Why Should al-Quds Open University (QOU) Adopt Flipped Classroom Model (FCM)?

In -Depth Investigation into the literature of FCM*

Dr. Khaled Abdel-Jaleel Dweikat**

***Received: 17/12/2017, Accepted: 6/3/2018.**
DOI: https://doi.org/10.5281/zenodo.2553030
****Associate Professor/Al-Quds Open University/Palestine.**

Abstract

Although literature review articles are somehow less common in scientific journals compared to research articles and papers, they still have their own significance. They mostly seek to provide the expected audience with a comprehensive and relatively succinct investigation into a certain issue. Taking this importance into account, the focus of this literature review was to discuss the rationale for using the flipped classroom model (FCM) at al-Quds Open University (QOU) in Palestine through examining a number of research papers written around this topic. Thus, to achieve the objectives of the current literature review, fifty research papers published between 2012 and 2018, were systematically reviewed for the purpose of finding out the possible benefits and the rationale of using FCM at QOU. Results of this investigation revealed that 42 research papers (84%) found that the flipped classroom model have positive effects on students' achievement and learning while only 8 studies (16%) found no significant effects of this type of learning. Such results revealed high consensus among the researchers regarding the positive impact of using flipped learning in education. In light of these results, the researcher recommended QOU to adopt the flipped classroom model as it suits the philosophy of open education and is a learner-centered-approach that invests in technological advancements.

***Keywords**: Flipped Learning, Flipped Classroom Model, QOU, Literature Review Articles, Open Education.*

لماذا ينبغي على جامعة القدس المفتوحة تبني نموذج الصف المقلوب؟

دراسة متعمقة في أدبيات نموذج الصف المقلوب

ملخص:

على الرغم من أن المقالات المتخصصة في مراجعة الأدبيات أقل شيوعا في المجلات العلمية مقارنة بالدراسات البحثية، إلا أن لها أهميتها أيضا. فهي تهدف في الغالب إلى تزويد جمهور القراء بمعلومات شاملة وموجزة نسبيا في موضوع ما بعينه. ومع أخذ هذه الأهمية بالحسبان، تركز هذه المقالة البحثية على مناقشة مبررات استخدام التعلم المقلوب في جامعة القدس المفتوحة في فلسطين من خلال مراجعة عدد من الدراسات والأبحاث في هذا المجال. ولتحقيق أهداف مراجعة الأدبيات الحالية، تم مراجعة خمسين ورقة بحثية نشرت في الفترة ما بين 2012-2018 بصورة منهجية منظمة بغرض معرفة الفوائد المحتملة لاستخدام التعلم المقلوب والاتساق ومسوغات توظيفه في جامعة القدس المفتوحة. وأشارت النتائج إلى أن 42 دراسة (84 %) وجدت آثارا إيجابية للتعليم المقلوب على تحصيل الطلبة وتعلمهم، في حين أن 8 دراسات فقط (16 %) لم تجد آثارا ذات دلالة إحصائية لهذا النوع من التعلم. وكشفت هذه النتائج عن توافق كبير بين الباحثين فيما يتعلق بالأثر الإيجابي لاستخدام التعلم المقلوب في التعليم. وفي ضوء هذه النتائج، أوصى الباحث بأن تتبنى جامعة القدس المفتوحة نموذج الصف الدراسي المقلوب لكونه يتلاءم مع فلسفة التعليم المفتوح، وهو نهج يتمحور حول المتعلم ويستثمر في التقدم التكنولوجي.

كلمات مفتاحية: التعلم المقلوب – نموذج الصف المقلوب – جامعة القدس المفتوحة – مقالات مراجعة الأدبيات – التعليم المفتوح.

Introduction

Over the past two decades, the latest technological advancements and innovations played a significant role in our daily life. Education has been greatly affected by the integration of these technologies to the extent that we witnessed a variety of technology-based approaches in the teaching /learning process. In this respect, some instructional methods such as flipped learning enable students to study the teaching materials before the teaching session, as we will discuss later. Learning can be self-paced, allowing for class time to focus on student-centered active learning (Hibbard, Lisa, Sung, Shannon, Wells & Breche, 2016). Heinerichs et al. (2016) maintained that the flipped classroom is an educational approach that has become popular in higher education because it is student-centered. In this "flipped" or "inverted classroom, students are expected to read material and view videos before coming to class and then engage in active learning

classroom activities using case studies, labs, games, simulations, or experiments (Herreid & Schiller, 2013).

Therefore, it seems to be different from traditional teaching where the teaching materials are presented during a normal lesson or lecture for a group of students who are assessed on that material during another session at a later stage (Balan, Clark & Restall, 2015). In such situations where technology is needed, the internet with its numerous applications is seen to be one of the most important innovations that has the potential to support and enhance students' learning in both school and university contexts.

Al-Quds Open University

One of the pioneering educational institutions endorsing open learning programs in Palestine and in the Arab world is al-Quds Open University (QOU). QOU is the first among Palestinian and Arab universities adopting the philosophy of open education, keeping abreast of technological advances for the sake of providing learners with a variety of delivery methods. Currently QOU has established a network of 20 branches spread in the major Palestinian cities, which nowadays have about 65,000 students. Moreover, QOU strives to prepare independent students who will graduate with the adequate knowledge and skills. It will also enable them to continue learning depending on their own abilities to face the on-going challenges. The University makes use of different technologies and methods to achieve its objectives. Of these methods; e-learning techniques aim to design, deliver, select, administer, and extend learning, virtual classes by means of WizIQ e-learning platform, blended learning courses, e-courses, synchronous e-learning that involves communication in which interaction between participants is simultaneous and asynchronous e-learning that involves communication in which interaction between parties does not take place simultaneously. In addition to, QOU Tube (an open educational resources (OER) site that gives a variety of high quality videos sorted by topics, easy to get to), online educational video library, video streaming as a type of technology which is similar to satellite transmission but is done through the internet. Recently, the use of QOU channel can be accessed through the Facebook in addition to its live broadcasting on the NileSat (QOU Official website).

Objective of This Literature Review Article

Instructional methodologies are continuously changing to cope up with the ongoing changes of learners' needs and interests everywhere. Thus, educational systems need to work hard to keep pace with these changes. The flipped learning is a pedagogical approach that enhances teaching practices in many subject domains and educational levels, enriching the students' learning and engagement in the classroom. Many instructors adopted the use of the flipped learning approach as an instructional strategy that utilizes technology to increase the amount of time that students engage with each other in class in more meaningful learning activities. The use of "flipping" has largely been tied to the incorporation of video technology either in the form of a student practicum or an instructor lecture via on-line delivery combined with a classroom meeting involving collaboration and/or application exercises in the face-to-face session (Westermann, 2014). Hence, a great deal of literature has been written on flipped learning to explore its effectiveness in school and university education.

Despite the fact that QOU tries its best to keep abreast of the best instructional methodologies and strategies for the sake of providing learners with a variety of teaching methods, the flipped learning model, to the best of the researcher's best knowledge, has not been given the required attention at QOU in spite of its promising yields.

Thus, this article focuses primarily on the rationale of using flipped learning at QOU in Palestine. One further objective is to revise the literature written to explore the benefits of using this strategy through organizing, integrating and critically evaluating already published articles and papers in an attempt to consider the progress of current research

towards the significance of using the flipped learning strategy at QOU to contribute to the understanding of this emerging pedagogy.

Significance of the Literature Review Articles

Although literature review articles are somehow less common in scientific journals compared to research articles and papers, they are nonetheless as important. They mostly aim at providing the expected readers with a comprehensive and relatively succinct investigation into a certain topic. Taking this importance into account, the focus of this literature review will be on a random sample of up-to-date representative and informative research papers on flipped learning to allow for a more in-depth theoretical and research review. This is to provide some theoretical perspectives and practical samples that can contribute to the literature of flipped learning. It is especially important for researchers who are interested in updating their knowledge in this domain and for the instructors and teachers at QOU as well as the Ministry of Education. For the researchers, this literature review is expected to help them uncover critical areas in the field of flipped learning that many researchers were able to explore paving the way for a new learning methodology. Moreover, the review might have the potential to initiate a groundbreaking approach of instructional delivery at QOU that meets the learners' expectations and needs. The greater demand for new methodologies and approaches at QOU justifies the need for more effective, life-changing teaching approaches that suit the philosophy of open education.

Methodology

To achieve the objectives of the current literature review, a random sample of fifty refereed journal research papers on flipped learning published between 2012 and 2018 were examined and analyzed. The use of content analysis in this literature review article aimed to link the data related to the issue of flipped learning and analyze specific themes that can be comprehended by readers conveniently and efficiently. Researchers can also use it as a reference for potential future research in the field of the flipped classroom approach in the area of open education as well. Thus, the major steps followed to conduct this content analysis study involved using Google search engine to randomly select flipped learning studies from various fields. The criterion for analysis and categorization involved the impact of flipped learning model on students' learning, achievement, motivation, engagement, interaction and attitudes. Results of this systematic analysis were later interpreted using the descriptive analysis method.

Flipped Learning: Theoretical Background and Perspectives.

Despite the fact that a great deal of research has been written on the issue of flipped learning worldwide, little attention has been paid to the issue of flipped learning at the university level in general as well as in distance and open learning institutions in particular.

One rationale for using flipped learning is given by Wallace et al. (2014) who argued that if instructors desire students to gain a deeper understanding of the content and begin to think like experts, then they will need class time for active, collaborative learning. Kates, Byrd and Haider (2015) on the other hand call for an active "constructionist" approach to flipping classrooms where not only are homework and lecture sessions flipped, but students create, or "construct" knowledge outside of class and present them to others through group learning activities. In this model, students become more meaningfully engaged when they are creating rather than merely receiving knowledge in either a synchronous or an asynchronous learning environment. Chang (2016) agrees with this point of view when he highlights the idea of shifting instruction to students before the class and using class time for assignments believing that such shift allows students to learn the basic concepts on their own and explore the concepts in depth during the class. By doing so, flipped classrooms will become transformational when shifting the educational focus

from the traditional and passive lecture-based teaching to an active engagement of students with each other and with the teacher as well. Consequently, students were satisfied with the flipped classroom lessons and the Fl enabled students to work both in and out of the classroom and actively explore their learning environment (Obari & Lambacher, 2015).

Regarding flipped learning, Ahmed (2016) maintains that the flipped classroom-sometimes called reverse, backwards, inverted and upside down classroom-is an instructional model that inverts the traditional lecture-plus-homework format. Furthermore, Ahmed (2016), talks about three foundations of the flipped classroom model. The first is the blended learning approach when it moves the lecture away from class into online delivery and uses face-to-face class time for actual application. The second foundation of the flipped model is the student-centered approach when moving learners away from an instructor-centered learning environment to another environment where teachers become real organizers, mentors, and facilitators. The flipped classroom makes each student responsible for coming to class with a basic understanding of the material, so that he/she can engage in interactive learning in the classroom. Here, flipped learning can be used to help students become more responsible for their learning, as well as help teachers provide differentiated instruction (Sweet, 2014).

A third theoretical underpinning/pillar for the flipped classroom is active learning which covers a number of pedagogies focusing on student activity and engagement in the learning process. The flipped classroom can be used to include active learning elements in class while maintaining the ability to cover critical course material. In this case, the flipped classroom radically changes the traditional concept of teaching and learning by shifting how the teacher is teaching and the learners are learning (Al-Harbi1 & Alshumaimeri, 2016). What makes the flipped learning a promising model is that it can provide a digital solution to the lack of time that obstructs teachers in the classroom when more learning can be done outside the classroom especially with the various resources available today. Thus, it is up to teachers to find ways to integrate these technologies into the learning experience (Webb & Doman, 2016).

By the same token, Rossi (2015) stated that educators in all academic levels have recently been exploring the "inverted classroom" or "flipped classroom" pedagogical model for improving student engagement in subjects spanning the fields from liberal arts to business studies to science and technology. This learner-centered pedagogy, in which course content is delivered outside the classroom, allows class time to be more productively used for higher-level engaging activities, such as collaborative and problem-based learning through instructor-led applications of the material delivered outside of class. Flipped learning has come to the forefront in education to maximize learning by moving content delivery online, where learning can be self-paced, allowing for class time to focus on student-centered active learning (Hibbard et al., 2016). In flipped classrooms, lectures, which are normally delivered in-class, are assigned as homework in the form of videos, and assignments that were traditionally assigned as homework, are done as learning activities in class (Sletten, 2017).

According to Herreid and Schiller (2013) the term "flipped" or "inverted classroom comes from the idea that what is normally done in class and what is normally done as homework is switched or flipped. Instead of students listening to a lecture in class and then going home to work on a set of assigned problems, they read material and view videos before coming to class and then engage in active learning using case studies, labs, games, simulations, or experiments.

A flipped classroom approach promotes active learning and increases teacher-student interactions by maximizing face-to-face class time (Hamdan, Mcknight, Arfstrom & Arfstrom 2013), provides lectures outside of class, allows instructors to incorporate both the explicit instruction and interaction approaches which may facilitate the understanding of grammar and lead to language

proficiency (Perfume, 2016). Corrias (2014) found that with the flipped approach, classroom sessions turned out to be livelier than is expected. In this respect, Bergmann and Sams (2014) point out that the flipped classroom model has established less lecturing and more activity in the classroom. Maher, Lipford and Singh (2013) suggest that students spend time in the classroom working on activities that create a learning environment of collaboration with peers.

According to van Vliet, Winnips and Brouwer (2015), in flipped-class pedagogy, students prepare themselves at home before lectures, often by watching short video clips of the course contents. With "flipped" instruction, students practice skills during class after viewing or/and reading lecture content beforehand (Clark, Kaw & Besterfield-Sacre, 2016). This might encourage some teachers to flip their classes by having students read a text, watch a supplementary video or solve problems outside of class as homework.

Other educators consider flipped classroom as "a potential game-changer" because learning takes place before the student enters the classroom, allowing the teacher "to broaden and deepen" the learning (Pearson, 2012). Such advantages might be due to the fact that flipped instruction has positive effects on student achievement especially when students are offered the opportunity to watch video lectures outside of class and appreciate more active approaches to learning (Leo & Puzio, 2016). In a flipped classroom, professors assign pre-class homework consisting of brief, recorded lectures and presentations, digital readings with collaborative annotation capabilities, and discussion board participation. This frees up classroom time to promote active learning through collaborative, project-based activities using simple display and sharing tools. While technology facilitates flipped instruction, it takes both planning and experimentation to perfect the model (Demski, 2013).

Results and Discussion.

The major objective of this literature review article was to discuss the rationale for using the flipped classroom model at QOU in Palestine through examining published articles and papers in the field of flipped learning in an attempt to consider the progress of current research towards the significance of using it in education in general and open education in particular. Accordingly, the results of examining 50 research papers and articles revealed that 42 research papers (84%) found flipped learning to have either positive effects on students' achievement, performance and learning in general or at least students have positive perceptions and attitudes towrds this model. On the other hand, only 8 studies (16%) found no significant effects of this type of learning although most students participating in these studies showed positive attitudes towards this model. Table 1 below summarizes the major results of the analysis.

Table 1: Percentages and Frequencies of Impact of Flipped Learning on Students' Achievement and Attitudes

No.	Studies that showed positive impact on students' achievement and learning	Studies that showed positive impact on students' engagement, Particiaption, and interaction	Studies that showed positive attitudes and perceptions towards flipped learning	Studies that showed no impact on students' Learning, participation and engagement
1	Bergmann & Sams (2012)	Hamdan, Mcknight, Arfstrom & Arfstrom (2013)	Al-Harbi1 & Alshumaimeri (2016)	Zainuddin & Attaran (2016)
2	Perfume (2016)	Thompson & Ayers (2015)	Hibbard, Lisa, Sung, Shannon; Wells & Breche´ (2016)	Long, Logan & Waugh (2016)

No.	Studies that showed positive impact on students' achievement and learning	Studies that showed positive impact on students' engagement, Particiaption, and interaction	Studies that showed positive attitudes and perceptions towards flipped learning	Studies that showed no impact on students' Learning, participation and engagement
3	Pearson (2012)	Obari & Lambacher (2015)	Galway, Berry & Takar (2015)	Chang (2016)
4	Leo & Puzio (2016)	Unruh et al. (2016)	Sletten (2017)	Yamada et al. (2016)
5	Oyola (2016)	Collins (2015)	Chen et al. (2015)	Snyder et al. (2016)
6	Touchton (2015)	Saterbaj, Tracy & Wettergreen (2016)	Brooks (2014)	Jensen et al.(2015)
7	Hsieh et al. (2017)		Galway, Berry & Takar (2015)	Clark, Kaw & Besterfield-Sacre (2016)
8	Kostaris et al. (2017)		Çelebi, Karaaslan & Demir-Vegter (2016)	Brooks (2014)
9	Ahmad (2016)		Ölmefors (2016)	
10	Al-Harbi1 & Alshumaimeri (2016)		Hao (2014)	
11	Mori, Omori & Sato (2016)			
12	Hibbard (2016)			
13	Scovotti (2016)			
14	Yelamarthi, Drake & Prewett (2016)			
15	Ryan & Reid (2016			
16	Porcaro et al. (2016)			
17	Van Vliet, Winnips & Brouwer (2015)			
18	Danker (2015)			
19	Bormann (2014)			
20	Farah (2014)			
21	Kates, Byrd & Haider (2015)			
22	Mazur, Brown& Jacobsen (2015).			
23	Webster, David, Madden & Amanda (2016)			
24	Song & Kapur (2017)			
25	Webb & Doman (2016)			
26	Rosa (2018)			
Total	26 (52%)	6 (12%)	10 (20%)	8 (16 %)

The overall results revealed great consensus among the researchers who have taken various approaches to study the effect of using flipped learning in education either at school level or university level. Regarding students' attitudes and perceptions towards using the flipped classroom model, these were positive and reflected motivation to succeed (Al-Harbi & Alshumaimeri, 2016;

Hibbard, Lisa, Sung, Shannon, Wells & Breche´, 2016); especially when flipped learning generated positive impact for shy and quiet students (Zainuddin & Attaran, 2016). One justification might be that flipping the classroom gives students statistically significant advantages in difficult, applied areas emphasized in class and students learn more and enjoy the course more than students in a traditional classroom (Touchton, 2015).

Furthermore, some participants indicated a high level of support for the flipped classroom despite the great efforts needed, thus stressing the students' responsibility and the active learning nature of the course (Thompson & Ayers, 2015). Students in the flipped classroom felt they learned more and enjoyed the course more than those in a traditional classroom (Touchton, 2015). In addition to these favorable attitudes, students were satisfied with flipped classroom lessons and motivated by the blended learning environment that incorporated mobile learning (Obari & Lambacher, 2015). At the same time, flipped classroom teachers have higher technology and teaching efficacy, greater comfort levels using technology, more positive attitudes toward technology, and greater levels of student engagement (Unruh et al., 2016).

However, very few results revealed that there is no positive effects of flipped learning as there were only 8 studies that showed no impact on students' learning, participation and engagement. For example, Zainuddin and Attaran (2016) found that part-time students faced a challenge in flipped classroom due to the lack of time to participate and become familiar with the content before attending the class. On the other hand, Long, Logan and Waugh (2016) found that students' attitudes and preferences on pre-class learning materials did not differ across class levels, major fields, or previous experience of learning via videos. Furthermore, Chang (2016) found that students preferred traditional lectures that explained and illustrated basic concepts whereas Yamada et al. (2016) found that learners seemed to face difficulties in using the discussion plugin and role management in Flip-J. Snyder et al. (2016) by the same token found that the use of flipping does not significantly impact student success while Van Vliet, Winnips and Brouwer (2015) found that the effects of flipped classes were not long-lasting although flipped-class pedagogy enhanced students' critical thinking, task value, and peer learning. Additionally, Jensen et al. (2015) found that the flipped classroom does not result in higher learning gains or better attitudes compared with the non-flipped classroom when both utilize an active-learning, constructivist approach. They propose that learning gains in either condition are most likely a result of the active-learning style of instruction rather than the order in which the instructor participated in the learning process. Clark, Kaw and Besterfield-Sacre (2016) found that only 38% of respondents preferred flipped instruction to usual methods.

The rationale for using Flipped Learning at QOU

Based on the aforementioned literature review, there seems to be several reasons representing a good rationale for QOU in Palestine to adopt the flipped classroom model in its distinct educational philosophy.

Firstly, since one major aim of establishing QOU in Palestine was to provide students with educational and training programs in accordance with the best practices of open and blended learning approach, the flipped learning model represents an optimal choice. Depending on the results of this paper which found that 42 research papers (84 %) indicated that flipped learning has either positive effects on students' achievement and learning and/or that students participating in such a model have positive attitudes and perceptions towards using it. Examples of the positive effects revealed by some studies are that using flipped learning not only enhanced the participants' motivation but also significantly improved their idiomatic knowledge (Hsieh et al., 2017). Flipped learning provided evidence of potential advantages in students' cognitive learning related to subject domain knowledge, enhanced the exploitation of teaching time during face-to-face

sessions and raised students' level of motivation as well as level of engagement (Kostaris et al., 2017).

Additionally, flipped learning facilitated teachers work and made better use of the face-to-face sessions through minimizing teacher's lecture and increasing students' active learning, collaboration and scaffolding (Bergmann & Sams, 2012). Students practiced skills during class after viewing or/and reading lecture content beforehand (Clark, Kaw & Besterfield-Sacre, 2016). It promoted active learning and increased teacher-student interactions by maximizing face-to-face class time, enhanced in-class active learning and allowed instructors to incorporate both the explicit instruction and interaction approaches (Perfume, 2016). Furthermore, the flipped classroom model has established less lecturing and more activity in the classroom (Bergmann & Sams, 2014) which might represent an educational approach that can become popular in higher education because it is student-centered (Heinerichs et al., 2016) especially when classroom sessions turned out to be livelier than expected (Corrias, 2014).When students spend time in the classroom working on activities, this creates a learning environment of collaboration with peers (Maher, Lipford & Singh, 2013). In science, technology, engineering and math flipped learning can be used to help students become more responsible for their learning, as well as helping teachers to provide differentiated instruction (Kostaris et al., 2017; Sweet, 2014).

According to Clark, Kaw and Besterfield-Sacre (2016), the most frequently-stated benefits of flipped instruction involved enhanced learning or learning processes, engagement and professional behaviors. In addition, the flipped classroom had a significant effect on the listening comprehension of Egyptian EFL students (Ahmad, 2016) which played a role in enhancing the students' grammar performances (Al-Harbi & Alshumaimeri, 2016). Furthermore, introductory students scored better on postlesson tests in the flip condition than in the nonflip condition only for fall 2014 but not for spring 2015 (Mori, Omori & Sato, 2016).

Some researchers found that students who were instructed through the flipped learning platform performed better than those taught using traditional pedagogy (Hibbard, 2016; Scovotti, 2016); and also improved by the implementation of multi-pedagogical strategies informed by the use of modified flipped model (Yelamarthi, Drake & Prewett, 2016). For example, exam performance was stronger in the flipped section (Ryan & Reid, 2016) while the flipped classroom approach improved pass rate for the final examination from 56-65% (Porcaro et al., 2016); and flipped classroom delivering instruction outside of class with lecture videos increased active classroom learning time which in turn increased classroom interactions (Perfume, 2016).

Taking into account further possible benefits of flipped learning, Galway, Berry and Takar (2015) found that flipped learning offers a diversity of activities that give students the opportunity to practice skills potentially relevant to the workplace. They also provide a high level of course preparation, perceived content, and peer interaction indicating student engagement when a flipped classroom format used emphasis on student responsibility and the active learning nature of the course (Thompson & Ayers, 2015). Additionally, it was found that flipped-class pedagogy enhanced students' critical thinking and peer learning (Van Vliet, Winnips & Brouwer, 2015) and reverses the role of the student from passive observer to an active participant which improves the overall learning (Kates, Byrd & Haider, 2015). Thus, flipped classrooms were able to remodel large lecture classes into active-learning classes, supported the possibility of individualised learning for the students, helped students to engage on a deeper level, increased their curiosity and engaged them to develop higher-order thinking skills (Danker, 2015). Also, flipped classroom promotes student empowerment, leads to student preparedness, addresses critical-thinking skills, and promotes computer literacy skills (Bormann, 2014). Based on the various advantages of the flipped learning model mentioned above, this

model seems to be an optimal decision for QOU to adopt.

The second reason to adopt the flipped learning model is that the flipped learning model goes in line with one of the basic foundations presented by Ahmed (2016) which is the blended learning approach that moves the lecture away from class into online delivery and uses face-to-face class time for actual application. Thus, it seems to be consistent with Heinerichs et al. (2016) who maintain that educators can successfully use flipped classroom principles in blended courses to create student-centered classes. In this respect, it is worth mentioning that open education in general and QOU in particular gives more emphasis to the learners' ability to study at home and prepare the material before coming to class instead of coming daily to the campus.

Thirdly, if the flipped learning model is adopted, QOU students will be given more opportunities to create knowledge outside face-to-face meetings so as to come to the class well-prepared and ready for the required material using different types of acivities that might include pair work, group work, individual work or even student –led discussions instead of teacher –led lectures. Accordingly, students, through this model will become more meaningfully engaged when they are creating rather than merely receiving knowledge. Moreover, QOU instructor can assign pre-class tasks to maximize learning where learning can be self-paced, allowing for class time to focus on student-centered active learning.

Fourthly, regarding the philosophy of open education, it is common that one aspect of openness in education is the development and adoption of open educational resources that enable learners to take full responsibility of their learning and come to class well-prepared. Hence, this aspect goes in parallel with the flipped learning model when it involves providing learners with online materials using the YouTube, Facebook, TV channels and videos that should be kept short and engaging to cover the new concepts and associated procedures. This means that video lectures hold an important role in the flipped learning model. Such investment in technological advancements goes in parallel with QOU vigorous efforts being made nowadays to establish a more well –structured blended model that combines face-to-face instruction and distance learning techniques by means of technology –based learning for the aim of delivering the instructional materials. Thus, the flipped classroom is supposed to help QOU achieve its mission through using videos that can be found on the YouTube, TED (Technology, Entertainment, Design) at (www.ted.com), QOU Tube, Online educational video library, Video Streaming, Virtual meetings and most recently QOU channel which can be accessed through the Facebook in addition to its live broadcasting on the NileSat. These technologies help learners to learn on their own and be more responsible for their learning

Fifthly, taking the second foundation of the flipped model into account, the student-centered approach which is also emphasized in open education systems seeks to move learners away from an instructor-centered learning environment to another environment where teachers become real organizers and facilitators. The flipped classroom makes each student responsible for coming to class with a basic understanding of the material, so that he/she can engage in interactive learning in the classroom. Hence, the flipped learning can be used to help students become more responsible for their learning, as well as help teachers provide differentiated instruction. This means that the flipped classrooms demonstrate their successes in the active learning sessions through constructivist teaching methods where students are to be active at home and in class sessions. Such model allows students to learn the basic concepts on their own and explore the concepts in depth during the class.

Finally, as the results of this literature review article revealed positive impact of the flipped learning model, QOU should adopt this model to help leaners and instructors alike achieve the desired objectives of the open and distance learning, where the former keeps abreast of technological advances for the sake

of providing learners with a variety of delivery methods. This model, as a result, could contribute to more effective learning on the part of QOU students when it improves their active participation, provides more resources to use and supports their self-learning. Furthermore, the flipped learning model can be an optimal choice for QOU instructors when it helps them cope with the latest technological advancements in education that meet the needs of the 21st century students who have different expectations, experiences, and interests from those in the past. What characterizes students in the 21st century is that they are technophiles keeping up with the latest innovative technologies found everywhere; on their laptops, Apps on smartphones, tablets, and others. The good news is that with today's mobile technology, instructional delivery is no longer constrained by four-wall classrooms of a university campus or a school setting. The 21st century students can nowadays access information anywhere at any time, thanks to the Internet technology.

In a nutshell, adopting the flipped learning model at QOU is seen to be the optimal decision since it has the potential to review the material anywhere outside of class according to their preferred time and need, and study at their own pace. Such active involvement can also increase students' collaborative learning in QOU education outside the class. By using the flipped learning model, QOU students do not have to spend much time attending weekly lectures since they can work outside the classroom walls, individually or collaboratively, through distance learning technologies. Using the flipped learning model also contributes to better understanding of technology use in open education as students are supposed to make use of the various technological media provided by QOU in all its branches in Palestine.

Implications and Conclusion

The investigation of the literature review indicated that the flipped classroom can be used at QOU since it has the potential to reach all learners, promote student empowerment, lead to student preparedness, address critical-thinking skills, influence student achievement, facilitate differentiation and redefine teaching. This approach will increase students' engagement, encourage at-home involvement and reinforcement. What makes flipped learning a promising model in university education is that it can provide a digital solution to the lack of time that obstructs teachers in the classroom when more learning can be done outside the classroom especially with the various resources available today including the internet, YouTube and other tools. Nevertheless, the success of the flipped learning model relies heavily on a highly engaged and supportive instructor who can inspire and promote learning during in-class sessions. This competent instructor is also important to ensure that students are not left behind and that there are ample opportunities for clarification on important concepts and materials that may be difficult to acquire through self-directed means. In a nutshell, the flipped learning model is a promising choice for QOU since it is a learner-centered approach as it shifts learners away from an instructor-centered learning environment to another environment where teachers become real organizers, mentors, and facilitators. It supplements the blended learning approach when it moves the lecture away from class into online delivery and uses face-to-face class time for actual application. Last but not least, this approach is based on active learning strategies in the classroom while maintaining the ability to cover critical course material.

References

1. *Ahmad, Samah Zakareya. (2016). The Flipped Classroom Model to Develop Egyptian EFL Students' Listening Comprehension. English Language Teaching; Vol. 9, No. 9. http://dx.doi.org/10.5539/elt.v9n9p166*
2. *Al-Harbi1, Sarah S. & Alshumaimeri, Yousif A. (2016). The Flipped Classroom Impact in Grammar Class on EFL Saudi Secondary School Students' Performances and Attitudes. English Language Teaching; Vol. 9, No. 10; pp.60-80.*
3. *Balan, Peter; Clark, Michele; Restall, Gregory (2015). Preparing Students for Flipped or Team-Based Learning Methods. Education & Training, v57 n6 p639-657.*

4. *Bergmann, J., & Sams, A. (2014). Flipped learning: Maximizing face time. Training & Development, 68(2), 28-31.*
5. *Bergmann, J., and Sams, A., (2012). Flip your classroom: Reach every student in every class every day. International Society for Technology in Education, Washington, USA. https://www.liceopalmieri.gov.it*
6. *Bormann, J. (2014). Affordances of flipped learning and its effects on student engagement and achievement (Master's thesis, University of Northern Iowa). Retrieved from http://flippedlearning.org/cms/lib07/VA01923112/Centricity/Domain/41/bormann_lit_ review.pdf*
7. *-Brooks, Andrea Wilcox. (2014). Information Literacy and The Flipped Classroom.*
8. *Communications in Information Literacy 8(2).*
9. *Çelebi, H., Karaaslan, H., & Demir-Vegter, S. (2016). Corpus use in enhancing lexico-grammatical awareness through flipped applications. Journal of Language and Linguistic Studies, 12(2), 152-165.*
10. *Chang, Sau Hou (2016). How I used flipped learning to inform my teaching? Paper Presented at*
11. *Association of Teacher Educators Conference Louisville, KY July 30-August 2, 2016.*
12. *Clark, Renee M.; Kaw, Autar; Besterfield-Sacre, Mary. (2016). Comparing the Effectiveness of Blended, Semi-Flipped, and Flipped Formats in an Engineering Numerical Methods Course. Advances in Engineering Education, v5 n3.*
13. *-Collins, Michael A. (2015). Examining the Perspectives of Teachers and School Building Leaders on the Use of the Flipped Classroom Method in New York City Public Schools. ProQuest LLC, Ed.D. Dissertation, Sage Graduate School*
14. *Corrias, A. (2014). Lightening up mathematics-intensive classes: A case study using a flipped classroom approach. CDTL Brief, 17(1), 10-13.*
15. *Danker, Brenda. (2015). Using Flipped Classroom Approach to Explore Deep Learning in Large Classrooms. The IAFOR Journal of Education, Volume III - Issue I.*
16. *Demski, Jennifer. (2013). 6 Expert Tips for Flipping the Classroom. Campus Technology, v26 n5 p32-37.*
17. *-Farah, M. (2014). The impact of using flipped classroom instruction on the writing performance of twelfth grade female Emirati students in the Applied Technology High School (Doctoral dissertation, British University in Dubai). Retrieved from http://bspace.buid.ac.ae/bitstream/1234/676/1/120088.pdf*
18. *Fryling, Meg; Yoder, Robert; Breimer, Eric .(2016). Full Flip, Half Flip and No Flip: Evaluation of Flipping an Introductory Programming Course. Information Systems Education Journal. 14 (5).*
19. *Galway, Lindsay P.; Berry ,Barbara and Takar ,Timothy K.(2015). Student perceptions and lessons learned from flipping a master's level environmental and occupational health course. Canadian Journal of Learning and Technology. 41(2).pp.1-16.*
20. *Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. (2013). A review of flipped learning. Retrieved from http://www.flippedlearning.org/review.*
21. *Hao, Y. (2014). Students' Attitude towards a Flipped Classroom and its Relationship with Motivation Orientations in an Undergraduate Course. In M. Searson & M. Ochoa (Eds.) , Proceedings of SITE 2014--Society for Information Technology & Teacher Education International Conference (pp. 2835-2840). Jacksonville, Florida, United States: Association for the Advancement of Computing in Education (AACE). Retrieved February 16, 2018 from https://www.learntechlib.org/p/131225/.*
22. *Heinerichs, Scott; Pazzaglia, Gina; Gilboy, Mary Beth. (2016). Using Flipped Classroom Components in Blended Courses to Maximize Student Learning .Athletic Training Education Journal, v11 n1 p54-57.*
23. *Herreid, Clyde Freeman; Schiller, Nancy A. (2013). Case Studies and the Flipped Classroom. Journal of College Science Teaching, v42 n5 p62-67.*
24. *-Hibbard, Lisa; Sung, Shannon; Wells, Breche´ (2016). Examining the Effectiveness of a Semi-Self-Paced Flipped Learning Format in a College General Chemistry Sequence. Journal of Chemical Education, v93 n1 p24-30 Jan 2016. https://eric.ed.gov/?q=Using+flipped+learning++&id=EJ1088231*
25. *Hsieh, Jun Scott; Wu, Wen-Chi Vivian; Marek, Michael W. (2017). Using the Flipped Classroom to Enhance EFL Learning. Computer Assisted Language Learning, v30 n1-2 p1-21 2017. https://eric.ed.gov/?q=Using+flipped+learning++&id=EJ1134034.*
26. *Jensen, Jamie L.; Kummer, Tyler A.; Godoy, Patricia D. d. M. (2015). Improvements from a Flipped Classroom May Simply Be the Fruits of Active Learning. Life Sciences Education, v14 n1.*

27. *Kates, Frederick R.; Byrd, Michael D.; Haider, M. Rifat. (2015). Every Picture Tells a Story: The Power of 3 Teaching Method Journal of Educators Online, v12 n1 p189-211.*
28. *Kostaris, Christoforos; Sergis, Stylianos; Sampson, Demetrios G.; Giannakos, Michail N.; Pelliccione, Lina.(2017).Investigating the Potential of the Flipped Classroom Model in K-12 ICT Teaching and Learning: An Action Research Study.Educational Technology & Society, v20 n1 p261-273.*
29. *Leo, Jonathan; Puzio, Kelly. (2016). Flipped Instruction in a High School Science Classroom. Journal of Science Education and Technology, v25 n5 p775-781.*
30. *Long, Taotao; Logan, Joanne; Waugh, Michael. (2016). Students' Perceptions of the Value of Using Videos as a Pre-Class Learning Experience in the Flipped Classroom. TechTrends: Linking Research and Practice to Improve Learning, v60 n3 p245-252.*
31. *Maher, M., Lipford, H., & Singh, V. (2013). Flipped classroom strategies using online videos. Technical Report, Center for Education Innovation, University of North Carolina, Charlotte.*
32. *Mazur ,Amber D. ; Brown , Barbara and Jacobsen , Michele .(2015). Learning Designs Using Flipped Classroom Instruction.Canadian Journal of Learning and Technology. 41(2)*
33. *Mori, Yoshiko; Omori, Motoko; Sato, Kumi. (2016). The Impact of Flipped Online "Kanji" Instruction on Written Vocabulary Learning for Introductory and Intermediate Japanese Language Students. Foreign Language Annals, v49 n4 p729-749.*
34. *Obari, H., & Lambacher, S. (2015). Successful EFL teaching using mobile technologies in a flipped classroom. In F. Helm, L. Bradley, M. Guarda, & S. Thouësny (Eds), Critical CALL – Proceedings of the 2015 EUROCALL Conference, Padova, Italy (pp. 433-438). Dublin: Research-publishing.net. http://dx.doi.org/10.14705/*
35. *Ölmefors, Oscar (2016).Student attitudes towards flipped classroom. Master thesis in Technology and Learning. Stockholm University.*
36. *Oyola, Michelle. (2016). Content Planning and Delivery in a Flipped Classroom: A Qualitative Examination. ProQuest LLC, Ed.D. Dissertation, Missouri Baptist University. http://www.proquest.com/en-US/products/dissertations/individuals.shtml.*
37. *Perfume, Yuko Enomoto. (2016). Exploring a Flipped Classroom Approach in a Japanese Language Classroom: A Mixed Methods Study. ProQuest LLC, Ed.D. Dissertation, Baylor University.*
38. *Pearson, George. (2012). Students, Parents Give Thumbs-Up to Flipped Classroom. Education Canada, v52 n5.*
39. *Porcaro, Pauline A.; Jackson, Denise E.; McLaughlin, Patricia M.; O'Malley, Cindy J.(2016). Curriculum Design of a Flipped Classroom to Enhance Haematology Learning. Journal of Science Education and Technology, v25 n3 p345-357.*
40. *-Rosa, Tahani. (2018). The Effectiveness of Flipped Classroom in Teaching the Science Teaching Strategies and its Assessment Course on the Academic Achievement and Mind Habits Development of The Student of Princess Norah bint Abdulrahman University. IUGJEPS, Vol 26, No 1, 2018, pp 128 -150*
41. *Rossi, Robert D. (2015). ConfChem Conference on Flipped Classroom: Improving Student Engagement in Organic Chemistry Using the Inverted Classroom Model. Journal of Chemical Education, v92 n9 p1577-1579.*
42. *Ryan, Michael D.; Reid, Scott A. (2016). Impact of the Flipped Classroom on Student Performance and Retention: A Parallel Controlled Study in General Chemistry. Journal of Chemical Education, v93 n1 p13-23.*
43. *Saterbaj, Ann; Tracy, Volz and Wettergreen , Matthew. (2016). Implementing and Assessing a Flipped Classroom Model for First-Year Engineering Design. ADVANCES IN ENGINEERING EDUCATION.*
44. *Scovotti, Carol. (2016). Experiences with Flipping the Marketing Capstone Course. Marketing Education Review, v26 n1 p51-56 2016. https://eric.ed.gov/?q=Using+flipped+learning++&id=EJ1131240*
45. *Sletten, Sarah Rae. (2017). Investigating Flipped Learning: Student Self-Regulated Learning, Perceptions, and Achievement in an Introductory Biology Course. Journal of Science Education and Technology, v26 n3 p347-358.*
46. *Snyder, Catherine; Besozzi, David; Paska, Lawrence; Oppenlander, Jane. (2016). Is Flipping Worth the Fuss: A Mixed Methods Case Study of Screencasting in the Social Studies Classroom*

Authors .American Secondary Education, v45 n1 p28-45.

47. *Song, Yanjie; Kapur, Manu. (2017). How to Flip the Classroom--"Productive Failure or Traditional Flipped Classroom" Pedagogical Design? Educational Technology & Society, v20 n1 p292-305.*
48. *Sweet, Dawn.(2014). Microlectures in a Flipped Classroom: Application, Creation and Resources Mid-Western Educational Researcher, v26 n1 p52-59.*
49. *Thompson, Gayle A.; Ayers, Suzan F. (2015). Measuring Student Engagement in a Flipped Athletic Training Classroom Athletic Training Education Journal, v10 n4 p315-322.*
50. *Touchton, Michael. (2015). Flipping the Classroom and Student Performance in Advanced Statistics: Evidence from a Quasi-Experiment .Journal of Political Science Education, v11 n1 p28-44.*
51. *Unruh, Tiffany; Peters, Michelle L.; Willis, Jana. (2016). Flip This Classroom: A Comparative Study.Computers in the Schools, v33 n1 p38-58.*
52. *Van Vliet, E. A.; Winnips, J. C.; Brouwer, N. (2015). Flipped-Class Pedagogy Enhances Student Metacognition and Collaborative-Learning Strategies in Higher Education but Effect Does Not Persist. CBE - Life Sciences Education, v14 n3 Article 26*
53. *Wallace, Michael L.; Walker, Joshua D.; Braseby, Anne M.; Sweet, Michael S.(2014). "Now, What Happens during Class?" Using Team-Based Learning to Optimize the Role of Expertise within the Flipped Classroom. Journal on Excellence in College Teaching, v25 n3-4 p253-273.*
54. *Webb, Marie and Doman, Evelyn. (2016). Does the Flipped Classroom Lead to Increased Gains on Learning Outcomes in ESL/EFL Contexts?. The CATESOL Journal 28.1 .p.39-67.*
55. *Webster, Donald, R.; Majerich, David M. and Madden, Amanda G. (2016). Flippin' Fluid Mechanics - Comparison Using Two Groups. Advances in Engineering Education. Fall 2016.*
56. *Westermann, Edward B. (2014). A Half-Flipped Classroom or an Alternative Approach?: Primary Sources and Blended Learning .Educational Research Quarterly, v38 n2 p43-57.*
57. *-Yamada, M., Goda, Y., Hata, K., Matsukawa, H., Yasunami, S. (2016). Flip-J: development of the system for flipped jigsaw supported language learning . In S. Papadima-Sophocleous, L. Bradley & S. Thouësny (Eds), CALL communities and culture – short papers from EUROCALL 2016 (pp. 490-Research-publishing.net. https://doi. org/10.14705/rpnet.2016.eurocall2016.612*
58. *Yelamarthi, Kumar; Drake, Eron; Prewett, Matthew. (2016). An Instructional Design Framework to Improve Student Learning in a First-Year Engineering Class. Journal of Information Technology Education: Innovations in Practice, v15 p195-222.*
59. *Zainuddin, Zamzami; Attaran, Mohammad. (2016). Malaysian Students' Perceptions of Flipped Classroom: A Case Study. Innovations in Education and Teaching International, v53 n6 p660-670 .*