

Applying the Flipped Classroom Model to Foster Motivation and Willingness to Communicate

¹Hamid Marashi*

²Donya Eghtedar

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Abstract

This study sought to investigate the effect of flipped classroom instruction on EFL learners' motivation and willingness to communicate (WTC). To fulfill the above purpose, 68 intermediate learners were selected among 90 through their performance on a piloted sample English proficiency test. The learners were thence assigned into two control and experimental groups each with the same number of students (i.e., 34). The WTC test both inside and outside the classroom and the Attitude/Motivation Test Battery (AMTB) were given to the two groups as pretest. Both groups were taught by the same teacher for 12 sessions of 90 minutes using the same material. In the experimental group, the students underwent the treatment which was flipped classroom, whereas the learners in the control group received the usual instruction based on the syllabus of the language school. The same WTC and AMTB questionnaires were administered again as the posttest at the end of the instruction to the two groups. Two ANCOVAs were run concluding that the flipped classroom instruction had a significantly positive impact on EFL learners' motivation and WTC. This study has implications for the ELT community including teachers, learners, syllabus designers, and educational managers (discussed in detail in the conclusion section) thus encouraging them to apply flipped classroom instruction for better results.

Keywords: ELT, Flipped classroom, Motivation, Willingness to communicate

1. Introduction

Communication is the core component of modern language pedagogy thereby giving momentum to the cause of training language learners who are able to communicate successfully in the target language. Studies show that lack of willingness to use the second/foreign language might cause ineffective interaction and language production and, as a result, quite a number of L2 teachers would prefer learners to use L1 in class (Yashima, MacIntyre, & Ikeda, 2018). To this end, the concept of willingness to communicate (WTC) which is the intention and tendency to initiate communication becomes important in learning a second language (MacIntyre, Dörnyei, Clément, & Noels, 1998).

The significance of WTC emerges from the examination of interaction-driven L2 advancement (Long, 1996; Mackey & Gass, 2016; Swain, 2005). Scholars here have contended that language learning is encouraged through important communications as more communication leads to more language advancement and learning (Cao, 2011; Clément, Baker, & MacIntyre, 2003). With an increasing emphasis on authentic communication, WTC with respect to students is regarded to have different multiple advantages, for example, an expansion of presentation and practice in authentic L2 communication and advancement of learner autonomy (Kang, 2005; MacIntyre, Baker, Clément, & Conrod, 2001).

WTC has been and continues to be a major topic of research both globally (e.g., Liu & Jackson, 2008; MacIntyre, Baker, Clément, & Donovan, 2002; Peng, 2011; Wen & Clément, 2003; Yashima, Zenuk-Nishide, & Shimizu, 2004) and in the context of Iran (e.g., Afghari & Sadeghi,

¹ Associate Professor of Applied Linguistics (Corresponding Author), ahmuya@yahoo.com; Department of English, Central Tehran Branch, Islamic Azad University, Tehran, Iran.

² MA in TEFL, donya_35755@yahoo.com; Department of English, Central Tehran Branch, Islamic Azad University, Tehran, Iran.

2012; Azmand, 2014; Marashi & Sahafnia, 2020; Marzban, & Firoozjahantigh, 2017; Rastegar & Karami, 2015; Zarrinabadi & Abdi, 2011). A number of other constructs have also been identified as directly or indirectly predictive of WTC including motivation (Hashimoto, 2002; MacIntyre, 2007; MacIntyre & Charos, 1996).

The pioneers of studying the concept of motivation to learn L2 were perhaps Gardner and Lambert (1972) who identified learners' tendency, attitude, and the amount of effort to learn L2 as the major causes of reflecting motivation. Dörnyei (2005) acknowledged that motivation plays an important role in academic learning and mastering an L2. Moreover, motivation, as aptly pointed out by Yuanfang (2009), is of "particular interest to second/foreign language teachers, administrators and researchers, because it can be presumably enhanced in one specific learning context but weakened in another learning context" (p. 87).

More specifically, this concept consists of three components including: the desire to learn the language, attitude towards learning the language, and motivation density (Browngate, 1987, as cited in Marashi & Khatami, 2017). Dörnyei (2003) described this key component of learning as an inner source, desire, emotion, need, impulse, or purpose that moves a person to a particular action. Despite having been conceptualized around half a century ago, motivation still remains as a major theme of study around the world (e.g., Farahi & Mohseni, 2014; Golaghaei & Arefinezhad, 2015; Manolopoulou-Sergi, 2004; Marashi & Tahan-Shizari, 2015; Noels, 2001; Peng, 2007; Rezaee, Kaivanpanah, & Najibi, 2015; Wang, 2008).

To enhance learners' motivation (and other constructs, for that matter), researchers are constantly looking into different teaching methods, with one such rather recent and innovative procedure being flipped learning. Developed by Sams and Bergmann (2008) who were two chemistry teachers from Colorado (the United States), the flipped classroom is founded upon the technological factor which is a source of motivation inside and outside the classroom (Zengin, 2017). They designed the flipped classroom "as response to the large amount of student absences that resulted from the far distances their students had to travel for school-related sports and activities" (Sams & Bergmann, 2013, p. 17).

There is a broad range of definitions and interpretations with regard to what constitutes a flipped classroom. Such various definitions include a traditional flip, partial flip, Khan Academy flip, and mastery-based flip (Ash, 2012; Bergmann & Sams, 2014; Hamdan, McKnight, McKnight, & Arfstrom, 2013; Springen, 2013). Sams and Bergmann (2013) further argue that, "There is no single way to flip your classroom...flipping the classroom is more on the learner and the learning. Every teacher who has chosen to flip does so differently" (p. 17).

2. Review of the Related Literature

2.1. *Willingness to Communicate*

It has been conclusively shown that the concept of WTC refers to language learners who have the tendency to communicate in the second language and try to find opportunities to communicate and they will eventually communicate in the L2 (Zarrinabadi, 2014). Given the importance of WTC, MacIntyre (2007) proposed that a main objective for second language education should be creating this willingness and the ultimate purpose of the learning process in language education should be stimulating students in this regard. Accordingly, MacIntyre et al. (2001) applied WTC to L2 and built up a heuristic model of factors impacting WTC; there are six layers, to be specific, i.e., correspondence conduct, conduct goal, arranged forerunners, inspirational affinities, full of feeling psychological setting, and social and individual setting. The initial three layers speak to the situational effects on WTC (state level), while the last three layers speak to the suffering impacts on WTC (attribute level).

Fundamentally, WTC plays an unmistakably more vital job as students will undoubtedly have fewer chances to utilize the unknown dialect outside the classroom (Zhou, 2015). However, foreign language learners might sometimes lose motivation to make profitable use of these chances. As for why this poses a problem for foreign language development, Allwright (1984) notes memorably

that the prominent reason for “getting them (L2 learners) to communicate is that communication practice in the classroom is pedagogically useful because it represents a necessary and productive stage in the transfer of classroom learning to the outside world” (pp. 156-157).

What is more, educators may not move toward learners’ WTC properly ignoring its multifaceted structure, which is the opposite side of the issue concerning L2 WTC (Lee & Drajiati, 2020). With this respect, examining WTC in EFL settings is by all accounts a relevant worry for ELT professionals and is of principal significance for various reasons (Pawlak & Mystkowska-Wiertelak, 2015). To start with, a significant level of WTC is probably going to boost inspiration among learners to search out chances to utilize English in the homeroom (Batstone & Philp, 2013). Second, it is significant for language instructors to comprehend the association and reliance among individual, natural, and semantic components hidden by WTC since it is an immediate indicator of recurrence of correspondence in the language classroom (Cao, 2011). Besides, perceiving WTC in language learning as a significant student variable will help ELT professionals take care of learners’ WTC conduct more appropriately (Freiermuth & Jarrel, 2006).

2.2. Motivation

In an early work, Gardner (1985) established a socio-educational model of motivation in second language learning where the role of different individual variations in the learning of an L2 is examined. Accordingly, Gardner proposed that motivation comprises two main categories: the cultural context and the educational context which are named integrativeness and attitudes toward the learning situation, respectively. He further defined integrations as “genuine interest in learning the second language in order to come closer psychologically to the other language community” (p. 7). Building on this idea, Gardner went on to consider the degree to which individuals respect and need to relate to specific people as well as unfamiliar individuals and culture, and proposed two sorts of inspiration, i.e., integrative and instrumental, for students who make endeavors at learning an unknown dialect.

Learners with an integrative orientation may have a desire to increase their affiliation with the target community (Liuoliene & Metiuniene, 2006). Likewise, Noels, Pelletier, Clément, and Vallerand (2000) found that learners with high integrative motivation tend to work harder and learn faster than those who have lower integrative motivation.

On the other hand, instrumental motivation contributes to language learning because of a clear or vague perceived utility that this learning might have for the learner (Gardner, 1983, as cited in Csizer & Dörnyei, 2005). As indicated by Hadfield and Dörnyei (2013), instrumental motivation is a controlled inspiration which diminishes self-governance and causes outside apparent locus of causality. At times labeled intrinsic and extrinsic motivation, many studies have been conducted to compare the advantageousness of the two with results mostly favoring contextuality as the determining factor (Jovanovska, 2020; Ryan & Deci, 2006; Schindler, 2010).

2.3. Flipped Classroom

Flipped classroom is an approach that transfers learning responsibility from the teacher to the student (Bergmann, Overmyer, & Wilie 2011). The idea of a flipped classroom is a mindset, a methodology, not a mold that classrooms can be placed into (Bergmann & Waddell, 2012). In its simplest definition, the flipped classroom approach is expressed as what is done at school is done at home and homework done at home is completed in class (Bergmann & Sams, 2014). Accordingly, the students watch the theoretical parts of a lesson via multiple equipment such as online videos, presentations, and learning management systems, take notes, and prepare questions about the parts that they do not understand (Kim, Kim, Khera, & Getman, 2014). The flipped classroom approach has four founding elements:

- *F* (“F”lexible Environment): It indicates provision of time and place flexibility of learning.

- *L* (“L”earning Culture): In the traditional teacher-centered approach, the source of knowledge is the teacher. In the flipped classroom approach, there is transition from the teacher-centered approach to the student-centered approach.
- *I* (“I”ntentional Content): Flipped classroom educators both think about how education is used to provide fluency and how they can develop cognitive understanding of students.
- *P* (“P”rofessional Educator): The responsibility of flipped classroom educators is more than the ones using the traditional approach. Flipped classroom educators continuously observe students during the course, evaluate their studies and provide feedback (Sams, Bergmann, Daniels, Bennett, Marshall, & Arfstrom, 2014).

One teacher in a study conducted by Hamdan et al. (2013) explained that flipped classroom “is not a defined model but is, instead, the result of teachers using different tools to meet individual students’ needs” (p. 15). Ash (2012) makes a similar point when she explains that, “Some teachers assign a video for homework, while others allow students to watch those video in a class. Still, others make videos for the lesson, but do not require students to watch them at all” (p. 1). Others, like Bull, Ferster, and Kjellstrom (2012) disagree with the legitimacy of the multitude of ways and approaches and argue that although teachers implement flipped classroom in a variety of ways, some ways are more effective than others depending on the classroom context.

During the course, learners may achieve supporting activities such as finding answers together to the questions they prepared before the lesson, group working, problem solving, discussion, and making an inference (Abeysekera & Dawson, 2015). To this end, a large appeal of flipping a classroom is the extra time teachers have with their students during class hours (Goodwin & Miller, 2013; Yoshida, 2016). Chuang, Weng, and Chen (2018) consider the time saved as a way of *flipping forward* one’s learning. This availability of extra time translates into teachers being more able to provide individual and personalized support to students (Lo & Hew, 2017).

2.4. Some Empirical Studies Regarding Flipped Learning

Albeit a rather novel approach, the effectiveness of flipped classroom has been documented by a significant number of studies worldwide. To begin with, the studies conducted in different countries by Basal (2015), Boyraz and Ocak (2017), Chao, Chen, and Chuang (2015) Chen Hsieh, Wu, and Marek (2016), Enfield (2013), Huang (2015), Milman (2012), Santikarn and Wichadee (2018), and Zappe, Leicht, Messner, Litzinger, and Lee (2009) are only some examples of the positive effect of flipped classroom on general English language learning. The context of Iran, in turn, is no exception to this trend as researchers such as Abaeian and Samadi (2016) and Karimi and Hamzavi (2017) have concluded likewise.

Furthermore, Sirakaya and Ozdemir (2018) have documented the positive effect of flipped classroom on academic achievement, self-directed learning readiness, motivation, and retention while Hasanudin and Fitrianiingsih (2018) and Al-Zahrani (2015) concluded that flipped instruction helped improve learners’ verbal intelligence and creativity, respectively. In addition, Bryan, Glynn, and Kittleson (2011) and Baeten, Kyndt, Struyven, and Dochy (2013), stated that there might be a connection between motivation and students’ preference for the flipped classroom.

3. Purpose of the Study

Despite the rather warm reception that flipped teaching has received globally (as noted above), the method does not stand free of critique. Indeed, there are those who argue that the flipped classroom is restricted in its narrow instructional model cautioning that this model can promote a *one-size-fits-all* approach to teaching which can have negative effects on students whose learning styles differ from those privileged in this model (Fulton, 2012; Springen, 2013). They are further concerned that the flipped model limits student discovery and inquiry-based learning. Furthermore, a flipped classroom is all the more demanding as instructors need to distinguish the individual adapting needs of learners, ensuring they all utilize the class time for the learning procedure (Al-Jaser, 2017).

In addition, others such as Staker and Horn (2012) raise the issue of digital equity where they concede that the flipped model may only be feasible in upper-income suburban schools and that students who cannot benefit from online instruction at home require classroom instruction to avoid falling behind. Bergmann and Sams (2012), however, do not believe that the lack of equitable access to technology is an insurmountable obstacle and argue that it can be overcome with creativity and resourcefulness. One must of course note that these concerns date back to the early 2010s when smartphone apps such as Telegram and WhatsApp which have become very much ubiquitous nowadays were not available then. With this technology at hand of course, the digital divide is perhaps gradually waning in many parts of the world (UNESCO, 2020).

Accordingly, it seems quite clear that there is evidently room for further research on flipped learning, especially now that the use of technology in education has grown exponentially compared to even a decade ago. At the same time, with the above studies emphasizing the significance of WTC and motivation in language learning and also the rise of flipped learning within the ELT community both internationally and inside Iran, the researchers felt that there was a gap in the existing literature regarding the possible effect of flipped classroom instruction on EFL learners' motivation and WTC. The significance of the current investigation could thus be a commitment to explore into somewhat uncharted territories of instructing and learning in terms of the suitability of applying flipped learning to boost motivation and WTC in language classrooms.

Based on the purpose of the study described above, the following two null hypotheses were formulated:

H₀₁: Flipped classroom does not have any significant effect on EFL learners' motivation.

H₀₂: Flipped classroom does not have any significant effect on EFL learners' willingness to communicate.

4. Methodology

4.1. Participants

The participants of this study comprised 34 male and 34 female Farsi-speaking intermediate EFL learners who were studying at a private language school in Tehran with their ages ranging from 14 to 18. These 68 learners were selected from among 90 intermediate learners who demonstrated homogeneity in terms of their language proficiency following their performance on one such language test already piloted among another sample of 30 intermediate learners. The scores of the participants, whose selection was through nonrandom convenience sampling, fell within one standard deviation above and below the mean; they were subsequently assigned randomly into two groups (one experimental group of 34 and one control group of 34 learners). Ultimately, one learner was found to be an outlier at the posttest level and thus eliminated from the study; hence, the final number of the participants was 67.

Moreover, the participants' performance on the writing and speaking sections of the proficiency test was scored by the two researchers. The inter-rater reliability of the two had been established a priori ($r = 0.978$, $p = 0.0001 < 0.01$ for the writing and $r = 0.864$, $p = 0.0001 < 0.01$ for the speaking).

4.2. Instrumentations and Materials

4.2.1. Preliminary English Test (PET)

A sample PET (the name of which has recently changed to B1 Preliminary) developed by Cambridge ESOL was administered for the participant selection process (already described above). This test comprises all the four language skills of reading, writing, listening, and speaking in the three papers of reading and writing (paper 1), listening (paper 2), and speaking (paper 3). The PET contains 75 items. The reliability of the PET stood at 0.92 and 0.91 during the piloting and main administration, respectively. Furthermore, the PET general mark scheme which is the rubric for a summative score was applied for rating the writing and speaking papers.

4.2.2. Willingness to Communicate Scale

In this study, the scale developed by MacIntyre et al. (2001) was used to gather data about learners' trait-like WTC both as a pre- and posttest. This scale is designed as a direct measure of the respondents' predisposition toward approaching or avoiding the initiation of communication inside the class. The WTC scale includes 27 items which can yield a total score of 27 to 135 in five orientations (job-related, travel, friendship with native English speakers, school achievement, and personal knowledge). The allocated time for answering the 27 items of the WTC is 20 minutes. The items are represented in a five-point Likert scale ranging from 1 for "almost never willing" to 5 for "almost always willing".

MacIntyre et al. (2001) report this scale to be a valid and reliable one. Alpha levels indicate reliability estimates for speaking through eight items and equal to $\alpha = 0.81$, comprehension by means of five items and equal to $\alpha = 0.83$, reading through six items and equal to $\alpha = 0.83$, and writing through eight items and equal to $\alpha = 0.88$. Furthermore, in this specific study, the reliability of the scale stood at 0.89.

4.2.3. Attitude/Motivation Test Battery (AMTB)

The AMTB developed by Gardner (1985) was used in this study and administered as a pre- and posttest to both experimental and control groups to check the possible changes on their level of motivation. This questionnaire includes 104 items. Each item is followed by seven 1-7 alternatives. The AMTB was developed to measure various components of the socio-educational model of second language acquisition. The section pertinent to language acquisition includes two sets of 25 Likert-type items and requires 25 minutes for administration. The test is recognized universally as being valid with a reliability of around 0.87 (Gardner, 1985; Gardner, Lalonde, Moorcroft, & Evers, 1987; Gardner & Lysynchud, 1990; Gardner & MacIntyre, 1993; Gardner & Tremblay, 1998). The AMTB reliability in this study was 0.89.

4.2.4. Course Book and Applications

The course book used was *Touchstone* (McCarthy, McCarthen, & Sandiford, 2006). Touchstone presents natural language in authentic contexts, and explicitly develops conversation strategies so learners speak with fluency and confidence. The key features of the series include natural language, conversation strategies, inductive learning, personalization, and blended learning (as described in the following webpage: <https://www.cambridge.org/be/cambridgeenglish/catalog/adultcourses/touchstone>). During the treatment, two units of the main course book were covered in both groups.

Edpuzzle is a video platform that allows teachers to customize videos for their classes. The platform has several features that promise to increase student engagement in video viewing. Teachers can pull existing videos or add their own, create questions for students to answer as they watch, and track how much of a video each student viewed. Edpuzzle also allows teachers to edit videos by trimming video length or recording their own audio over videos. Edpuzzle could allow teachers to more easily shape their lessons around video content. The ability to pull videos from various sources, including YouTube, gives them a way to show video content within a contained platform without ads or other distractions. Teachers are able to set up classes to easily sort videos for their students. As quizzes can be embedded within videos, teachers are able to tie video content directly to assessment. Another advantage of Edpuzzle is that students can watch videos on their own devices (www.caitlindavey.com).

Screen-O-Matic App is a Java-based application media that is used to make screencasts in Windows, Mac, and Linux operating systems. Screen-O-Matic provides free software that enables the user to record all views and motions of their monitor, even the motion of the cursor and click instructions, add explanations or comments, and is easy to use. In addition, Screen-O-Matic is a software that could be used by the users of Windows 15 Xp, Windows Vista, and Windows 7 operating systems. Screen-O-Matic can also be used to record webcam activities, so any tutorial may be recorded and shared on YouTube or a blog. Screen-O-Matic has great

potential for the field of education because it is easy to use and provides simple ways of adding text. The videos created with Screencast-O-Matic can be viewed at anytime and anywhere by anyone who has a browser and internet connection. Students can play video tutorials many times, so they can be used whether online, offline, or in hybrid study. The videos can serve as their reference materials. Generally, screencasts create a more interesting atmosphere in which to study online. Screencast-O-Matic is a software that can record all e-learning media for a tutorial video in which the teacher can teach the students as if they were in the classroom. Then, it can be shared through many models (Priowirjanto & Prapantja, 2013, as cited in Hasanudin & Fitriainingsih, 2018).

4.4. Procedure

Following the piloting and the administration of the PET through which the 68 participants were assigned into the two groups (one experimental with 34 learners and one control with 34 learners), the participants sat for the WTC and AMTB at the outset in order to measure their levels of both constructs as a base index. All participants in both experimental and control groups were exposed to the same amount of instruction by the same teacher (one of the researchers). The treatment lasted 12 sessions of 90 minutes.

4.4.1. Experimental Group

The basic procedure of a flipped classroom is represented in Figure 1 below:

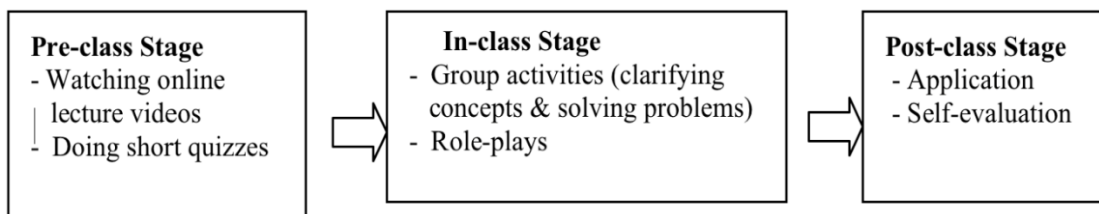


Figure 1: Procedure of A Flipped Classroom (Estes, Ingram, & Liu, 2014)

For a clearer understanding of the above diagram, a complete lesson plan for a typical session is provided below with a detailed narrative of how this lesson plan is implemented. The researchers designed this lesson plan based upon the Santikarn and Wichadee (2018) model.

Table 1: Flipped Classroom Lesson Plan Template

Lesson Title	Interests
Course	English, short reading section about leisure time and college news
Date	Learning Objectives
The students will be able to talk about their interests with <i>can, like, hate, prefer, be good at</i> , etc.	
Student Learning Resources at Home	
Ask the students to view the video/presentation found at: www.edpuzzle.com	
Student Learning Activities at Home	
Ask the students to submit their answers to the general questions in the “think” section found at: www.edpuzzle.com	
The students should answer these questions based on the video they have watched before.	
1.	Is he interested in learning new things?
2.	What are his hobbies?
3.	Is he good at sports?
4.	Can you play? What else does he enjoy doing in his free time?
Classroom Activities	
0-10 min: The students break into five groups to discuss their answers to one of the five questions related to the video viewed at home. They will present the information group by group to the class.	
10-30 min: Ask the students for predictions and explanations of the concepts learned at home (e.g. what that they want to do in their leisure time with a correct structure: <i>can, prefer, good at</i> , etc.).	
30-50 min: Give the students worksheet answer questions related to the short reading. Allow them to work in unassigned groups/with neighbors. Ask them to volunteer to write worksheet answers on the board.	

50-60 min: Hand out post-quiz to be completed before leaving class. Ask the students to write sentences about their interests and a summary of the abovementioned reading.

Pre-Class Stage: A self-study on Edpuzzle. Pre-class sessions aim to help students explore knowledge through educational technology. Constructing knowledge or learning the new content was done at home before the in-class session. The students were asked to watch instructional video clips and answer questions or do short quizzes about the content on Edpuzzle which was employed as an online platform for learning. These clips taught grammatical structures, vocabulary, and language usage. Details on speaking and writing tasks that would be performed in class were recorded and demonstrated here. Moreover, several useful links from outside were selected and added as supplementary lessons on Edpuzzle too (Santikarn & Wichadee, 2018).

As noted earlier, the researchers prepared video lectures by using the Screencast-O-Matic software mentioned above. All of the video lectures in this study lasted approximately 18-20 minutes. Each video lecture involved the content state in the curriculum which was presented to the students with multiple questions and open-ended questions embedded in the videos via Edpuzzle.

The video lectures were only allowed to be accessed by the experimental group. The videos were recorded via Screencast-O-Matic and uploaded to Edpuzzle. Edpuzzle provides a report for the instructor about whether students have watched videos and answered the questions and also the number of times the students have watched the videos. After these videos were made, the teacher would send them to the students; the next step was the students watching these teacher-made videos at home. Subsequently, they talked about those videos in class.

In-Class Stage: Group activities and role-plays. Class time was spent more on group activities which increased peer interaction, focusing more intensely on higher cognitive and group-based learning including small group discussion, problem solving (worksheet), interview, role-play, and peer review on writing tasks. However, individual activities were occasionally done through PolleEverywhere.com (www.pollev.com) and Kahoot! which is a popular eLearning tool that can easily be used to add vitality, student engagement, and metacognitive supports to higher education classrooms with limited instructor or student training required. The free online learning platform has gained wide acceptance globally with more than 30 million users worldwide, and it is based on current user-centered and behavioral design methodologies. Student responses and experiences using Kahoot! in graduate and undergraduate classrooms indicate that students welcome the use of this game (Plump & LaRosa, 2017).

Each session, the students discussed and shared their ideas about the topic. The role of the teacher was somehow as a facilitator and conductor of materials. Not only the teacher but also the learners would give feedback to other students. All the videos created for a flipped classroom do not have to begin and end with the teacher; rather, the students can make use of videos to better demonstrate proficiency. Furthermore, the students can be assigned to record practice role-play activities to show competency or ask each one to film themselves presenting a new subject or skill as a means *to teach the teacher*.

Some strategies that can be used in in-class activities include active learning, peer instruction, collaborative learning, problem-based learning, and discussions or debate. Thus, an active learning experience would occur in the classroom. The advantages of this stage are to promote the development of critical thinking and problem-solving skills, as well as to improve interpersonal skills (Santikarn & Wichadee, 2018).

Post-Class Stage: The initial and final stages (pre- and post-class) were made by the students by distance, at home, using a digital platform and appropriate educational material. The students can view the digital content as many times as they want; they can focus on any points they wish at their own space and their own pace. Thus, the interaction of the students with the teaching material is scaled in a way that does not occur when lectures are given in class. After the flipped classroom activities, students can return to the platform and check the level of their knowledge. Depending on

their performance and after identifying their possible weaknesses, they can refer again to digital material, watch the video again from a different viewpoint, or expand their knowledge further if they wish.

The intermediate stage takes place in the classroom using active and participatory teaching techniques. In the flipped classroom, students are asked to combine the information they acquired outside the classroom and interact with their peers in a way to show that they have become active users of information, based on their personal experiences, opportunities, critical thinking, and interaction through group activities (Bergmann et al., 2011). The post-class stage aimed to provide students with opportunities to apply what they had learned including exercises, games, and quizzes in an online workbook (www.cambridgelms.org/main).

4.4.2. Control Group

The participants in the control group did not receive the flipped classroom treatment. The teacher encouraged the learners to work individually and refer to the teacher when they encountered any problems. The first move was having warm-up in class which sought to prepare the learners for what they were going to learn. The warm-up was usually done by asking some questions.

Next, the presentation was done which was the actual teaching of the new lesson. The basic lesson plan included having students learn new vocabularies, sentence structure, and grammar rules. In this method, the teacher's primary job was to give definitions of the new words, explain word usage and collocation, analyze the grammatical rules, and also present sentence structure to learners. Moreover, practicing what was taught in pairs or individually was the next phase. This helped the learners to use the presented points in different settings. Finally, there was a production phase which was regarded as a sort of feedback. In this phase, the students were typically supposed to be able to produce what they had learned. At the end of instruction in both groups, the WTC and AMTB questionnaires were administered again to the 68 participants only this time as their posttest.

5. Results

5.1. Participant Selection

As noted earlier, the researchers used a sample piloted PET to select the participants required in this study. The mean and standard deviation were 85.53 and 8.51, respectively.

5.1.1. Pretests

Once the two control and experimental groups were in place, the two pretests (WTC and AMTB) were administered to them. Table 2 shows the descriptive statistics for both pretests.

Table 2: Descriptive statistics of the scores obtained by the two groups on both pretests

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Std. Error
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
WTC Pre Cont	34	57	108	87.24	12.980	-.712	.403
WTC Pre Exp	34	60	106	86.85	10.216	-.435	.403
AMTB Pre Cont	34	361	508	425.18	33.372	.622	.403
AMTB Pre Exp	34	339	469	426.32	35.176	-.725	.403
Valid N (listwise)	34						

The mean and the standard deviation of the control group were 87.24 and 12.98, respectively, while those of the experimental group stood at 86.85 and 10.22, respectively on the WTC scale. Furthermore, the skewness ratios of both groups fell within the acceptable range ($-0.712 / 0.403 = -1.766$ and $-0.435 / 0.403 = -1.079$) thus running a parametric test was legitimized so far. As for the AMTB, the mean and the standard deviation of the control group were 425.18 and 33.37, respectively, while those of the experimental group stood at 426.32 and 35.18, respectively.

Furthermore, the skewness ratios of both groups fell within the acceptable range ($0.622 / 0.403 = 1.543$ and $-0.725 / 0.403 = -0.799$) thus running a parametric test was legitimized so far.

5.1.2. Posttests

Following the termination of the treatment, the same two questionnaires above were administered to both groups as the posttest. Table 3 shows the descriptive statistics for both instruments.

Table 3: Descriptive Statistics of The Scores Obtained by The Two Groups on Both Posttests

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
WTC Post Cont	34	56	101	83.06	11.138	-.737	.403
WTC Post Exp	34	90	135	120.62	8.759	-0.173	.403
AMTB Post Cont	34	392	520	451.38	27.895	.265	.409
AMTB Post Exp	34	427	483	455.76	12.412	.003	.409
Valid N (listwise)	34						

The mean and the standard deviation of the control group were 83.06 and 11.14, respectively on the WTC scale, while those of the experimental group on this scale stood at 120.62 and 8.76, respectively. The skewness ratio of the control group fell within the acceptable range ($-0.737 / 0.403 = -1.828$) but that of the experimental group fell outside that ratio ($-1.173 / 0.403 = -2.910$). As for the AMTB, the mean and the standard deviation of the control group were 451.38 and 27.89, respectively, while those of the experimental group on this scale stood at 455.76 and 12.41, respectively. The skewness ratio of the scores of both groups fell within the acceptable range ($0.265 / 0.409 = 0.648$; $0.003 / 0.409 = 0.007$).

To remove the problem of skewness so that the parametric ANCOVA test could be employed, the researchers removed the one outlier in the experimental group. Table 4 presents the descriptive statistics of the experimental group on the WTC posttest with the outlier having been removed.

Table 4: Descriptive Statistics of the Scores Obtained by The Experimental Group on The WTC Posttest (Without the Outlier)

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
WTC Post Exp	33	107	135	121.55	6.996	-.016	.409
Valid N (listwise)	33						

As can be seen from Table 4, the skewness ratio stood at -0.039 which demonstrated normalcy. With this removal, the number of the participants in the experimental group was lowered to 33 from the original 34 and the total number of the participants became 67 at this stage.

5.3. Testing the Null Hypotheses

In order to test the two null hypotheses, that is to check any significant difference in the degree of the two groups' WTC and motivation as a result of the treatment, two sets of ANCOVA were run on both groups' scores on the WTC and AMTB pre- and posttests. The test and its preconditions are discussed in the following two sections. Since all four sets of scores enjoyed normalcy as demonstrated earlier, this prerequisite need not be discussed.

5.3.1. Testing the First Null Hypothesis

To begin with, the variances were investigated and seen that they were not significantly different ($F_{(1,65)} = 10.326, p = 0.25 > 0.05$). As one covariate is being investigated (WTC pretest), the assumption of the correlation among covariates did not apply in this case.

Table 5: Tests of Between-Subjects Effects (1)

Source	Type III Sum of Squares	df	Mean Square	<i>F</i>	Sig.
Corrected Model	28868.830 ^a	3	9622.943	379.816	.000
Intercept	5210.185	1	5210.185	205.645	.000
Group2	1251.040	1	1251.040	49.378	.551
WTCPretest2	3975.122	1	3975.122	156.898	.159
Group2 * WTCPretest2	1854.064	1	1854.064	73.180	
Error	1596.155	63	25.336		
Total	727737.000	67			
Corrected Total	30464.985	66			.000

a. R Squared = 0.948 (Adjusted R Squared = 0.945)

Regarding homogeneity of regression slopes, Table 5 shows that the interaction (i.e. Group*WTC Pretest) is 0.16 which is larger than 0.05 thus indicating that the assumption of homogeneity of regression slopes has not been violated. With the above assumptions in place, running an ANCOVA was legitimized.

Table 6: Tests of Between-Subjects Effects (2)

Source	Type III Sum of Squares	df	Mean Square	<i>F</i>	Sig.	Partial Eta Squared
Corrected Model	27014.766 ^a	2	13507.383	250.556	.000	.887
Intercept	4081.063	1	4081.063	75.702	.000	.542
WTC Pretest	2209.845	1	2209.845	40.992	.000	.390
Group	25136.809	1	25136.809	466.276	.000	.879
Error	3450.219	64	53.910			
Total	727737.000	67				
Corrected Total	30464.985	66				

a. R Squared = 0.887 (Adjusted R Squared = 0.883)

According to Table 6, the WTC pretest scores (the covariate in the model) came out to be significant ($F = 466.276, p = 0.0001 < 0.05$) thus demonstrating that prior to the treatment, there was a significant difference between the two groups in terms of their WTC. With the eta squared of 0.88, the pretest covariate accounted for 88% of the overall variance.

Furthermore, there was a significant relationship between the covariate (the WTC pretest) and the dependent variable (the WTC posttest) while controlling for the independent variable ($F = 75.702, p = 0.0001 < 0.05$). Hence, the first null hypothesis of the study which stated that flipped classroom did not bear a significant effect on EFL learners' WTC was rejected with those in the experimental group who gained a much higher mean bearing a significantly higher degree of WTC than those in the control group.

5.3.2. Testing the Second Null Hypothesis

Again with the first assumption of normalcy in place, the second procedure was testing the homogeneity of variance for which the Levene's test was run: the variances were not significantly different ($F_{(1,65)} = 76.761, p = 0.22 > 0.05$). As one covariate is being investigated (AMTB pretest), the third assumption of the correlation among covariates did not apply to this very case. The fourth assumption is that of homogeneity of regression slopes.

Table 7: Tests of between-subjects effects (1)

Source	Type III Squares	Sum of df	Mean Square	F	Sig.
Corrected Model	14934.717 ^a	3	4978.239	9.720	.000
Intercept	29160.810	1	29160.810	56.934	.000
Group2	1622.491	1	1622.491	3.168	.080
AMTB Pretest	13219.763	1	13219.763	25.810	.000
Group * AMTB Pretest	1647.796	1	1647.796	3.217	.078
Error	32267.970	63	512.190		
Total	13720207.000	67			
Corrected Total	47202.687	66			

a. R Squared = 0.316 (Adjusted R Squared = 0.284)

Table 7 shows that the interaction (i.e. Group*AMTB Pretest) is 0.078 which is larger than 0.05 thus indicating that the assumption of homogeneity of regression slopes has not been violated. With the above assumptions in place, running an ANCOVA was legitimized.

Table 8: Tests of between-subjects effects (2)

Source	Type III Squares	Sum of df	Mean Square	From	Sig.	Partial Squared	Eta
Corrected Model	13286.921 ^a	2	6643.460	12.536	.000	.281	
Intercept	29027.577	1	29027.577	54.776	.000	.461	
AMTB Pretest	13277.779	1	13277.779	25.056	.000	.281	
Group	6.156	1	6.156	.012	.000	.000	
Error	33915.766	64	529.934				
Total	13720207.000	67					
Corrected Total	47202.687	66					

a. R Squared = 0.281 (Adjusted R Squared = 0.259)

According to Table 8, the AMTB pretest scores (the covariate in the model) came out to be significant ($F = 25.056$, $p = 0.0001 < 0.05$) thus demonstrating that prior to the treatment, there was a significant difference between the two groups in terms of their motivation. With the eta squared of 0.281, the pretest covariate accounted for 28% of the overall variance.

Furthermore, there was a significant relationship between the covariate (the AMTB pretest) and the dependent variable (the AMTB posttest) while controlling for the independent variable ($F = 0.012$, $p = 0.0001 < 0.05$). Hence, the second null hypothesis of the study which stated that flipped classroom did not bear a significant effect on EFL learners' motivation was also rejected with those in the experimental group who gained a higher mean bearing a significantly higher degree of motivation than those in the control group.

6. Discussion

As demonstrated through the above data analysis, the motivation and WTC of the learners in the experimental group were higher than those of the control group. The results of this study are supported by Abeysekera and Dawson (2015) who suggest that the flipped classroom environment is more likely to fulfill students' need to be able to learn and relate to what they learn which leads to an increase in motivation. They further note that for students to experience an increase in motivation, there must be a satisfaction in engagement in learning activities.

Furthermore, Deci and Ryan (2000) suggested that motivation will increase with the learning activities that students find innovative, challenging, and appealing. Active learning approaches are

supported to increase students' level of comfort for solving problems while also increasing comprehension of concepts; Zappe et al. (2009) state that the flipped classroom method is a useful way to add active learning to the classroom without sacrificing valuable class time needed for coverage of content. Students are given the responsibility of independently learning the course material so that more class time can be dedicated towards problem solving and active learning exercises.

The finding of this study, that is the fact that using flipped classroom has solid advantages, is in agreement with certain other studies too. For example, Chen et al. (2016) stress that learning is most active when flipped classroom reduces the amount of frustrating sessions. Additionally, this methodology assists students with feeling self-effective when they effectively take an interest in spreading information unlike those who were receiving knowledge through traditional teaching and lecturing.

Sirakaya and Ozdemir (2018) also found that the students' motivation in the flipped learning group was higher than that of the learners in the control group. Santikarn and Wichadee (2018) assert that using flipped classroom in language learning provides positive ideas and benefits that motivate students to become self-directed learners. Basal (2015) indicated that pre-service English teachers had positive perceptions towards the use of the flipped classroom as an integral part of face-to-face courses while Boyraz and Ocak (2017) recommended that the flipped classroom is useful for students to learn better and communicate with their colleagues in a pleasant and advantageous learning condition. Al-Zahrani (2015) underlines that successful learning happens when flipped classroom promotes students' creativity.

Furthermore, past exploration has indicated that students are motivated to learn and participate in realizing whenever hands-on exercises and the chance to team up with students are introduced and accordingly become less motivated when a tremendous amount of contextual material is presented during traditional face-to-face instruction (Bryan et al., 2011). As indicated by Baeten et al. (2013), there might be a connection between motivation and students' preference for the flipped classroom. Furthermore, there are likewise studies recommending that the flipped class learning procedure is a technique which assists students to improve in academia and the motivation to learn (Enfield 2013; Milman, 2012).

This result shows a similarity with other studies in the literature (e.g., Chao et al., 2015) which conclude that the flipped learning approach has a positive effect on the transfer of learning. Boyraz and Ocak (2017) assert that the consequences of this investigation bolster the decision that an innovation improved flipped classroom was both effective and scalable; such classrooms encouraged learning better than simulation-based training and students saw this methodology to be more motivating in that it allowed for greater differentiation of instruction.

The essential qualities of the flipped classroom model presumably represent this outcome and it is realized that the flipped classroom model has points of interest, for example, allotting the time spent in the classroom to interactive activities (Zappe et al., 2009), introducing various sorts of materials to students with different characteristics (Chen et al., 2017; Huang, 2015), expanding students' interest and participation (Enfield, 2012), and guaranteeing that students assume liability for their own learning (Al-Jaser, 2017). Consequently, the higher motivation levels of the experimental group could be attributed to the aforementioned advantages of the flipped classroom model.

Bergmann and Waddell (2012) argue that the learners who undergo the flipped learning approach may have the opportunity to discuss with their teachers which is perhaps not a common possibility in conventional classes. Additionally, students are urged to think both inside and out of the class (Kellinger, 2012). Such different encouraging procedures help students to be active learners in the classroom.

The fact of the matter is that perhaps flipped classes provide an active learning condition which holds students at the center of the education process. This claim is supported by studies

showing that the flipped classroom model provides active engagement of students in the classroom (Enfield, 2013; Huang, 2015). Additionally, in the investigation led by Yoshida (2016), it is expressed that flipped classes give active engagement to class exercises which probably cause students to have a positive attitude towards the model. Through various types of exercises, students acquire learning experiences (Baeten et al., 2013). The findings of the study could of course be attributed to the idea of the flipped classroom which gives an arrangement of guidance that places students at the center of their prior experiences and emphasizes collaborative learning that helps students develop their higher order thinking skills. The researcher noticed that the students of the experimental group enjoyed learning cooperatively and had the option to learn English significantly more easily and rapidly. Moreover, such discoveries can be credited to the way that utilizing flipped classroom raised their interactivity and participation as well as their motivation to learn, which, in turn, raised their enjoyment and alacrity for employing the flipped classroom model in learning English.

7. Conclusion and Implications

The present study can produce significant implications in several aspects regarding the productive application of flipped classroom. The findings of the study can, to a large extent, contribute to both teachers as well as syllabus designers' effective use of flipped classroom in their teaching program in practice as in the following sections.

Teachers can benefit from the findings of the study as they can implement flipped classroom to stimulate the learners' WTC and motivation, leading to their interaction in the classroom. Since teachers are concerned with better teaching, they can apply flipped classroom in their classes to take advantage of the learners' involvement in the classroom, which may help the learners to be motivated and interactive.

In addition, teachers could change their role from teachers who rule the class into instructors whose job is to organize, help, guide, coordinate, and support the students to communicate and acquire language. This can be accomplished by means of the flipped classroom in which the role of students and instructors contrasts traditional pedagogy. Additionally, they can strengthen the relationship with students which makes a non-threatening classroom atmosphere and encourages the learning-teaching process.

One would perhaps need to go beyond individual teachers if the ultimate goal is incorporating flipped learning within ELT programs; this requires institutional policy- and decision-making initiatives. To this end, educator preparing focuses and foundations would imperatively need to instruct instructors with this procedure. This preparation should be possible both for instructors who are studying at the undergraduate level at educator training colleges or those effectively engaged in the practice of pedagogy in the form of in-service courses.

Syllabus designers are also the beneficiaries of the present study. In fact, they can incorporate flipped classroom techniques in their syllabus and materials to be applied by English teachers. Materials could focus on methods to foster learners' interaction as well as their engagement which can be fulfilled by the application of flipped classroom in the syllabus.

In the process of conducting this study, certain limitations were at work; accordingly, the researchers suggest the following studies to possibly address those limitations thereby expanding the power to generalize the findings. First, the present research benefited from teenage language learners (i.e., 14 to 18 years of age) for collecting the data. Adult language learners can also be studied to measure the effectiveness of flipped classroom on their WTC and motivation and find out which group can benefit from flipped classroom more. Second, the learners participating in this research were those attending English classes in one of the hundreds of private language schools in Tehran; more studies in very diverse communities and locations among learners from heterogeneous demographic denominations are required to establish more assurance of the repeatability of the findings. Lastly, another area for further study is an investigation into the possibility of comparing the effectiveness of flipped classrooms on other learner variables.

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