The Potential and Prospect for a MOOC-based Flipped Classroom Model in Turkish Higher Education in relation to Professional Teacher Development

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Abstract

The flipped classroom (FC) model and Massive Open Online Courses (MOOCs) have in recent years attracted great interest for teaching in higher education institutions. They have also been the subject of considerable attention in the literature. However, a critical review of the existing literature reveals the need for different approaches and initiatives regarding FC and MOOCs. Therefore, the present study aimed to find out the effect of a MOOC-based FC model on pre-service English language teachers' academic achievement. It also attempted to explore the perceptions of pre-service English language teachers based on their MOOC and FC experiences. The results showed that there was no significant statistical difference between the experimental group and the control group in terms of their academic performance. However, the study lays out a model with conceptual and methodological tools and provides

educators with a conceptual framework built around new combinations of classroom teaching and self-paced/online studies. Therefore, as a complement to traditional face-to-face instruction, the MOOC-based FC model could be considered useful for the training of future teachers.

Keywords: Flipped Classroom, EFL learners, Pre-service English Language Teachers, MOOC, Connectivism, Teacher education

1. Introduction

Given the dramatic rise of online learning, especially in tertiary education, due to the sudden outbreak of the COVID-19 pandemic, education has been given on digital platforms, whereby teaching has been influenced profoundly (Li & Lalani, 2020). Similarly, as a result of growing Internet use at home or any other location and with the ever wider use of computers and digital content in schools, colleges, and universities, it is an undeniable fact that online teaching has become a highly valuable medium for education and access to knowledge (Chen Hsieh, Wu, & Marek, 2017). It is also beyond question that innovative pedagogical methods and present-day technologies have changed the nature of the teaching profession. In this regard, every teacher today should be informed about the effective leverage factors of technology-enhanced education and be ready to employ new teaching methodologies and different learning models to customize their teaching to the individual needs of their students.

With reference to its potential use of digital technology, flipped classroom (FC) model could provide a good alternative for the modern teacher of the twenty-first century by ensuring the availability of online learning content such as video lectures or reading texts and combining it with the benefits of face-to-face classroom instruction (Saeidi & Ahmadi, 2016; Simon, 2019). However, as knowledge is no longer transmitted only from teacher to student, new technologies require teachers to break down the traditional walls of teaching by implementing the flipped classroom pedagogy, and thus making real use of digital technology. At this point, Massive Open Online Courses (MOOCs) can be utilized for their potential to bring about improvements in the levels of interaction, which is achieved via a stronger connection between learners and content as well as a higher degree of autonomy (Mackness, Mak, & Williams, 2010; Qarabesh, 2020). The fact that more learners than ever now access to MOOCs due to the COVID-19 pandemic-related lockdown has been a good indication of the increasing importance of the learner autonomy concept (Yaşar & Polat, 2021), which

requires learners to actively steer their own learning process with self-discipline (Ginting, Djiwandono, Woods, & Lee, 2020). According to Song, Song, and Wei (2015), through their highly collaborative environment, which fosters active participation and social interaction, MOOCs could hold considerable potential for mutual and autonomous learning with a range of opportunities that are based on principles of student-centered learning and the 53onnectivist learning theory.

First developed in 2007 by two high school chemistry teachers, Jonathan Bergmann and Aaron Sams, to compensate for classes missed by students who attended athletic competitions, FC has since been attracting the attention of a wide range of research studies (Bui, 2018; Farrah & Qawasmeh, 2018). It is defined by Merrill (2015) as "a pedagogical model in which class work and homework are reversed" (p. 16). Being one type of blended learning, flipped learning draws on interactive learning methods (Xinying, 2017). In addition to classroom teaching, wherein students directly engage in discussions and participate in joint projects, the FC approach offers students a high degree of e-learning materials outside the classroom, which is the main concern for teachers, and gives them opportunities for intensive and interactive practice, thereby enabling them to learn at their own pace and possibly with their preferred learning style (Berrett, 2012; Bijlani, Chatterjee, & Anand, 2013). In the traditional classroom (TC), however, students solely rely on classroom training sessions and teachers for the provision and production of teaching and learning materials as well as the development, organization, and running of the course delivery and student support (Amiryousefi, 2019).

Similarly, MOOCs, the main goal of which is "to provide open access to self-learning via high quality of education which supports the process of learning and knowledge creation via social interactions and to advance study on learning" (Wong, Tee, & Lim, 2015, p. 382), offer a convenient option for autonomous learning. Instead of producing publications and videos on subjects relating to their course content, creating pages, and releasing them on the Internet, instructors can reinforce classroom learning by integrating ready-built MOOCs that include varied teaching methods and carefully selected instructional resources in their traditional classroom settings (Mangan, 2012; Manning, Morrison, & McIlroy, 2014). As a recent approach to teaching, the MOOC-based FC model offers "new opportunities for people to learn and share information across the World Wide Web and among themselves" (Jitpaisarnwattana, Reinders, & Darasawang, 2019, p. 22).

Although they are still under development, MOOC-based FC models can assist teachers in providing their students with appropriate teaching and learning materials such as lecture videos, discussion forums, online tasks, and automatically graded quizzes all of which are

already available on MOOCs (Ding & Shen, 2019; Sallam, Martín-Monje, & Li, 2020, Yaşar, 2020). In this paper, considering the scant studies on the model, the effect of a MOOC-based FC model on pre-service English language teachers' academic achievement and their perceptions of a MOOC-integrated FC model are explored. It is likely to offer valuable insights into the field of teacher education as it attempts to provide pre-service English language teachers with an instructional model with the aim of setting an example for them to decide whether this form of learning delivery can help them gain significantly in their content knowledge and if it can be seen as an optimal alternative to traditional classroom instruction.

2. Literature Review

Various studies have confirmed that the learning performance of students in the flipped learning environment appears to be significantly higher than that of students in a TC environment (Deslauriers & Wieman, 2011; Hung, 2015; Turan & Akdag-Cimen, 2020). There are, however, studies suggesting that there is no significant difference in student achievement between flipped and non-flipped classes (Fraga & Harmon, 2014). Likewise, a high level of satisfaction with the FC approach has been reported by respondents in various research studies (Al-Zahrani, 2015; Gaughan, 2014; Turan & Akdag-Cimen, 2020). Several studies found high levels of instructor satisfaction as well (Gilboy, Heinerichs, & Pazzaglia, 2015).

Diverse studies have revealed that FC can enhance active learning (Hung, 2015). Many studies also revealed that a flip-class setting empowers learners with critical thinking and improves their problem-solving skills (Kim et al., 2014; Zainuddin & Attaran, 2016). However, despite stating many advantages of flipped-class instruction, He et al. (2016) revealed that as they were used to TC, some students took offense at the change of the instructional model. He et al. (2016) concluded that highly motivated and academically well-prepared learners are more welcoming and responsive concerning flipped instruction than the ones with low motivation, poor self-discipline, and weak academic skills. Therefore, after a detailed analysis and systematic review of the relevant literature, O'Flaherty and Phillips (2015) concluded that FC may not accommodate all learning styles and may not be appropriate for all learner types.

It should be noted that only limited number of studies with pre-service teachers and even fewer studies with pre-service English language teachers have been conducted so far on their perceptions of FC. A few studies can be summarised as follows. More recently, Akçor (2018) examined the pre-service English language teachers' perceptions of approach in a

Turkish context. She concluded that the FC model has a promising potential to make the teaching and learning process more effective. She also indicated that there was clear evidence of increased learning gains in her study. Kurt (2017) also found that compared to the students in TC, the students in FC demonstrated better learning outcomes and a higher level of self-efficacy beliefs.

Similarly, Adnan (2017) found, in her study at a Turkish state university with pre-service English language teachers, that the perceptions of the participants have been rather positive in terms of learning experiences. In some other studies with pre-service teachers, however, participants were found to be biased against FC at first, although this prejudice was removed once the participants were engaged in FC practices (Çukurbaşı & Kıyıcı, 2017). Some other studies reported this biased attitude of participants might be based on students' not being used to the FC approach (Özpinar, Yenmez, Gökçe, 2016; Talbert, 2012).

Kocabatmaz (2016) indicated that the participants, in her study with pre-service English language teachers, held positive views on FC as it allowed them to learn from different resources, foster cooperative learning, and allow the content to be accessible from anywhere and anytime. It also facilitated student-to-student and student-to-teacher interaction. Lack of motivation for pre-class preparation, insufficient Internet access, or poor Internet connection were among the problems reported to have been encountered by the participants.

Although there have been quite a few studies so far that have focused on the applicability and benefits of the FC model in teacher training, very few studies have been conducted to examine the FC model in conjunction with MOOCs, which could fulfil a useful role for "flipped learning whereby students develop their knowledge around a topic using MOOC content outside the classroom then come together in class to share their understanding and views, with the teacher facilitating the interactions and maintaining an appropriate group dynamic" (Manning, Morrison, & McIlroy, 2014, p. 295). Actually, it has been advocated for many years that teacher trainers should set a good example for pre-service teachers by implementing effective teaching techniques and participatory learning methods so that pre-service teachers can apply these techniques in the future for their own students (Bruff, Fisher, McEwen, & Smith, 2013; Hao & Lee, 2016). To this end, FC was considered to be a good model for investment in the education and training of pre-service teachers in order to raise the level of their basic training, including the use of new technology, and thus ensuring that they have the necessary resources and pedagogical skills to prepare their future students for their future career (Vaughan, 2014). Therefore, this study provides an opportunity to advance our knowledge of the MOOC-based FC model in teacher education in a Turkish higher education

context, wherein both teachers and students mostly rely on the established forms of teaching and learning, especially in the field of English language teaching (ELT) (Kirgoz, 2007). With its virtual dimension, which permits flexible education that is independent of time, the MOOC-based FC model differs from the rigid organisational environment for communication processes and the traditional system of teaching and learning in many respects.

Given the scarcity of literature on the MOOC-based FC model in the literature, especially in ELT higher education context, first, this study aims to find out the effect of the MOOC-based FC model on pre-service English language teachers' academic achievement by comparing the achieved test results of the students in Flipped vs. Traditional classrooms to ascertain whether the model could contribute to the academic achievement of the learners or if it has a positive or a negative effect on students' academic achievement. Second, it intends to examine what the pre-service English language teachers' perceptions are on the MOOC-based FC approach and if it can provide them with some additional skills in their professional development. Third, the study attempts to discover the perceptions of the pre-service English language teachers based on their MOOC and FC experiences to gain an insight into the factors that determine success and failure in FC practices. To address these goals, the study sought answers to the following research questions:

1. Is there a significant difference between the experimental group and the control group in terms of their academic performance after the implementation of the MOOC-based FC model?
2. What are pre-service English language teachers' perceptions of the MOOC-based FC model?

3. Method

3.1. Research design and participants

The research method adopted for this study was a mixed-method research design, combining both quantitative and qualitative data collection procedures. In this regard, the data were collected, using a quasi-experimental research design, with pre-test and post-test experimental design, a perception of flipped learning experience questionnaire, and two open-response questionnaires.

The current study was carried out with pre-service English language teachers who were taking the *"Learning Technologies in ELT I"* course at the Faculty of Education in the 2019-2020 academic year, at a state university in Turkey. These fourth-year candidate teachers were studying in the ELT program, which is responsible for training teachers of English in the Department of Foreign Languages Education (FLE). As the medium of

instruction is English, students must meet certain English proficiency standards put by the Council of Higher Education (CoHE). Namely, before being qualified for having education in the ELT department, they need to either present a valid International English Proficiency exam score like TOEFL IBT or get a score of 70 from the proficiency exam administered by the School of Foreign Languages at the same university. Students who cannot provide either score, must register at the English Preparatory Program carried out by the School of Foreign Languages. They can study at this school for a maximum of four semesters until they meet certain standards and prove they are qualified for studying in the ELT department. Students who fail to succeed in the proficiency exam by the end of the allowed time are expelled from the institution.

The ELT programs in Turkey are responsible for educating future qualified English language teachers. The program aims to provide candidate teachers with professional competence, essential field and theoretical knowledge as well as practical skills, and equip them with a sufficient background in the area of teaching methodology. The ELT program also aims to familiarize students with new information and communication technologies and help them adapt to the latest developments in the area of technology-based learning methodology.

The context of the study covers 61 fourth-year pre-service English language teachers taking the compulsory *Learning Technologies in ELT I* course. Their ages ranged from 22 to 25. Two classes with similar educational backgrounds were chosen, using non-random sampling procedures. The experimental group was made up of 27 participants (16 female and 11 male), while the control group consisted of 34 participants (21 female and 13 male). The experimental group was instructed with a MOOC-based FC model, while the control group had a traditional instructional setting. All participants in the experimental group were also required to enroll in a four-week online course, offered free on FutureLearn MOOC Platform (Appendix A), thus engaging with a face-to-face teaching model blended with an online course. The title of the MOOC was *"Teaching English Online"* and it was developed by Cambridge Assessment English (FutureLearn, 2019). It had similar topics (Appendix B) with the course, which was offered at the university, so it was integrated with the course curriculum. Those who were eligible were granted a Certificate of Achievement by the University of Cambridge at the end of the course. The participants were able to find out about the skills, knowledge, digital tools, and resources they need to design and deliver effective online English lessons. They were expected to gain insights from online teachers, trainers, and learners and share ideas with other course participants.

A MOOC-based FC model was performed during the course period. As required by the principles of the FC approach, the students in the experimental group were supposed to study the course content individually on the FutureLearn MOOC, and afterward the course content was covered in a traditional face-to-face class format. The course on the MOOC was offered by two expert online English teachers working for Cambridge Assessment English, while the complementary face-to-face course was delivered by the first author of this study. The students in the experimental group were required to be prepared for classroom discussions during the face-to-face courses as they were already familiar with the topics. Rather than one-way knowledge transmission, the participants had the chance to exchange views on the content through extensive discussions, as well as question and answer sessions. For the students in the control group, on the other hand, the course was carried out in the traditional manner, wherein the teaching and learning of the content happened in the classroom only. The face-to-face lectures were offered by the same researcher, and they were based on active and collaborative tasks. The content was conveyed by the instructor and individual work was also demanded from the students to increase student participation in the classroom activities. The students in both groups were tested at the end of the course, and their grades had a rate of 40 percent on their final score.

3.2. Instruments

The data were collected through three instruments. A test[1] by Cambridge Assessment English (2019) was administered twice both to the experimental and control group as a pre- and a post-test. It was first administered to both groups as a pre-test before instruction. Being exactly the same as the pre-test and comprised of 32 questions, the post-test was applied to both groups after four weeks of instruction to examine the effect of the FC model on the academic achievement of the participants in the experimental group.

The Perception of Flipped Learning Experience questionnaire developed by Chen Hsieh, Wu, and Marek (2017) was employed to identify participants' opinions on the FC model after the post-test administration (Appendix C). Ranging from 'Strongly disagree' (1) to 'Strongly agree' (5), a 5-point Likert scale was used. The questionnaire was developed by the researchers based on related literature and previous studies, to examine the students' overall perception of the flipped learning instructional design. It was also validated by two

[1] As the test (Teaching English Online Achievement Test) is used commercially, test items are not shared in this study.

outside experts in the field of English as a foreign language (EFL) from a four-year comprehensive academic university in central Taiwan. The instrument had 14 statements with four constructs. The constructs were motivation (items 2, 4, 7, 9, 11), effectiveness items (1, 3, 8, 10), engagement (items 5, 6, 12, 13), and overall satisfaction (item 14). The Cronbach's alpha reliability score of the instrument, which was administered to 26 participants, who made up the experimental group, was measured.92. This value indicates that the reliability of the instrument is quite high (see Table 1).

Table 1

Cronbach's Alpha Reliability Score of the Instrument

Cronbach's Alpha	N of Items
0.92	14

Finally, to gain a deeper level of understanding about students' FC experiences and explore their perceptions on the MOOC-based FC model of instruction, the data were collected from the experimental group through two open-response questionnaires. The first open-response questionnaire was administered to all participants to explore each participant's opinions about the MOOC-based FC model right after the experiment (Appendix D). The participants of the second open-response questionnaire were chosen, using purposive sampling, based on several criteria such as their achievement scores, views on the FC model, and gender so that maximum diversity could be achieved to determine the participants of the second open-response questionnaire (Appendix E). Table 2 shows details about the respondents of the second open-response questionnaire. The items of both open-response questionnaires were adapted from the studies of Amiryousefi (2019) and Chen Hsieh, Wu, & Marek (2017).

Table 2. Qualitative Data Sampling for the Second Open-Response Questionnaire

Participants	Gender	Pre-test Scores	Post-test Scores	Opinion on FC Model
P1	F	87	100	Positive
P2	M	74	96	Positive
P3	M	81	96	Negative

P4	F	65	96	Positive
P5	F	59	68	Negative
P6	F	62	68	Positive
P7	M	43	59	Positive

3.3. Procedure

The quantitative data collection had two phases and took four weeks to complete. The first phase consisted of the pre- and post-tests, which respectively served as a proficiency and achievement test, while the second one was based on an attitude questionnaire which was administered to examine the MOOC-based FC model perceptions of the participants.

While the pre- and post-tests were administered to both groups respectively on the first and the last days of the experiment, the attitude questionnaire was only applied to the experimental group upon their post-test administration.

As for the questionnaire, it was first turned into an online form to facilitate quick evaluation, then it was sent to the participants. After having been collected via the Internet-based online questionnaire, all the data, including pre- and post-test results, were transferred to SPSS 24.

For the qualitative part of the present study, the data were gathered only from the experimental group after the completion of four-week treatment. Upon a request by the researcher for personal interviews, the participants expressed their desire for open-response questionnaires, instead. Hence, the qualitative data were collected through two open-response questionnaires, following the principles formulated by Brown (2009). The open-response questionnaires adhere to the guidelines laid down by Brown on how to conduct successful/effective quality qualitative research through broad open questions, as they "allow for a deeper exploration of one issue, and they generate more expansive, and often unpredicted, responses. Effective broad open questions prompt the respondent to write a succinct answer of more than a phrase and up to a paragraph" (Brown, 2009, p. 203).

3.4. Data analysis

The quantitative data analysis was conducted using SPSS 24. As regards the first research question, the data collected from pre- and post-tests were evaluated quantitatively to analyse the differences between the scores of both groups which were instructed through the

Flipped vs. Traditional Classroom model. After the data were collected, Kolmogorov-Smirnov and Shapiro-Wilk normality test was carried out to determine whether or not the data follows a normal distribution.

The data were tested for normal distribution and the significance value for Shapiro-Wilk test was found to be.159 for the experimental group and.180 for the control group, suggesting a normal distribution (p >.05).

As the data were found to follow a normal distribution, an Independent Samples T-test was conducted to compare the differences in the scores of either group.

In addition, a comparative analysis was also conducted to see the progress each group made by evaluating the mean difference between the pre- and post-tests of each group. To this end, another normality test was carried out again to see if the data from both groups were normally distributed. The significance value for the Shapiro-Wilk test was.598 for the experimental group and.945 for the control group, indicating a normal distribution (p >.05). Hence, the effect of MOOC-based FC model on the academic achievement of the students could be evaluated by comparison with the TC model.

The items on the questionnaire were also analyzed quantitatively through SPSS 24 in a descriptive manner in connection with the second research question. A descriptive analysis was conducted for each construct to explore students' perceptions of the MOOC-based FC model.

The qualitative data gathered through open-response questionnaires were analyzed using content analysis, based on van Manen's (2016) analysis criteria. To ensure intercoder reliability, two researchers analyzed the data independently, conducting an independent data analysis method. To achieve this, first, the data collected from each participant were examined thoroughly by the researchers in isolation from each other. Then, each questionnaire, received through email, was analyzed, and every item was read repeatedly to highlight relevant and irrelevant parts. To this end, thematic analysis was carried out by sorting out and then discarding data that were considered to be unnecessary with a view to formulating core themes for further analysis. Then, the researchers compared their codes through a couple of meticulous debriefing sessions to make final decisions and resolve disagreements. At this point, some specific themes were constructed based on the categorization of the most significant statements, thus the common statements were clustered and identified as main themes. Table 3 demonstrates the research questions and the corresponding data collection procedures.

Table 3

Overview of Research Questions and Data Collection Procedures

Research Questions	Data Collection Instruments & Study Group	Data Analysis
1- Is there a significant difference between the experimental group and the control group in terms of their academic performance after the implementation of the MOOC-based FC model?	Pre- & Post-Tests (Teaching English Online Achievement Test) Experimental + Control Group	Inferential Statistics (Independent Samples t-test)
2- What are pre-service English language teachers' perceptions of the MOOC-based FC model?	Questionnaire Experimental Group	Descriptive Statistics (means and standard deviations)
	1st and 2nd Open-Response Questionnaires Experimental Group	Content Analysis

4. Findings

4.1. Findings related to the 1st research question

Pre-post-tests were applied to both groups, and analyses of both tests were conducted with regard to the first research question below.

1st Research question: Is there a significant difference between the experimental group and the control group in terms of their academic performance after the implementation of the MOOC-based FC model?

In order to get more reliable results in the end, the pre-test scores of both groups were examined before the instruction began. As shown in Table 4 below, the experimental group (*M* = 64.22, *SD* = 11.26) outperformed the control group (*M* = 59.52, *SD* = 7.65).

Table 4

The Means of the Pre-test Scores.

Group	N	M	SD
Experimental	27	64.22	11.26
Control	34	59.52	7.65

The results of the Independent Samples T-test, as illustrated in Table 5 below, showed that statistically there was no significant difference between the success rates of the two groups (*P* >.05). It means that the levels of participants in both groups were similar, which contributes to the reliability of the study.

Table 5

Independent Samples T-test Results for Pre-test (Proficiency Test Results)

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	2.872	.095	1.933	59	**.058**	4.692	2.428	-.166	9.552
Equal variances not assumed			1.851	43.912	.071	4.692	2.534	-.416	9.802

To find out the effect of the MOOC-based FC model on the academic achievement of the students in the experimental group, it was necessary to examine whether there was any significant difference between the post-test scores of both groups. As data were found to be normally distributed, parametric tests were applied using an Independent Samples T-test to compare the mean scores of both groups. Figure 1 below shows the mean scores of both groups.

As seen in Figure 1, the experimental group (*M* = 84.48, *SD* = 10.39) outperformed the control group (*M* = 83.71, *SD* = 8.81) regarding the post-test scores, but only by a narrow margin. Table 6 below indicates the pre- and post-test scores of each group.

Table 6

Pre-Post-Test Results of Both Groups & P value of the Independent Samples T-Test

Group Statistics	**Group**	**N**	**M**	**SD**	**P**
Pre-Test	Experimental	27	64.22	11.27	0.058
	Control	34	59.53	7.66	
Post-Test	Experimental	27	**84.48**	10.39	**0.754**
	Control	34	**83.71**	8.81	

However, an Independent Samples T-test (Table 7) was also conducted to determine whether the difference between the scores of both groups was statistically significant or not.

Table 7

Independent Samples T-test Results (Post-test Results of Both Groups)

	Levene's Test for Equality of Variances		t-test for Equality of Means						
								95% Confidence Interval of the Difference	
	F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Equal variances assumed	1.284	.262	.315	59	**.754**	.776	2.459	-4.144	5.696

Equal variances not assumed	.309	51.027	.758	.776	2.506	-4.256	5.807

The results indicated that statistically there was no significant difference between the success rates of both groups ($P > .05$).

In relation to the first research question, the results showed that although no difference was seen between the overall performances of the students who were instructed in a MOOC-based FC model and the ones who were instructed in the TC model, it seems that the MOOC-based FC model had a slightly positive effect concerning students' academic achievement.

All in all, the results showed that there was no significant difference between the experimental group and the control group in terms of their academic performance after the implementation of the MOOC-based FC model.

4.2. Findings related to the 2nd research question

The findings of both quantitative and qualitative analyses were presented to find an answer to the second research question below.

2nd Research question: What are pre-service English language teachers' perceptions of the MOOC-based FC model?

4.2.1. Quantitative findings related to the 2nd research question

The data were analyzed using descriptive statistics. Table 8 below indicates the descriptive statistics of each construct.

Table 8

Descriptive Statistics of FC Perceptions in Accordance with the Four Constructs

Constructs	Min.	Max.	M	SD	*N* of items
Motivation	1	5	3.43	0.77	5
Effectiveness	1	5	3.26	0.81	4
Engagement	2	5	3.52	0.81	4
Overall Satisfaction	1	5	3.57	1,13	1

N = 26

The results showed that each construct had more than an average mean score, suggesting a generally positive view in reference to the students' attitudes towards the MOOC-based FC model with regard to four constructs. It can thus be said that the model motivated the participants, and its effectiveness was found to be satisfactory. However, it should also be noted that the constructs of effectiveness (M = 3.26) and motivation (M = 3.43) had lower mean scores than those of engagement (M = 3.52) and overall satisfaction (M = 3.57), which needs to be further analyzed and interpreted through qualitative findings of this study.

To help identify the key issues relating to participants' attitudes toward the FC approach, each questionnaire item was described in detail, and further examination was done using descriptive statistics of each item as shown in Table 9 below.

Table 9

Students' Attitudes Towards FC Approach

Questionnaire Items		M	SD
1-	A flipped classroom is a better way of learning.	3.23	1.06
2-	I enjoyed the flipped classroom teaching approach more.	3.50	0.86
3-	I think the flipped classroom is a more effective and efficient way to learn.	3.19	0.89
4-	I feel more motivated in a flipped classroom.	3.19	1.09
5-	I participated and engaged myself more in learning in the flipped classroom.	3.50	0.94
6-	I became a more active learner in the flipped classroom.	3.53	0.90
7-	I thought the time and effort I spent in the flipped classroom was worthwhile.	3.50	0.98
8-	I learned more and better in the flipped classroom.	3.26	0.87
9-	I prefer the flipped classroom to a lecture-based classroom.	3.07	1.01
10-	I think the flipped classroom learning guided me toward better understanding of the course topics.	3.38	1.02
11-	I experienced pleasure in the flipped classroom.	3.73	1.11

12-	I devoted myself more to the instructional/class activities in the flipped classroom.	3.46	0.90
13-	I spent more time and effort than usual on my flipped classroom learning activities.	3.61	1.23
14-	Generally, I am happy and satisfied with this flipped learning experience	3.57	1.13
	N = 26		

According to the results indicated in Table 9, all items got more than an average score, suggesting an overall positive attitude towards the FC approach. For example, item 11, "I experienced pleasure in the flipped classroom," received the highest score (*M* = 3.73, *SD* = 1.11) from the participants. On the other hand, item 3 "I think the flipped classroom is a more effective and efficient way to learn" (M=3.19, SD=0.89) and item 4 "I feel more motivated in a flipped classroom" (*M* = 3.19, *SD* = 1.09) received the lowest scores from the respondents.

Although these scores were more than average, they provided enough evidence to suggest that despite participants' overall positive attitudes toward the FC approach, there is a need to focus on a closer examination of the participants' views.

All in all, the findings of the attitude questionnaire items support the results of the four constructs of the questionnaire, suggesting students' more positive views on overall satisfaction and engagement aspects of the FC approach than its motivation and effectiveness aspects.

4.2.2. Qualitative findings related to the 2nd research question

In order to explore students' perceptions about the MOOC-based FC model and extend more on the quantitative findings relating to the four constructs, the data collected through two open-response questionnaires were systematically refined and analyzed. Table 10 below shows the main themes that emerged in the process of identifying basic patterns during the qualitative data analysis.

Table 10

Emerging Themes of the Qualitative Findings Related to the 2nd Research Question

Categories	Main Themes

Motivation	(a) active learning, (b) self-directed learning, (c) rich learning experiences
Effectiveness	(a) academic readiness, (b) external reinforcement, and (c) learner autonomy
Engagement	(a) effective instructional techniques and group facilitation skills and (b) group-oriented teaching material
Overall Satisfaction	(a) creating a collective and individual learning environment and (b) accommodating different learning styles

Below are the dimensions based on the participants' views and experiences that were framed around the categorization highlighted above:

1. Motivation

(a) Active learning

Most of the participants highlighted the significance of active participation in the lesson thanks to the FC design, which encouraged them to get involved in classroom discussions more freely due to increased motivation, resulting from the enjoyment of active learning. They also expressed how much the active learning atmosphere increased motivation for them to practice their communication skills. Participant 3, for instance, stated that "Well, rather than just listening, actively participating in the lesson to widen our opinions increased my motivation."

(b) Self-directed learning

Highlighting the advantage of self-directed learning in the MOOC-based FC learning by giving much of the credit to the MOOCs' varied learning opportunities for their motivation in the FC model, the respondents reported that they can choose their own learning pace, go deeper into the topic, record their own learning, reuse, and retake the lessons many times if they wish, which is made possible thanks to the instructional technologies in MOOCs. Participant 2 commented that "… I have more control over the pace of learning while taking responsibility for directing my own learning. I can watch the videos at any time that I want,

or I can watch them again and again. …" However, there were some students who could be considered displeased not with the varied learning opportunities they were offered maybe, but with the extra time needed to fulfil them while at the same time they had some other assignments to do. Participant 4 highlighted that "… there were many things to do before the lesson, so I felt a bit bored because I had many things to do for my other lessons as well."

(c) Rich learning experiences

Most of the participants acknowledged that the FC model helped them to continue developing their skills and broaden their horizon by extending their interaction, through the MOOC, beyond the borders of the classroom, enabling them to meet a lot of new people, talking about different cultures and languages, discussing various topics with people of different viewpoints. They seem to be pleased to be involved in learning through a MOOC and FC model as they claim they've learned a lot from the videos, articles, pictures, discussions, which allowed them to cooperate and improve their communication skills. It seems that these rich learning experiences enhanced their motivation and participation in class as well as learning and developing new skills at home. For instance, Participant 2 said that "they can get a chance to learn English with using lots of different materials and task such as videos, audios, role plays, reading tasks, etc. In this way, they can feel more motivated and enthusiastic to participate to the lessons."

2. Effectiveness

(a) Academic readiness

Commenting on the effectiveness of the MOOC-based FC model, most students mentioned that it mostly depends on students' eagerness to take responsibility for their own work. That is, as far as the effectiveness of the FC model is concerned, the participants think that as well as some other factors like the course, the subject, the schedule, the instructor, etc., it is dependent on the students' academic readiness. Participant 3, for instance, stated that "… if the student is eager and willing to do the task, it (FC) is an effective method, but if the student is lazy and will not do the activities at home, this method cannot work well." The participants also think of it as a matter of learning style, noting that the effectiveness of the FC model depends on the style of the learners, which seems to echo the general views of the participant as regards the academic readiness of the students. Participant 5, for example, indicated that "It depends on your style. … A student who has problem with focusing may

find it troubling to keep their attention on the lesson since they will not have the teacher in front of them to draw their attention."

(b) External reinforcement

Participants mostly thought of the FC model as an external drive that helps them prepare for the subjects that will be covered in the classroom and reinforce the knowledge that they have already learned as they have direct access to knowledge before the lesson, which makes them more active in the learning process. Participant 2 for example indicated that "… FC is quite an effective learning method as the students have direct access to the knowledge and more active in the learning process. The teacher is a guide and helps students to reinforce their knowledge by guiding." Some of them, however, didn't seem to be particularly enthusiastic about participating in the classroom discussions. Namely, they preferred to be passive listeners in the classroom and registered users at home, as Participant 7 put it, "It had no effect on my effectiveness unfortunately."

(c) Learner autonomy

Participants found the FC model effective as it puts them in a position where they can play an active role in shaping and building their own learning process. They also liked the idea that the FC model provides knowledge, practice, and engagement beforehand, as it enables them to work independently. They also had direct access to educational resources, which offers opportunities for learner autonomy. In addition, they could internalize the knowledge through a wide range of learning tools, as the MOOC-based FC model provides them with easy access to sources. Participant 1 stressed that "I think it is effective because it improves students' achievement and students contribute to their own learning process. Since students introduce the material before the class, they know what to do and how to do in classroom."

3. Engagement

(a) Effective instructional techniques and group facilitation skills

Upon being asked about their feelings about engagement in the FC model, participants generally revealed that creating a learner-friendly atmosphere and designing courses that build upon the positive effects of group dynamics can enhance learner engagement in classroom activities, thus improving the ability of learners to revise what they have learned at home. This can be deduced from the following statements of Participant 3, "If the activities allow them to

cooperate with each other, they will be more willing to learn. Group work/pair work can be done in the class to improve their communication and cooperation skills." In contrast, Participant 4 clearly indicated that "Engagement is not about the method of class, instead it is inside the student in my opinion", implying that the successful implementation of the FC model depends much more on students' eagerness to get involved in exercises and activities than on the course design or teaching materials. In contrast, Participant 6 highlighted that it is mostly the instructors who are responsible for experimenting with new learning techniques and designing effective courses which will address the specific needs of the group members. Participant 6 commented that "… all thing is about teacher. … If the teacher creates his/her own materials by considering the students' needs, expectations and interests, the students may feel more comfortable and gladder to do tasks."

(b) Group-oriented teaching material

Most participants also highlighted that considering the individual needs and wishes of the group members, giving learners some control over the learning material, and encouraging them to apply in practice what they have learned at home would make a huge difference in the level of student engagement in learning activities. Participant 2, for example, stated that "Choosing next week's topic with the students and deciding what to do all together would make this experience more enjoyable." Other participants also held the view that when generating teaching materials, being open to suggestions and ideas from students can raise student engagement in the FC model. Participant 7 said that "Maybe students can also choose their subject content, or they can prepare something about the lesson, so they can present and share it to the teacher and other friends …."

4. Overall Satisfaction

(a) Creating a collective and individual learning environment

Most of the participants mentioned that although it's labour-intensive, they liked the FC model as it creates a cooperative learning environment and promotes interaction among students in the classroom as well as reinforcing the competency of the individual at home. For instance, Participant 2 highlighted that "Yes, there is much more workload and yes, you need to arrange your schedule considering this type of learning. But learners discover the lesson by themselves and get the knowledge out of it." Some participants seemed to have mixed feelings about the FC model. On the one hand, they found it enjoyable and effective, as was indicted by Participant 7, "It is technology based and more enjoyable than conventional classes. …

Students can be prepared for the lesson thanks to the materials provided before the lesson." On the other hand, they found it to be too difficult to follow since it requires a lot of time and devotion to complete. For example, Participant 6 stated that "It is a good teaching model, but it may not be suitable for senior students as this model requires more time and devotion to follow the courses and do the tasks." Participant 5 even thought that the FC model is not suitable for her, as she admitted that she is too lazy to make an effort to fulfil the requirements on her part, so she just wanted to enjoy the lesson as it was being lectured by the lecturer or topics being discussed by peers. She expressed her feelings saying that "To me, conventional one is better than flipped learning because I am a lazy student. … Flipped learning has its benefits such as practicality, but I would prefer conventional classes. …"

(b) Accommodating different learning styles

Most of the participants noted that the benefits of the FC model are not limited to its contribution to autonomous and cooperative learning. The model also enables learners to adapt their pace of learning to meet their individual learning needs by supporting different learning styles through various motivating factors. For example, Participant 4 commented that "In the conventional classes, you get the knowledge from the teacher … it isn't personalized … In flipped learning, you can choose when to learn and how to learn and how many times to repeat etc." Other participants put special emphasis on the efficacy of the FC model on the one hand, and on various risk factors such as high time consumption required by this model, on the other hand. Participant 6, for instance, commented that "It was a really good type of learning, and I was able to learn the lesson more efficiently than in the other conventional type of classes. However, I did not have much time for my other lessons."

Overall, analysis of the participants' comments on their experience with the MOOC-based FC model revealed that although it seems more demanding than the traditional model of teaching, considering the benefits they have gained such as the increased chances to practice their learning during the class time and the motivating factors like managing their own learning, the pre-service English language teachers seem to be satisfied with the model.

5. Discussion

Contrary to expectations, this study did not find a significant difference between the success rates of the students in FC vs. TC. The findings revealed that the experimental group outperformed the control group though, suggesting that the MOOC-based FC model, in fact, contributed to the academic achievement of the learners (see Table 6).

The findings of the current study do not support some of the previous research which found that the success rates of the students in FC were significantly higher than those of the students in TC (Deslauriers & Wieman, 2011; Hung, 2015). There are studies, however, whose results agree with the findings of the present study, revealing that there is no significant difference in student achievement between flipped and non-flipped classes. (Fraga & Harmon, 2014; Strayer, 2012).

The unexpected result of the current study might be due to the difficulty in changing established patterns of behaviors and study habits that have been developed over the years. This explanation accords with some earlier observations by He et al. (2016), which showed that despite many advantages of the FC approach, some students took offense at the change of the instructional model as they were accustomed to TC. Similarly, the surprising result of the present study is contrary to some previous studies which revealed that FC enhanced students' learning performances and increased their motivation when compared to conventional classrooms as it helped them explore new things by developing their skills of critical thinking, suggesting that flip-class setting has a positive impact on learners' creativity and higher-order thinking skills and it empowers them with critical thinking as well as improving their problem-solving skills (Kim et al. 2014; Zahrani, 2015; Zainuddin & Attaran, 2016).

Based on the findings as a whole, it can be concluded that the students are mostly positive about the MOOC-based FC model and they seem to have favourable attitudes towards it. These results are in accord with results of some previous studies revealing a high level of student satisfaction with the FC approach (Adnan, 2017; Akçor, 2018; Al-Zahrani, 2015; Davies, Dean, & Ball, 2013; Gaughan, 2014; Kocabatmaz, 2016; Kurt, 2017; Turan & Akdag-Cimen, 2020). The findings also mirror those of the previous studies that have examined instructor satisfaction as well (Gilboy, Heinerichs, & Pazzaglia, 2015).

Despite their limited achievement when compared to the students in TC, which could at best be defined as a moderate success, flip-class participants' generally positive reception towards the MOOC-based FC model could be attributed to their increased motivation, as suggested by Merrill (2015), or it might be related to the major advantage of the FC model that enables them to progress at their own pace and not in a predetermined time, as revealed by Davies et al. (2013). Another possible explanation for this outcome may be the increased level of interactivity, communication, and cooperation between students, as well as the changing roles of teachers and learners, which broadly supports the observations of Galway et al. (2014).

Additionally, participants' positive attitudes towards the MOOC-based FC model may be explained by the fact that it appeals to students with diverse learning styles (Bruff et al., 2013; Gilboy, Heinerichs, & Pazzaglia, 2015). Factors such as student empowerment (Hung, 2015), improvements in the use of class time (Gaughan, 2014), welcoming atmosphere for active learning (Ziegelmeier & Topaz, 2015), and responsible manners of collaboration among participants (Kim et al., 2014) have also been reported in the literature as some of the reasons for student satisfaction regarding the FC model, which are in line with the findings of the present study.

The findings of the present study, on the other hand, are contrary to some previous studies which have found that students were not happy about their FC experience (Snowden, 2012). Increasingly being faced with the requirement to put in more varied levels of performance and be more active learners than the conventional way of teaching could have led those students to adopt a cautious attitude towards FC, as revealed by Al-Zahrani (2015).

Moreover, the findings of the current study differ sharply from the findings of other studies which indicated that students had more positive attitudes towards TC than they had towards FC (Strayer, 2012). Despite its increased popularity and the valuable contributions, it makes towards the quality of learning outcomes and the measurable improvement in learners' learning performance (Deslauriers & Wieman, 2011; Hung, 2015), the novelty of the FC approach or some students' preferences of passive over active learning styles may explain their choice in favour of TC rather than FC, which is not the case in the present study. Not being able to get immediate feedback in addition to having to watch pre-class videos cannot be ruled out as what seems cool to academically advanced students is often irrelevant or boring to average students.

Finally, the findings suggest that unlike the TC model, which depends on didactic lecturing, the MOOC-based FC model can promote self-directed learning, thereby supporting learners in developing greater learner autonomy. This finding is consistent with that of Manning, Morrison, and McIlroy (2014) who also found that MOOCs in education can constitute a new stage in the development of self-directed learning as they provide each student with the opportunity to learn at his or her own pace. Moreover, the model also appears to motivate students to use knowledge more reflectively and keep them engaged in learning far more than a traditional lecture. This also accords with Bijlani, Chatterjee, and Anand's (2013) definition of active and flipped learning, which embraces the view that learning is more effective when learners have control over their learning and participate in the process of learning rather than being passive recipients of facts.

6. Conclusion and Pedagogical Implications

Overall, the results showed that although there was no significant difference between the experimental group and the control group in terms of their academic achievement after the implementation of the MOOC-based FC model, the pre-service English language teachers seemed to be satisfied with the model.

The findings of this study have several important implications for future practice. First, the evidence from the study suggests that although the MOOC-based FC model made little contribution to the academic achievement of the pre-service English language teachers, it helped them become more productive and enthusiastic, as it provided them with some additional skills in their professional development. Therefore, as a complement to traditional face-to-face instruction, the MOOC-based FC model could be considered useful for the training of future teachers. Besides, pre-service teachers could set a good example for the modern teacher profile by empowering individuals to fill the digital divide between generations and applying educational technology tools.

Second, the current data highlight the importance of designing courses that are based on active learning principles, which necessitate intensive coaching, a stress-free environment, and tracking of student progress. Therefore, to motivate learners to engage in more learner-centered activities in the digital age of information and technology, in-service teachers, instructors, teacher trainers, and practitioners are suggested to apply the MOOC-based FC model in their own courses, which would facilitate greater communication between learners by combining face-to-face classroom training with out-of-class learning activities while at the same time tracking students' progress through data-tracking features on the MOOC platform.

Third, considering the global impact of the COVID-19 crisis, which has interrupted conventional schooling around the world and imposed a nationwide closure of educational facilities, another major implication of the present study might be the fact that it lays out a model with conceptual and methodological tools and provides educators with a conceptual framework built around new combinations of classroom teaching and self-paced/online studies.

Finally, these findings have significant implications for the understanding of how a MOOC blend could provide learners with valuable opportunities to reinforce the subjects in the curriculum and enhance autonomous and cooperative learning. In general, therefore, it seems that by making real use of digital technology, MOOCs can play a great role in breaking down the traditional walls of teaching. The findings of the study also suggest that MOOCs can establish an online global community, through which knowledge transmission can

continue outside of class time. As learning is no longer bound by the traditional classroom setting, school administrators, educators, and other stakeholders should consider adapting school curricula to match changing learner needs by fully exploiting the potential of the Internet for greater learning success and more student-centered instruction. Taking the findings of this study into account, they are recommended to consider integrating a MOOC-based FC model into the traditional classroom settings.

Although the major objectives of the study were accomplished, the study is apparently limited due to time constraints and the small number of participants included. Because this study is only the beginning of a process that needs to be further deepened through more longitudinal studies that could shed more light to discover learners' perceptions and usages of a MOOC-based FC model in larger contexts and more diverse populations, it provides a significant contribution to all stakeholders to evaluate the effectiveness of the model and the perceptions of the learners regarding its integration into the traditional classroom settings. Further research should focus on the views of practitioners and educators on the model. Moreover, further research should concentrate on some experimental studies that can provide educators with practical suggestions that can guide them in the right direction towards planning and implementing the MOOC-based FC model in their specific contexts.

Disclosure of Ethical Issues

The authors would like to state that this study meets the principles of research ethics, and the authors have no conflicts of interest to declare. This paper is based in part on the MA thesis of the first author. Both authors contributed equally at all stages to this study and the manuscript creation.

References

Adnan, M. (2017). Perceptions of senior-year ELT students for flipped classroom: A materials development course. *Computer Assisted Language Learning, 30*(3-4), 204-222.

Akçor, G. (2018). *Exploring the perceptions of pre-service English language teachers of flipped classroom* (Master's thesis). Hacettepe Üniversitesi, Eğitim Bilimleri Enstitüsü, Ankara.

Al-Zahrani, A. M. (2015). From passive to active: The impact of the flipped classroom through social learning platforms on higher education students' creative thinking. *British Journal of Educational Technology, 46*(6), 1133-1148.

Amiryousefi, M. (2019). The incorporation of flipped learning into conventional classes to enhance EFL learners' L2 speaking, L2 listening, and engagement. *Innovation in Language Learning and Teaching, 13*(2), 147-161.

Bergmann, J., & Sams, A. (2014). Flipped learning: Maximizing face time. *T+ D, 68*(2), 28-31.

Berrett, D. (2012). How 'flipping' the classroom can improve the traditional lecture. *The Chronicle of Higher Education, 12*(19), 1-3.

Bijlani, K., Chatterjee, S., & Anand, S. (2013, December). *Concept maps for learning in a flipped classroom.* Technology for Education (T4E), 2013 IEEE Fifth International Conference on (pp. 57–60). IEEE. doi: https://doi.org/10.1109/T4E.2013.22.

Brown, J. D. (2009). Open-response items in questionnaires. In J. Heigham & R. Croker (Eds.), *Qualitative research in applied linguistics* (pp. 200-219). London: Palgrave Macmillan.

Bruff, D. O., Fisher, D. H., McEwen, K. E., & Smith, B. E. (2013). Wrapping a MOOC: Student perceptions of an experiment in blended learning. *MERLOT Journal of Online Learning and Teaching, 9*(2), 187-199. Retrieved from http://jolt.merlot.org/vol9no2/bruff_0613.htm

Bui, T. M. T. (2018). Flipped learning: A possible model in the Vietnamese EFL tertiary context. *The Asian EFL Journal, 20*(8), 69-75.

Cambridge Assessment English (2019). *Teaching English online. In futurelearn. Online course.* Retrieved October 7, 2019, from https://www.futurelearn.com/courses/online-tutoring

Chen Hsieh, J. S., Wu, W. C. V., & Marek, M. W. (2017). Using the flipped classroom to enhance EFL learning. *Computer Assisted Language Learning, 30*(1-2), 1-21.

Çukurbaşı, B., & Kıyıcı, M. (2017). Preservice teachers' views about flipped classroom model. *Bayburt Eğitim Fakültesi Dergisi, 12*(23), 87-102.

Davies, R. S., Dean, D. L., & Ball, N. (2013). Flipping the classroom and instructional technology integration in a college-level information systems spreadsheet course. *Educational Technology Research and Development, 61*(4), 563-580.

Deslauriers, L., Schelew, E., & Wieman, C. (2011). Improved learning in a large-enrollment physics class. *Science, 332*(6031), 862-864.

Deslauriers, L., & Wieman, C. (2011). Learning and retention of quantum concepts with different teaching methods. *Physical review special topics-physics education research, 7,* 1-6.

Ding, Y., & Shen, H. (2019). Delving into learner autonomy in an EFL MOOC in China: A case study. *Computer Assisted Language Learning,* 1-23. DOI:10.1080/09588221.2019.1681464

Farrah, M., & Qawasmeh, A. (2018). English student's attitudes towards using flipped classrooms in language learning at Hebron University. *Research in English Language Pedagogy, 6*(2), 275-294

Fraga, L. M., & Harmon, J. (2014). The flipped classroom model of learning in higher education: An investigation of preservice teachers' perspectives and achievement. *Journal of Digital Learning in Teacher Education, 31*(1), 18-27.

FutureLearn (2019). *Teaching English online. In futurelearn. Online course.* Retrieved October 16, 2019, from https://www.futurelearn.com/courses/online-tutoring

Galway, L. P., Corbett, K. K., Takaro, T. K., Tairyan, K., & Frank, E. (2014). A novel integration of online and flipped classroom instructional models in public health higher education. *BMC Medical Education, 14*(1), 181.

Gaughan, J. E. (2014). The flipped classroom in world history. *The History Teacher, 47*(2), 221-244.

Gilboy, M. B., Heinerichs, S., & Pazzaglia, G. (2015). Enhancing student engagement using the flipped classroom. *Journal of Nutrition Education and Behaviour, 47*(1), 109-114.

Ginting, D., Djiwandono, P. I., Woods, R., & Lee, D. (2020). Is autonomous learning possible for asian students? The story of a mooc from Indonesia. *Teaching English with Technology, 20*(1), 60-79.

Hao, Y., & Lee, K. S. (2016). Teaching in flipped classrooms: Exploring pre-service teachers' concerns. *Computers in Human Behavior, 57,* 250-260.

He, W., Holton, A., Farkas, G., & Warschauer, M. (2016). The effects of flipped instruction on out-of-class study time, exam performance, and student perceptions. *Learning and Instruction, 45,* 61-71.

Hung, H.T. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning, 28*(1), 81–96. doi:10.1080/09588221.2014.967701

Jitpaisarnwattana, N., Reinders, H., & Darasawang, P. (2019). Language MOOCs: An expanding field. *Technology in Language Teaching & Learning, 1*(1), 21-32.

Kim, M. K., Kim, S. M., Khera, O., & Getman, J. (2014). The experience of three flipped classrooms in an urban university: an exploration of design principles. *The Internet and Higher Education, 22,* 37-50.

Kirgoz, Y. (2007). English language teaching in Turkey: Policy changes and their implementations. *RELC journal, 38*(2), 216-228.

Knight, J. K., & Wood, W. B. (2005). Teaching more by lecturing less. *Cell biology Education, 4*(4), 298-310.

Kocabatmaz, H. (2016). Ters yüz sınıf modeline ilişkin öğretmen adayı görüşleri. *Eğitim ve Öğretim Araştırmaları Dergisi, 5*(4), 14-24.

Kurt, G. (2017). Implementing the flipped classroom in teacher education: Evidence from Turkey. *Journal of Educational Technology & Society, 20*(1), 211-221.

Li, C., & Lalani, F. (2020, April 29). The COVID-19 pandemic has changed education forever. This is how. *WE FORUM.* https://www.weforum.org/agenda/2020/04/coronavirus-education-global covid19-online-digital-learning/

Mackness, J., Mak, S., & Williams, R. (2010). The ideals and reality of participating in a MOOC. In *Proceedings of the 7th international conference on networked learning 2010* (pp. 266-275). University of Lancaster.

Manning, C., Morrison, B. R., & McIlroy, T. (2014). MOOCs in language education and professional teacher development: Possibilities and potential. *Studies in Self-Access Learning Journal, 5*(3), 294-308.

Mangan, K. (2012). Massive excitement about online courses. The chronicle of higher education. Retrieved from http://www.chronicle.com/article/Massive- Excitement-About/134678/

Merrill, J. (2015). *The flipped classroom: An examination of veteran teachers' practices when flipping their classrooms for the first time.* (Doctoral dissertation, Texas A&M University). Retrieved from http://hdl.handle.net/1969.1/155313

Natividad, M. R. A., & Batang, B. L. (2018). Students' perceptual learning styles and attitudes toward communicative language teaching. *TESOL International Journal, 13*(4), 104-120.

O'Flaherty, J., & Phillips, C. (2015). The use of flipped classrooms in higher education: A scoping review. *The Internet and Higher Education, 25,* 85-95.

Özpinar, İ., Yenmez, A. A., & Gökçe, S. (2016). An application of flipped classroom method in the instructional technologies and material development course. *Journal of Education and training Studies, 4*(12), 213-226.

Qarabesh, M. A. M. (2020). Learning style preferences and attitudes to MOOCs: Common grounds for Saudi EFL learners' success. *The Asian EFL Journal, 27*(4), 132-152.

Saeidi, M., & Ahmadi, H. (2016). The effects of watching videos in pre-reading on EFL learners' reading comprehension and attitudes. *TESOL International Journal, 11*(2), 15-44.

Sallam, M. H., Martín-Monje, E., & Li, Y. (2020). Research trends in language MOOC studies: a systematic review of the published literature (2012-2018). *Computer Assisted Language Learning*, 1-28.

Simon, E. (2019, June 13). An overview of blended language learning. *The FLTMAG*. https://fltmag.com/an-overview-of-blended-language-learning/

Snowden, K. E. (2012). *Teacher perceptions of the flipped classroom: using video lectures online to replace traditional in-class lectures.* (Master's thesis). Retrieved from http://digital.library.unt.edu/ark:/67531/metadc149663/m2/1/high_res_d/thesis.pdf.

Song, M., Song, Y., & Wei, Z. (2015, November). A teaching model of flipped classroom based on mooc. In *2015 Eighth International Conference on Internet Computing for Science and Engineering (ICICSE)* (pp. 269-272). IEEE.

Strayer, J. F. (2012). How learning in an inverted classroom influences cooperation, innovation and task orientation. *Learning Environments Research, 15*(2), 171-193.

Talbert, R. (2012). Inverted classroom. *Colleagues, 9*(1), 1-7.

Turan, Z., & Akdag-Cimen, B. (2020). Flipped classroom in English language teaching: A systematic review. *Computer Assisted Language Learning, 33*(5-6), 590-606.

van Manen, M. (2016). *Researching lived experience: Human science for an action sensitive pedagogy*. Routledge.

Vaughan, M. (2014). Flipping the learning: An investigation into the use of the flipped classroom model in an introductory teaching course. *Education Research and Perspectives*, *41*(1), 25-41.

Wong, S. Y., Tee, W. J., & Lim, P. V. (2015). Design model for integrating learning activity management system (LAMS), massive open online courses (MOOC) and flipped classroom in Taylor's integrated moodle e-learning system (TIMeS). In *Taylor's 7th Teaching and Learning Conference 2014 Proceedings* (pp. 379-387). Springer, Singapore.

Xinying, Z. (2017). Researching into a MOOC embedded flipped classroom model for college English Reading and Writing course. In Q. Kan & S. Bax (Eds), *Beyond the language classroom: Researching MOOCs and other innovations* (pp. 15-27). Research-publishing.net.

Yaşar, M. Ö. (2020). Can MOOCs promote EFL learners' English communication skills? *Language and Technology, 2*(1), 1-15.

Yaşar, M. Ö., & Polat, M. (2021). A MOOC-based flipped classroom model: Reflecting on pre-service English language teachers' experience and perceptions. *Participatory Educational Research, 8* (4), 103-123. DOI: 10.17275/per.21.81.8.4

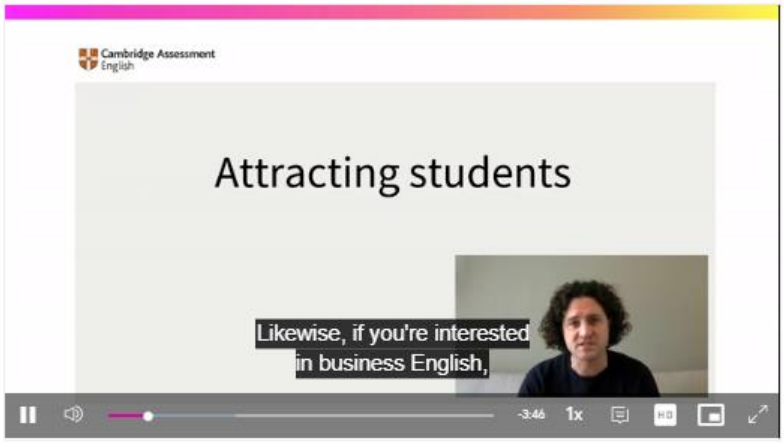
Zainuddin, Z., & Attaran, M. (2016). Malaysian students' perceptions of flipped classroom: A case study. *Innovations in Education and Teaching International, 53*(6), 660-670.

Ziegelmeier, L. B., & Topaz, C. M. (2015). Flipped calculus: A study of student performance and perceptions. *Primus, 25*(9-10), 847-860.

Appendix A. FutureLearn MOOC



View transcript Download video: standard or HD



View transcript Download video: standard or HD

Cambridge Assessment English

Teaching English Online

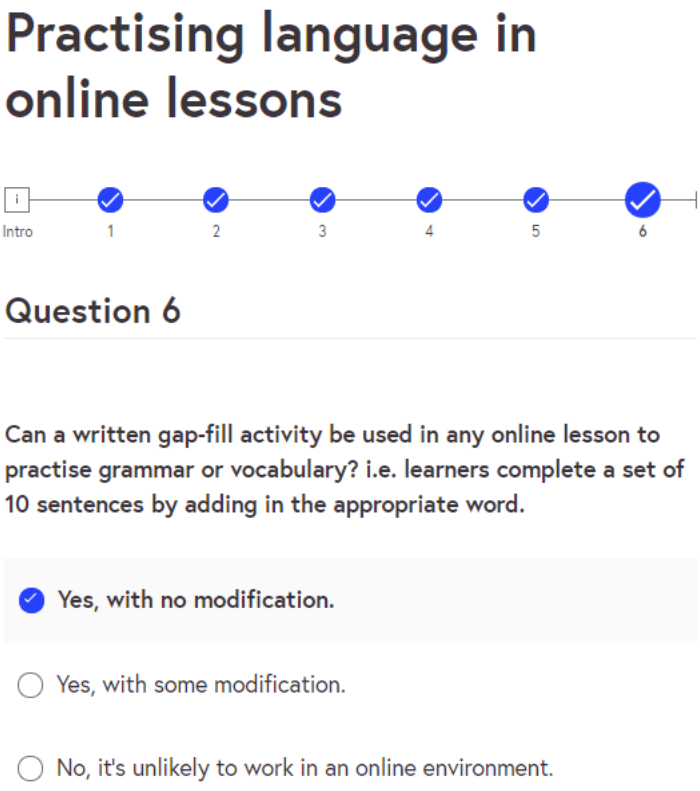
Step – Useful online tools for developing pronunciation

Task

Read the descriptions of the online tools and click on the links to find out more. Then answer these questions:

1. Which tools help learners to produce sounds?
2. Which tools help learners to produce words?
3. Which tool focuses on sentence stress and intonation?
4. Which tools provide a reference for learners of English?
5. Which tools could be used in an online lesson?
6. Which tools are more likely to be used for self-study?

Sound Foundations interactive phonemic chart:	A free, interactive version of the phonemic chart. Click on each sound to hear it or alternatively download a non-interactive version.



Appendix B. Topics of "Teaching English Online FutureLearn MOOC"

	Week 1		Week 2
1.1.	Introduction to the Course and Welcome To Week 1 - Video (01:43)	2.1.	Welcome to Week 2 - Video (00:50)
1.2.	Getting to Know Us - Article	2.2.	Teaching Skills Online vs Teaching Skills Face-To-Face - Article
1.3.	What Does It Mean to Teach English Online? - Video (02:56)	2.3.	How Do Online Reading Lessons Differ from Face-To-Face Reading Lessons? - Video (03:32)
1.4.	Why Become an Online Teacher? - Discussion	2.4.	Reading in a Lesson or for Homework - Article
1.5.	Working for a Company or Working for Yourself - Quiz	2.5.	Displaying and Sharing Reading Materials - Video (01:49)
		2.6.	Outline for an Online Reading Lesson - Assignment
1.6.	What Equipment Do You Need? - Video (02:36)	2.7.	Review Another Learner's Assignment - Assignment Review
1.7.	Getting to Know Your Platform - Video (03:43)		
1.8.	Exploiting Features of a Platform - Video (05:35)	2.8.	Reflect on Your Feedback Assignment - Reflection
1.9.	Researching Different Platforms - Article	2.9.	Useful Online Reading Resources - Article
1.10.	Other Digital Tools and Resources - Video (03:06)	2.10.	Teaching Listening Skills in Online Lessons - Video (02:45)
1.11.	Materials and Activities for Online Lessons - Video (02:44)	2.11.	A Listening Lesson - Video (05:50)
		2.12.	Listening Activities for Online Lessons - Article
1.12.	An Overview of Key Skills - Video (03:31)	2.13.	Useful Online Listening Resources - Video (00:45)
1.13.	Developing Rapport and Motivating Learners - Video (02:22)	2.14.	Ask Us Your Questions - Article
		2.15.	Video Review of Week 2 - Video (14:17)
1.14.	Tips for New Online Teachers of English - Video (04:06)	2.16.	What's On Next Week? - Video (00:48)
1.15.	Ask Us Your Questions - Article	2.17.	Test What You Learned - Test
1.16.	Video Review of Week 1 - Video (13:05)		
1.17.	What's on Next Week? - Video (00:59)		
1.18.	Test What You've Learned - Test		

	Week 3		Week 4
3.1.	Welcome to Week 3 Video (00:57)	4.1.	Welcome to Week 4 - Video (00:58)
3.2.	Key Things to Remember When Teaching a Speaking Lesson - Video (03:28)	4.2.	Online Language Lessons - Video (05:32)
		4.3.	Setting Context - Video (02:54)
3.3.	A One-to-One Online Speaking Lesson - Video (05:42)	4.4.	Useful Online Tools for Setting Context - Article
3.4.	A Group Online Speaking Lesson - Video (08:22)	4.5.	Flipping Your Online Classroom - Video (01:19)
3.5.	Developing Group Cohesion - Article	4.6.	Practicing Language in Online Lessons - Quiz
3.6.	Dealing With Error Correction in Online Speaking Lessons - Video (03:26)	4.7.	Useful Online Tools for Grammar and Vocabulary Lessons - Article
3.7.	Real-Time Error Correction – You Try It! - Video (01:48)	4.8.	Attracting Students to Your Online Teaching Business - Video (04:11)
3.8.	Developing Speaking Skills Outside a Lesson - Article		
3.9.	Diagnosing Pronunciation Problems - Video (01:06)	4.9.	Running Your Online Teaching Business - Video (04:52)
3.10.	Helping Students to Improve Their Pronunciation - Video (02:35)	4.10.	Testing New Students - Article
		4.11.	Privacy, Security and Copyright - Article
3.11.	Useful Online Tools for Developing Pronunciation - Article	4.12.	An Overview of Professional Development - Video (03:30)
		4.13.	Self-Reflection Activities for Online Teachers - Article
3.12.	Teaching Writing Skills in Online Lessons - Video (01:55)	4.14.	Joining an Online Community of Teachers - Video (02:16)
3.13.	An Online Writing Lesson - Video (06:20)	4.15.	Ask Us Your Questions - Article
3.14.	Giving Feedback on Written Work in a Digital Environment - Video (04:44)	4.16.	End-of-Course Video and Further Reading - Video (13:10)
		4.17.	Good Luck! - Article
3.15.	Useful Digital Tools for Developing Writing Skills - Article	4.18.	Test What You Learned - Test
3.16.	Ask Us Your Questions - Article		
3.17.	Video Review of Week 3 - Video (12:46)		
3.18.	What's on Next Week? - Video (00:38)		
3.19.	Test What You Learned in Week 3 - Test		

Appendix C. Perception of Flipped Learning Experience Questionnaire

Perception of flipped learning experience

This survey is to understand your overall perception of the flipped learning in the cou
no right or wrong answer. Please circle the answer which best reflects your overall thc
each statement. Your answers are anonymous and confidential. Thank you in advance fc

Strongly disagree	Disagree	Neutral	Agree	
1	2	3	4	

1	A flipped classroom is a better way of learning.	1
2	I enjoyed the flipped classroom teaching approach more.	1
3	I think the flipped classroom is a more effective and efficient way to learn.	1
4	I feel more motivated in a flipped classroom.	1
5	I participated and engaged myself more in learning in the flipped classroom.	1
6	I became a more active learner in the flipped classroom.	1
7	I thought the time and effort I spent in the flipped classroom was worthwhile.	1
8	I learned more and better in the flipped classroom.	1
9	I prefer the flipped classroom to a lecture-based classroom.	1
10	I think the flipped classroom learning guided me toward better understanding of the course topics.	1
11	I experienced pleasure in the flipped classroom.	1
12	I devoted myself more to the instructional/class activities in the flipped classroom.	1
13	I spent more time and effort than usual on my flipped classroom learning activities.	1
14	Generally, I am happy and satisfied with this flipped learning experience.	1

Appendix D. First Open-Response Questionnaire

1. How did you find the flipped learning compared with your previous experience of attending conventional classes?
2. Do you think that flipped classroom approach is an effective learning method?
3. How can conventional vs. flipped learning influence ELT Pre-Service teachers' academic achievement?

Appendix E. Second Open-Response Questionnaire

1. How did the Flipped Classroom model affect your motivation, effectiveness, and engagement? Please explain each item separately.
2. Why do you think you had a higher/lower average grade than the traditional group? Do you think that Flipped Classroom model affected your grade?
3. Do you believe if you had a traditional classroom instruction, I mean if you didn't have a Flipped Classroom model, would you have a lower grade? Why?
4. What should be done to have a more successful Flipped Classroom model? What suggestions do you have?