently, Zhonggen and Wang (2016) by employing mixed research technique figured out the efficacy of FC model on the writing courses of English. Using satisfaction scale for writing tests of Business English and interviews (structured) data has been collected. Both pretest and post test results has been derived via administrating satisfaction scale. The outcomes revealed that participants who anticipated in FC model scored higher comparatively than the others (control groups) who anticipated in traditional way of learning.

To exhibit the efficacy of FC (model) Janotha (2016) investigated to what level FC teaching influenced academic accomplishment of students enrolled in nursing programs. Two groups of participants have been allowed to participate in the study such as experimental group (group taught via FC model) and control group (group taught via traditional pedagogy). Both the groups have been administered via universal standardized-test and Health education system-tests. It has been observed that test score of experimental groups has gained from national standardized-test comparatively more than control groups. Additionally, experimental group students accomplished comparatively higher academic-performance than control group students.

Besides, the learning environment via FC also contributed to tutors' skills, affective development and pre-service learnings particularly by developing and authentic and meaningful learning context. Graziano (2017) carried out a research to explore the advantages of FC model, it effects on the success of students and hurdles of model. It has been observed that learners were enthusiastic and productive more in FC model than traditional model (Power and Ray, 2014). Initially, this research is substantial as related literature exhibited that though there is improvement in researchers relevant to FC model thru world. Furthermore, it is important as it is aiding in scholar's knowledge. Thus, it contributes to better understanding of model and its impact on learning and teaching.

2.8 The Flipped Instructional Paradigm

The instructional paradigm in flipped classrooms is inverted paradigm though lecture delivery in class and homework at home are carried out according to the traditional approach. Adopting this sort of instructional paradigm requires setting conceptual goals, defining time frames and allocating means and resources to attain those goals. This will enable students to meet objectives more efficiently and master the paradigm (Bergmann and Sams, 2012).

According to Bull, Frester and Kjellstorm, (2012) in prestigious universities like Harvard, MIT, and Stanford flipped classrooms have been successfully implemented especially in higher level college courses. The reason behind its success is the ability of technology that enable students to information effectively and in such formats that attract students. In this concept time inside the classroom is consumed to enable students to implement the concept in real world and determine the authenticity and relevance of the concept through investigation. The overall aim of the flipped-instructional-paradigm is the exposure of students to new-knowledge that exists outside the classroom.

Brame, (2012) asserts that new knowledge is acquired through both assigning research to students in advance and notes taken through video from textbooks and materials that contains teachers' lectures. To further enhance and extend the knowledge level of the students and engage them in tasks and certain activities that improve their experience and performance. In such activities students uses their own set of knowledge. For this purpose, reversed aspect of the flipped paradigm is use which actually extend the classroom time. This learning paradigm is so promising because of its flexibility. It is so flexible that there is no way that could be called correct in this paradigm. As long as it is improving a learners' experience there is no need of inverting it. Similarly, different levels can be used to differentiate the process for the purpose to enable teachers to help those students that are struggling with the concept. On the other hand, such students that are good can use their own methods and unique ways to showcase their understandings (Ash, 2012).

Bergmann and Sams, (2012) asserted that differentiation is the most amazing aspect of the flipped model and makes the model most promising in educational technology. It has proved that

it improves students' abilities related to management and to set suitable goals. The traditional moral model of instruction is transformed by the flipped paradigm from classroom to a comfortable atmosphere for students where they feel no barriers while reaching out content taught to them by flip-flopping a lecture's and homework's structure. Various academic studies conducted in the period of 1996-2012 that involved learner control in different disciplines are studied by Karich, Burns, and Maki (2014) along with data collected from 3618 respondents (students) in 18 studies. The peak result of studying 18 times, provides 25 effect sizes after looking for the extreme values. The result contains with median size effect of $g=0.05$ (95% confidence interval [CI] = -0.09 to 0.19). The effect of instruction on the learner also studied in this research with several characteristics of instruction for example allocation of time for mastery, pacing, sequence for instructional-materials, practice choice, training-items, and the amount of materials review. To make a big effect on learning learners requires multiple resources, revealed in result. To support education met analysis recommend the benefits of the use of technology, teachers work while the teacher worked to connect the ideas from these resources to relevant context in order for the supporting materials to produce greater outcomes in students' achievement.

According to Nolan and Washington, (2013) flipping a classroom fully or partially can be done through many ways. There is no precise and correct manner to follow. The increasingly use of technology is totally dependent on the instructor hence she/he can decide it. However, delivery of content through video is an integral part of the flipped classroom paradigm.

2.9 Flipped Classroom Advantages

Flipping classrooms is an advanced teaching and learning methodology which is why it is widely debated. From the use of instructional method, reliable and efficient results have emerged (Bull, 2012). According to EER (2011) the results were positive in those classes where flipped instructions were implemented.

The result showed about flipped classroom that most of the students showed interest in their own gaining knowledge. In flipped classroom students worked together in groups due to this a

collaborative goal achieved. Due to the oversight from the instructor the structure of flipped method results in extensive problem solving, which further directed the students to use their own knowledge with nominal success. Students can differentiate at pace to be capable of multiple learning objectives and can take ownership of their knowledge learning (Electronic Education Report, 2011).

Flipped classroom make the students to work in groups assisting one another and use outside resources for learning, discovered by Gilmartin and Moore (2010). Through their process of investigation of students can strengthening their learning and retention. The benefit of this model is the use of video-based knowledge which helps the students to review, pause and rewind the course at any time. When the course materials get difficult students can easily clarify by reviewing (Sam and Bergmann, 2012). Washington and Nolan (2013) discovered too that the flipped-classroom allowed to differentiate in and give attention low-performing-students. When the ability to differentiation instruction is done properly in flipped-classroom, can greatly affect the management process in the classroom structure.

Since the authorized individuals check the learning process and activity within the classroom bring more transparency (Sams and Bergmann, 2012). The author further says that by having solid documents of instructional lesson administrators and students could access to this content to judge instruction method of teacher. Students can differentiate at pace to be capable of multiple learning objectives and can take ownership of their knowledge learning. (Electronic Education Report, 2011) students, parents, teachers and administrators can be benefited from such transparent system. Despite having all of these advantages, the system is including some disadvantages.

The scholar Strohmeyer (2016) stated that the implementation of the strategy of flipped classroom accomplish several advantages. Those advantages are; (1) warranties the lecturer of making a great use of the class room time and due to which she or he use the time for helping and guiding the students. (2) Improves self-learning, skills of interaction, collaboration between the students, the critical-learning as well as building-experiences. (3) Gives a tool for assessing the understanding level of learners through short assignments and tests which the students do are the pointers of their strengths and weaknesses of the understanding level of the lecture material.

Alshahry (2015), he also added few additional positives of the flipped classroom which contains; (1) creating the teaching role as a professor and turn out to be a supervisor or guider as well as creating the student role to turn into a researcher contributing in the procedures of the learning and teaching. (2) Assisting the self-learning skill of the learner consistent with their individuality dissimilarities and capabilities. (3) Offering an excited learning atmosphere for the students as well as improving the critical skill of thinking.

Alzain (2015) claimed that the flipped classroom is the recent technological resolution for treating the academic weak points of the learners as well as improving the thinking capability level. He also added in the study that the strategy of the flipped classroom gives sufficient time to the teachers to discuss and converse with their students in the classroom as opposed to memorizing method. Additionally, by executing the flipped classroom model, the intellectual capabilities of the students can enhance. Through using this approach, the students can create their information in practical, behavioral and scientific ways. Dickensn (2016) determined that the flipped classroom is measured as the lively practice which capable the student to associate among what's learned as well as her or his personal experiences and life. In this method, the students will be capable to associate what she or he learns with her or his intellectual conducts till it come to be a portion of her or his personality.

2.10 Disadvantages of Flipped Classrooms

Flipped classroom is not that mush efficient as expected and it does not help the students to enhance the learning outcomes, it just shifts the students from one platform form to other Ash (2011). Ash and Milman (2012) stated about flipped-instructional-model that this system limit student from class participation because of outside reason which stops the student to get access to those videos. Levy et al. (2011), said in their article by supporting academic reading, in flipped classroom due to the indirect instruction of teacher increase the frustration of the student.

They face difficulty in finding the balance in flipped-classroom to hold both approaches of teacher and student centered to help in conceptual understanding. Student centered approach mean that students are trying to learn by involving in learning activities with teachers, while

teacher centered approach mean that teachers are mastered in the materials which is to share with students in the best way. Students are passive learners because they learn when they come in direct contact with contents, and when they are passively-listening they cannot learn.

Slavin and Cheung (2012) also approve that sharing the data through a video was the only way of flipped-classroom-model. They realized that sharing and delivering information through one way cannot bring academic success as compare to using various ways, methods and techniques with technology. Burnsell and Horejsi (2013a) also in favor that sharing knowledge through video was not quit enough and not much helpful in flipped classroom, it would be very efficient by the use of both technological and non-technological means. Both these are useful and efficient and support each other in instructional model.

Springen (2013) stated that some students face difficulty in directly accessing materials prepared by the teacher because of digital forums which makes it hard to communicate and give instructions all students. Implementing digital forums results in difficulty for the students to get instruction at home which would be very expensive for few regions (Lage, 2000). There is another drawback of FC that teachers would not be able to further develop their teaching skills. A skilled teacher can use technology badly but still can do better score but an unskilled and un efficient teacher can operate advance technology but cannot reach or cross the other teachers level, the use of technology does not improve instructor's skills or make her or him efficient at methodology (Levy, 2011).

2.11 Flipped Classroom Impact on Academic Performance

According to Marlowe (2012), students involved in flipped classrooms models has substantially higher outcomes in exam score terms though the scores on products which students made weren't statistically different over two treatments. The study was conducted in order to find the influence of flipped classrooms on the student's stress level and academic achievements. The sample comprised of a total 19 respondents where 14 were female while 5 were males. Additionally, those 19 respondents were the students of 11th and 12th grade doing societies an environmental system course. The study duration was around three (03) months in their initial semester using

the conventional technique and then three (03) months during next semester for flipped-instructional technique to draw comparison across the data. During the flipped classroom method, students were engaged in the classrooms via published videos on YouTube. The data extracted from the study were three (03) different measures like formative examination, summative examination and finally grading. A comparison was drawn between the students of 1st semester and 2nd semester. The study also considered qualitative data collected via interviews involving focus group discussions in order to determine both the learning level and stress level in between the instructional procedures of flipped classrooms.

Accordingly, Strayer (2007) reported that students preferred flipped classroom methods over the other conventional methods. In flipped classrooms students experienced a higher extent of engagement than in control groups. Students of two different colleges of statistics class were considered in the study. Students of 1st college comprised of 26 strengths were kept under control group, in other words homework's were assigned after every class while students of 2nd college comprised of 23 strengths were kept under the treatment of flipped classrooms. Flipped classrooms were enabling sources from Learning and Examination in Knowledge Space (LEKS) system for tutoring. A reflexive journal has been adopted while collecting the qualitative observations. Apparently, quantitative data has been collected via University and College Classroom-Environment-Inventory (CUCEI) to examine the level of student's interaction and ability to support and help each other. Analytic and descriptive techniques were performance to know the perspective and context of participants in which they engaged in instructional pattern.

Love et al. (2014) reported that student's perception and learning of flipped classrooms geared toward the students with engineering and math major involved in the course of linear algebra. Around 28 students were involved in conventional classrooms while 27 students were involved in flipped classrooms process. The study indiscriminately chose which class to be treated as a treatment group; students having less knowledge of instructional paradigm has been selected. LaTeX beamer package was used as a screenshot for flipped courses. The sessions involved ready assessment and informational talks through slide comprised of three major questions regulated via LMS (learning management system). Both classes students finished the same tasks however, a separate survey was undertaken with the treatment groups to know the insights of the students'

presumptions regarding flipped instructional method. This study majorly focused on examining the effect across four (04) different measures such as one final term exam and three midterms exams.

Clark (2015) assessed the effect of flipped classrooms on secondary math classrooms. It took seven (07) weeks to conduct the complete survey of Algebra I of 9th (ninth) grade. A sample of 42 students has been selected in the study. Initially, students were taught via using conventional methods and afterwards flipped classroom methods has been adopted to draw a comparison of the effect of flipped classrooms on the student's achievements. In order to familiarize the students with the flipped classrooms method different online forums has been used. Unit test-scores has been used for gathering the quantitative data. Apparently, focus groups and interviews has been conducted to gather qualitative data. The study revealed no substantial distinctiveness in academic performance terms among the students in two treatments. Additionally, the outcomes revealed flipped classroom technique is more engaging than the conventional paradigm.

Although FCI is relatively a new approach in teaching and supporting a student-centered, active-learning approach, with improved academic performance in students, class attainment, greater participation, and a perspective toward learning, quantitative research of student outcomes based on a flipped classroom is very limited (Harrington, Bosch, Schoofs, Beel-Bates, & Anderson, 2015), particularly in the field of nursing education (Bernard, 2015; Panicker, 2018). Panicker (2018) reported that FCR increased the engagement of students in various tasks in the nursing research course and eventually reflected in higher academic performance.

2.12 Self-Efficacy

Numerous scholars have reported regarding the link between self-efficacy and technology. The tech usage was positively related with the exam scores (Joo et al., 2000) while a negative relationship between the time consumed to solve a problem and technology (Zhen, 2009). Learners who are already familiar with the technology proved to be more self-efficient in learning novel material and acquire more knowledge than those who aren't used to it (Hommes et

al, 2012). Perhaps, there is also an understanding that students with greater abilities proved to overcome all those problems when confronted with in difficult times (Bandura, 1997).

Another author researched on two classes belonging to two different schools, one following the conventional paradigm while the second receiving flipped classrooms paradigm. Selections of flipped classroom students were randomly done. Through video podcasts and PowerPoint slides lectures were delivered to the students using flipped paradigm. The process continued for 18 weeks. After 18 weeks, a survey has been provided to both classes to perform a statistical analysis. The outcomes revealed that students involved in flipped classrooms were more self-efficient than those using conventional paradigm. All the students before the start of new semester participated in the pre-intervention and post-intervention survey. Additionally, no substantial distinctiveness has been observed on academic performance between the flipped and conventional paradigm.

Additionally, Nolan (2013) reported an enhancement in the student's engagement by around 66% because of one to one directions and advancement in student teacher link inside flipped classrooms as meant to be conventional classroom. Apparently, students that showed this kind of positive impact during the class looked to favorably show an improvement in self-efficiency. What the important factor is the improvement and retention in the students who involved in flipped classrooms (Ajzen, 2005 and Nolan and Washington, 2013). An additional advantage of flipped paradigm was that learner with low self-efficiency started to show high level of self-efficiency while on the other hand learners with robust self-efficiency aided from their engagement with technology resources.

Chapter 3: Methodology

3.1 Research approach

Research methodology is an approach to deliberately tackle an exploration issue. It might be perceived as a study of concentrating how study is done logically. In it we study the different advances that are for the most part embraced by a researcher in contemplating his exploration issue alongside the rationale behind them. It is important for the researcher to know the exploration methods/procedures yet in addition the methodology (Kothari, 2004). Researchers not just need to realize how to build up certain records or tests, how to compute the mean, the mode, the middle or the standard deviation, how to apply specific research technique, yet, they likewise need to know which of these methods or techniques, are significant and which are not, and what would they mean and demonstrate and why. Researchers likewise need to comprehend the suspicions fundamental different strategies and they have to know the standards by which they can conclude that specific procedures and methods will be relevant to specific issues and others won't. This implies it is essential for the researcher to plan his procedure for his concern as the equivalent may contrast from issue to issue. While a research method is a way of executing or directing. In other words, method is a specific way of doing something (Schwandt, 2007). In social science research, different kinds of methods and methodologies are used regarding a specific phenomenon.

The objective of this study is to investigate the perceptions of teachers in Dubai private schools about the effectiveness of implementing FCI as a pedagogical approach. The results of this study are intended to help schools to use a stronger tool in order to rise up students' achievement and increase their academic performance. Therefore, the researcher used mixed method research (MMR) for the purpose to obtain reliable information. For quantitative data, a questionnaire was used whereas for qualitative study the FGDs were used as a tool of data collection. The data that the teachers would answer is going to help in analyzing the pros and cons aspects in the FCI and as a result contribute in providing information for the necessary renovations in this sector in order to have a better learning experiences for learners in Dubai private schools in the future.

The main tool that is used in this study is a questionnaire. It was implemented on the teachers of two private schools who are following the American curriculum. In order to investigate the perceptions of teachers towards Flipped Classroom Instruction and identify the effects of the FCI on students' academic achievement, this study aims to examine the following research questions:

Q1: To what extent does the Flipped Classroom Instruction affect students' academic performances?

Q2: What are the opinions of teachers about the Flipped Classroom Model?

3.2 Sample size and sampling technique

Sampling is the way toward choosing a subset of units from the whole population. Sampling formula is used to decide how many to choose in light of the fact that it depends on the attributes of this example that we make derivations about the population. In this research study, the researcher selected two schools from district of Dubai - UAE, further from each school's random number of teachers participated in the survey of 51 participants

3.3 Pilot testing

A pilot study can be characterized as a 'small study to test research conventions, information assortment instruments, test enrollment procedures, and other exploration methods in anticipation of a larger study. A pilot study is one of the significant stages in a research venture and is directed to distinguish potential pain points and lacks in the research instruments and convention before execution during the full study.

Pilot testing is a practice or rehearsal of research study, which empowers us to test research approach with a minimal number of the respondents before to lead primary research study. It is an extra advance during a research venture, which is significant for the quality and to think about the powerless and solid territories of the approach. Through this testing the researcher filled some polls

from respondents and distinguished the more vulnerable segment of the approach. Consequently, it was ensured that research study runs easily and radically improved the yield of the investigation. For this reason, an example survey was filled from concerned teachers, and after that proper information assortment was begun. The researcher chose 15 teachers and distributed a copy of the survey among them, a hard copy was delivered to all participants. Furthermore, the survey instructions were very clear. The privacy and confidentiality of the participants were taken into consideration, the abbreviation of FCI was defined as Flipped Classroom Instruction, the timing needs was about 5 – 10 minutes.

3.4 Tools of data collection

To collect the relevant data from the respondents, a researcher used different kinds of tools according to the nature of research. For this research activity, the researcher used a questionnaire (See Appendix 1) as a tool for quantitative data collection. While for qualitative data collection the researcher used FGDs as a tool of data collection. Focus group discussion (FGD) is a proper way to assemble individuals from comparative foundations or encounters to talk about a particular subject of intrigue. The gathering of members is guided by a mediator (or gathering facilitator) who presents points for conversation and encourages the gathering to take an interest in a vivacious and common discussion amongst themselves. The quality of FGD depends on permitting the members to agree or can't help contradicting one another with the goal that it gives students into how a gathering thinks about an issue, about the scope of sentiment and thoughts, and the irregularities and variation that exists in a specific network as far as convictions and their encounters and practices (Sarantakos, 2005). Data is collected through a proper focus group discussion; Different sessions were arranged in schools. The teachers were given proper questions (Appendix#1) and then asked to answer each question as per the requirement and understanding of the study. Moderator was handling the discussion to keep it on track to get the desired outcome. The discussion was recorded (a consent form was sent to all participants earlier, Appendix#2) and then transcribed properly to analyze and fulfill the objectives of the study. Qualitative data was collected through the process using FDGS.

3.5 Data Analysis

For any research activity data analysis is the most important segment. For this study, the researcher analysed the quantitative data through statistical package for social science SPSS, while the qualitative data was analyzed through different themes and explanations. Further both the qualitative and quantitative data was missed through concurrent triangulation method with the help of research objectives and literature support.

3.6 Delimitation

Delimitations are generally the restrictions deliberately set by the researchers themselves. They are worried about the definitions that the researcher chooses to define as the limits or cut off points of their work with the goal that the investigation's points and targets don't become difficult to accomplish. In this regard, it can be contended that delimitations are in the specialist's control (Ellis, 2009). In this manner, delimitations are mainly worried about the study hypothetical foundation, goals, research questions, factors under examination and study test. The options to these and explanations behind dismissing them, for example the specific inspecting strategy picked out of numerous accessible, ought to be obviously introduced so that the reader is fully informed (Leedy, 2016).

The current study is of high importance for the student socialization and enhancement of student's academic performance. Flipped classroom instruction improves student's academic achievements and improves quality education. Flipped classroom instruction is a strategy through which the teachers give more time to each student, which enhances academic performance of the students. FCI also gives students the opportunity to ask more questions and motivate them towards learning. Also flipped classroom instruction provides an opportunity to students to work as a team, which enhances students' academic performance.

3.7 Ethical consideration

Ethical Considerations can be determined as one of the most significant parts of the research. Participants of the research ought not to be exposed to hurt in any manners at all. It is significant that social research happens in a social setting. Specialists should subsequently consider numerous moral contemplations close by logical ones in controlling and executing their exploration. Ethics is normally connected with profound quality and manages matters of good and bad. Anybody associated with sociological exploration, at that point, should know about the normal arrangements shared by analysts about what is fitting and what is unseemly in the carry out of scientific inquiry.

The researcher maintained anonymity of the participants as per requirements and ethics of the study. Before starting questionnaire and in depth interview the research took permission to record the view of respondents, when needed and required. For the purpose of primary data collection, the researcher took permission from school administration. Anonymity of the respondents was maintained as per research requirements. During the research activity the data was collected honestly, and free of biasness.

Chapter 4: Data Analysis

4.1 Tables:

Table1: Demographic of Participants

Gender	<ul style="list-style-type: none">▪ Male▪ Female
Marital Status	<ul style="list-style-type: none">▪ Single▪ Married
Age	<ul style="list-style-type: none">▪ 18-24▪ 25-34▪ 35-44▪ 45-54▪ 55+
Educational Level	<ul style="list-style-type: none">▪ Bachelor▪ Collage▪ Master▪ Professional Degree
Position	<ul style="list-style-type: none">▪ Teacher▪ Head of Department▪ Supervisor

Table 2: Detailed Demographic of Participants

Total n=51	
Gender	
Male	29%
Female	71%
Age	
18 – 24	6%
25 – 34	31%
35 – 44	43%
45 – 54	20%

55+	0%
Marital status	
Single	18%
Married	80%
Divorced	2%
Educational Level	
Bachelor	61%
Master	35%
College	2%
Professional Degree	2%
Position	
Teacher	73%
Head of Department	10%
Supervisor	4%
School Management	13%

4.2 Description/Quantitative analysis

The below table (Table#2) shows data regarding importance of flipped classroom instruction in private schools in the targeted area. In this regard different questions were asked from the respondents and they responded differently. A high number of the respondents 66% agreed that students are more engaged in flipped classroom instruction, 10% were strongly agreed, 4% disagreed with the statement and the remaining 20% considered undecided, as they are not aware about FCI mechanism. However, some studies show that students spend most of their time on the computer screen and they are busy with digital technology. In FCI different kinds of approaches

are utilized to enhance a student's academic performance, however, by using FCI mechanism some of the students are discouraged as most of the time they are busy with the learning process. Majority of the respondents i.e. 52% agreed that students' results are improving by applying flipped classroom instruction, 10% respondents were strongly agreed, 2% were considered disagree and the remaining 36% of the respondents were considered undecided. By using FCI most of the students don't hesitate to ask questions from the teachers and they are busy at learning every time which improves their results and academic performance. After students have drawn in with computerized content at home, they can go to the classroom arranged with thoughts and questions. It's an extraordinary method to include students in molding the study room meetings, and accordingly sustain their awareness of others' expectations. A high number of the respondents i.e. 70% were agreed that by applying flipped classroom instructions students asked more questions in the class, 20% of the respondents strongly agreed, 2% of the respondents disagreed and the remaining 8% responded that they did not decide. Most of the respondents i.e. 58% shared that by applying flipped classroom instruction the students are well prepared for lesson and they ask more questions related to lesson, 18% of the respondents were strongly agreed, 10% of the respondents were considered disagreed and the remaining 14% responded that they cannot decided. A high number of the respondents i.e. 68% shared that during class students are positively collaborative due to flipped classroom instruction, 22% respondents shared that they strongly agreed, 2% of the respondents disagreed and the remaining 8% responded that they cannot decide. A flipped classroom empowers understudies to invest more energy working together with each other: an incredible method to learn, yet additionally useful for their group working abilities. Similarly, most of the respondents i.e. 46% responded that they are preferring flipped classroom than traditional one, 10% were strongly agreed with statement, 10% of the respondents were not agreed and 2% of the respondents were strongly disagreed, while the remaining 32% of the respondents were consider undecided. Majority of the respondents i.e. 56% opined that students are more interested to learn due to flipped classroom instruction and motivate students towards learning, 14% of the respondents were strongly agreed, 12% were disagreed and remaining 18% were considered undecided.

Table3: participants survey responses

Statement	Strongly Agree		Agree		Undecided		Disagree		Strongly Disagree	
	Frequency	Percentage %	Frequency	Percentage %	Frequency	Percentage %	Frequency	Percentage %	Frequency	Percentage %
Students are more engaged in FCI.	5	10.0 %	33	66.0 %	10	20.0 %	2	4.0%	0	0
Students' results are improving when applying FCI.	5	10.0 %	26	52.0 %	18	36.0 %	1	2.0%	0	0
Students ask more advanced questions in the class.	10	20.0 %	35	70.0 %	4	8.0%	1	2.0%	0	0
Students come to class well prepared and ready for the new lesson.	9	18.0 %	29	58.0 %	7	14.0 %	5	10.0 %	0	0

During the class students are positively collaborative.	11	22.0 %	34	68.0 %	4	8.0%	1	2.0%	0	0
Students prefer flipped classroom than traditional ones.	5	10.0 %	23	46.0 %	16	32.0 %	5	10.0 %	1	2.0 %
Students are more interested to learn.	7	14.0 %	28	56.0 %	9	18.0 %	6	12.0 %	0	0
Students' social skills are developed after adapting FCI.	8	16.0 %	24	48.0 %	11	22.0 %	6	12.0 %	1	2.0 %
Peer learning becomes more visible in class.	7	14.0 %	36	72.0 %	5	10.0 %	2	4.0%	0	0
Students' desire to learn is clearly improved.	6	12.0 %	32	64.0 %	10	20.0 %	2	4.0%	0	0
The progress of submitting the assignments is notable.	4	8.0%	29	58.0 %	14	28.0 %	3	6.0%	0	0

Online resources are more convenient and accessible for students.	10	20.0 %	25	70.0 %	3	6.0%	2	4.0%	0	0
Students have enough time to interact with classmates.	11	22.0 %	29	58.0 %	8	16.0 %	2	4.0%	0	0
Students transformed to be more self-directed in their learning.	14	28.0 %	34	68.0 %	2	4.0%	0	0	0	0
By time teachers feel more comfortable using flipped classroom.	13	26.0 %	27	54.0 %	10	20.0 %	0	0	0	0
Teachers have more class time to discuss advanced ideas during class time.	16	32.0 %	26	52.0 %	5	10.0 %	2	4.0%	1	2.0 %

Teachers have excess time to do more activities.	11	22.0 %	29	58.05 %	6	12.0 %	4	8.0%	0	0
Time is more available for teachers to enhance low achievers during the lesson.	10	20.0 %	32	64.0 %	3	6.0%	4	8.0%	1	2.0 %
lesson plan preparation takes less time.	4	8.0%	17	34.0 %	15	30.0 %	12	24.0 %	2	4.0 %
Teachers' ICT skills become more competent through using FCI.	14	28.0 %	29	58.0 %	7	14.0 %	0	0	0	0
Through FCI teachers have good space for differentiation during the lesson.	10	20.0 %	33	66.0 %	5	10.0 %	1	2.0%	1	2.0 %

FCI helps students to build strong classmates relationships.	8	16.0 %	28	56.0 %	11	22.0 %	2	4.0%	1	2.0 %
In FCI teachers' role becomes more of a facilitator than lecturer.	13	26.0 %	31	62.0 %	5	10.0 %	1	2.0%	0	0
FCI contributes to the development of learners' higher order thinking skills.	13	26.0 %	31	62.0 %	2	4.0%	4	8.0%	0	0
FCI supports using technology in an educational way.	17	34.0 %	32	64.0 %	1	2.0%	0	0	0	0

Then, the questions were asked whether students' social skills are developed after adapting flipped classroom instruction, majority of the respondents i.e. 48% were agreed, 16% were strongly agreed, 12% were considered disagreed, 2% opined in favour of strongly disagreed and 22% shared that they cannot decided. FCI is an approach in which students and teachers are involved frequently with one another and such involvement improves their social as well as educational skills. A high number of students i.e. 72% were of the view that peer learning become visible due flipped classroom instruction, 14% shared that they strongly agreed, 4% of the respondents opined that

they disagree and remaining 10% were considered undecided. A developing number of studies have archived huge discoveries in the utilization of a flipped study room (FC) in various learning subjects. There is regular understanding that a FC as an instructive procedure is probably going to encourage students focused, dynamic learning by giving students more time to cooperate and zero in on assignments that psychologically request and require higher-request information and intellectual reasoning aptitudes (McLaughlin et al., 2014; Long et al., 2016). Similarly, a high number of the respondents i.e. 64% were agreed that students desire to learn and improve their learning, 12% of the respondents were strongly agreed, 4% of the respondents opined that they disagree and remaining 20% were considered undecided. Most of the respondents i.e. 58% were agreed that due to flipped classroom instruction progress of assignment submission is notable, 8% were strongly agreed, 6% shared that they disagree and 28% of the respondents cannot decide. Similarly, the question was asked whether online resources are more convenient and accessible for students due to flipped classroom instruction, a high number of the respondents 70% were considered agreed, 20% were strongly agreed, 4% were considered disagree and 6% were considered undecided. The question was asked that whether students have enough time to interact with classmates due to flipped classroom instruction, most of the respondents i.e. 58% were agreed, 22% respondents opined in favour of strongly agreed, 4% respondents shared that they are not agreed and the remaining 16% responded in favour of undecided.

Similarly, a high number of the respondents i.e. 68% were agreed that students transformed to be more self-directed in their learning due to flipped classroom instruction, 28% of the respondents were strongly agreed and the remaining 4% were considered undecided. Majority of the respondents i.e. 54% were agreed that teachers feel more comfortable using flipped classroom, 26% were strongly agreed and 20% considered undecided. Most of the respondents i.e. 52% were agreed that teachers have more class time to discuss advanced ideas during class time due to flipped classroom, 32% of the respondents were opined that they are strongly agreed, 4% of the respondents were disagreed, 2% were strongly disagreed and the remaining 10% were consider undecided. Most of the respondent's i.e. 58.5% shared that teachers have excess time to make more activities, 22% were strongly agreed, 8% of the respondents disagreed and the remaining 12% responded that they cannot decide. A high number of the respondents i.e. 64% were agreed that

time is more available for teachers to enhance low achievers during the lesson due to flipped classrooms, 20% responded in favour of strongly agree, 8% of the respondents disagreed, 2% of the respondents were strongly disagreed and 6% of the respondents cannot decided. In this regard most of the studies show that one of the most significant points of interest of flipped study room technique is the productive utilization of time. In the customary guidance, instructors save a large portion of their time in the class room for addressing while, in the flipped study room strategy, they strengthen the effectiveness of students learning by controlling (Bergmann and Sams, 2012; Miller, 2012). The flipped study room technique gives reality adaptability to the students and causes them to learn as per their individual movements (Bergmann and Sams, 2012). Since students are as of now arranged when they go to the classroom, their investment in the study room exercises gets simpler, their correspondence with their friends and instructors is improved because of the communication, they feel more good since they know, they can get quick and direct assistance even in the most troublesome exercises, and they find the opportunity to realize themselves better and accept the accountability of their learning since they are currently more dynamic (Bergmann and Sams, 2012; Kim et al., 2014). There are additionally a few burdens of the flipped homeroom strategy. These incorporate that it is hard for understudies who are acquainted with adapting conventional strategies that understudies would prefer not to accept greater accountability for their learning since it's their obligation of viewing the recordings before the class. Additionally, the recordings may have lower quality, and understudies need more individual exertion so as to comprehend the recordings. In addition, understudies have no chance to ask friends or educators inquiries promptly since the recordings are observed alone. Furthermore, educators can't be prepared to apply this technique or can think that it's inconvenient (Miller, 2012).

Then, the question was asked whether lesson plan preparation takes less time due to flipped classroom, 34% of the respondents were considered agreed, 8% were considered strongly disagreed, 24% disagreed, 4% of the respondents opined in favour of strongly disagree and the remaining 30% responded that they could not decide. In this regard, Rotellar and Cain (2016) opined that students are sent home to watch what might be principally utilized as a talk. What's more, come to class arranged to do the schoolwork with the teacher. This is to enable the students to get ready for "intelligent and higher-request exercises, for example, critical thinking,

conversations, and discussions" Kim, Kim, Khera, and Getman, 2014. Most of the respondents i.e. 58% were agreed that teachers' ICT skills become more competent through using flipped classroom instruction, 28% were strongly agreed and 14% considered undecided.

Similarly, a high number of the respondents i.e. 66% agreed that through FCI teachers have good space for differentiation during the lesson, 20% were strongly agreed, 2% of the respondents disagreed and 2% were strongly disagreed and 10% considered undecided. Majority of the respondent's i.e. 56% agreed that FCI helps students to build strong classmates relationships, 16% were strongly agreed, 4% of the respondents opined in favour of disagree, 2% strongly disagreed and the remaining 22% were considered undecided. Then, the question was asked whether in FCI teachers' role becomes more of a facilitator than lecturer, majority of the respondents i.e. 62% were agreed, 26% were strongly disagreed, 2% of the respondents shared that they disagree and 4% were considered undecided. Similarly, a high number of the respondents i.e. 64% were agreed that FCI support using technology in an educational way, 34% were strongly agreed and 2% considered undecided. Studies of (Blair et al., 2016; Davies et al., 2013) have seen no critical or just a slight contrast on students' scholastic exhibition between the flipped classroom instruction and conventional instructional models, while in different cases FC was found to create better outcomes. The critics are of the opinion that the kind of technology required for students i.e. computer, smart gagged, internet etc. are not accessible to every student.

4.3 Qualitative analysis

This qualitative part presents the thematic analysis of the open-ended questions of the questionnaire. Q1.....Flipped classroom is an "academic methodology in which direct guidance moves from the gathering learning space to the individual learning space, and the subsequent gathering space is changed into a dynamic, intelligent learning climate where the teacher guides students as they apply ideas and connect imaginatively in the topic". In this regard, the majority of the respondents shared their views regarding flipped classroom instruction implications in all subjects. The question was asked whether flipped classroom instruction could be used in all subjects or not. In this regard R1, R5, R11,R18, R31, R33,R45,R51 were of the opinion that flipped

classroom could not be used in all subjects or level, whereas R1 responded that it is suitable for Master level classes, R5 shared in favour of college level, R 11 and 18 opined for higher level classes, R31 shared that for those schools having high technology and R33,R45,R51 were of the view that flipped classroom instruction could be used only at secondary level classes and subjects. Majority of the respondents shared their views in favour of yes and agreed that FCI could be used in all subjects. However, R25 responded in favour of undecided and R30 responded that may be FCI is used in all subjects.

Similarly, the question was asked from the respondents whether FCI is suitable for all school phases. In this regard most of the respondents shared that yes it is applicable for all phases of school. However, some of the respondents did not agree with the statement and they shared their views differently. In this regard, R1 opined that it is suitable for master level, R11 suggest it for higher studies, R15 justify it only for mathematics subject, R24 opined in favour of class three and four, R46 suggest it for from Gr. 1-3 scientific subjects + Islamic / Gr3-12 all subjects.

In the end the question was asked: are you ready to use FCI in the classroom. In this regard majority of the respondents opined that yes they are ready for using FCI in class rooms. However, R3 shared their view that he is always recommending FCI, R25 opined that he is using it from the last three years and R44 shared that he is using it in some special cases. Conclusively, FCI is a good way to enhance student academic performance and leads to quality education.

Participant#1

Q: Are you ready to use FCI in your class?

"Absolutely"

Participant#4

Q: Are you ready to use FCI in your class?

"Being a middle school teacher, makes me want to try it especially in literature classes."

Participant#6

Q: Are you ready to use FCI in your class?

"Yes, but I think the students need practice more on the concept of FCI"

Chapter 5: Discussion, Conclusion, Recommendations, and Limitations

5.1 Discussion

The current study focuses on “the effective of flipped classroom instructions on student’s achievement in UAE. The core aim of the study was to know the multiple dynamics of FCI and how it improves students’ academic performance. The prime objective of the study is to know about the role of flipped class room instruction in enhancement of academic performance. The nature of the study is mixed method research (MMR), where the data is collected from the fifty (50) respondents through simple random sampling technique. The quantitative data were collected through structure questionnaire, while qualitative data were collected through in depth interview. Further, the quantitative data were analyzed through statistical package for social sciences (SPSS) and were presented in the form of frequencies and percentage, while the qualitative data were analyzed and presented in form of themes. Results of the quantitative data shows that by using flipped class room management instruction students learn positively, mostly busy in completion of their assignment, motivate students for learning, students take interest in academic activities, students work in team, teacher give more time to study, while the above mentioned indicators enhance academic performance and leads to quality education. Results of the qualitative data shows that FCI is applicable in all subjects and for all phases of schools, however some of the respondents shared that it is not applicable for all phases.

5.1.1 Concurrent Triangulation Method

In concurrent triangulation design, quantitative and qualitative data are assembled at the same time in one phase. The data is explored freely and after that investigated just as merged. Normally, used to beat a deficiency in one procedure with the characteristics of another. It can moreover be useful in developing quantitative data through aggregation of open-completed data. The scientist blends the information through simultaneous triangulation plans with the help of literature.

The quantitative data shows that students are more engaged in FCI and they asked questions due to FCI. Further, quantitative data shows that students prefer FCI more than traditional one method. Further due to FCI classmates are sharing ideas with each other frequently as well as enhancing students' academic performance. The analyzed data shows that by using FCI the teachers has more time to motivate students and enhance their academic achievements. In this regard, Mazur and Crouch, (2001) were of the opinion that teachers are more interested in courses, students' academic performance and improvement of class rooms. Such improvement in academic performance and class rooms leads to academic performance which is due flipped classroom instructions. The qualitative data shows that FCI are using in all subject which enhance students' academic performance in all subjects. Further qualitative data shows that FCI is suitable for all phases of school, such suitability enhance students' academic performance and leads to parental attraction in schools. The qualitative data shows that most of the respondents are using FCI method in class rooms for students' academic performance enhancement.

5.2 Conclusion

The core purpose of the study is effective of flipped class room instructions on student's achievement at targeted area of UAE. The study also focuses on different dimensions of the flipped class room instruction which enhance students' academic performance and leads to quality education. The parameters of the study were developed according to generated data.

Flipped class room instruction is one of the methods and approach through student's academic performance is enhanced positively during schooling. Analysis of the primary data shows that engagement of students through FCI, improvement of the student's results through FCI, to ask more questions by using FCI, ready for new lesson plans, positive relationship with class mates, motivation for learning are the factors which are because of flipped class room instruction during schooling. Further, the analyzed data shows that improvement in students' social skills, visible peer learning, students desire for learning, availability of online resources, comfortably of the teachers, lesson plans, preparation of the teachers, more time with teachers for other activities and to enhance students' academic achievements, development of the learner and using technology are the factors which enhance students' academic performance by using flipped class room instruction.

5.3 Recommendations

On the basis of study, the following suggestions were recommended:

- New and updated trainings for teaching staff as well as group based faculty development programs to assist faculty in paradigm change.
- Pre and in class activities needed to be link, as it is necessary for students to complete both for success and enhancement of academic performance.
- Provision of proper guidance for students understanding, provision of an opportunity to students to ask questions without hesitation and cover all the areas of FCI.
- Provision of digital learning platforms for students and to ensure access of every student to digital technology i.e. computer, internet, multimedia etc.

5.4 Key Findings

- 66% of the respondents were of the view that students are more engaged in flipped class room instruction
- 52% of the respondents shared their views that students result and academics performance are enhanced through flipped class room instructions.
- 70% of the respondents opined that students asked more questions due to flipped class room instruction.
- 58% of the respondents were of the view that by using flipped class room instruction students are well prepared their lesson and take interest in learning's
- 68% of the respondents shared that due to flipped class room instruction students play their role positively in school and class room.
- 46% of the respondents were of the view that students are preferring flipped class room instruction rather than traditional classes
- 56% of the respondent's shard their view that students are motivated and learn easily due to flipped class room instruction.
- 48% of the respondents were of the opinion that students' social skills are improving by using flipped class room instruction
- 72% of the respondents opined that peer learning become visible by using flipped class room instruction
- 64% of the respondents opined that by using flipped class room instruction students learning desires are increasing day by day which motivate students and enhance their academic performance.
- 58% of the respondents shared that by using flipped class room instruction student's assignment submission is notable.
- 70% of the respondents were of the opinion that by using flipped class room instruction students access to online materials are easy
- 58% of the respondents shared their views that by using flipped class room instruction students interact with their class mate

- 64% of the respondents opined that by using flipped class room instruction teacher has a lot of time for students learning and enhancement of their academic performance.
- 58% Of the respondents were of the view that by using flipped classroom instruction teachers' ICT skills are improved positively

5.5 Limitations for the study

Limitations of specific report concern potential shortcomings that are as a rule out of the researcher control, and are firmly connected with the picked research plan, measurable model limitations, subsidizing requirements, or different variables. In this regard, an impediment is a 'forced' limitation which is hence basically out of the analyst's control. All things considered, it might influence the study configuration, results and at last, ends and ought to subsequently be recognized obviously in the study when submitted. In short words, limitations are impacts that the researchers can't control. They are the inadequacies, conditions or impacts that can't be constrained by the researcher that place limitations on your strategy and ends. Any restrictions that may impact the outcomes ought to be referenced.

In this research activity, number of registered school from the concern authority was a tough task which was handled the researcher to get form school authority.

To collect the relevant data from the teachers was a tough task, the researcher take approval from the school administration and collected the relevant data.

5.6 Scope for further study

The current study focuses on effective of flipped class room instruction and their influence on students' academic achievements. As it is obvious that the advancement and development of a nation is based on education and technology, so for development and prosperity technological education and FCI is need of the time. The current study can be helpful as the ongoing development to incorporate the flipped class room model into advanced education has brought about critical changes that influenced both instructing and learning rehearses in various manners. After right around a time of examination on the flipped class room model, distinctive developing results have been accounted for in an area explicit setting. A natural result of progress in innovation, new methodologies towards instructing and learning have risen and the appropriateness of the flipped class room technique, another instructive system, in the field of training has begun to be talked about.

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