

University Teachers' Perceptions of Flipped Classroom: A Qualitative Study

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Abstract: This qualitative study aims to explore university teachers' perceptions on using flipped classroom in the didactic context of higher education. Based on extensive reading of the educational research literature that dealt with the flipped or inverted pedagogical framework and the perceptions of teachers, we argue that a limited number of previous studies addressed the issue in higher education. The present study attempts to fill this gap, by reviewing the literature and conducting a qualitative study with university teachers. The sample consisted of 25 university teachers from various faculties at three public universities in Egypt, who previously employed flipped classroom as a pedagogical approach or an instructional strategy in different disciplinary domains. Semi-structured interviews were conducted with the participants in order to collect the data, and transcripts were subsequently thematically analysed. The findings indicate that Egyptian university teachers' perceptions towards the use of the flipped classroom are overall positive. Moreover, flipped classroom is grasped as an authentic support for the teaching and learning processes in higher education, and also enables university teachers to effectively embed technology into their pedagogy.

Keywords: flipped classroom, higher education, university teachers, perceptions

INTRODUCTION

The flipped classroom is a pedagogical approach that changes teaching and learning sequencing, and reverses or inverts the types of activities, in the sense that the learning content is introduced to students out of

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the classroom (frequently based on online platforms, in asynchronous learning tasks such as online video lectures) and before the direct teacher-students interactions in the lecture halls, while class discussions, applications, individual and group work, etc. are planned for the direct activities in the classroom (Sointu et al. 2023). Inevitably, nowadays blended and online learning are intertwined with the flipped approach: teachers convert the content into video lessons and share them with the students, who in turn familiarise themselves with the content outside the classroom and before the direct didactic activity; thus, the class time is allocated to other types of learning activities than the ‘traditional’ lecture. Flipped classroom helps to pre-plan and design the didactic activities and allows students to learn independently and search for information, which empowers and helps them to achieve the educational goals (Larsen 2013). The whole concept of flipped classroom is based on principles such as active learning, student effectiveness and engagement, a mixed lesson design, and information broadcast (Herreid and Schiller 2013). According to relevant research studies (e.g. Kazu and Kurtoglu 2020; Colomo-Magaña et al. 2020), students perceive flipped classroom as having a positive effect on their performance and engagement. Furthermore, other research noted positive teachers’ perceptions on using flipped classroom in didactic contexts of pre-university education (Ouabo 2021; Abdul-Kader 2019; Snowden 2012).

Bergmann and Sams (2012), two of the founders of the flipped classroom approach, stated more than a decade ago that the model becomes more popular in higher education. However, there is still a lack of research on effects in higher education, including university teachers’ perceptions on the actual use of flipped classroom. Given the relevance of the topic in the pandemic and post-pandemic higher education contexts, and the lack of empirical data about the endorsement of flipped classroom among university teachers, we attempt to add to the body of empirical evidences depicting university teachers’ perspectives on the matter.

LITERATURE REVIEW

Flipped classroom in higher education

Flipped classroom appears to have positive effects in higher education, especially in supporting students’ achievement, engagement, outcomes of the learning process, positive perceptions and attitudes towards the learning activities and learning environments, and self-efficacy beliefs

(Danker 2015). University students using flipped classroom with their teachers declare themselves motivated, engaged, and they appreciate the different, technology-enriched pedagogical approach (Davies et al. 2013). Kurt (2017) showed in her study that flipped classroom helped students to learn better: her results indicated that the students who experienced the flipped learning display more positive self-efficacy beliefs and improve their learning. Students' attitudes and perceptions towards the flipped classroom were generally positive, and they reported that watching the videos prior to the face-to-face lesson enabled them to comprehend the content better. Additionally, they found the learning experience more enjoyable, and they were more at ease and comfortable. A study signed by Sointu et al. (2023) suggests that students' satisfaction with a flipped course is significantly explained by pedagogical guidance and experienced teaching for understanding in the classroom. Similarly, Colomo-Magaña et al. (2020) concluded their study with the idea that students evaluate positively the usefulness of flipped classroom as an instructional strategy.

Flipped classroom and teachers' perceptions at different educational levels

As mentioned in the introductory paragraphs, although a growing body of empirical evidences about the use of flipped classroom in higher education is available, teachers' perceptions are rather poorly represented in the literature. Therefore, we provide a brief review of research with teachers at different educational levels. Teachers at public schools shown their satisfaction and positive perceptions after using the flipped classroom, and also reported that flipped classroom helped students to increase their achievements (Unal and Unal 2017). Pre-university teachers see the flipped classroom as an instructional strategy that provides more opportunity for individualised education, learning challenges for students, and enhanced student-teacher contacts (Gough et al. 2017). In a study involving math teachers, flipped classroom was positively appreciate for the increase of students' motivation and the development of skills such as problem solving and critical thinking among students (Rachmawati et al. 2019).

Teachers in primary schools also report positive perceptions towards flipped classroom: in a study conducted by Abdul Kader (2019), with the main focus to identify the perceptions of Singaporean teachers on using flipped classroom in primary schools and the

relationship between classroom interactions and the potential of flipped classroom, participants richly described their experiences through individual interviews. This study was based on small groups of participants, and interviews, notes, the analysis of pre-class and in-class tasks and teachers' lesson plans as data collection tools. The results indicated that the flipped classroom could enhance interactions within classrooms, particularly if students take part in groups for discussions. The teachers participating in this study research agreed that classroom time should be used efficiently for collaborative activities and discussions.

On the other hand, the study of Ouabo (2021) aimed to explore the perceptions of teachers in high school to learn more about the potential of flipped classroom approach in assisting students with disabilities. He had several reasons to conduct this study: firstly, as a result of flipped classroom's rapid expansion; secondly, he found few previous studies related to the perceptions of teachers towards flipped classroom in inclusive educational contexts. The research design was qualitative, and the concerns-based adoption model was used as the framework. In-depth interviews were used as tools of data collection to explore the teachers' perceptions. The sample of the research study consisted of 11 teachers from different countries who used the flipped classroom techniques. The study findings indicated that despite the fact that some disabled students failed to concentrate, the teachers found the flipped classroom approach effective for most students. In a flipped classroom, teachers took on a different role and gave the students the responsibilities towards independent learning, which determined students to feel empowered. In order to learn more about the specifics of teachers' attitudes and beliefs, this study employed a more thorough research methodology, namely structured interviews.

Youhasan et al. (2022) conducted a study to explore the perceptions of university teachers about flipped classroom, and also investigated teachers' readiness to use this pedagogical approach in didactic contexts. The exploratory qualitative study involved nursing higher education teachers in Sri Lanka, and the data were collected through four focus group interviews with 24 participants. The results suggest that teachers had positive perceptions towards their readiness to use flipped classroom in didactic context. Although teachers perceive several benefits of flipped classroom such as increased students' collaboration, assistance for struggling students and engagement with active learning, teachers also admit that the availability of technology

was a major challenge to apply the flipped classroom, because its success largely depends on students and teachers' access to appropriate technology-related resources (Gough et al. 2017).

Flipped classroom in Egyptian higher education institutions

Besides the central focus of our exploratory study, it is relevant to mention the larger research context. The idea of the study emerged based on the current attention to digital and online education all over the world, especially due to emergency remote teaching arrangement during the pandemic, but also in connection with the profound changes in the Egyptian higher education system in the last decades. According to the reforms implemented in order to increase the quality of the Egyptian higher education sector, universities are encouraged to focus strongly on student-centered education, to acknowledge the significance of students' diversity, and to implement teaching and learning adjustments that may support this vision. In addition, the current technological advances prompted educational institutions and teachers in Egypt to integrate technology into the educational process. In a bibliometric study, Al-Shabibi & Al-Ayasra (2019) mentioned an impressive volume of empirical studies focusing on improvements in learning outcomes as a result of the implementing flipped learning from primary school to university level published around the world, and reported no less than forty Egyptian studies, but only a part of them explored the effects on academic achievement among university students. A number of research-based articles published in the last decade (e.g. Ahmad 2016; Zaki 2017; Desouky 2019) reflect the interest of Egyptian university teachers and researchers for flipped classroom, but most of them focus on improving academic achievement in different areas, developing creative and critical thinking skills, supporting academic motivation, students satisfaction and other similar constructs, and a lot less on teachers' perspectives.

METHOD

Participants

The sample consisted of 25 Egyptian university teachers (52% women and 48% men) from three large public universities in Egypt, who previously implemented the flipped approach in their teaching practice. The participants are associated with different faculties and schools, such as Education Science, Letters, Commerce and Economics, Applied Arts, Law, Engineering, Dentistry and Computer Science.

Participants' age ranged between 27 and 60 years ($M_{age}= 41.16$ years), while the years of teaching experience in higher education institutions ranged between 5 and 35 years ($M_{years\ of\ teaching\ experience}= 17.24$ years), and the years of experience in using flipped classroom ranged between 3 and 11 years ($M_{years\ of\ experience\ with\ flipped\ classroom}= 7.56$ years).

Interview guide and data collection

A qualitative methodology using semi-structured interviews for data collection was selected for the present study. The interview guide included twenty open-ended questions, addressing teachers' overall knowledge and experience with flipped classroom, their prior training for the use of flipped classroom, pedagogical and technological conditions for its use, and perceptions on the effects of flipped classroom (e.g., general advantages and disadvantages, impact on designing teaching and learning, but also on learning gains and classroom interactions). The interview guide was prepared for the phase of data collection both in English and Arabic.

All participants received the invitation, the information sheet and the informed consent form via email. After collecting all the signed informed consent forms, teachers were contacted by the first author to set an appointment that fits their schedule. After that, the date and place for the interviews were scheduled. Most university teachers requested interviews to be organized in their offices, inside the university buildings. All participants consented the interviews to be audio recorded and used for further analysis, anonymously and with respect for their privacy and confidentiality.

All interviews were conducted in presence during the academic year 2021-2022, and the average duration for each interview was 40 minutes. The interviews were conducted in English with nine participants, while sixteen participants preferred the Arabic language.

Data analysis

For the phase of data analysis, the recordings of the interviews have been transcribed, and – whenever needed – translated from Arabic to English. A thematic analysis was conducted on the resulted corpus, based on codes generated and revised after careful screening of the whole data set. The final codes were organised under three main themes: arguments for implementing the flipped model in higher education (e.g. self-paced learning, improving academic achievement, time effectiveness), the potential of flipped model in higher education

(e.g. active participation, flexible environment, collaborative practice), and main positive effects of the flipped model on supporting teaching and learning in higher education based on direct teaching experience (e.g. developing problem-solving skills, integrating technology). The first author created the raw codes by using descriptive coding which summarized the main topic of the data in a word or short sentence (Saldana, 2016), and the co-author reviewed the codes to assure trustworthiness. Finally, themes were identified, the codes were organised accordingly, and sample quotes were selected for a deeper interpretative approach.

RESULTS AND DISCUSSION

Arguments for implementing the flipped model in higher education

Given the focus of the present study, it was critical to investigate university teachers' understanding of the flipped model, as well as their arguments for implementing this instructional strategy. Most participants were familiar with the concept, and provided arguments and justifications for its implementation in higher education. As a general note, participants with longer experience in using the flipped approach provide more detailed insights and express their active interests in promoting associates practices among their fellows, as illustrated in the following exemplary quote: *“The flipped classroom is one of my research and teaching interests. I encourage my colleagues at the university to use the flipped classroom in teaching, and I described to them by doing some presentations in workshops and seminars, how use of the flipped classroom was useful and effectively for my students.”* [Participant 21, 35 years of university teaching experience, 11 years of experience in using flipped learning].

All participants recommended the flipped pedagogical approach, based on their positive professional experiences, regardless their field of study. One of the participants mentioned that: *“Flipped classroom for me is one of the best teaching methods. It is also appropriate for students who need assistance.”* [Participant 11, 5 years of university teaching experience, 4 years of experience in using flipped learning]. Four of the participants emphasized the time ‘earned’ for in-class activities whenever the flipped model is employed: *“In-class time in the flipped classroom is used for activities to develop students' motivation towards learning as well as increase cooperation between students.”* [Participant 9, 35 years of university teaching experience, 12 years of experience in using flipped learning].

Regarding instructional content and students' academic success, most participants argued for increased student achievement and lighter instructional burden as *"Flipped classroom makes instructional content easier."* [Participant 8, 16 years of university teaching experience, 10 years of experience in using flipped learning]. They also noted that the teacher cannot deliver the information in an effective way for each student at the same time within the classroom, especially with large cohorts enrolled for one course, but *"when students are at home and they have the videos, they watch the lessons more than one time, and they get the information and understand it more, which helps to increase their achievement"* [Participant 5, 15 years of university teaching experience, 8 years of experience in using flipped learning].

According to the findings, all interviewed university teachers have a positive perception towards the use of flipped classroom, while stressing its potential in higher education, similarly with results reported in other studies (e.g. Shih and Tsai 2017; Kurt 2017). Results also indicate that all participants agree that flipped classroom increases students engagement and academic motivation, and the idea is also supported by previous studies on students' outcomes when using the flipped approach (e.g. Wu et al. 2017; Karimi and Hamzavi 2017).

Most of the participants prefer some specific tools in order to effectively use the flipped classroom: assign students more responsibilities regarding their learning; using online platforms for fostering engagement out of the class and to share video; motivating students through formative assessment. All these pathways confirm the findings of the prior research work on the topic (Yarbro et al. 2014).

The potential of flipped model in higher education

The transformative potential of the flipped pedagogical approach is reflected by most participants. Thus, some teachers mention the enhancement of collaborative practices as one of the relevant outcomes: *"Flipped classroom increased students' skills such as creativity, collaboration and communication skills."* [Participant 23, 22 years of university teaching experience, 10 years of experience in using flipped learning]. Regarding classroom interaction, university teachers believe that flipped classroom has the potential to support effective teaching and learning especially during lectures with big groups of students: *"Flipped classroom enabled students to do activities and discussion during class time."* [Participant 10, 32 years

of university teaching experience, 11 years of experience in using flipped learning]; “When flipped classroom was implemented in higher education, there were many opportunities for interaction between students themselves, between students and the educational content, and between students and the university teachers.” [Participant 12, 23 years of university teaching experience, 10 years of experience in using flipped learning]. They also indicated that flipped classroom allows students to get fast feedback: “The great potential of flipped classroom allowing students to receive feedback quickly and work in groups during in-class time.” [Participant 2, 8 years of university teaching experience, 5 years of experience in using flipped learning].

Concerning the flexible environment, university teachers stated that *“flipped classroom increased students' comprehension since they could view the videos as many times as they wanted at home.” [Participant 13, 20 years of university teaching experience, 9 years of experience in using flipped learning]. Furthermore, one of the university teachers mentioned the students' positive reactions to the approach: “I implemented flipped classroom last year with my students in the course entitled ‘Criminal Law’ and at the end of the course my students want to study through flipped classroom every year because it was very flexible.” [Participant 7, 24 years of university teaching experience, 11 years of experience in using flipped learning]. On the other hand, one of the university teachers in the field of engineering presented an opposite view for the above positive perceptions: “Some of students were unable to process the videos they watched at home.” [Participant 16, 5 years of university teaching experience, 3 years of experience in using flipped learning]. Regarding active participation, most of the teachers expressed optimistic views, as it may have a role in “reducing absenteeism and increasing students' engagement.” [Participant 25, 17 years of university teaching experience, 8 years of experience in using flipped learning].*

Flipped classroom is frequently associated with potential positive effects on learning outcomes, students' perceptions and self-efficacy beliefs, as well as better collaboration skills in higher education, in line with previous research (e.g. Kurt 2017; Gough et al. 2017).

Positive effects of the flipped model on supporting teaching and learning in higher education based on direct teaching experience

Flipped classroom is considered an important pedagogical approach or an educational model, which may also support the inclusion of the

latest technology in teaching and learning processes. The codes associated with this theme were grouped around problem solving and critical thinking skills, technology, time and effort, and evaluation of academic performance, students' engagement in learning, including group work.

Given the time saved for in-class work, the flipped model provides more room for developing relevant skills in future university graduates, such as problem-solving skills: *"Our students interacted in the classroom to solve the problems that they encountered during watching the videos in the pre-class stage."* [Participant 6, 32 years of university teaching experience, 10 years of experience in using flipped learning]. This is consistent with results reported by Bishop and Verleger (2013) in their study, which emphasized that flipped classroom supports the process of finding solutions for obstacles encountered by learners in the first sequence (out of the class) in its second sequence (in-class). In addition, the development of critical thinking skills is frequently mentioned in connection with the flipped model, but only if the teachers explicitly plan for significant learning situations: *"In classroom activities, I designed some situations for the students so that they could listen to each other's ideas, arguments, and criticisms."* [Participant 17, 10 years of university teaching experience, 5 years of experience in using flipped learning]; *"I encouraged my students to analyse the information presented to them, whether it is information they have in mind, or it is being shared by others."* [Participant 14, 14 years of university teaching experience, 7 years of experience in using flipped learning].

Participants reported that flipped classroom helps the integration of technology in teaching and learning as *"flipped classroom contributes to achieving many goals, including better use of information technologies and modern technologies, which is inevitable considering the continuous development of these technologies, which have a variety of roles in the learning and teaching process in higher education"* [Participant 22, 19 years of university teaching experience, 8 years of experience in using flipped learning]; *"flipped learning makes the learning process more interactive, unlike methods of traditional learning because flipped classroom combined technology with traditional learning."* [Participant 1, 5 years of university teaching experience, 3 years of experience in using flipped learning]. Most of the participants reported that once they realized that implementing the flipped approach implies some level of digital skills,

their main worry became to acquire and to train respective skills, but also to get familiar with useful digital tools and online platforms, as also mentioned in other studies (Gough et al. 2017).

In relation to time and effort, university teachers talked about their experiences and shared their views on balancing limited resources with the flipped approach: *“The main functions of flipped learning include optimal utilization of lecture time, which leads to increased learning time and saves a significant amount of effort in the lecture.”* [Participant 20, 11 years of university teaching experience, 6 years of experience in using flipped learning]. Most university teachers argued that in flipped classroom the learning period is doubled as *“the interactive aspect of flipped classrooms doubles learning time, breaking from the traditional lesson plan.”* [Participant 4, 5 years of university teaching experience, 4 years of experience in using flipped learning]. However, one of the participants mentioned the additional time and effort invested by the teacher in preparing, organizing and leading the teaching process within the flipped framework: *“The flipped model reduces the amount of work required for classroom lectures, but it requires an unconventional effort. I prepare video lectures, and then devote myself to various educational and learning activities during the lectures.”* [Participant 19, 25 years of university teaching experience, 10 years of experience in using flipped learning]. According to participants' perceptions, the evaluation in the flipped classroom is more realistic, but also can closely follow students' progress: *“Flipped classroom allowed me to evaluate students' performance in a more realistic way”* [Participant 15, 20 years of university teaching experience, 9 years of experience in using flipped learning]; *“Flipped learning gave me the opportunities to follow up the performance of each student in the lecture halls during the practice of the various educational and learning activities at the time of the lecture.”* [Participant 3, 5 years of university teaching experience, 4 years of experience in using flipped learning].

Overall, students participation and engagement is reported as higher when teachers use the flipped model: *“Flipped classroom increases the students' integration in learning activities”*; [Participant 24, 9 years of university teaching experience, 4 years of experience in using flipped learning]; *“Students complete individual and group tasks during class time, however in a traditional classroom there is little time for activities or interactions because the whole class period is dedicated to the teaching process.”* [Participant 8, 16 years of

university teaching experience, 10 years of experience in using flipped learning]; “*If the students have prior knowledge, they will actively participate at the time of the lecture.*” [Participant 25, 17 years of university teaching experience, 8 years of experience in using flipped learning]; “*I like that my students have knowledge of the lessons in advance and have full responsibility for their learning, and I also like them as interactive participants at the time of the lecture.*” [Participant 13, 20 years of university teaching experience, 9 years of experience in using flipped learning]. Furthermore, students are more likely to engage in group work: “*Students were strongly motivated to work together*” [Participant 9, 35 years of university teaching experience, 12 years of experience in using flipped learning], and “*Were ready to participate in class activities and interact with their peers.*” [Participant 23, 22 years of university teaching experience, 10 years of experience in using flipped learning].

In reference to self-regulated learning skills, teachers argue that the success of the flipped model depends mainly on the student, who needs to read and review the learning materials before the lecture. This process inherently supports students to develop self-regulated learning skills: “*Flipped learning provides students with multiple and varied opportunities to review the scientific material and view it according to their own pace of learning, and in the place and time that suit them.*” [Participant 17, 10 years of university teaching experience, 5 years of experience in using flipped learning].

Research findings indicate that most interviewed university teachers agree with the important role of flipped classrooms in assisting students to become (more) independent learners. In line with other studies (e.g. Hashemifardnia et al. 2018; Al-Zahrani 2015; Osgerby 2013), participants in the present study described students enjoying autonomous learning, but also in-class group and collaborative work, during which they develop critical thinking and communication skills.

CONCLUSIONS

In summary, the results of the present study partly uncover university teachers’ positive perceptions about the use of the flipped pedagogical approach in didactic contexts, mainly because it has potential benefits for teaching and learning processes and allows the full and appealing embedment of digital technology. Although these findings add on the body of available empirical evidences on flipped classroom in higher education, they have to be interpreted with caution mainly due to

cross-cultural differences. Beyond researchers' subjective biases, some methodological limits also need to be considered, such as translation errors when working with interview transcripts, originally produced in both English and Arabic. However, the diversity of the sample ensures data saturation, and provides a comprehensive view of teachers' perspectives, from different angles corresponding to various disciplinary domains.

Although the access to the subjective views of university teachers is certainly a strength of this qualitative study, future studies should be designed on a mixed-method approach, to enlarge the research scope by adding variables to be investigated, and to cover larger samples. A multi-facets and multi-agents overview of the flipped pedagogical approach may be of interest in future research, and this can be achieved by incorporating the perspectives of teachers, students, curriculum developers etc. in the same study.

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