83. The Effect of Flipped Classroom Technique on Developing English Speaking Skills of EFL learners

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Abstract

Various innovative language teaching techniques have been created and applied in language classes to improve students’ speaking skills. Flipped classroom technique, a new pedagogical model, has paved the way for transformation in the foreign language teaching field for it provides students with online instruction or language content in videos to be studied as homework and an opportunity to practice linguistic input in the classroom. The purpose of this study is to explore the effect of the Flipped Classroom Technique on developing the English Speaking Skills of EFL learners. Semi-experimental method was used to examine the data. The population of the study was made up of Forty-seven intermediate EFL students in an English institute in Khorramabad, Iran. They were divided into two groups, experimental (males=8, females=9) and control group (males=9, females=8). Each group comprised of seventeen students. The experimental group was taught based on flipped classroom techniques while the control group was taught according to traditional methods. Besides, the participants’ age range was between 16 to 26 years old. The instruments used for data collection are the IELTS Speaking Test, Multimedia resources, Brainstorming, and the IELTS speaking rubric. The findings of the study show that there is a meaningful difference between those instructed with flipped classroom techniques and those instructed with traditional methods. Those who were taught by the flipped technique outperformed those who were instructed by the traditional methods. Based on these findings, it can be concluded that the flipped classroom technique is an effective technique in terms of developing the speaking skills of EFL learners.

Keywords: Flipped classroom technique, Speaking skills, English language, Learners of English language
The English language has become the lingua franca around the globe. It means that people from all over the world use it to communicate with each other despite their mother tongue language. Hence, the importance of communication is highlighted (Crystal, 2003). Communication occurs by creating a speech, which is related to the act of expressing our opinions, meanings, and ideas (Qureshi, 2007). For this purpose, individuals need to use their articulatory system and speak skillfully. So it is required to become proficient enough in speaking skills to transfer the intended meaning. Like other skills, however, improving speaking ability requires practice and education, particularly in the case of those learners who study English as a foreign language (EFL). Therefore, teachers have a significant role and are responsible for preparing students to speak accurately and fluently in confronting real-world situations.

The Advent of technology in the current century has rushed to the aid of science in all fields. Language teaching and learning is not an exception, as Technology has become an essential part of language education (Basal, 2015). It can improve the quality of language teaching and enhance students’ learning by motivating and creating more opportunities for exposure to the language. A plethora of studies emphasized implementing different types of technologies in language learning (Bax, 2011; Basal, 2015; Parveen, 2016; Ahmadi, 2018; Alcaraz-Valencia, Gaytán-Lugo, Gallardo & Arellano, 2020; Fayzullayeva, 2021). Almost all the previously mentioned studies agreed that technology is a tool that facilitates language teaching and language learning by providing vast areas of resources for both teachers and learners. Nowadays, abundant technology resources are available; the internet, computers, videos, cameras, tape recorders, applications, etc. Some researchers in the field of language teaching stated that technology and education should be integrated due to the support that technology offers to language learning (Eady & Lockyer, 2013; Pourhosein Gilakjani, 2017). Moreover, the advancement of technology brought new teaching methods to the field of education (Miner, 2004). In this regard, the flipped classroom technique, when compared to other methods of teaching, brought more significant changes that dramatically affect the development of language proficiency and also facilitate and hasten the process of learning and acquisition. The logic of flipped classrooms is that language learning does not only occur at school. The classroom environment is the place of the realization and application of what is learned. Videos, lesson notes, and various internet platforms give opportunities to the ones who are willing to learn new languages. In this respect, the flipped classroom technique is an innovative foreign language teaching method for it stimulates learners to focus on linguistic input at home and allows them much time to practice the language during class hours. Thus, this research is of significance in terms of analyzing the effectiveness of the flipped classroom technique in improving the speaking skills of EFL students.
2. Flipped classroom

The flipped classroom is a newly developed educational method that substitutes teaching and homework. In other words, learning occurs at home (Adnan, 2017). A flipped classroom is a situation in which an activity "which is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class" (Bergmann and Sams, 2012, p. 13). Milman (2012) called flipped classrooms "inverted learning". She also mentioned that a flipped classroom is a type of strategy that refers to blending face-to-face instruction with online learning. According to Yeşilçınar (2019), the flipped classroom model hasten the learning process outside and inside the classroom. He also referred to it as reversed teaching, blended learning, and invented classroom. Compared to traditional methods of learning that are teacher-centered and students are passive, the flipped classroom is student-centered and students are more responsible in their learning. According to Basal (2015) flipped classroom learning is student-centered because "each student learns at his or her own pace" (p.29). In a flipped classroom, the teacher is not the dominator in the class but is only an organizer and a facilitator. The teacher guides the students and students engage in learning activity dynamically (Chen Hsieh, Wu, & Marek, 2017). In addition, the teacher can dedicate classroom time to problem-solving and improving lower-level students' knowledge. An important element that is the substantial reason for the popularity of flipped classroom learning is the use of technology (Giannakos, Krogstie & Sampson, 2018). Using multimedia Technologies provides a chance for students to study, preview, and access the lessons before taking part in the classroom. Moreover, students can access the class content anywhere at any time. Even absent students will not fear missing the contents (Aburezeq, 2020). The flipped classroom also motivates students by preparing lessons at home which leads to being more active and achieving more success. According to Bishop and Verleger (2013), teachers use videos to transfer lectures outside the classroom environment so students and teachers have sufficient time to participate in active learning activities.

3. Flipped classroom and Foreign language skills

Many studies investigated the effect of flipped classroom techniques on the language learning and proficiency of EFL learners. Evseeva and Solozhenko (2015) in a study concerning the effect of the flipped classroom on language learning asserted that:

“Based upon pedagogical experience, we would like to mention that students studying the English language at National Research Tomsk Polytechnic University have different levels of English language competence, consequently, they need a different period to learn theoretical material and fulfill practical assignments. Flipped classroom technology allows students to solve this problem by giving them the opportunities to choose the tempo, speed, and the volume of the content to study" (p.208).

In (2017), Karimi and Hamzavi explored the influence of flipped classroom teaching on the reading proficiency of 60 EFL learners in an institute in Isfahan, Iran. The results of this experimental study revealed that the experimental group who received instruction through flipped learning outperformed the control group who participated in the traditional classroom. In another study, Amiryousefi (2017) investigated the effect of flipped learning on the L2 proficiency of 67 freshmen in two universities in Iran. According to the findings of the study, the flipped learning method dramatically improved the listening ability of students. Regarding writing ability, Challlob (2021) searched the impact of flipped learning on the writing performance of English learners in Iraq. Moreover, the factors that affected this performance have been investigated. In conclusion, an improvement in writing performance was found
for students who learned through flipped learning. In addition, time, peers' and teachers' feedback, and, the comfortability of the environment were found as important elements in flipped learning success regarding writing ability. Koroglu and Cakir (2017) in quantitative research, studied the relationship between flipped classroom technique and speaking ability of Turkish students. an experimental quantitative method was used to gather the data. Eventually, a significant difference between the pre-test and post-test of the experimental group was found. It meant that flipped classroom instruction had a positive impact on improving the speaking ability of the participants.

The flipped classroom is a pedagogical model where traditional lecture and homework elements of a course are reversed. It inverts traditional teaching methods, delivers instruction outside of class, and moves homework into the classroom (Du, Fu & Wang, 2014). It allows teachers to spend greater amounts of time tutoring students in place of lecturing them (Wallace, 2014). In the flipped classroom model, the teacher is no longer a knowledge presenter. He has a guiding role in classroom activities and promoter of self and peer learning, which helps students improve their organizational skills in learning activities, enhance their sense of collaboration with their classmates, provide feedback, and assess their learning (Boud, 2001). The core point of the flipped classroom technique is that students study the linguistic point at home at their own pace, they have a great deal of time to practice the comprehensible input in the classroom. Language learners have a lot of time to make use of their knowledge in speaking classes for teacher-guided online learning has taken the place of face-to-face instructions( Li,2017). Teachers observe the learning process through the activities done in the classroom catch the points which are not clearly understood and give 'immediate feedback' (Altemueller, 2017). Students control their learning by reviewing the material as necessary (Fulton, 2012).

4. Gender

In the EFL field, the role of gender has been examined from various perspectives, such as teachers' attitudes, linguistic performance, and involvement in classroom activities (Duran, 2006, Namaziendost, 2019, Makila, 2015). Male and female students are willing to participate in the language courses when they find the activities interesting. Sunderland (2000) argues that the male dominance of classrooms can cause low participation of female students or the use of compensatory communication strategies. Therefore, a participatory critical pedagogical approach (Brown, 2018) should always be adopted and implemented in language courses. Like communicative approach, the flipped classroom technique provides a relaxing learning environment and high interaction among learners. Accordingly, male and female students feel free to discuss the topics studied beforehand. According to a study done by Baltacı (2018), compared to male students, the female students' self-efficacy level was higher in the application of the flipped classroom practice. This shows that flipped classroom activities help female students gain self-confidence in terms of communicative performance in language learning. Baltacı (2018) also emphasizes that role plays, reversing gender roles in the role-play activities help students empathize with each other.

**Research questions**

1. Does flipped learning have a significant effect on the speaking performance of the students?

2. Is there any significant difference between the speaking performance of the experimental and control group regarding their gender?
Hypothesis

1. Flipped learning has a significant effect on the speaking performance of the students.

2. There is a significant difference between the speaking ability of females and males in the experimental and control groups.

5. Method

In this study, A quasi-experimental research design was used with experimental and control groups using pre- and post-tests. A quasi-experimental design helps the researcher in determining and organizing dependent and independent variables. Reichardt (2019, p.3) states ‘Units are assigned to treatment conditions in a nonrandom fashion such as by administrative decision, self-selection…People might select treatments based on which treatment appears most desirable or most convenient’. In addition, the participants must have similar qualities (Karasar, 2012).

Participants

Forty-seven intermediate EFL students in an English institute in Khorramabad, Iran, volunteered to participate in the study. To homogenize the participants, Thirty-four EFL learners (both genders) who had the same GPA based on the previous semesters were selected. They were divided into two groups, experimental (males=8, females=9) and control group (males=9, females=8). Each group comprised of seventeen students. The experimental group was taught based on flipped classroom techniques while the control group was taught according to traditional methods. Besides, the participants’ age range was between 16 to 26 years old. The students were informed about the experiment.

Instruments

In this study, to answer the research questions the following instruments were used:

IELTS Speaking Test

In the present study, two different topics from Cambridge Speaking tests for IELTS were utilized. The first one was used to assess the Speaking proficiency of participants in the Pre-test and the second one was for the Post-test assessment. These tests were the same as the IELTS exam test; it was comprised of three parts: part one which consisted of some personal questions from participants such as their names, occupations, home towns, etc. then, in the next part, participants were supposed to talk about a topic up to two minutes. In the last part, some questions were designed about the participant’s answers to part two.

Multimedia resources

The researchers were interested in understanding the effects of multimedia resources on the speaking proficiency of the experimental group. Hence, different types of multimedia resources were used. A plethora of short videos with a length of two to five minutes was sent to students before each session. The topics of the videos were about different routine activities such as news, drama, sports, cooking, family, etc. Besides, students were asked to send their voices about the summary of the videos in the WhatsApp group to share with peers.
**Brainstorming**

Before the study, students were asked to brainstorm about the video which was given to them before the session. They should have talked about the vocabularies, structures, and synonyms with their peers or teacher in the class and generated ideas. The effect of brainstorming on improving language learning especially on speaking was recognized in different studies (Hamideh, Rostampour & Abdorahimzadeh, 2015; Octarina, Rizal, & Zasrianita, 2021).

**IELTS speaking rubric**

To assess the performance of participants on the IELTS speaking test, the IELTS rubric designed by the Cambridge assessment system was utilized. This rubric assesses different criteria such as fluency and coherence, lexical resources, grammatical range and accuracy, and pronunciation. It ranges from 0 to 9 band scores. Those who get the score ‘9’ are the most proficient students and those who get lower than 9 are less proficient.

**Procedure**

Before the study, participants were divided into two groups of seventeen students randomly; a control group and an experimental group. Before starting the classes, both the experimental and control groups participated in a pre-test speaking exam. Pre-tests lasted between 8 to 13 minutes. Students’ answers were recorded via voice recorder for future assessments. The duration of the classes was 3 weeks. In each week, two sessions were held. Each class lasted for fifty minutes. The experimental group received instructions based on the flipped learning technique. A group in WhatsApp was created and all the students of the experimental group were added. Before each session, they were given two short video clips and they were asked to watch the videos, summarize the videos based on their understanding, and send their recorded voice to the group to share with peers. In the class, before the lesson started, students brainstormed ideas about the videos, they had watched. They were asked to talk about different synonyms, vocabularies, pronunciations, structures, etc. During the sessions, they watched the videos and then talked to their peers and asked the questions posed by the teacher. The control group, meanwhile, received no instruction and they were taught based on regular and traditional instructions. The results from the pre-test and post-tests were recorded. The recorded results of the tests for speakers’ scores were given to two raters to approve interrater reliability. All the tests were examined based on the IELTS speaking rubric.

**6. Results**

**Homogeneity of variances**

One of the inferential statistics for measuring variance equality in several independent groups is the use of Levene’s test. In most statistical software, the calculation and execution of this test is a prerequisite for other tests.

| Table.1 Levene’s Test of Equality of Error Variances |
|----------------------------------------|----------------|
| F                                     | df1 | df2 | Sig. |
| 1.559                                 | 2   | 31  | .226 |
According to Table 1, the F value (1.559) had a statistically significant level (sig=.226) that is higher than the acceptable number for rejecting the null hypothesis. Therefore, no significant difference was found between the variance of the groups and the homogeneity of variances was established.

The homogeneity of regression coefficients in different groups is another assumption in Covariance analysis, which means that the relationship between dependent variables and covariates in different groups must be homogenous. To investigate this hypothesis, the interaction of independent variables (group) and covariates (pre-test) was used. The rejection of the null hypothesis indicates the heterogeneity of regression coefficients in the data.

<table>
<thead>
<tr>
<th>Table 2: Regression</th>
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</thead>
<tbody>
<tr>
<td><strong>Model</strong></td>
</tr>
<tr>
<td>Regression</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Total</td>
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According to Table 2, To investigate this hypothesis, F was related to the interaction of the independent variable and pre-test, the value of which was calculated to be (F= 2.00) with a significance level of (sig = 0.166), which is not statistically significant. This means that the regression coefficients in different groups are not significantly different and are homogeneous.

**First research question**

Does flipped learning have a significant effect on speaking performance of the students?

To answer this question, the mean and standard deviation of both groups based on their scores on the pre-test and post-test were calculated. The results are displayed in Table 3.

<table>
<thead>
<tr>
<th>Table 3. Mean and std. deviation of control and experimental groups</th>
</tr>
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<tbody>
<tr>
<td><strong>Group</strong></td>
</tr>
<tr>
<td>Control</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Experimental</td>
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</tbody>
</table>

According to Table 3, there was a significant difference between the mean and standard deviation of the experimental group in pre-test (m=2.23, SD=.43) and post-test(m=3.82, SD=.88). However, no significant difference was found between pre-test(m=2.52, SD=.62) and post test(m=2.58, SD=.61) in control group.

**Table 4. Results from the analysis of covariance**

<table>
<thead>
<tr>
<th><strong>Source</strong></th>
<th><strong>Sum of squares</strong></th>
<th><strong>df</strong></th>
<th><strong>Mean square</strong></th>
<th><strong>F</strong></th>
<th><strong>P value</strong></th>
<th><strong>Observed power</strong></th>
</tr>
</thead>
</table>


Comparison of the effects of flipped learning on speaking ability

Table 4 shows the effect of the pre-test on the dependent or post-test variable. This effect was significantly less than 0.05 (sig=0.032, p<.05). That is, there is a significant difference between the speaking ability of students who have been instructed through the flipped learning technique with control groups. These findings revealed that the flipped classroom technique has a crucial role in improving students' speaking ability. This finding is in line with that of Li and Suwanthep (2017) who found flipped learning as a powerful tool for improving the speaking ability of students. In addition, it is in line with that of Wu, Hsieh, and Yang (2017) who found that flipped learning ameliorated the speaking ability of EFL university students through engagement in learning activities.

Second research question

Is there any significant difference between speaking performance of experimental and control group regarding their gender?

To answer the second research question, an independent sample t-test between groups was conducted.

Table 5. Independent sample t-test

<table>
<thead>
<tr>
<th>Group</th>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>control</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>.102</td>
<td>.310</td>
</tr>
<tr>
<td>Pre</td>
<td>.649</td>
<td>.433</td>
</tr>
<tr>
<td>experimental</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pre</td>
<td>.064</td>
<td>.804</td>
</tr>
<tr>
<td>Pre</td>
<td>4.729</td>
<td>.046</td>
</tr>
</tbody>
</table>
As can be seen in Table 5, the F-value of the Levin test was not significant except for the experimental-post-test group (sig.>0.05). This lack of significance indicated the homogeneity of variances in females and males. The significance of the F value in the experimental-post-test group indicates a lack of homogeneity of variances in the scores of males and females (sig. = 0.046 <0.05). However, due to the lack of significance of t-values in any of the categories (sig. [2-tailed]> 0.05), This lack of significance indicated that there was no significant difference between the scores of females and males regarding speaking ability in the pre-test and post-test. It means that gender does not affect the speaking performance of the students.

**Discussion and conclusion**

The aim of this study was to examine the effects of flipped classroom technique on developing speaking ability of EFL learners. The results revealed that there was a significant difference between those instructed with flipped classroom technique and those instructed with traditional methods. It means that those who were taught by flipped technique outperformed those who were instructed with the traditional methods. This finding is in line with Abdullah, Hussin, and Ismail (2019) who found flipped classroom technique as a powerful tool that not only improved the speaking proficiency of students, but also elevated their willingness to participate in English conversations. In fact, using multimedia resources such as videos, peer learning, and online tools can improve students’ motivation and have an important role in increasing their engagement in learning process. This finding also aligns with that of Sudarmaji, Anwar, and Mulyana (2021) who used video conference in their flipped classes and found that this technology enhanced students’ speaking performance. Moreover, technology aids students to become more independent and self-centered by practicing and studying the lessons before starting the session (Hung, 2015, Wu et al, 2017). In addition, the results demonstrated that gender has no effect on students’ speaking ability using flipped classroom technique. It means that males and females had the same rate of speaking performance. This finding is in contrast with that of Aburezeq (2020) who found that females outperformed males in speaking ability regarding flipped classroom learning technique. Utilizing the flipped learning model offers a multitude of benefits for both educators and learners, enhancing the overall educational experience. For students, this approach provides the opportunity to engage with instructional material at their own pace at home, allowing for a more personalized learning journey. This self-paced learning not only aids in better comprehension but also frees up classroom time for more interactive and hands-on activities. Moreover, students gain the advantage of sharing their perspectives and insights with classmates both before and after the actual classroom session. This peer-to-peer interaction fosters a collaborative learning environment, enriching the educational experience and promoting a deeper understanding of the subject matter. It also helps students develop critical thinking and communication skills, as they are encouraged to articulate their viewpoints and debate with their peers. On the other hand, teachers benefit significantly from the flipped learning model as well. With students arriving in class already having engaged with the basic material, educators can allocate more time to addressing specific questions, clarifying doubts, and providing targeted assistance. This enables a more efficient use of classroom time, as teachers can delve deeper into complex topics, facilitate discussions, or even introduce supplementary materials that enrich the curriculum. Additionally, the model allows teachers to identify gaps in understanding or areas where students are struggling, enabling more timely and effective interventions. This focused classroom time can be used to solve problems, explore advanced concepts, and even engage in project-based learning, which further enhances comprehension and retention of the subject matter. In summary, flipped learning is a win-win for both teachers and students. It allows for a more personalized, interactive, and in-depth educational experience, making it a valuable approach in modern education.
Limitations of the study

Although the present study addressed important questions regarding the flipped classroom technique, it faced with some limitations. Firstly, the sample of the study were thirty-four students. A larger sample may lead to different results. Secondly, the participants of the study were intermediate students in an English institute. Students from different levels such as advanced or beginners in schools or universities may have a different performance. Thirdly, the instructing time for experimental group was three weeks. A larger instructing time may be more beneficial.

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