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EFL Learners' Attitudes Toward Flipped Teaching and Its Effect on Their Oral Complexity, Accuracy, and Fluency

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Abstract

The flipped teaching has nowadays become a new movement in teaching and is getting pervasive in the educational system. The goal of the present study was to explore if there was any significant difference between L2 learners' oral complexity, accuracy, and fluency (CAF) in flipped and traditional classes. To do so, both traditional and filpped classes were resorted to in order to see which class matched the students' needs. Moreover, this study was done to find out if it had any significant effect on the learners' motivation, self-efficacy, engagement, self-confidence, and autonomy. Via an OPT, 40 homogenous, lower-intermediate students were chosen from a language school in Isfahan, Iran. Then, they were randomly assigned to experimental 1 and 1 control groups. Initially, all the students attended an interview session and their responses were audio-recorded; then, 2 teachers scored their responses to make certain the interviews enjoyed reliability. Afterward, the students took a pretest with 2 questions relevant to their actual life and the grammar they would acquire in the course of the treatment. After taking 4 treatment sessions, the students received a posttest to see how much they had progressed during the 4 treatment sessions. Also, a questionnaire was adapted from another study to figure out the students' satisfaction regarding this type of teaching. The results revealed that the flipped class increased the students' motivation, self-efficacy, engagement, self-confidence, and autonomy. However, no significant difference was seen between the learners in the flipped class and those in the traditional class, as far as oral CAF was concerend. Based on the students' answers to the questionnaire, most were satisfied with the flipped model. To conclude, materials developers and syllabus designers should modify instructional materials and books taught in language schools and add some parts to them in line witth technology to satisfy digital natives.

Keywords: Accuracy, Complexity, Digital Natives, Fluency, Flipped Teaching

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1. Introduction

Significant modifications have been brought about in the field of language pedagogy since the employment of new technologies has become more common, running the gamut from incorporating messengers in teaching, to using learning management systems (LMS) like Edmodo and Coursera along with normal classes. One significant ramification of these changes is *blended learning*, particularly the flipped movement (Bergman & Sam, 2012). Blended learning has been described as "a combination of face-to-face (FtF) and computer-assisted learning (CAL) in a single teaching and learning environment" (Neumeier, 2005, p. 163). Danker (2015) believes that the flipped classes employed either a blended learning technique in which the learners initially saw online lectures as their homework and then did their in-class practical work and assignments; or they used a guided inquiry technique at the start of the classes via this process.

Thanks to new technologies, flipped teaching has eased language learning, as most L2 students can have their own materials at home by the use of digital gadgets like smart phones and computers. Johnson (2013) noted that "this strategy leverages technology providing additional supporting instructional material for students that can be accessed online. This frees up classroom time that had previously been used for lecturing" (p. ii). In Bishop and Verleger's (2013) words, flipped learning is "an educational technique that consists of two parts: interactive group learning activities inside the classroom, and direct computer-based individual instruction outside the classroom" (p. 5). Following this interpretation, it could be argued that the activities are reversed. The teacher provides L2 learners with materials to learn at their home instead of learning in the classroom, and they do their exercises in the class with the help of their teacher. In more elaborate terms, instruction is done outside the classroom and without the presence of a teacher, and homework is done inside the environment of the school and with the presence of a teacher (Findlay-Thompson & Mombourquette, 2014). In Roehl et al.'s (2013) view, "flipping the classroom employs easy-to-use, readily accessible technology in order to free class time from lectures. This allows for an expanded range of learning activities during class time" (p. 44).

Flipped teaching has been used not only for English learning, but also for many majors like medicine, chemistry, and physics. In the realm of language teaching, some scholars like Jinlei et al. (2012) have worked on flipped teaching and believed that "a flipped classroom is a classroom that swaps the arrangement of knowledge imparting and knowledge internalization comparing to the traditional classroom" (p. 46). In the flipped classroom, the L2 teacher's as well as learners' responsibilities are reversed, and within the class duration, they have other activities to do.

In Roach's (2014) idea, flipped classes offer a number of advantages, such as more one-on-one time with L2 learners, more opportunity for active participation and collaboration in the classroom, and self-paced learning, just to name but a few. Another benefit that Benson (2011) mentioned is autonomous learning that makes L2 students not only better learners, but also better members of the society. The present research paper was motivated by the two subsequent research questions:

1. Does flipped language teaching affect significantly L2 learners' complexity, accuracy, and fluency (CAF)?
2. What are L2 students' attitudes toward flipped language teaching?

The abovementioned research questions were addressed using the quantitative strand of research. Although the flipped paradigm has made inroads on students' achievement figures in mainstream education and in fields such as chemistry, physics, and high school courses, its effect on language learning has not been well investigated yet (Han, 2015). As such, this study is just one attempt among others to step into this still dark territory to gauge the effect of flipping learners' spoken CAF. In addition, although many research studies have concentrated on the changes of achievement test scores at the end of the term, to the best knowledge of the present researchers, few studies (e.g., Han, 2015; Wu et al., 2017) have tried to explore the effect of flipping on learners' spoken CAF. Therefore, the undertaking of such a study seems quite warranted. Also, our current approaches to language teaching are outdated and no longer fit the needs of digital natives.

The flipped movement of education has had an undulating course of history over the past few years. The origination of this movement can be attributed to King (1993). In her paper, King presented readers with classes in which L2 teachers are the main figures and L2 students are mere recipients of knowledge who reproduce what they have memorized on final exams. She termed such classes as *transmittal*. In this model of knowledge delivery, it is believed that "student's brain is like an empty container into which the professor pours knowledge" (p. 30). Then, she goes on to note that the class time should be used for the construction of knowledge, rather than deposit knowledge into L2 students. Based on her claims, the L2 teacher should be a facilitator (rather than a mere depository of knowledge) and is tasked with helping L2 learners achieve their goals. Though she did not mention anything close to the term *flipping*, her work is counted as a basic foundation for the creation of this model. When L2 students are engaged actively in activities and in the learning process, it is more probable to remind that information and apply it. According to Mayer (1984), King (1993) was one of the advocates of active learning and defines it as "getting involved with the

information presented—really thinking about it (analyzing, synthesizing, evaluating) rather than just passively receiving it and memorizing it" (p. 30). She believed that active learning, more often than not, results in the creation of something new.

The second person who had an enormous role in the advancement of the flipped movement was Mazur (1997) at Harvard University. Based on Mazur's teaching experience as a physics teacher, he used to distribute his notes among his students after class presentations. In the middle of the semester, his students asked him to distribute his notes as a pamphlet before each session, so that they could come to class well prepared. He granted permission and decided to distribute the pamphlets before his presentations. His method is now known as *peer instruction* which has proved to be a useful method. Peer instruction has been defined as a pedagogical strategy to involve all students during class time with the help of a structured questioning process during which students should ask and answer questions to consolidate their learning (Crouch et al., 2007). In Simon and Cutts's (2012) point of view, peer instruction is a method in which students benefit from preparatory knowledge before participating in the class (e.g., through reading a textbook) and providing students with a prelecture quiz to understand that whether they are prepared enough to learn new things in a lecture format. In peer instruction, students preread the textbook which is going to be discussed in the classroom. Thus, the teacher can spend less time on lecturing and prolonging the time devoted to practicing and solving their problems in the limited time of the class. Therefore, it can be concluded that the flipped movement was born out of Mazur's (1997) work.

The third important endeavor to further this line of inquiry was the paper by Baker (2000), inventing and bringing to the scholarly for the term *flip*. Also, he proposed to put an end to confining of the instruction to the boundaries of the class and suggested the use of Internet technologies. In his belief, using the World Wide Web (WWW) helps students to have more free time to practice the newly acquired knowledge in their classes. He mentioned an attempt to transfer the delivery of instruction through the Internet and outside the classroom.

And yet, the fourth practical move can be attributed to two high school teachers named Bergman and Sams (2012). In order to facilitate the situation for those students who were not able to attend their classes for one reason or another and to ease their understandings, Bergmann and Sams (2012) videotaped their lectures before the class and sent it to their students to watch them online. Their method was known as "pre-vodcasting model" (p. 71). By using this method, they came to this conclusion that the students who were absent in some sessions could learn the new lesson and those who were present could watch these videos several times. Another finding that emerged

from their experience was that the students showed a deeper comprehension of the materials than ever before. It was not before long that they decided to put the classroom instruction aside and limit it only to home. To this end, they merely videotaped their lectures before the students attended the class and provided them with these videos and allocated more time on practicing while the students were present in the classroom. Finally, they collected all their experiences in their ground-breaking book *Flip Your Classroom: Reach Every Student in Every Class Everyday* (2012). Bergman and Sams observed that in traditional classes, students only need their teacher when they face problems during their doing of homework. That is to say, they do not need their teachers for learning, but when they want to do their homework. Moreover, in some cases, students could not catch up well with the teacher's pace and, therefore, they would not learn some parts of their lessons. This made Bergman and Sams leave the responsibility of learning on the students' shoulders and bring the homework to the classroom. In their new method of teaching, the instruction was delivered through online videos, and class time was used more productively to help the students practice and apply their knowledge. In more elaborate terms, in their new flipped version of teaching, instruction is done at home, and homework is done at home.

2. Literature Review

Marlowe (2012) tried to probe into the effect of flipped teaching on students' knowledge achievement and their amount of stress during this period. The study sample included students in the second year of the International Baccalaureate (IB) Standard Level Environmental Systems and Societies (ESS) course. Nineteen students were involved in the course, including 5 males and 14 females. The senior students observed lectures through media before the class. Then, they did their assignments like review questions, lab reports, and worksheets during the class. During the semester, the teacher held some formative tests, and finally, the students had a summative test. After the second formative test, the students were more satisfied with their grades and they mentioned their success was because of their notes which helped them during the learning process. They also reported that the students' levels of stress were lower than a normal class. Whereas student's formative assessment had great improvement, their summative exam scores did not reveal statistically enormous progress. Generally, the students were more satisfied with the treatment and the amount of their stress was lower than the usual time.

In a similar vein, Stone (2012) did a research at the University of Colombia in which a genetic disease course along with a general biology course were flipped. The students in this study were interested in the field of genetic diseases because most knew a family member who suffered from

genetic disorders. In both courses, the lectures were recorded before the class (ranging from 7 to 15 min). The students had to watch these videos before the class and do some activities. The students showed their completion by participating in an online quiz or describing a news story or other production activities. Some activities in the classroom were done like a jigsaw exercise, problem-based activities, games, and debates. The students were classified into two groups and each was required to do the activities individually. Some time was allocated to solving the students' problems and questions. In the smaller genetic diseases class, units 1 and 2 were flipped, but unit 3 was not completely flipped and served as an internal control. The results of exams 1 and 2 increased from 78.5% and 77.5% in the control group to 86.2% and 90% in the flipped classroom. In the larger general biology class, the flipped strategy was just utilized for one lecture during the semester. In exam 1, the flipped course averaged 72.6% and the controlled grouped averaged 74.4% and for exam 2, the flipped course averaged 74%, which means in the first exam there was not any difference between these two results. The evidence showed that, in the small college classroom like the genetic diseases class, flipping can result in a better performance of the students compared to a traditional classroom. In order to find out the students' satisfaction in this study, they were provided with a survey. It was found that the students in the genetic diseases class were 91% pleased with their rate of learning. In the large education classes, the results were not eminent and the difference between the traditional classroom and the flipped classroom was 10%, meaning that the students in the flipped classroom outperformed their counterparts in the traditional classroom by 10%.

Harris (2016) conducted a quasi-experimental design type of research on the flipped paradigm in an economics course. The primary objective of this study was to figure out whether two different flipped treatments (i.e., a partially flipped teaching with traditional mini lectures and along with online video lectures assigned as homework and a completely flipped teaching) had an effect on the students' final exam. The results were the indication that the students' performance in both treatment groups was up to 14% higher compared to traditional classes. This difference was found statistically significant and, therefore, valid.

Moreover, Al-Zahrani (2015) examined the effect of the flipped teaching on the progression of students' innovative thinking. Following a quasi-experimental design, the participants were assigned to two different groups: The first group attended normal classes, whereas the second group attended the flipped teaching. The researcher, then, investigated the participants' attitudes toward the flipped teaching with the help of a survey. Overall, the results indicated that the flipped teaching facilitated the

participants' learning and had a significant role in their creativity. However, this strategy had its own problems like the students' limited preparation.

Several studies (e.g., Ahmed, 2016; Huang & Hong, 2016) have been done, exploring the effect of the flipped teaching on English classes. Overall, these studies are suggestive of the idea that the flipped teaching may have a promising future in this field, as most of these studies showed favorable results. Some of these studies are discussed in the following.

Huang and Hong (2016) explored the effect of a flipped English class of information and communication technology (ICT) that primarily focused on reading comprehension abilities. Forty students were selected randomly to take part in a flipped English classroom as the experimental group, whereas 37 students were chosen as the control group. A questionnaire that evaluated the students' ICT were completed by all the participants at the beginning and end of the study. A number of four students who gained the lowest pretest grades from the experimental group were chosen to be checked through an interview for the posttest. The findings revealed that the experimental group's English reading comprehension progressed successfully. The quantitative findings showed that the results of the interview and observation were consistent.

In another attempt carried out by Ahmed (2016), the effect of the flipped teaching on the writing skill and students' attitudes toward it was investigated. The sample consisted of 60 students who were divided into two groups. An EFL writing test and a set of questionnaires for measuring the students' performance and attitudes toward the flipping method were devised. Before starting the experiment, both groups were pretested through the EFL Writing Test. The questionnaires were distributed among the experimental group only before the treatment. Following that, the experiment group was taught through the flipped teaching, whereas the control group was treated as a normal or traditional class. The results revealed that the participants who were assigned to the experimental group outperformed the students in the control group.

In a similar line of inquiry, Hung (2015) described that integrating the flip classes into language classes through utilizing an inquiry-based learning strategy (i.e., WebQuest that helps L2 learners to search the Web in order to encourage their engagement in active learning) can be effective. The main objective of this research was to investigate the effect of the flipped teaching on the amount of English learning, students' opinion, and their level of participation. A quasi-experimental design and three different formats of the flipped teaching were adopted. The results showed that the structured and semistructured flip lessons were more influential designs than the nonflip lessons. With the help of the structured and semistructured flip lessons, the

students' learning would be better and they would have a better attitude toward language learning.

2.2. Theoretical Framework

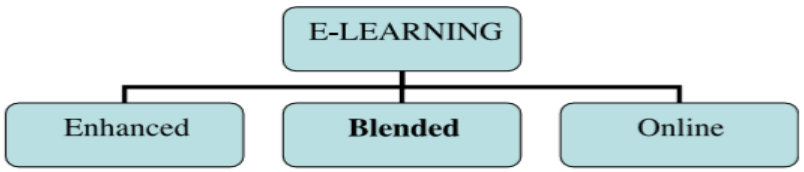
2.2.1. Blended Learning

Flipped teaching belongs to the larger category of *blended learning* or *hybrid learning.* In their book, *Bonk and Graham* (2012), define blended learning and instruction as face-to-face teaching plus the use of computer-based technologies to foster better learning outcomes. In another definition, blended learning is an approach that "combines face-to-face and online modalities" (Halverson et al., 2012, p. 381). Reidsema et al. (2017) concur with the above definition and suggest that blended learning is "the marriage between online learning and on campus face-to-face learning activities" (p. 6). Also, siding with the above definition, Staker and Horn (2012) opine that blended instruction is when students use two different modes: online as well as face-to-face. In their comprehensive definition, blended learning refers to an instructional program held both in a physical space (e.g., a traditional classroom) as well as a virtual one (i.e., using online modes). This also grants the learners a degree of control over the materials, timing, and other common instructional elements.

Garrison and Kanuka (2004) differentiated between online learning and blended learning. In fact, they distinguished between enhanced learning, online learning, and blended learning (see Figure 1):

Figure 1

A Continuum of E-Learning (Garrison & Kanuka, 2004)



In order to consider a course as a blended one, some believe that more than 50% (or, at least half) of the educational load should be assigned to online means (Bernard et al., 2014). The Department of Education's 2010 revealed that students participating in blended learning classes attain more than those who participate in an absolute online or traditional classes (Means et al., 2010). Furthermore, in contrast to face-to-face classes, students in blended learning classes show more satisfaction (e.g., Marlowe, 2012; Stone, 2012). Blended learning offers its own advantages like the reduction of time for physical attendance in classroom and elimination of pressure on

classroom scheduling. In Köse's (2010, p. 2796) point of view, additional advantages are also possible:

- Blended learning has the potential to enhance L2 learners' performance and academic achievement, as a variety of modalities and approaches are employed.
- It can be used in different educational levels for L2 learners' with vastly different needs and learning styles,
- It is cost-effective and allows for a reallocation of financial resources to more substantiated educational goals,
- Because it fosters the use of different modalities and approaches, L2 students' find it easier to pay attention during the courses,
- L2 students' are not limited to the teachers' knowledge; they can easily access other resources and save their face-to-face interactions with teachers for application and discussion of the intended subjects.

Many studies (e.g., Ahmed, 2016; Huang & Hong, 2016) have revealed that flipped classroom yields better production results because students' ability for solving problems is better improved through the increased practice.

2.2.2. Technology in Flipped Teaching

Using digital technologies has a great role in the success of flipping from how students can participate in collaborative learning to engaging students. Technology can help instructors with creating instructional materials (Blumenfeld et al., 1991). According to Ouzts and Palombo (2004), technology can improve both teaching and learning, and investing in it can foster beneficial teaching and learning practices more than what traditional approaches were ever capable of.

The Internet has provided students with a variety of means to learn new things like texting, videos, podcasts, and interactive facilities for learners to learn better and easier. It is possible to utilize technology to share new information and collaboration which facilitates cooperative learning (Stahl et al., 2006). If your partner is not physically present in the class, then designing online cooperative learning will be helpful.

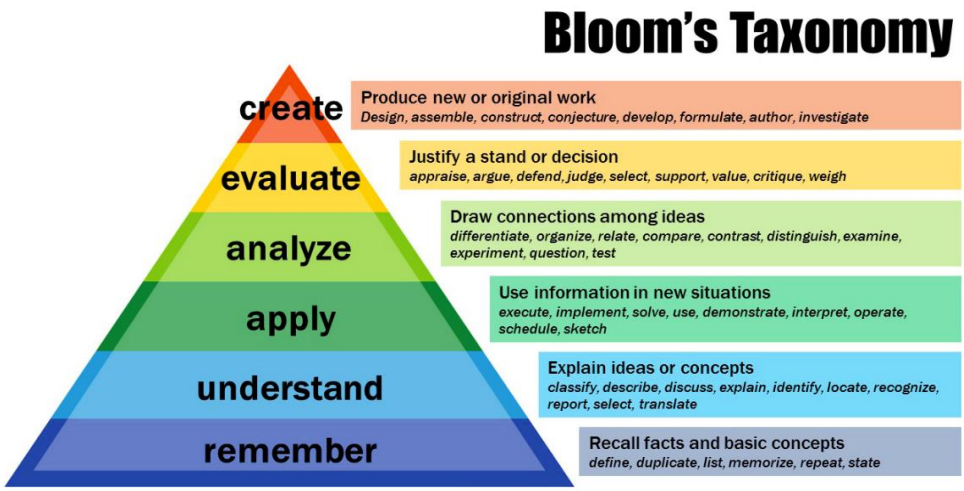
2.2.3. Bloom's Taxonomy

The flipped paradigm of learning and teaching is also undergirded by the hierarchy of Bloom's (1956) revised taxonomy. Learning and thinking skills are divided into lower-order thinking skills (i.e., recalling, understanding, and applying) and higher-order thinking skills (analyzing, evaluating, and production), as shown in Figure 2. Although most teaching methods and approaches target the consolidation of lower-order thinking skills, the flipped paradigm seeks to bring higher-order thinking skills into

the fore. In traditional classrooms, the focus is centered on remembering, understanding, and applying knowledge at its best. Higher-order thinking skills are either ignored or left to students' own resources. As a result, students become mere recipients of knowledge and void of any critical thinking. In a flipped teaching, however, the delivery of instruction is done in the context of the home. Afterward, students come to class and learn to apply, evaluate, and create. Therefore, both higher-order and lower-order cognitive potentials will be trained. The idea is that learners do not need any instructor to help them with the honing of lower-order skills. Although this can be done at home, the flipped teaching is particularly famous because during class time, higher-order thinking skills can be trained with the presence of a competent teacher.

Figure 2

Bloom's Revised Taxonomy (Anderson & Krathwohl, 2001)



2.2.4. Digital Natives and Digital Immigrants

As Prensky (2001) mentions, our learners are not the learners we used to have some decades ago. He uses the term *digital natives* to recognize a generation raised around various forms of technology, making them, figuratively, fluent in its language and use of different digital resources. These digital natives are no longer responsive to our traditional approaches to teaching. To make matters even worse, "our Digital Immigrant instructors, who speak an outdated language (that of the predigital age), are struggling to teach a population that speaks an entirely new language" (p. 2). A change in language teaching approaches is necessary because "the first generation of 'Digital Natives'—children who were born into and raised in the digital world—is coming of age, and soon our world will be reshaped in their image" (Palfrey & Gasser, 2011, p. 120). As lecture-based classrooms no

longer fit into digital natives' attention span, probably a flipped approach can be of help.

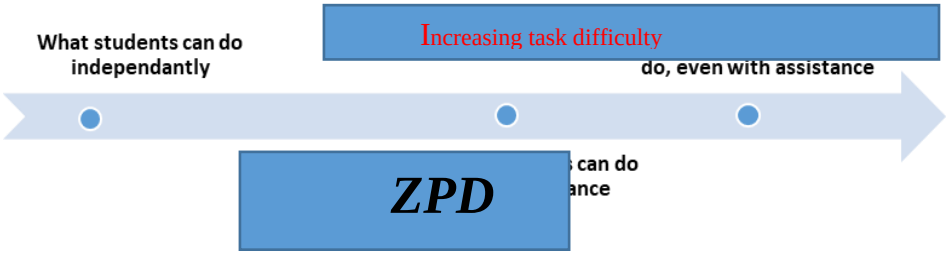
2.2.5. Social Constructivism

The source for constructivism principles is Vygotsky's (1978) sociocultural theory in which humans learn new things in a socially constructed way. Vygotsky (1978) claimed that most knowledge in the world is socially constructed, and children learn better through constructing knowledge by interacting with others and asking for help from a cognitively developed person (i.e., the learner being the child aspiring cognitive development and the teacher being the grown-up representing the more cognitively developed figure). Therefore, interaction with a more cognitively developed person is at the heart of social constructivists. The nature of this interaction, along with the knower's scaffolding, can help learners go through their zone of proximal development (ZDP). As the discussion now revolves around Vygotsky's (1978) sociocultural theory, it behooves us to have a word on the above concepts of ZPD and scaffolding.

According to Vygotsky's (1978), ZPD refers to "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 86). Therefore, it is the distance between the present cognitive level of a learner and the level they can reach with the help of a more developed person.

Figure 3

Locating the ZDP (Vygotsky, 1978)



In fact, there are three zones: In the first zone (i.e., the zone of actual development), learners can learn to do things on their own and without seeking help. In the second zone, learners can perform tasks on the condition that enough help is provided. In the third zone, learners cannot do the task, even with adequate help. Vygotsky (1978) opines that a task should be at a challenging level, but not overwhelming either. Tasks that fall only within

the ZPD zone can result in cognitive development. Cognitive development, nonetheless, is acquired when there is enough support or more precisely adequate scaffolding.

Scaffolding is a structural cognitive support for learners and is gradually dismantled, as learners become independent of their instructor. In scaffolding, the amount of backing is always important. A scaffold, in its literal sense, is a structure upon which people can climb high places. The distance between steps is just as far as it should be. This distance is neither too short (like in a ladder which makes the ascend rather effortless), nor too long to make the climb impossible. While climbing a ladder is too easy, climbing a scaffold involves some reasonable effort on the part of the climber. This effort will, then, result in a better muscle training and a better overall performance in future trials. Learning is no different. If there is too much support, learning does not happen because there is no effort on the part of the learner. On the other hand, if support is missing, the task cannot be accomplished because it is beyond learners' ability. By enough scaffolding, learners can establish their own footholds and become gradually independent. As students' mental functions mature, scaffolding is removed pole by pole and board by board. Total withdrawal of support happens only when learners can assume full responsibility of their own learning (i.e., becoming autonomous).

The flipped teaching is, then, founded on the above concepts of ZPD and scaffolding. In traditional classes, more often than not, it is ridiculed that teachers normally solve simple equations in class. Challenging equations are usually left to students to be done at home. Assignments usually remain untouched or solved through unorthodox fashions because there is no adequate support. This problem of inadequate support can be partially solved through the use of the flipped teaching. In a flipped class, thanks to galloping advances in the world of technology, support is usually provided both within and without classroom boundaries.

3. Method

3.1. Participants

A group of 40 adult students of English constituted the participants of this study, whose age ranged from 20 to 30 and were at the lower-intermediate level of English (gauged through the Oxford University Press and University of Cambridge Local Examinations Syndicate's Oxford Placement Test [OPT]). The participants were chosen through convenience sampling procedures, as access to a representative sample of favorable size was not considered feasible. This group was opted from a language institute in Isfahan (Iran). The participants' major at the university was not related to English or linguistics studies, but was mostly related to mechanical

engineering, electrical engineering, and art. They shared Persian as their L1 and none had been in an English-speaking country prior to launching the current study. They were told that these tests were just for the purpose of the research, but were held naïve to the exact purposes of the study. After that, 20 of the participants (half of them) were randomly put into an experimental group, and the rest were assigned to a control one. Other relevant information is provided in Table 1:

Table 1

Relevant Information for the Participants

Groups	*N*	Age Range	Age Mean	Language Level	L1
Control	20	20-30	25.4	Lower-Intermediate	Persian
Experimental	20	20-30	27.3	Lower-Intermediate	Persian

3.2. Materials and Instruments

For the purposes of this study, a number of materials were used. These included a pretest, a posttest, and a scoring scheme against which the participants were rated and the OPT was used as the proficiency-measuring instrument.

3.2.1. Oxford Placement Test (OPT)

Administration of a validated placement test is always of crucial importance because, as it could be assumed, participants in one group could generally be more proficient in terms of their command of English. To tackle this problem and to secure the homogeneity of the participants, the OPT (version 1.1) was utilized prior to the study. This test is classified into three different sections: Part 1 (questions 1-40) evaluates knowledge of vocabulary; part 2 (questions 41-60) assesses knowledge of grammar; and part 3 includes an essay-type writing test. In this section, the participants are required to write a 150-word long essay about a topic specified by the testers.

3.2.2. Speaking Test Pretest

In order to determine the participants' CAF prior to the treatment, they were required to take a speaking test designed by the researchers in the course of this paper. The validity of the pretest was checked by two experts and the reliability was estimated as .72. The participants were audio-recorded and scored by two teachers to ensure interrater reliability. The scoring process was done through allocating 1 point for each correct question. The interrater reliability of the pretest scores was calculated through the *Pearson correlation coefficient* formula for CAF, equaled .87, .91, and .89, respectively. The pretest included a series of questions asking the participants to describe a particular event in their lives. These tests resembled those of

IELTS speaking tasks. The participants were required to think about two monologue speech questions for 1 min and, then, talk for 2 min about them.

3.2.3. Speaking Test Posttest

To see if the flipped teaching had exerted any influence on the participants' CAF, they were required to take a posttest when they finished the treatment. The reliability of this posttest was calculated around .85 and its validity was checked by two experts. This posttest was in the form of a speaking task and contained two questions of monologue speech. The participants were audio-recorded for further scoring and analysis. Similar to the pretest, the participants' performance was scored by two teachers and the interrater reliability of the posttest scores was calculated through the *Pearson correlation coefficient* formula for CAF, equaled .88, .92, and .87, respectively. These tests resembled those of IELTS speaking tasks. As most participants at this level were not familiar with the words and grammatical structures of the original IELTS test, we decided to simplify the phrases of the test and explain the way they would have to behave with this kind of test. The participants were required to think about the questions for 1 min and, then, talk for 2 min about them.

3.2.4. Measuring CAF

In order to measure the participants' CAF, the following calculations were done: For the sake of practicality, complexity was calculated by measuring the number of clauses per T-unit. For measuring the focused grammatical accuracy, we measured specific accuracy for both the posttest and the pretest because two grammatical points were taught. Grammatical accuracy was calculated using the ratio of error-free T-units to the total number of T-units that were taught to the participants (Ortega, 1999). In order to measure fluency, the speech rate was calculated as the proportion of syllabus per minute on the total time expressed in seconds (Ortega 1999). Moreover, another way of calculating fluency was to divide the filled pauses by every 100 words (Skehan & Foster, 2005).

3.3. Procedure

Prior to the study, the participants were asked to take the OPT to make sure they were homogenous. Three participants whose scores were 2 *SD* deviant from the mean were sifted out from the study. Once the general homogeneity was ensured, the participants were randomized classified into the traditional classroom (i.e., control) and flipped classroom (i.e., experimental). Both groups took part in a speaking pretest which was introduced earlier in this research.

3.3.1. Experimental Group

Following the random group assignment, the participants were asked to take part in a speaking task to serve as their pretest. The pretest included an IELTS-like speaking task during which the participants were required to give a speech about a specific topic for 2 min. For this particular inquiry, the emphasis was mainly on *be going to* and *simple past* structures. The participants were audio-recorded and scored (as mentioned in section 3.4) and it was done by two teachers. The interrater reliability between the two scorers was, then, estimated through Pearson correlation formula. The whole scoring process was done according to the definitions of CAF in section 3.2.4.

As for the treatment phase, the experimental group was taught two consecutive units from *Touchstone* series (Part 1) by Höst (2011) through the flipped model. The grammatical constructions were *going to* and *past simple*. This treatment phase spanned over four sessions. The grammar lessons were taught through ready-made video clips uploaded to Edmodo (i.e., a Learning Management System [LMS] that learners can communicate with one another and their teacher). The participants were required to watch the videos prior to their classes as their homework assignment. During the class time, the teacher spent the first few minutes to address the participants' problems and, then, started giving them real-life tasks which involved using the two grammatical structures. Rather than on instruction, the class time was, therefore, spent on carrying out the tasks. Mostly, the tasks were related to the new grammatical lessons, for instance, filling the blank with an appropriate tense.

After participating in the treatment, the students were required to take a posttest that was similar to the pretest in its format. The results obtained from the pretest and the posttest were compared against one another and conclusions were drawn. The calculation for each factor (i.e., CAF) was done through the explanation in section 3.2.4.

3.3.2. Control Group

The control group was taught in a traditional, face-to-face-only manner. After participating on the posttest speaking test, these participants attended the class for face-to-face instructions. In the classroom, they were taught how to use grammatical points like *past* and *future tense* and were assigned homework to do at home. These participants were, then, required to take part in a posttest speaking test to see if there was any progress at all. The results gained from the pretest and the posttest were statistically compared to provide answers to the research questions of the present study. Comparing scores were done through evaluating the scores that the students got for each factor (i.e., CAF) on their pretest and posttest.

3.4. Data Analysis

The following statistical procedures were performed on the data to answer the questions presented in the current study:

1) To test the assumption of normality, the Kolmogorov-Smirnov test was done on the pretest and posttest scores of control and experimental groups. Besides, prior to conducting one-way ANCOVA, the assumptions of linearity and homogeneity of regression slopes were checked (see section 4.1 below).
2) Pearson correlation coefficient: To check for the interrater reliability at the time of the pretest and the posttest, a Pearson correlation coefficient formula was used.
3) To see whether any progress was made in the control and experimental groups, one-way ANCOVA was run to compare the pretest scores with posttest ones. This statistical test was conducted inasmuch as it takes into account any potential pre-existing disparity between the two groups, makes adjustments accordingly, and then conduct the follow-up analysis.

Calculations for the above formulae were done by Statistical Package for the Social Sciences (SPSS, version 25), and any necessary processed data or the figures are presented to better illuminate and describe the research findings. Hopefully, these statistical analyses provide adequate answers to the research questions developed herein.

4. Results and Discussion

4.1. Results

Before conducting one-way ANCOVA, the underlying assumptions had to be tested. One such assumption was the assumption of normality. To test this assumption, the Kolmogorov-Smirnov test was done on the pretest and posttest scores of both participants in the flipped classroom (i.e., experimental) and the traditional one (i.e., control). The results of this test are presented in Table 2.

In Table 2, the values under the *Sig.* column of the Kolmogorov-Smirnov test should be examined. Because all the *p* values lined up under this column were larger than .05, it could be concluded that the CAF scores in both instances (i.e., posttest and pretest) for both groups (i.e., experimental and control) formed normal distributions. Furthermore, in order to conduct one-way ANCOVA, the assumptions of linearity and homogeneity of regression slopes had to be checked. To this end, further analyses were carried out, and through line graphs, it was found that the assumption of linearity was not violated for all the three variables of CAF; the *p* values for interaction effects between the independent variable and CAF were, respectively, .15, .36, and .99

($p > .05$), which indicate that the homogeneity of regression slopes' assumption can be assumed. Now that all these assumptions were met, it is possible to proceed with the one-way ANCOVA test.

Table 2

Kolmogorov-Smirnov Test Results for Pretest and Posttest Scores of Experimental and Control Groups

Groups		Kolmogorov-Smirnov			Shapiro-Wilk		
		Statistic	*df*	*Sig.*	Statistic	*df*	*Sig.*
Experimental	Complexity Pretest	.10	20	.20	.94	20	.22
	Complexity Posttest	.11	20	.20	.93	20	.23
	Accuracy Pretest	.11	20	.20	.94	20	.34
	Accuracy Posttest	.11	20	.20	.92	20	.10
	Fluency Pretest	.15	20	.20	.97	20	.76
	Fluency Posttest	.17	20	.10	.92	20	.13
Control	Complexity Pretest	.13	20	.19	.96	20	.62
	Complexity Posttest	.14	20	.18	.98	20	.76
	Accuracy Pretest	.14	20	.20	.93	20	.19
	Accuracy Posttest	.15	20	.20	.90	20	.06
	Fluency Pretest	.13	20	.20	.94	20	.34
	Fluency Posttest	.13	20	.20	.95	20	.43

4.1.1. Effects of Flipped Learning on Complexity

One of the objectives of the study was to figure out whether flipped learning could bring about a significant difference in the complexity of Iranian EFL learners' production. To this end, we had to compare the complexity post-test scores of the experimental and control groups plus control for any possible prior disparity between them on their complexity pretest scores. As such, a one-way ANCOVA was carried out:

Table 3

Descriptive Statistics for Comparing Complexity Post-test Scores of Experimental and Control Groups

Groups	Mean	Std. Deviation	*N*
Experimental	1.02	.04	20
Control	1.04	.06	20
Total	1.03	.05	40

As seen in Table 3, it is clear that the mean of complexity post-test of the experimental group participants (M = 1.02) was smaller than the complexity post-test mean score of the control group participants (M = 1.04). To see whether this difference can be considered significant, we examined the values under the *Sig.* column and in front of the Groups row.

As evident in Table 4, the p value is larger than the alpha level of significance (.63 > .05), showing a lack of significant difference between the experimental (M = 1.02) and control (M = 1.04) group on the complexity post-test. Thus, it can be concluded that the outcomes of flipped learning were not notably different from traditional instruction when it comes to the complexity of the participants' linguistic productions.

Table 4

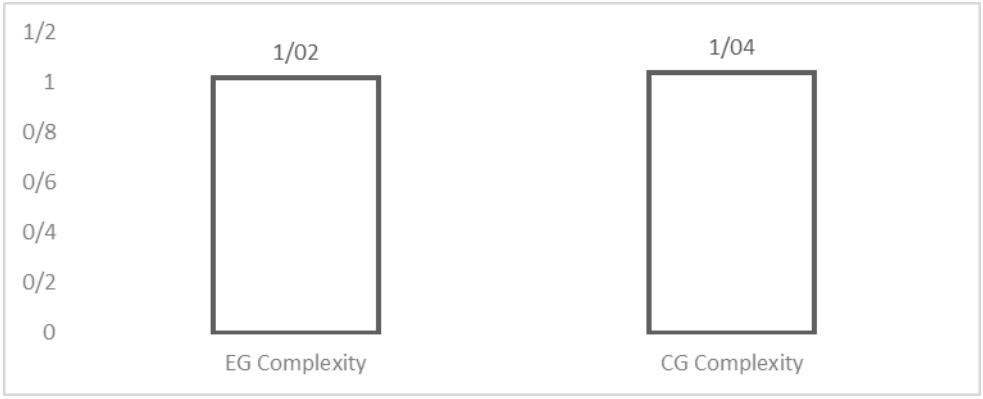
Results of One-Way ANCOVA for Comparing Complexity Post-test Scores of Experimental and Control Groups

Source	Type III Sum of Squares	*df*	Mean Square	*F*	*Sig.*	Partial Eta Squared
Corrected Model	.003	2	.001	.36	.69	.01
Intercept	.16	1	.16	45.78	.00	.55
Pretest	.001	1	.001	.31	.57	.009
Groups	.001	1	.001	.23	.63	.006
Error	.13	37	.004			
Total	42.94	40				
Corrected Total	.13	39				

Figure 4 illustrates this lack of difference between the complexity post-test scores of the experimental and control groups:

Figure 4

Complexity Post-test Mean Scores of Experimental and Control Groups



It is evident that the difference between the complexity post-test scores of the experimental and control groups was not statistically significant, leading us to the conclusion that the flipped learning and the traditional instruction were both equally effective.

4.1.2. Effects of Flipped Learning on Accuracy

One of the objectives of the study was to compare the experimental and control groups regarding their accuracy posttest scores to see if the treatment (i.e., flipped learning) could affect the accuracy of the experimental group participants or not. To meet this aim, we compared the accuracy post-test scores of the experimental and control groups using a test of one-way ANCOVA, the results of which are shown in Tables 5 and 6:

Table 5

Descriptive Statistics for Comparing Accuracy Post-test Scores of Experimental and Control Groups

Groups	Mean	Std. Deviation	*N*
Experimental	.68	.13	20
Control	.71	.13	20
Total	.70	.13	40

Table 5 indicates that the accuracy posttest mean score of the experimental group (M = .68) was lower than that of the control group (M = .71). To see if the difference between these groups was of any statistical significance, we had to refer to the p value in the following table:

Table 6

Results of One-Way ANCOVA for Comparing Accuracy Post-test Scores of Experimental and Control Groups

Source	Type III Sum of Squares	*df*	Mean Square	*F*	*Sig.*	Partial Eta Squared
Corrected Model	.19	2	.09	7.02	.003	.27
Intercept	.46	1	.46	33.10	.00	.47
Pretest	.19	1	.19	13.53	.001	.26
Groups	.01	1	.01	.73	.390	.01
Error	.52	37	.01			
Total	20.43	40				
Corrected Total	.72	39				

As indicated in Table 6, the *p* value in the row labeled Groups under the *Sig.* column was found to be greater than the alpha level of significance (.39 > .05), leading us to the conclusion that the difference between the accuracy post-test scores of the two groups of experimental (M = .68) and control (M = .71) failed to reach statistical significance. This would mean that there was not a significant difference between the effects of the flipped learning and the traditional instruction as far as the accuracy of participants' linguistic productions was concerned. As seen in Figure 5, the lack of a significant difference between the accuracy post-test scores of the experimental and control groups is apparent.

Figure 5

Accuracy Post-test Mean Scores of Experimental and Control Groups

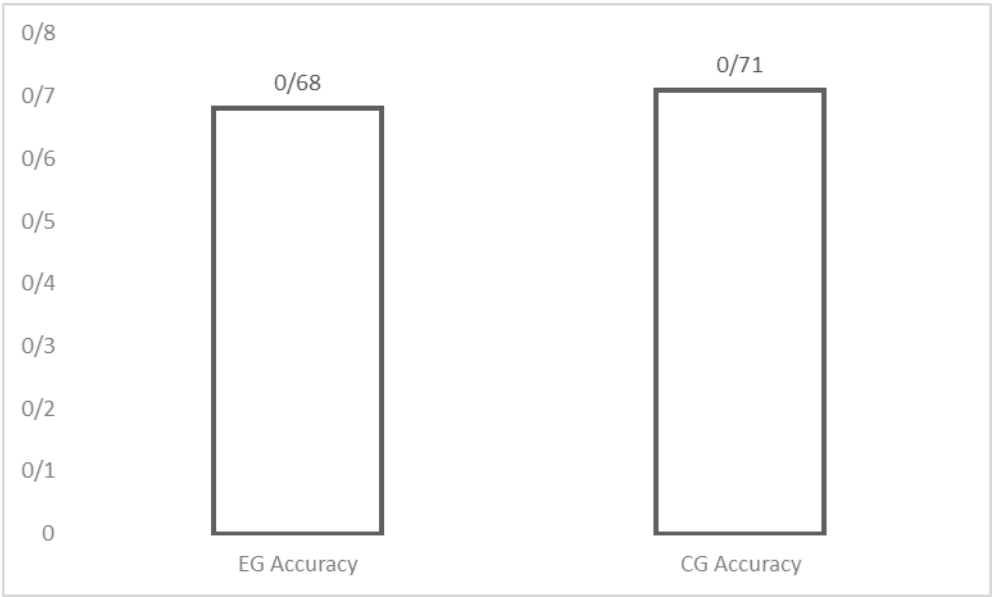


Figure 5 shows that this between-group difference was very small and negligible, bringing about the conclusion that the flipped learning and the traditional instruction did not differ significantly with regards to their effects on the participants' accuracy.

4.1.3. Effects of Flipped Learning on Fluency

The current study also intended to compare these two groups regarding their fluency posttest scores to determine whether the flipped learning could bring about improvements in the accuracy of the experimental group participants. In order to conduct the between-group comparison a one-way ANCOVA was utilized (see Table 7):

Table 7

Descriptive Statistics for Comparing Fluency Post-test Scores of Experimental and Control Groups

Groups	Mean	Std. Deviation	*N*
Experimental	1.42	.25	20
Control	1.34	.34	20
Total	1.38	.30	40

As illustrated in Table 7, the fluency post-test mean score of the experimental group (M = 1.42) outweighed that of the participants in the control group (M = 1.34), but to find out if the between-group difference in regard to their mean scores was a statistically significant one, we had to examine the p value in Table 8:

Table 8

Results of One-Way ANCOVA for Comparing Fluency Post-test Scores of Experimental and Control Groups

Source	Type III Sum of Squares	*df*	Mean Square	*F*	*Sig.*	Partial Eta Squared
Corrected Model	1.75	2	.87	18.02	.00	.49
Intercept	.38	1	.38	7.91	.00	.17
Pretest	1.68	1	1.68	34.69	.00	.48
Groups	.00	1	.00	.17	.67	.005
Error	1.80	37	.04			
Total	79.78	40				
Corrected Total	3.55	39				

Table 8 shows that there was no significant groups effect on the participants' mean score, F (1, 37) = 0.17, $p = 0.67$, $p < 0.05$. This indicates that the difference between the fluency post-test scores of the experimental group (M = 1.42) and the control group (M = 1.37) was not of statistical significance. In other words, the flipped learning and the traditional instruction were not significantly different from one another, as far as the

fluency of the participants' linguistic productions was concerned. The approximate similarity of the two groups on the accuracy post-test is graphically shown in Figure 6.

Figure 6

Fluency Post-test Mean Scores of Experimental and Control Groups

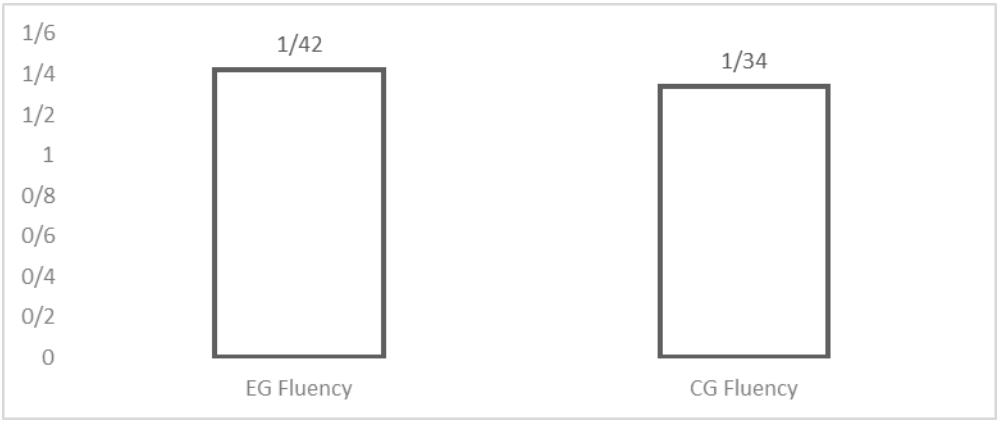


Figure 6 displays that the difference between the fluency scores on the post-test of the both groups (experimental and control) was so small that it could be overlooked; thus, we can conclude that the flipped learning and the traditional instruction had an almost equal effect on the participants' fluency scores.

4.1.4. EFL Learners' Attitudes towards Flipped Learning

To investigate the experimental group participants' attitudes towards the flipped learning, a 10-item Likert-scale attitude questionnaire, adopted from Farrah and Qawasmeh's (2018) study, was given to this group. The results of the questionnaire were codified and tabulated, as shown in Table 9.

In the questionnaire shown in Table 9, most items (except for items # 6, 8, and 10) within the questionnaire had a mean score of 3.00 and above. Considering that this value (3.00) is associated with *No Opinion*, the middle point between *Strongly Disagree and Strongly Agree*, it can be interpreted that the experimental groups' participants had a mostly positive evaluation of the flipped classroom. This is further approved by the fact that two out three items, with a mean score of lower than 3.00 (meaning that the students tended to value them as *Strongly Disagree*), were negative comments regarding the flipped teaching. The highest mean scores in Table 9 belonged to items # 2 (M = 4.20), # 4 (M = 3.55), and # 7 (M = 3.45), through which the participants expressed that (a) the flipped classrooms made it possible for them to easily access the learning materials at any time, (b) the flipped learning created more communication opportunities for them while they were

in class, and (c) the flipped classroom reduced the number of frustrating sessions.

Table 9

Results of the Attitude Questionnaire

No.	Statements	*Strongly Agree*	*Agree*	*No Opinion*	*Disagree*	*Strongly Disagree*	Mean
1	The flipped classroom supports students in becoming self-directed learners.	2	8	5	4	1	3.30
2	The flipped classroom allows students to have access to the lectures at any time easily.	7	11	1	1	0	4.20
3	The flipped classroom helps students to ask questions and get immediate targeted answers to difficult concepts.	3	5	6	5	1	3.20
4	The flipped classroom gives students more opportunities to communicate with each other.	5	8	2	3	2	3.55
5	Teachers are available for more one-on-one interaction with students in a flipped classroom.	4	7	1	5	3	3.20
6	Students would not recommend the flipped classroom to their friends.	3	4	2	4	7	2.60
7	The flipped classroom reduces the amount of frustrating sessions.	6	7	1	2	4	3.45
8	The flipped classroom allows students have more time for family, friends, play, and extra-curricular activities.	2	8	2	3	5	2.95
9	Students would rather watch a traditional teacher lead lesson than a lesson video.	5	6	1	6	2	3.30
10	The flipped classroom has not improved students' learning of English.	2	3	4	3	8	2.40

For those questionnaire items with mean scores lower than 3.00, it was revealed that the experimental group participants disagreed with items # 6 (M = 2.95), 8 (M = 2.95), and 10 (M = 2.40), which, respectively, stated that (a) they would not recommend flipped learning to their friends, (b) flipped teaching allow for more time to spend with family, friends, and for extracurricular activities, and (c) flipped teaching has not improved the students' English. In fact, through items # 6 and 10, the experimental group participants disagreed with two negative comments about the flipped learning and, thus, approved of the treatment they received in this experiment.

4.2. Discussion

This study could not find a relationship between the learners' oral CAF and the flipped model of teaching. This can be due to the limitations of the current study, namely limited sample size and lack of knowledge to use technology. The null hypothesis, which reads "flipped language teaching

does not affect significantly L2 learners' complexity, accuracy, and fluency (CAF)" cannot be rejected. To answer the second question, that is, "what are the perceptions of students towards flipped teaching?" Farrah and Qawasmeh's (2018) questionnaires were used. The findings obtained from the questionnaires suggest that the flipped model has a great efficiency. A large number of the participants were satisfied with this model and maintained that flipped teaching was more constructive in helping them reduce their stress. The findings from the questionnaires also suggested that the learners mentioned that the positive point about this method was the access that they had during the period of the classes which helped them improve their performance in the classroom; this way, they had a lot of time to spend on lessons and practice them without the presence of teacher at home.

The findings for the first research question significantly differed from most previous results reported in the literature (e.g., Harris, 2016; Stone, 2012) that have shown that flipped teaching had a great effect on the participants' achievement rather than conventional classes. Meanwhile, the results of the second research question, mentioned in the section 4.6, are compatible with previous studies (e.g., Al-Zahrani, 2015; Harris, 2016; Hung, 2015; Talley & Scherer, 2013) due to a positive attitude toward flipping the classroom and participating in classes just for the sake of solving problems.

The present study partly diverged from the literature in that the findings did not support the assumption that the participants who were taught using flipped teaching method outperform those that were in the conventional classes. The results of the first part are incompatible with those of Harris's (2016) that observed a significant difference between those who had participated in the flipped classroom and those who had participated in the traditional classes. It was indicated that the score of the participants in the treatment group was about 4% and 14% points higher than the participants in the conventional classes. Also, he concluded that the flipped teaching could be partially helpful in the process of teaching.

Additionally, Bhagat et al. (2016) conducted a research in the field of mathematics. Like other studies in the literature, the researchers aimed to figure out which group outperformed the other one. This research was conducted through a pretest/posttest, quasi-experimental design. A number of 82 learners participated in this research, though almost near half of the participants were used in this study. The results revealed that the participants of the flipped classroom outperformed the participants in the nonflipped classroom, and this model impressed the participants positively the way it was in our current study.

Added to the above, Talley and Scherer (2013) carried out a research in a Physiological Psychology course. The results lend partial support to the findings of the present study. The results suggested that the participants in the flipped group had performed significantly better than those in the traditional class. One part of the results that is in accord with the results of the current study is the participants' positive attitudes toward flipping the classroom. Surprisingly, only 4.4% of the participants expressed their dissatisfaction with this type of class.

The findings of the present study are also in accord with the findings of the study by Marlowe (2012). In Marlower's study, the number of the participants was nearly the same as the present study (around 19 students participated in this experiment). During their formative tests, they had made a great improvement and, after the second formative test, he found out that their stress level had decreased dramatically. Although a substantial improvement was observed during their formative tests, their summative test scores did not reveal any significant enhancement. Moreover, his conclusions about the participants' satisfaction are in harmony with the current study. It was reported that the participants were satisfied with this treatment and they had been under less stress.

To this end, what would draw attention in relation to this study is that the limited sample size, time, sessions, and materials may skew the results. What is more, the findings from the questionnaires indicate that the flipped model had a great impression on the participants and they were more willing to participate in these types of classes.

5. Conclusions and Implications

The present study was an attempt to see whether the effectiveness of the flipped teaching on L2 participants' oral CAF and their self-efficacy, motivation, autonomy, engagement, and self-confidence is empirically supported.

Based on the findings, it can be concluded that the flipped teaching did not have any positive effect in terms of promoting the participants' oral CAF compared to the traditional classroom. Like previous studies, the present study revealed the participants' preference and positive attitudes toward this method, and they agreed that their ability to learn English had improved and they could cooperate more efficiently with other participants as the result of flipping. What is more, the participants believed that they could easily access the lectures and information whenever they wanted. More significantly, the flipped teaching reduced the number of frustrating sessions, and the participants were not afraid of committing mistakes as they had much practice at home and reviewed the lectures for several times. Though these

two groups did not differ too much in their results and the participants' improvement in oral CAF, the most crucial difference would be the participants' stress which was at the lowest point in flipping. Considering these findings, we can reason that, in spite of the limited time, sessions, materials, and lack of desired sample size, the flipped teaching, compared to the conventional classes, could attract most participants' attention, and also the learners tended to have positive attitude toward it. The findings of this study may have provided support for the contention that the flipped teaching has a promising future.

Like other studies, this research has its own theoretical implications, which are going to be discussed in this section. According to Vygotsky (1978), knowledge is socially constructed and humans learn new concepts through communication in society and asking others for help. In addition, this study was concerned with the notion of *priming* (Hamdan et al., 2013), which means that by priming the memory, L2 learners learn better when they are prepared to attend the class. Being well-prepared helps L2 students boost their self-confidence as well as their self-efficacy. As it is obvious from the results of the questionnaire, the findings are in line with the tenets of the blended learning. Being independent of the teacher gives L2 learners a sense of learning autonomously and learning at any time they want via technology, and there is no obligation to attend the class at a specific time to listen to lectures.

In the end, implications were derived from the findings of this study regarding the impact of the flipped teaching model on the boosting of L2 learners' self-efficacy, motivation, autonomy, engagement, and self-confidence, which are crucial factors for learning and L2.

Although some limitations were inevitable, several attempts were made to eliminate some of the design, measurement, and analytical flaws. Knowing these flaws and limitations are necessary to be taken into account for future research. Like any other study, this research has its own flaws and limitations which will be discussed in this section.

Selecting 40 participants with a homogenous background is a kind of limitation, as a small sample size cannot produce a favorable result. As far as this study is concerned, intermediate and lower-intermediate participants were needed to implement the research design thoroughly. The participants at this level were not confident enough to take the OPT, especially resisted to be interviewed, and were not willing to have their voice recorded. One more prominent limitation of this study is that it was difficult for lower-intermediate participants to study on their own in the flipping classrooms, as they need more help while learning new concepts and they are not yet independent in the process of learning.

Selecting the participants through a multiple-choice test may not be a good idea to measure their performance because the ability to perform in a multiple-choice test is different from the speaking skill. Some may have a good talent in written tests, though their performance in speaking is not good enough. To overcome this problem, a suitable interview should be designed.

Moreover, these data were based on monologue speech samples that did not give a clear idea of the real communicative ability of the participants. Communicating in a monologue situation could be another limitation, as it is a difficult task for lower-intermediate participants to talk continuously for 2 min.

In addition, finding participants at the same age was burdensome for the researchers. In this research, most participants were around 20 to 30, which is considered a limitation, as the volunteers and people who had the required specifications were not enough to choose an adequately large sample from.

The last limitation is a lack of knowledge regarding working with new technology and having few facilities to participate in online classes. Still, some participants did not get used to using online facilities and some did not have proper access to the Internet. Having access to low-speed Internet might prohibit the participants from learning or makes the process boring to them.

Future studies with the same design might include more participants for a better understanding of whether or not the flipped teaching enormously affects the oral CAF of L2 learners.

As this study was not successful in finding a significant relation between flipping the classroom and EFL learners' oral CAF, to some extent, this can be attributed to the small sample size; thus, future studies require bigger sample size. Additionally, this study did not investigate the effect of the flipped teaching on different genders. It is suggested that future researchers limit the age of participants to find out for what age group this particular method would yield the best possible outcome.

References

Ahmed, M. (2016). The effect of a flipping classroom on writing skill in English as a foreign language and students' attitude towards flipping. *US-China Foreign Language*, *14*(2), 98-114.

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.

Baker, J. W. (2000). *The classroom flip: Using Web course management tools to become the guide by the side.* In the 11th International Conference on College Teaching and Learning, Cedarville, Communication Faculty Publications.

Benson, P. (2011). *Teaching and researching: Autonomy in language learning.* Routledge.

Bergman, J., & Sams, A. (2012). *Flip your classroom: Reach every student in every class every day.* International Society for Technology Education.

Bernard, R. M., Borokhovski, E., Schmid, R. F., Tamim, R. M., & Abrami, A. C. (2014). A meta-analysis of blended learning and technology use in higher education: From the general to the applied. *Journal of Computing in Higher Education*, *26*(1), 87-122.

Bhagat, K. K., Chang, C.-N., & Chang, C.-Y. (2016). The impact of the flipped classroom on mathematics concept learning in high school. *Journal of Educational Technology & Society, 19*(3), 134-142.

Bishop, J. L., & Verleger, M. A. (2013). The flipped classroom: A survey of the research. In *ASEE National Conference Proceedings*, *30*(9), 1-18.

Bloom, B. S. (1956). *Taxonomy of educational objectives.* McKay.

Blumenfeld, P. C., Soloway, E., Marx, R. W., Krajcik, J. S., Guzdial, M., & Palincsar, A. (1991). Motivating project-based learning: Sustaining the doing, supporting the learning. *Educational Psychologist*, *26*(3-4), 369-398.

Bonk, C. J., & Graham, C. R. (2012). *The handbook of blended learning: Global perspectives, local designs.* Pfeiffer Publishing.

Crouch, C. H., Jessica, W., Fagen, A. P., & Mazur, E. (2007). Peer instruction: Engaging students one-on-one, all at once. *Peer Research-Based Reform of University Physics, 1*(1), 40-95.

Danker, B. (2015). Using flipped classroom approach to explore deep learning in large classrooms. *IAFOR Journal of Education, 3*(1), 171-186.

Findlay-Thompson, S., & Mombourquette, P. (2014). Evaluation of a flipped classroom in an undergraduate business course. *Business Education & Accreditation, 6*(1), 63-71.

Garrison, R. D., & Kanuka, H. (2004). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education, 7*(2), 95-105.

Halverson, L. R., Graham, C. R., Spring, K. J., & Drysdale, J. S. (2012). An analysis of high impact scholarship and publication trends in blended learning. *Distance Education, 33*(3), 381-413.

Hamdan, N., McKnight, P., McKnight, K., & Arfstrom, K. M. (2013). *The flipped learning model: A white paper based on the literature review titled a review of flipped learning.* Flipped Learning Network/Pearson/George Mason University.

Han, Y. J. (2015). Successfully flipping the ESL classroom for learner autonomy. *NYS TESOL Journal, 2*(1), 98-109.

Harris, J. C. (2016). Flipping the undergraduate economics classroom: Using online videos to enhance teaching and learning. *Southern Economic Journal, 83*(1), 31-331.

Höst, A. K. (2011). *Stray: Touchstone: Part 1.* Cambridge University Press.

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

Jinlei, Z., Ying, W., & Baohui, Z. (2012). Introducing a new teaching model: Flipped classroom. *Journal of Distance Education, 4*(8), 46-51.

Johnson, G. B. (2013). *Student perceptions of the flipped classroom.* University of British Columbia.

King, A. (1993). From sage on the stage to guide on the side. *College Teaching, 41*(1), 30-35.

Köse, U. (2010). A blended learning model supported with Web 2.0 technologies. *Procedia ─ Social and Behavioral Sciences, 2*(2), 2794-2802.

Marlowe, C. A. (2012). *The effect of the flipped classroom on student achievement and stress.* Unpublished master's thesis, Montana State University, Bozeman, Montana, United States.

Mayer, R. E. (1984). Aids to text comprehension. *Educational Psychologist, 19*(1), 30-42.

Mazur, E. (1997). *Peer insttruction: Getting students to think in class.* In AIP Conference Proceedings. Harvard University, Cambridge, Massachusetts.

Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2010). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies.* Center for Technology in Learning, U.S. Department of Education.

Neumeier, P. (2005). A closer look at blended learning—Parameters for designing a blended learning environment for language teaching and learning. *ReCALL, 46*(6), 163-178.

Ortega, L. (1999). Planning and focus on form in L2 oral performance. *Studies in Second Language Acquisition, 21*(1), 109-148.

Ouzts, D. T., & Palombo, M. J. (2004). Technology in higher education: A study of perceptions of college professors. *TechTrends: Linking Research and Practice to Improve Learning, 48*(5), 19-24.

Palfrey, J., & Gasser, U. (2011). *Born digital: Understanding the first generation of digital natives.* New York: Basic Books.

Piaget, J. (1967). Language and thought from the genetic point of view. In D. Elkind (Ed.), *Six psychological studies* (pp.143-158). Random House.

Prensky, M. (2001). Digital natives, digital immigrants (part 1). *On the Horizon, 9*(5), 1-6.

Reidsema, C., Kavanagh, L., Hadgraft, R., & Smith, N. (Eds.). (2017). *The flipped classroom: Practice and practices in higher education.* Springer.

Roach, T. (2014). Student perceptions toward flipped learning: New methods to increase interaction and active learning in economics. *International Review of Economics Education, 17*, 74-84.

Roehl, A., Reddy, S. L., & Shannon, G. J. (2013). The flipped classroom: An opportunity To Engage millennial students through active learning. *Journal of Family and Consumer Sciences, 105*(2) 44-49.

Simon, B., & Cutts, Q. I (2012). Peer instruction: A teaching method to foster deep understanding. *Communications of the ACM, 55*(2), 27-29.

Skehan, P., & Foster, P. (2005). Strategic and online planning: The influence of surprise information and task time on second language performance. In R. Ellis (Ed.), *Planning and task performance in a second language* (pp. 193-216). Benjamins.

Stahl, G., Koschmann, T. D., & Suthers, D. D. (2006). Computer-supported collaborative learning: An historical perspective. In R. K. Sawyer (Ed.), *Cambridge handbook of the learning sciences* (pp. 409-426). Cambridge University Press.

Staker, H., & Horn, M. B. (2012). *Classifying K-12 blended learning.* Innosight Institute.

Stone, B. B. (2012). *Flip your classroom to increase active learning and student engagement.* In proceedings from the 28th Annual Conference on Distance Teaching & Learning, Madison.

Talley, C. P., & Scherer, S. (2013). The enhanced flipped classroom: Increasing academic performance with student-recorded lectures and practice testing in a "flipped" STEM course. *The Journal of Negro Education, 82*(3), 339-347.

Vygotsky, L. S. (1978). *Mind in society: The development of higher-order psychological.* Harvard University Press.

Wu, W. C. V., Hsieh, J. S. C., & Yang, J. C. (2017). Creating an online learning community in a flipped classroom to enhance EFL learners' oral proficiency. *Journal of Educational Technology & Society*, *20*(2), 142-157.

Appendixes

Appendix 1

First Speaking Assessment Task:
An Open-Ended Question for Speaking Task at Pretest Time

Task 1:
Part 1:
Describe your plans for next year.
You should say:
What is it?
When you want to do it?
How you want to achieve it?
Part 2:
Describe one of your childhood memories.
What is it?
When it happened?
How did it affect you in life?

Appendix 2

Second Speaking Assessment Task:
An Open-Ended Question for Speaking Task at Posttest Time

Task 2:
Part 1:
Describe what you want to do in the future.
You should say:
What is it?
When you want to do it?
How do you want to achieve it?
Part 2:
Describe a journey you went on.
You should say:
Where did you go on your journey?
Why did you get to this particular place?
What did you do and with whom?

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