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The Effect of the Flipped Classroom on Learning Process: A Literature Review

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Abstract

Many of the recent studies have focused on the Flipped classroom as an instructional strategy. The massive practice of technology by digital natives offers opportunities to provide educational environments that cover the possibility of learning efficiently. Numerous studies have currently conducted concentrated on the flipped classroom (flipped instruction) and its effects on learning. However, teachers and learners are not familiar with the flipped classroom. Therefore, teachers and learners still have restrictions to change the traditional method of teaching to the flipped instruction. Teachers' rejection, worry and unwilling to implement the flipped classroom could be illustrated through the following aspects: first, teachers' lack of knowledge about the flipped classroom and the implementation of the flipped classroom. Second, teachers' lack of information about the empirical studies of the effect of flipped learning on the learning process. Therefore, the current study aims to define and illustrate the features, implementation, advantages, and disadvantages of the flipped classroom to familiarize teachers and students with the flipped classroom method. Besides, the second aim of the study is to

demonstrate and compare some empirical studies of the effect of the flipped classroom on learning environment so as to display the influence of the flipped classroom on the learning process and remove teachers' doubt about the outcome of implementing flipped classroom in the classes. Based on the explanation of the previous studies, it could be concluded that the flipped classroom is an effective and positive teaching and learning method which is appropriate to the current educational system, and the teachers need to be aware of the effect and implementation of the flipped classroom in order to change the traditional method of teaching to the flipped learning model, and have efficient knowledge about implementing the flipped teaching method effectively.

1. Introduction

Teaching and learning methods, techniques, and strategies have been changed throughout the last centuries. The facilities have been rapidly developed through the current technology age. The new generation can follow the instruction of traditional methods. Therefore, the development, updating and renovating of teaching methods become inevitable. Teaching and learning methods, techniques and strategies requests to adapt to the new generation and digital natives.

The idea of the flipped classroom has rapidly developed in the educational process, through this educational approach the traditional teaching model has been converted and flipped. Flipped classroom liberate the students to learn outside of the classroom. The boundaries and barriers of the classroom have been removed in these teaching methods. The face to face classroom has been switched with the video instruction which provides an opportunity for the

students to study the content of the course at home or anywhere rather than the classroom. While, the class time is allocated for activities, tasks, and discussion (Ahmed & Asiksoy, 2018).

Teaching and learning are a dependent process that depends on other aspects to make learning happen. The current period is recognized as a digital and technology age through the rapid developing in technology. Therefore, online teaching and learning became essential and inevitable. Furthermore, with the development of the many aspects of life, the expectation of society toward the educational system increases as well. Society anticipates more from learners to experience updated knowledge and develop, invent, evaluate and create production. For instance, today's learners recognized as “digital native” who have opportunity to receive all the course instruction online at home, and find limitless resources and information within one click (Kwek, 2011). Educators can take advantage from flipped classroom strategies and techniques to increase learners’ technological efficiency and flexible learning environment through using multimedia and online video instruction before class time which considered as a positive aspect to motivate students inside and outside of the classroom (Harris et al., 2016)

During the last decades, Teaching and Learning have gradually and incessantly developed to make learning happen in the classroom effectively. Following the advent of the recent pedagogical methods, strategies, and techniques, educators and teachers are accepting the blending learning approach in order to develop and advance students’ learning experience (Bonk & Graham, 2006). According to Abaeian & Samadi (2016) flipped learning (classroom) is a type of blended learning approach which increases learners’ participation and involvement in a classroom in order to achieve the predicted learning outcome which previously determined in the course objectives. In addition, the benefits of the flipped classroom are to shift teacher-centered

classroom into an active student-centered classroom which the students have an active role in the classroom and the role of teachers is the facilitator.

English language becomes an international language, while the teaching methods are not always convincing, fulfill the ambition of learners, and achieve the needs of learners and educators. The English language is still been teaching in a traditional method classroom. Therefore, educators pursue a novel teaching methodology suitable for improving learning proficiency. Moreover, innovative teaching methods required to motivate students to adapt to the learning environment (Johnson et al., 2014).

There are numerous studies on flipped classroom instruction, and the strategies techniques of the flipped classroom. However, teachers, educators, and students still have a lack of understanding of how to implement the flipped classroom approach in their classroom. For this reason, 170 university instructors have been questioned about their familiarity to the flipped classroom, advantages and disadvantages of the flipped classroom through a survey. The survey was included three basic questions which were: 1- Are you familiar with flipped classroom? 2- Do you know the advantage and the disadvantages of flipped classroom? 3- Have you ever read any empirical study about the flipped classroom? The result revealed that 157 instructors were not familiar with the flipped classroom only 13 of the instructors were familiar with basic meaning of the flipped classroom. Regarding the second question, no one of the instructors have any background about the advantage and the disadvantages of the flipped classroom. Concerning the third question, instructors have stated that they have not read any empirical studies about the flipped classroom. According to the abovementioned studies, teachers are not certain about the effect of the flipped classroom on the learning process and learning environment. Therefore, the current article aims to illustrate and clarify the definition of flipped classroom, advantages,

disadvantages and its effect on the various aspect of the learning process by comparing theoretical and empirical studies.

2. Definition of the flipped classroom

Flipped classroom is a teaching model that become the object of many studies in the last decade. In this type of teaching model students provide with the learning environment through which they can take the lectures before class time through video instruction. The video instruction is used as an alternative to the traditional class lecturing. The students complete the tasks, activities, discussion and sharing knowledge during the class time relation to the video lecturing topic. In this type of teaching model learners have the opportunity to learn anywhere and anytime outside of the classroom (Smith, 2015). According to Freeman et al. (2014), the flipped lecturing model aims to prepare learners outside of the class throughout online lecturing and video instruction in order to provide an effective, in-depth, comprehensive and learning environment during the class time.

The flipped classroom is a teaching strategy and a specific type of blended learning which converses the traditional learning setting through delivering instructional content outside of the classroom and practicing activities including projects, assignments and home works in the class (Albert & Beatty, 2014; Roach, 2014)

Bergmann & Sams (2012) defined the concept of the flipped classroom as an alternative to the traditional method of teaching through which what was traditionally practiced in the class, currently are practiced at home, and the activities, homework, and tasks which were practiced at home previously, now they are practiced in the class time.

Moreover, Harris et al. (2016) defined flipped classroom as a learning environment through which learners receive video lecturing online and basic knowledge about content before the class meeting as a part of the homework in order to assist learners to control the target learning content before starting class time. On the other hand, the class time has been used for effective activities, tasks, sharing ideas and discussion.

3. Reasons for implementing the flipped classroom

Bergmann & Sams (2012) as pioneers, developers, and discoverers of flipped classroom demonstrate the following reasons for practicing flipped teaching method in the classroom to make learning happen more effectively:

Flipping classroom speaks the language of today's students: most of the students nowadays are digital natives who grew up with social media sites, YouTube, and a huge number of digital resources. They use digital devices most of the time. Therefore, the flipped classroom assists to attract students' attention to the learning process by providing a digital learning environment. Besides, the flipped classroom increases students motivates and positive perception toward the learning process. Flipping aids busy students: flipping classroom affords a valuable opportunity and flexibility to busy, sick or absent students who miss class instruction. The students will be able to compensate for the missed class and understand the content of the course through video instruction in the flipped classroom. Flipping helps struggling students: flipped classroom assists students who lose attention in the classroom and the passively attended or listened to the class discussion. Through instruction videos online, students can recompense the information that they have missed in class time. Flipping helps students of all abilities to excel: students with special needs can take advantage from flipped instruction materials especially video instruction. Students do not need to record notes to understand the subject. They can scan

and watch the videos again and again in order to understand the materials. This means flipped classroom give students remote and autonomy to learn anytime and anywhere. Flipping classroom growths student-teacher interaction and student-student interaction: in flipped classroom students have more time to interact with the teachers and their peers. Students have another opportunity to interact with the teachers and peers online before and after the class meeting. Furthermore, students and teachers have more time for interaction during face to face class time because the role of the educators has been changed from lecturer to trainer (learning coach). Flipping allows teachers to know their students better: flipped classroom develops teacher-student integration during the class time discussion and before or after class time through message and online connection. This kind of connection and integration helps teachers to know the students superior in order to overcome the issues that students have to learn the content. Flipping allows for real differentiation: students have different abilities, talents, and proficiency. Each student needs different time and techniques to understand the content of the lesson. The flipped classroom is a powerful method of teaching to convey the aim of the course and make learning happen. Flipping changes classroom management: most of the traditional classroom faced the difficulty of some of the students who do not pay attention to the lesson. Those students confuse and distract other students in the class and this has a negative effect on them. In the flipped classroom, most of the classroom management has been solved because there is not lecturing in the class which needs students' attention. While the class provides for students' work and activities. Flipping changes the way we talk to parents: former parent conference was mostly about students' behaviour in the class and how they act with the teachers and peers. After implementing the flipped classroom, students behaviour and classroom management become an irrelevant question. Only two questions have been focused which are: does every student learn?

If not, what can be done to assist them to learn? These two questions are relevant in the flipped classroom approach. Flipping educates parents: alongside their children, parents watch the video instruction. Parents also take advantage of the video instruction and learn the content of the students' class. Flipping makes your class transparent: flipped classroom opens the class for the public and makes the class transparent. Community and parents have free access to the videos online and the posts, they can know and understand what is being taught to the students. Flipping is a great technique for absent teachers: the absent teachers have opportunity to instruct students through video instruction or live lesson, even if they are in a far distance or they are unable to come to class. Flipping can lead to the flipped-mastery program: the flipped classroom is not only flipped the class. While it is a flipped mastery program. This means students transfer over the material at their own pace. The students have the autonomy to watch video instruction anytime and anywhere. Therefore, the process of changing the content mastery of the traditional classroom to the flipped classroom may take several years, and those interested in inverting the classroom are recommended to make the change progressively.

4. Advantages of the flipped learning method

McLaughlin et al. (2014) demonstrated the merits of the flipped learning method including: first, students come to the lesson prepared and have satisfactory background knowledge about the content of the class and ready to implement and apply the knowledge. Second, students' engagement in the tasks and classroom activities is encouraged via active learning of students, learners employing the theoretical knowledge into practice during the class time. Finally, the flipped classroom motivates students and gives responsibility to the students to participate in the course activities.

The advantage of the flipped classroom is illustrated as the followings: amplify class time in order to involve in learning, increase group work and cooperate skills, growth students' self-paced management, concentrate on discussion, debate, and argument in the classroom, gives opportunity, access to lecturing and instruction anytime anywhere, require information and knowledge from different people and sources, and self-determination to faculty to sustain standardized curriculum (Milman, 2012; Millard, 2012; Fulton, 2012). In addition, Overmyer (2014) identified other merits of the flipped classroom: first, the flipped classroom is a student-centered teaching approach. Second, the inverted classroom provides a positive learning and motivated environment for the students. Finally, flipped teaching increases students willing to contribute to the activities which growth time for discussion and applying.

5. Empirical studies of the effect of the flipped classroom on the learning process

During the last decades, flipped education and teaching became a debatable field in the process of teaching and learning. Following previous studies, Basal (2015) conducted a study on the teachers' vision on implementing flipped classroom teaching as an alternative and supportive method of traditional teaching methods, and clarify how to implement flipped instruction for English language instructors. So that the study takes place, 47 English foreign language Turkish instructors have taken part in this study. The instructors have been asked through open-ended questions so as to investigate instructors' viewpoint about probable using flipped classroom a state university in Turkey and familiarize English language instructors of the implementation flipped instruction. The design of the study was quantitative research through using open-ended questions for collecting data. The results demonstrated that the pre-service instructors have a positive viewpoint toward implementing flipped teaching as incorporation to the traditional

teaching of methods in the classroom. In addition, Basal (2015) identified the following four positive features of the flipped classroom through the analysis of the pre-service instructors' answers: the growth of self-study learning, increasing learners' preparation before the class time, overwhelmed the issue of lack time of the class, and enhance learners' participation in the classroom. Basal (2015) evidently stated pre-service instructors agreed that flipped classroom is a positive method to support tradition method theoretically. However, the lack of the experiment in the study is a limitation of the study. In addition, the second objective which is familiarizing English language instructors with the implementation of flipped instruction is not clearly stated in the study.

Regarding the impact of the flipped classroom on improving learners' grammar, Al-Harbi & Alshumaimeri (2016) have carried out a study in order to investigate the influence of flipped classroom strategies on learners' grammar improvement, and indicate students' attitude and perception toward implementing the strategies of flipped classroom in the English foreign language courses. The research was both quantitative and qualitative research design, conducting pre-test and post-test of English grammar proficiency and questionnaire were qualitative instruments, and semi-structured interview and some semi-open ended questions in the questionnaire were instruments for the qualitative part. The participants who took part in the study were 43 second year secondary school female students from Saudi Arabia. The participants were divided into two unequal groups: the experimental group was 20 students, and the control group was 23 students. Students in the experimental group have received instruction videos about grammar lessons before class time. While students in the control group grammar instruction in the traditional face to face class. The findings demonstrate that the p-value is (0.285) which means that there is not a statistically significant difference in grammar knowledge

improvement between the students in the experimental group and students in the control group. However, the mean score of the students in the experimental group is higher than the mean score of the students in the control group. On the other hand, according to the students' answers of the questionnaire, flipped classroom and online instruction video before the class time were very useful and interesting, students' perception toward flipped classroom was very positive. Moreover, the qualitative part of the study which was semi-open ended questions and semi-structured interviews revealed that the strategies of the flipped classroom are effective and positive. The students preferred the strategies of the flipped classroom rather than strategies of the traditional method of teaching. Further, the students' attitude and viewpoint toward flipped classrooms were constructive, the majority of the students were more adapted with the used of flipped classroom compared with the traditional teaching strategies. In conclusion, Al-Harbi & Alshumaimeri (2016) stated that flipped classroom strategies were considered as beneficial features according to the students' perspective responses in the questionnaire and semi-structured interview. Strategies of the flipped classroom are more effective compared with traditional method strategies. However, the difference between means scores was not statistically significant. In terms of pedagogy, it is preferred to implement a flipped classroom based on the findings of the study. Al-Harbi & Alshumaimeri (2016) study was generally effective and well organized. However, it has limitations. The critiques of the study are as followings: the number of the total number of participants was 43 students in both groups which are insufficient statistically to generalize to the whole population. In addition, the number of participants was not divided into two groups equally. As a result, the mean score of the groups is not comparable because of the difference in the number of both groups.

Enfield (2013) investigated the effect of flipped teaching approach on students' outcomes, achievement, and performance. Therefore, 40 lessons video has been prepared for 50 learners at California State University Northridge for the spring semester in 2013. The instrument for data collection was 22 items survey in order to examine the connotation between learner's achievement, improvement, and performance in the lesson and the responses of the survey. The findings revealed that learners recognized the course as a successful course based on the survey responses. Students indicated that were flipped classroom and video instruction are beneficial, motivated, interested, challenging and appropriate approaches of teaching. The study focused only on one instrument which was a survey to demonstrate the correlation between students' performance in class and students' responses in the survey. The procedure and methodology of the study were valuable. However, the performance of the study throughout using flipped teaching during the semester was not explained in detail.

Further, Abaeian & Samadi (2016) have conducted a study in order to investigate the influence of flipped classroom on second language reading comprehension. The sample of the study 100 foreign language students in both the intermediate and upper intermediate level. The participants were all female and they were divided into an experimental group and control group. The instrument of the study was pre-test and post-test in order to show the improvement of the students of both groups. The treatment of the experimental group was 18 sessions of flipped reading instruction while the treatment for the control group was 18 sessions of traditional lessons of reading comprehension. The findings of the study indicate that the improvement of the reading comprehension in the experimental group is statistically significant compared to the improvement of reading comprehension in the control group. In addition, the intermediate

students took more advantage from the flipped approach comparing to the upper intermediate students.

On the other hand, El Sakka (2016) studied the impact of flipped classroom instruction on listening comprehension of the first year university English foreign language students. In order to conduct the study, 25 students took part in the study as an experimental group who have taken pre-test and post-test so as to reveal the development of the students' listening comprehension. The results demonstrated that the flipped education-based approach has a positive effect on improving learners listening comprehension based on the differences between pre-test scores and post-test scores. The statistical analysis showed that the p-value was 0.00 which means the difference between the pre-test and posttest were significant statistically.

6. Recommendations and Suggestions

Considering the merits and demerits of the flipped classroom the following recommendations need to be mentioned:

1. The flipped classroom is novel teaching method teachers and educators need to have a good knowledge and information about the method and the implementation as well before implementing in their classroom.
2. The flipped classroom is challengeable for students in kindergarten and primary schools because of the using technology by the kids which needs monitoring. Therefore, Teachers need to be aware of this challenge. In addition, video instruction must be prepared in a very clear language so that the students can understand easily.

3. Teachers have to aware of updating the online materials and instructional video. Knowledge and information are subject to change. Therefore, teachers need to update the instructional video because it may mislead students and makes confusion.
4. Lack of technology, not all the students have the same access to technology and the internet. Therefore, teachers are required to use appropriate tools of teaching in order that all the students can access it.

7. Conclusion

This article demonstrated the flipped classroom in terms of definition, advantages, challenges, empirical studies, and recommendations to familiarize teachers and students with the flipped classroom method. In addition, the article aims to determine and compare some empirical studies of the effect of the flipped classroom on the learning environment so as to display the impact of the flipped classroom on the learning environment and eliminate teachers' uncertainty about the outcome of implementing flipped classroom in the classes.

To sum up, the article, based on the empirical studies flipped classroom could be used as an effective pedagogical tool. In addition, the flipped classroom is an appropriate method to the current digital age and digital natives. Therefore, it could be utilized as an alternative to the traditional method of reaching.

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