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STUDENT LEARNING, CHILDHOOD & VOICES | RESEARCH ARTICLE

Effects of flipped instruction on Iranian intermediate EFL learners' speaking complexity, accuracy, and fluency

Arash Hashemifardnia¹, Sajad Shafiee^{1*}, Fariba Rahimi Esfahani¹ and Mehrdad Sepehri¹

Abstract: This study examined the effects of using flipped instruction on Iranian EFL learners' speaking complexity, accuracy, and fluency (CAF). To fulfill this objective, the Oxford Quick Placement Test (OQPT) was administered to 96 Iranian EFL learners and 60 of them who were at the intermediate level were selected as the target participants of this study. Then, the selected participants were divided into two groups of experimental ($n = 30$) and control ($n = 30$). After that, the participants of both groups were given a speaking pre-test. Subsequently, the experimental group received the instruction through flipped instruction while the control group was instructed in a traditional classroom. After the treatment, a questionnaire related to the learners' attitudes towards using flipped instruction was distributed among the participants of the experimental group to investigate their ideas about using flipped instruction. The findings of Independent Samples T-test and Paired Samples T-test revealed that there was a significant difference between the post-tests of the experimental and the control groups in the favor of the experimental group. In fact, the results indicated that the experimental group significantly outperformed the control group on the post-test



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A PUBLIC INTEREST STATEMENT

Based on the researchers' best knowledge, English teaching and learning in Iran is accompanied by some challenges especially when learners try to improve their speaking skill. The other problem that is frequently touched is that using e-learning in Iranian EFL contexts is not common as only very few universities support e-learning in Iranian language learning contexts. Due to the high cost of electronic tools, lack of accessibility and availability of the Internet in Iranian contexts, and lack of skilled teachers, distance-learning or e-learning environments cannot be established in Iran generally. MOOC-based and flipped instructions as two kinds of e-learning are unknown teaching modes in Iran and most English classes are held in a face-to-face environment rather than through on-line instruction. Regarding the lack of attention to these new instructions in the Iranian EFL context, this study aimed to investigate the effects of these teaching modes on Iranian EFL learners' speaking CAF. The results revealed the positive impacts of both MOOC-based and flipped instructions.

. Moreover, the findings of One-Sample T-Test showed that Iranian EFL learners had positive attitudes towards using flipped instruction for speaking classes. The findings of this study can encourage English teachers to use flipped instruction in their classes to reach better learning results. In addition, this study may enrich the related literature by encouraging researchers to pay more attention to the impacts of the flipped instruction on developing EFL and ESL learners' speaking skill.

Subjects: Computing & IT Security; CAD CAE CAM - Computing & Information Technology; Information & Communication Technology; ICT; Language& Linguistics; Language Teaching & Learning

Keywords: CALL; flipped instruction; speaking; complexity; accuracy; fluency

1. Introduction

Recent technological developments have been enormously influential in enhancing different fields of study (Kalogiannakis & Papadakis, 2019). Among such developments are computers which are used in general education particularly in language learning, giving rise to the term "Computer-Assisted Language Learning" (CALL) (Vahdat & Eidipour, 2016). CALL is a language learning and teaching approach in which the computers are applied as an instrument for presentation, assisting students, evaluating materials, and having interactional functions (Jafarian & Soori, 2012). Richards and Schmidt (2010) defined CALL as "The use of a computer in the teaching or learning of a second or foreign language" (p. 110). CALL is a medium to facilitate language learning that challenges traditional methods of teaching and learning (Khoshsima & Mozakka, 2017). It can provide teachers with individualized instructions allowing students to work at their own pace (Nachoua, 2012). Moreover, it can increase language interactions between teachers and learners (Tatiana Dina & Ciornei, 2013).

One mode of CALL is flipped instruction which is referred to a "pedagogical concept that replaces the standard lecture-in-class format with an opportunity to find out concepts as well as to review materials from outside of class" (Embi, 2014, p. 198). Flipped instruction is "a pedagogical model in which classwork and homework are reversed" (Merrill, 2015, p. 16). According to Merrill, "instruction delivery takes place outside of the classroom, most often via video obtained from Internet resources" (p. 16). AlJaser (2017) defined flipped instruction as a student-centered educational learning model that "aims at replacing the traditional lecture by active cooperative tasks using internet and computer technology to transmit a video lecture to be watched at home; and then students discuss it through some pair activities" (p. 69).

Although using flipped instruction in the COVID-19 period can be a good alternative for face-to-face instruction, it is not common in the Iranian educational system. Both teachers and students are accustomed to face-to-face teaching/learning methods. Besides, the speed of the Internet is low in some areas especially in villages which makes online teaching difficult. In addition, English classrooms bear a number of limitations including incompetent teachers, insufficient time, sources, and materials, lack of technology, and anxiety in the learning environment. Regarding the mentioned problems, this study focused on the effectiveness of using the flipped instruction on teaching speaking CAF to Iranian EFL learners.

2. Review of the literature

Flipped classrooms have become remarkably common in instructional settings and they more widely used by teachers over the past several years (Moranski & Kim, 2016). Bishop and Verleger (2013) believe that a flipped classroom is a student-centered learning system consisted of two sections of interactive learning experiences during classes, as well as separate teaching bases that are specifically dependent on computers. The flipped classroom teaching method is defined as one in which the activities traditionally carried out by students outside class context are moved into the classroom session, whereas what is traditionally conducted in class is done outside and prior to

class (Lag & Grom Sale, 2019). According to Jenkins (2012), there are many things to praise about the flipped classroom; for example, students can approach materials and take them in at their own speed. By covering lecture materials at home and from a video-based platform, they can privately view the materials. This permits them to approach materials without the worry of peers noticing them moving slower or faster. Students can stop, pause, rewind, and fast forward materials so that they can examine things in their own way (Ch. & Pratama, 2016).

Flipped classrooms can be regarded as a model of student-centered learning (Williams, Horner, & Allen), as they are accountable for working autonomously by flipped materials facilitated by teachers and increasing greater participation in discussion and research activities in the classroom. In this way, the students gain a greater role and responsibility in their own learning process (Hill et al., 2009). This structure permits spending time in the classroom to clarify content by small explanations (Touron & Santiago, 2015). The activities that persuade more active participation of the students including the resolution of problems or cases, and that permit the students to get more involved in the learning process have a positive effect on the process of learning (Kazanidis et al., 2019) because students reach a higher degree of understanding than in more passive methodologies.

Although flipped classroom has several advantages, it has its own disadvantages. For example, Hertz (2012) mentioned some drawbacks for the flipped classroom such as computer access after-hours for all students. Spending long hours in front of a screen every night watching the required videos when teachers flip their classes is not 100% effective because not everyone learns best through watching videos. The other problem refers to teachers' computer literacy; as Johnson (2013) stated that instructors creating and operating flipped classes must have a certain level of computer literacy to be successful in its design, implementation, and operation. Johnson (2013) added that instructors who are not used to using technology regularly may struggle to participate effectively.

Lack of instructor contact can be the other problem of the flipped classroom, Fulton (2013) said that students learn more effectively in a classroom environment since they can ask direct questions to their teachers and peers, while this capability is absent in the flipped classroom. The other drawback of the flipped classroom is that the elements of preparation, tests, and activity which should develop learning entail a larger workload on students (Lag & Grom Sale, 2019). This may cause dissatisfaction among students (Centra, 2003). Based on Wallace (2014), the other weakness of the flipped classroom is that the students who have an aversion to technology may find the flipped instruction usefulness and demotivating.

To prove the effectiveness of using the flipped classrooms on improving English as a foreign/second language, several studies were conducted. Hsieh et al. (2016) and Mohammadi et al. (2019) examined the effects of using flipped classrooms model on EFL learners' idiomatic knowledge and English achievement, respectively. The findings demonstrated that the flipped classrooms had a significant effect on the participants' idiomatic knowledge and their English achievement.

In another study, Karimi (2017) examined the impacts of using flipped model of instruction on EFL learners' reading comprehension ability and their attitudes toward flipped model of instruction. To this end, 50 EFL learners were selected as the subjects of this research and then they were assigned to experimental and control groups. After that, a researcher-made reading comprehension pretest was administered to the participants of both groups. Then, the experimental group was instructed through flipped model of instruction, while the control group was taught via conventional instruction. At the end of the study, the participants answered a questionnaire related to the flipped model of instruction. The outcomes of ANCOVA showed that the experimental (flipped) group outperformed the control group on the posttest. The results confirmed that participants presented favorable attitudes about flipped classroom instruction.

Yet, in another research, Hashemifardnia et al. (2018) examined the impacts of flipped classrooms on Iranian EFL learners' reading comprehension. To do their study, they chose 50

Iranian pre-intermediate learners and assigned them to two equal groups; one experimental group (flipped classroom) and one control group (traditional classroom). Then, the researchers gave a reading comprehension pretest to the both groups to determine their reading comprehension before applying the treatment. After that, the researchers put the experimental participants in a flipped classroom. The participants of the experimental group had access to the Internet, computer, and projector in the flipped classroom. The participants were asked to read each text before attending the class and practice it with their friends. On the other hand, the participants of the control group received a traditional instruction. Before starting to teach each text, the researchers catered background knowledge for the control group and after teaching each text, the participants were asked to answer some questions associated to the text. After finishing the treatment, the reading comprehension post-test was given to the participants of both groups. The findings of research showed that the experimental group had a better performance than the control group on the post-test. In fact, the outcomes uncovered that the flipped classroom was an effective way to improve Iranian EFL learners' reading comprehension.

Farrah and Qawasmeh (2018) inspected the opinions of English students in Hebron University about the flipped classroom in academic years of 2017 and 2018. The researchers used both questionnaires and interviews to indicate the opinions of the participants about flipped classroom. To do this research, 150 pre-service teachers were selected and were required to respond to the questionnaire. Moreover, 10 pre-service teachers were selected to respond to the interviews. The final findings revealed that the flipped classroom promoted more learners' autonomy and self-direction. In addition, the results revealed that the participants' attitude towards using the flipped classrooms was significantly positive.

In most studies reported above, the effectiveness of the flipped instruction was examined on reading comprehension and idiomatic knowledge rather than on speaking skill. Few studies in Iran context was done on the effectiveness of flipped instruction on developing speaking skill. In addition, most studies mentioned above neglected the attitudes of the participants, therefore, this research aimed to examine the attitudes of Iranian EFL learners towards the flipped instruction. Moreover, it intended to investigate the impacts of the flipped instruction on enhancing speaking skill of EFL learners.

Using e-learning in Iranian EFL contexts is not common as Mellati and Khademi (2018) stated that only very few universities support e-learning in Iranian language learning contexts. Flipped-based instruction as a kind of e-learning is a less-frequent used teaching mode in Iran and most English classes are held face-to-face rather than through online instruction. Regarding the lack of attention to the flipped-based instruction in the Iranian EFL context, this study aimed to investigate the effects of this teaching mode on Iranian EFL learners' speaking CAF. Accordingly, the following research questions were raised in this study:

RQ1. Does using flipped instruction have any significant effects on Iranian EFL learners' speaking CAF?

RQ2. What are Iranian EFL learners' attitudes towards using flipped instruction?

3. Method

3.1. Participants

To conduct the present study, 60 Iranian EFL learners were selected as the participants. The selected participants were at intermediate level and their age range was between 14 and 20 years old. Due to the gender segregation, the researchers selected only male students for their research participants. The participants were selected based on the convenience non-random sampling method. The first language of the participants was Persian. The researchers divided the participants into two equal groups of experimental (flipped instruction) and control.

3.2. Instruments

Three instruments including a speaking pre-test, a speaking post-test, and an attitude questionnaire were used in this study.

The first instrument used in this research for collecting the needed data was a researcher-made speaking pre-test. Several questions concerning the topics of the learners' textbook (i.e., *American Headway 3*) were included in the pre-test. The participants were asked to talk about each topic for 2 to 3 minutes and their speech was recorded for analysis by the first (the first researcher of the current study) and the second-raters (the second researcher of the current study). To assure the validity of the pre-test (which was held in the form of an interview), first, the topics were chosen from the topics which were covered in the participants' coursebook. Second, the topics/questions were given to a group of English experts to examine their suitability for use with the target participants. In addition, the reliability of the pre-test was checked by performing inter-rater reliability through Pearson correlation analysis ($r = .85$).

The second instrument of this research was the speaking post-test, topics of which were chosen from the textbook stated above. The same as the pre-test, the reliability of the post-test was calculated via inter-rater reliability utilizing Pearson correlation analysis ($r = .86$) and its validity was confirmed by a group of English experts.

The third instrument used in the present research was a questionnaire administered to the participants of the flipped group to explore their general attitudes towards using the flipped instruction. The questionnaire was designed by Farrah and Qawasmeh (2018) via using the literature review on the flipped classrooms. This questionnaire contained 20 items about the attitudes of the participants towards using the flipped classrooms. Likert scale was used in the mentioned questionnaire to indicate the degree of disagreement and agreement from 1–5 which were: strongly disagree, disagree, neutral, agree, and strongly agree. The reliability of this questionnaire was calculated by using Cronbach's alpha ($r = .82$). The validity of this questionnaire was confirmed by a panel of English experts.

3.3. Procedure

To carry out this research study, 60 intermediate participants were selected among 96 Iranian EFL learners based on administering the OQPT. The selected participants were then divided into two equal groups of 30; one experimental and one control. Then, the pre-test of speaking was administered to both groups to check their speaking level before starting the treatment. It should be noted that all instruments including the speaking pre-test and post-test and the attitude questionnaire were piloted on another group of students whose language proficiency, age, and gender were the same as the target participants to check the feasibility of the instruments that were used to collect the information from the target groups.

Regarding the treatment, the participants in the flipped classroom were sent the materials online and they were responsible for their own learning. They were required to study the materials both individually and in pairs before attending the face-to-face class. The materials were sent to the students through the WhatsApp application since they all had easy access to this application. It should be noted that two or three days before each face-to-face session, one conversation was sent to participants via the WhatsApp application. It is worth mentioning that both the audio file and the text of each conversation were sent to the students. The participants of the flipped group had the homework and the materials before attending the class. When the materials were presented in the group, some activities including brainstorming and questions /answers were also sent to the students. The flipped classroom was equipped with the Internet, computer, and projector, and the participants in this classroom were permitted to bring their Smartphones to the classroom in order to use them during face-to-face class.

In addition, the students were required to practice each conversation before coming into the class and discuss it with their classmates. In the flipped class, when the students attended the class, the teacher (the researcher) elicited some information related to the conversation from them. In addition, he asked them some questions and gave them a test. In addition, the researcher randomly selected some students to perform the conversation in front of the others. In fact, the teacher in the flipped class was a facilitator and a coordinator in the learning process. After the treatment which lasted 13 sessions, the flipped group was given a questionnaire to investigate their ideas on using the flipped classrooms.

On the other hand, the control group participants were taught in a traditional classroom that was not equipped with the Internet and the students were taught in the classroom. The researcher provided some information about each topic for the students and then he played the audio file of the conversation, and after teaching each conversation, the students were required to practice it with their partners and perform it in front of the class. This procedure continued till teaching 13 conversations to the students.

The whole treatment lasted 17 sessions of 50 minutes which in its first and second sessions, the OQPT and the speaking pre-test were administered, respectively. During 13 sessions, the treatment (teaching 13 conversations) was performed; in the 16th session, both experimental and control groups took the speaking post-test; in the last session, the attitude questionnaire was administered only to the experimental group.

3.4. Data analysis

In this paper, the CAF measure which was previously applied by a group of researchers (e.g., Ahmadian, 2011; Ahmadian & Tavakoli, 2011; & Yousefi, 2016) was utilized to measure the participants' speaking complexity, accuracy, and fluency. The model used by them is as follows:

4. Complexity measures

1. Syntactic complexity: the amount of subordination which is the ratio of AS (Analysis Speech) units to clauses. An AS unit is defined as an utterance consisting of an independent clause accompanied by any subordinate clause(s) associated with it (Foster et al. (2000).

2. Syntactic variety: the ratio of different grammatical verb forms used in language learners' performance. The grammatical verb forms taken for analysis in the present study were tense (e.g., simple present, present continuous, and present perfect) and modality (e.g., can, should, must, and may) (Yousefi, 2016).

3. Overall complexity: the mean length of AS-units in language learners' speech which was obtained by counting the mean number of words per AS-unit.

5. Accuracy measures

1. Error-free clauses: the ratio of error-free clauses, i.e., the number of the clauses that were not deviant from standard norms concerning to syntax, morphology, and/or lexicon (Yousefi, 2016).

2. Correct verb forms: the ratio of all verbs that are used correctly in terms of tense, aspect, modality, and subject-verb agreement.

6. Fluency measures

1. Rate A: the ratio of syllables produced per minute of oral performance; it is measured by counting the number of syllables within each narrative divided by the articulation time used to complete the task and multiplied by 60 (Yousefi, 2016).

2. Rate B: the ratio of meaningful syllables per minute of speech; it is measured by the use of the procedures used in Rate A, but all syllables, words, and phrases that are repeated, reformulated, or replaced should be excluded (Ahmadian & Tavakoli, 2011).

After measuring and scoring the participants' performances on the speaking pre and post-tests, the gathered data were analyzed by using SPSS software, version 22. Firstly, Independent Samples T-test and Paired Samples T-test were run to compare the pre-test and the post-test of the experimental and the control groups. Secondly, One-Sample T-Test was used to analyze the data collected via attitude questionnaire.

7. Results

After gathering the data through the speaking pre and post-tests and the attitude questionnaire, the researchers analyzed them to get the final results. Before conducting any analysis, the Kolmogorov-Smirnov test was used to check the normality distribution of the data. The results showed that the distribution of the data was normal since the Sig. values were greater than 0.05. After assuring that the data were normal, the parametric statistics like Independent Samples T-Test, Paired Samples T-Test, and One-Sample T-Test were used to get the final results.

7.1. Effect of flipped class on CAF

The results related to the effectiveness of flipped class on EFL learners' CAF are presented in the following tables:

Based on Table 1, the mean scores of the experimental and the control groups are almost the same. The results of an independent samples t-test showed that there was not a significant difference between the pre-tests of both groups (see the following table):

As seen in Table 2, Sig is .89 which is greater than 0.05, and the observed t (.12) is less than the critical t (2.00) with $df=58$, therefore, the difference between the speaking pre-tests of both experimental and control groups was not significant.

Table 3 shows that the mean scores of both experimental and control groups are different on the speaking post-tests. An Independent Samples T-Test was used in the following table to see if the difference between the speaking post-tests of the groups was significant.

Table 4 reveals that Sig (.00) is less than 0.05, and the observed t (4.57) is greater than the critical t (2.00) with $df = 58$, this implies that the difference between both groups was significant on the speaking post-test. Indeed, the experimental group outperformed the control group on the speaking post-test due to receiving flipped instruction. Since the effect size is 1.18 (very large effect size), we can say that the treatment had a significant effect on speaking CAF of Iranian EFL learners.

As shown in Table 5, a Paired Samples T-Test was used to compare the pre-test and the post-test of the control group. Since Sig (.08) is greater than 0.05 and the observed t (.24) is less than the critical t (1.69) with $df = 29$, the difference between the pre-test and post-test of this group was not significant. On the other hand, the results of the second Paired Samples T-Test shows that the difference between the pre-test and the post-test of the experimental group was significant since Sig (.000) is less than 0.05 and the observed t (.6.44) is greater than the critical t (1.69) with $df = 29$. It

Table 1. Descriptive statistics of both groups on the pre-test of speaking

Groups	N	Mean	Std. Deviation	Std. Error Mean
Control	30	15.36	3.04	.55
Experimental	30	15.26	3.02	.55

Table 2. Inferential statistics of both groups on the pre-test of speaking

Independent Samples Test									
Levene's Test for Equality of Variances				t-test for Equality of Means					
		F	Sig.	t	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
Scores	Equal variances assumed	.04	.83	.12	58	.89	.10	.78	Lower -1.46 Upper 1.66
	Equal variances not assumed			.12	57.99	.89	.10	.78	-1.46 1.66

Table 3. Descriptive statistics of both groups on the post-test of speaking

Groups	N	Mean	Std. Deviation	Std. Error Mean
Control	30	16.43	2.78	.50
Experimental	30	19.00	1.28	.23

should be noted that the effect size is 0.36 (small effect size) for the control group while the effect size for the experimental group is 1.61 (very large effect size).

7.2. Attitudes of EFL Learners towards flipped instruction

To answer the second question raised in this research, One-Sample T-Test was used to show the attitudes of the participants towards using flipped instruction (Table 6).

Looking at the mean scores of the questionnaire items in Table 7, we can see that all mean scores are greater than 3.00. This implies that the participants held positive attitudes towards using flipped instruction. To see if the extent to which the participants presented positive attitudes towards the flipped classroom was of statistical significance or not, a One-Sample T-Test was run in the following table:

As displayed in Table 6, the observed t (59.59) is greater than the critical t (1.72) with $df = 19$ and the significance level 0.000 ($sig = 0.00$) is less than 0.05. This indicates that the participants of this study held positive attitudes towards implementing flipped instruction.

8. Discussion

Regarding the first research question “Does using flipped instruction have any significant effects on Iranian EFL learners’ speaking CAF?”, the results showed that the participants of the flipped group outflanked the participants of the control group on the post-test. This improvement and betterment can be ascribed to the flipped instruction. The combination of face-to-face and online instructions can provide fertile ground for learning English language more successfully. The results obtained in this study indicate that flipped instruction can change the process of English learning and teaching into a better way. The flipped classroom can encourage cooperative learning among the students since it is designed in a way that can foster cooperation between the students. Consequently, students have the opportunities to work collaboratively to learn new materials better. In addition, the flipped classroom environment engages students in interactive activities that can promote critical thinking skills and encourage social interactions (Farrah & Qawasmeh, 2018).

One justification for the obtained results can be that in the flipped instruction the responsibility of learning is on the students’ shoulder as Harris et al. (2016) stated that the flipped classroom strategy places the educational encumbrance upon the students; instructors become the experts who develop the talents of their students and eliminate the codependency” (p. 331). The other justification for the obtained results can be that the flipped classroom could encourage cooperation among the students. It also helped the students to learn English in a student-centered educational situation.

Unlike the traditional classroom settings which cause codependency, the flipped classroom creates independency which encourages students to solve their own problems. We can say that the student-centered and the collaborative features of the flipped classroom can pave the way for the students to develop their English learning (Harris et al., 2016).

The other reason for obtaining the positive results of this study can refer to the participants’ motivation to develop their speaking skill. Since some Iranian people migrate to native English-speaking countries yearly, they have instrumental motivation to enhance their speaking skill, they may want to learn a language because of some practical reasons such as getting a job promotion,

Table 4. Inferential statistics of both groups on the post-test of speaking

Independent Samples Test											
Levene's Test for Equality of Variances				t-test for Equality of Means							
		F	Sig.	T	Df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference		
									Lower	Upper	
Scores	Equal variances assumed	19.75	.00	4.57	58	.00	-2.56	.56	-3.68	-1.44	
	Equal variances not assumed			4.57	40.81	.00	-2.56	.56	-3.69	-1.43	

Table 5. Paired samples T-Test (the pre and post-tests of both groups)

Paired Samples Test									
		Paired Differences				T	df	Sig. (2-tailed)	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
	Pre/post control	1.06	1.79	.32	.39	1.73	29	.08	
	Pre/post experimental	3.73	3.17	.57	2.54	4.91	29	.00	

Table 6. One-sample T-Test of the questionnaire

Test Value						
	t	Df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
	59.59	19	.00	4.42	4.26	4.57

getting into university, and applying for a well-paid job. In addition, the integrative motivation of Iranian EFL learners can persuade them to develop their speaking skill; the learners with integrative motivation want to learn the language to better understand and get to know the people who speak that language.

The results of the current study are in line with the previous studies (e.g., AlJaser, 2017; Basal, 2015; Evseeva & Solozhenko, 2015; Johnson, 2013; Sh. & Hamaidi, 2018; Sirakaya & Ozdemir, 2018; Song & Kapur, 2017; Unakorn & Klongkratoke, 2015) which proved the positive benefits of applying the flipped classroom in the language learning process.

In addition, the findings of this study agree with Mohammadi et al. (2019) who proved the effectiveness of using the flipped classroom on Iranian EFL learners' English achievements and their willingness to communicate. Likewise, Hashemifardnia et al. (2018) and Karimi (2017) confirmed the effectiveness of using flipped instruction on developing Iranian EFL learners' English learning.

Regarding the second research question "What are Iranian EFL learners' attitudes towards using flipped instruction?", the results of the One-Sample T-test indicate that the Iranian EFL learners had positive attitudes towards using flipped instruction. After teaching and learning through the flipped classroom, the participants showed a tendency towards it. The reason why the participants presented positive attitudes towards applying flipped instruction may refer to the interaction, the cooperation, and the independency that the flipped instruction provided for the students as AlJaser (2017) believes using a flipped classroom can provide students with more chances for interaction and responsibility towards education. Also, Sirakaya and Ozdemir (2018) and Villanueva (2016) stated that students welcome the use of the flipped classroom since it boosts their motivation, collaboration, and performance.

The findings of this study are compatible with the findings gained by Farrah and Qawasmeh (2018) and Namaziandost et al. (2020) who examined Iranian EFL learners' attitudes towards using flipped classrooms and their findings indicated that Iranian EFL learners held positive attitudes towards using the flipped classrooms. Similarly, this study lends support to the findings of Marlowe (2012) who found that students in her study presented positive attitudes towards implementing the flipped classrooms.

We can attribute the gained results to the nature of the flipped classroom model which follows a procedure that makes students responsible for their own learning independently before attending the real class session through practicing materials and discussing in the social network groups. Moreover, implementing the flipped classroom model can free the instructional time and smooth the path for interactive learning activities which can develop students' communicative competence (Mohammadi et al., 2019).

This study can develop the related literature by raising the awareness of teachers and researchers about the effects of the flipped instruction on developing EFL learners' speaking skill. It is hoped that future research focuses more on the effectiveness of the flipped instruction on improving oral skills. Since most previous studies examined the effects of the flipped instruction on reading comprehension, this study can pave the way for those researchers who aims to investigate the effects of the flipped instruction on speaking skill of EFL learners.

Table 7. Distribution of the participants' responses and mean scores

Mean	Std Deviation	Strongly Agree	Neutral Agree		Disagree	Strongly Disagree	
4.40	.49	12 40%	18 60%	0 0%	0 0%	0 0%	1. The flipped classroom supports students in becoming self-directed learners.
4.33	.74	15 50%	10 33.33%	5 16.66%	0 0%	0 0%	2. The flipped classroom helps students to ask questions and get immediate targeted answers to difficult concepts.
4.20	.84	14 46.66%	8 26.66%	8 26.66%	0 0%	0 0%	3. The flipped classroom allows students to have access to the lectures at any time easily.
4.16	1.20	15 50%	10 33.33%	1 3.33%	2 6.66%	2 6.66%	4. The flipped classroom reduces the amount of frustrating sessions.
4.63	.49	19 63.33%	11 36.66%	0 0%	0 0%	0 0%	5. The flipped classroom gives students more opportunities to communicate with each other.

(Continued)

Table7. (Continued)

Mean	Std Deviation	Strongly Agree	Neutral Agree			Disagree	Strongly Disagree	
4.66	.47	20 66.66%	10 33.33%	0 0%	0 0%	0 0%	0 0%	6. The flipped classroom allows students to have more time for family, friends, play, and extra-curricular activities.
4.60	.56	19 63.33%	10 33.33%	1 3.33%	0 0%	0 0%	0 0%	7. Teachers are available for more one-on-one interaction with students in a flipped classroom.
4.40	1.03	18 60%	10 33.33%	0 0%	0 0%	0 0%	2 6.66%	8. Students have less stress in the flipped classroom.
4.56	.67	19 63.33%	10 33.33%	0 0%	1 3.33%	0 0%	0 0%	9. I recommend the flipped classroom to my friends.
4.36	.96	17 56.66%	10 33.33%	1 3.33%	1 3.33%	1 3.33%	1 3.33%	10. The flipped classroom can improve the students' English learning.
4.30	1.26	20 66.66%	5 16.66%	2 6.66%	0 0%	0 0%	3 10%	11. I prefer the combination of face-to-face and online learning.

(Continued)

Table7. (Continued)

Mean	Std Deviation	Strongly Agree	Neutral Agree		Disagree	Strongly Disagree	
4.83	.37	25 83.33%	5	0	0	0	12. I believe that the flipped classroom develops autonomy of the students.
4.70	.53	22 73.33%	7 23.33%	1 3.33%	0	0	13. I think learning online is really useful and time-saving.
4.43	.93	20 66.66%	5 16.66%	3 10%	2 6.66%	0	14. I think having homework before attending the class can reduce the stress of the students.
4.63	.49	19 63.33%	11 36.66%	0	0	0	15. I am satisfied with using this method for my learning.
3.80	1.49	15 50%	5 16.66%	3 10%	3 10%	4 13.33	16. I prefer this method in the COVID-19 period.
4.30	.98	16 53.33%	10 33.33%	2 6.66%	1 3.33%	1 3.33%	17. This method can be used at any time.
4.86	.34	26 86.66%	4 13.33%	0	0	0	18. This method is useful for teaching all skills.

(Continued)

Table 7. (Continued)

Mean	Std Deviation	Strongly Agree	Neutral Agree		Disagree	Strongly Disagree	
4.90	.30	27 90%	3 10%	0 0%	0 0%	0 0%	19. This method is more attractive than traditional one.
3.73	1.25	12 40%	4 13.33%	10 33.33%	2 6.66%	2 6.66%	20. This method is good for the introverted students.

9. Implications of the study

The findings of this research can bring about some pedagogical implications for Iranian teachers, students, and material developers to take the advantages of the flipped instruction into account. Therefore, this study may persuade Iranian English teachers to incorporate technology into their teaching to reach better learning outcomes. The findings of this study can encourage Iranian English teachers to use a versatile and an engaging way to share learning content while putting more responsibility on the students' shoulder for their own learning process.

Iranian EFL learners can be the other beneficiary of this study; students who are absent because of illness, too long distance, or any other reason, can catch up with their peers faster and easier with the flipped classroom model than with the traditional one. Unlike the traditional classroom model, the flipped classroom puts students in charge of their own learning. By providing lectures online, teachers can give students the opportunity to learn at their own pace. Since Iranian EFL learners do not have any interaction outside of the classrooms, the flipped classroom can provide them ample opportunities to use English language more communicatively. This study can help those introverted and shy students who suffer from embarrassment in participating in the face-to-face classroom. Furthermore, the findings of this study can encourage Iranian material developers to seriously incorporate online teaching into the Iranian syllabus in which only traditional instructions and materials are used.

10. Conclusion

This study examined the effectiveness of using the flipped instruction on Iranian EFL learners speaking CAF. Based on the results obtained, we come to the conclusion that using the flipped instruction could help Iranian EFL learners improve their speaking CAF. In addition, it can be concluded that Iranian EFL learners had positive attitudes towards using the flipped instruction. Using online instruction besides face-to-face instruction can yield positive results for EFL learners.

The main limitation refers to the small sample of this research which included only 60 Iranian intermediate EFL learners, so care should be exercised if we want to generalize the findings to other population. Therefore, next studies are suggested to include more participants to increase the generalizability of their findings. Because of the COVID-19 pandemic, we could not interview the participants to get qualitative data, therefore, only quantitative data were gathered to provide answers for the research questions; hence, next research is offered to use both qualitative and quantitative data in order to boost the validity of the results. Perhaps phenomenological investigations could be implemented to explore the lives experiences of the participants in such environments. Or even phenomenography can be used to capture the immediate experiences of the individuals who are exposed to such treatments. The participants of this research were Iranian male EFL learners, future research is recommended to examine the effects of the flipped instruction on female learners in other EFL and ESL contexts. Upcoming studies can extend the experiment time and examine the effects of the flipped instruction on different skills in different contexts.

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