On the Effectiveness of Using Flipped Classroom in Teaching Grammar to Iranian Advanced Students of ELT

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Abstract
This paper aimed to investigate the impact of employing flipped classrooms in teaching grammar on Iranian advanced EFL students through an experimental research design. Two groups were created on Skype application. The groups of the participants were grouped via tossing a coin. There were 20 participants in each group. Both groups received instructions through Skype. They also had groups on Telegram, Signal, and WhatsApp to receive assignments for the members of the control group and instructions for the inverted classroom. The members of the control group received the instruction traditionally on Skype, whereas, the participants of the experimental group received the instruction in an inverted approach. Statistical test of ANCOVA was employed to investigate the differences among the participants after the 20th session to analyze the data. The results showed that learners who received instructions through the flipped classroom could outperform the control group in grammar achievement and accuracy.

Keywords: EFL Classrooms, EFL Students, Computer Assisted Language Learning, Flipped Classroom, Grammar.
1. Introduction

Flipped classrooms seek to prepare a situation in which learners take part in activities inside the class and outside it. It provides the chance for learners to build knowledge (Yavuz & Ozdemir, 2019), which started in 2006 in Colorado (Al-Harbi & Alshumaimeri, 2016). To simply define flipped classroom, according to Bergmann and Sams (2012), “what used to be traditionally done in class is now done at home, and that which used to be traditionally done as homework is now completed in class”. In other words, as opposed to traditional classes in which the teacher delivers the lecture inside the class and learners carry the exercises out of the classroom, flipped classrooms follow an inverse process where the teacher sends the instruction through online applications to the learners outside the class and learners review the content outside the class and conduct the exercises inside the class. In brief, learners acquire knowledge outside the class and manipulate it inside the class. To carry a flipped classroom out, 4 major points must be considered according to (Al-Naabi, 2020), which were taken from Abeysekera and Dawson (2016), Brame (2013), and McNally et al. (2017): (a) prior exposure of students to content (e.g., recorded lectures, notes, videos), (b) an incentive for students to prepare for class (e.g., pre-class quizzes, online discussions, online activities), (c) a mechanism to measure students’ understanding and to ensure that students have viewed the content (e.g., graded pre-class quizzes), and (d) in-class activities that focus on higher-level cognitive activities: active learning, collaborative and peer learning, problem-solving and/or case studies.

In one study, Fathi and Rahimi (2019) investigated the impact of flipped classrooms on the writing complexity, accuracy, and fluency of Iranian EFL learners. They concluded that both groups, experimental and control, had significant changes in their performance; however, the performance of the experimental group was able to outperform the performance of the control group.

Li and Suwanthep (2017) investigated the efficacy of inverted classrooms on EFL students speaking. The result of their study showed that the participants in the experimental group grew more significantly than those of the control group in the result of their post-test. Abdullah Hussin and Ismail (2019) also checked whether flipped classrooms have a significant impact on English-speaking performance. They concluded that the participants who received the instruction via flipped classroom approach had a more significant development than their peers who traditionally received the instruction. They claimed that
flipped classrooms have a highly positive role in the development of speaking skills. In another study, Giman and Kaya (2019) investigated the impact of flipped classrooms on developing basic skills. They claimed that both learners and their parents had positive attitudes towards this approach. Yeşilçınar (2019) investigated the impact of flipped classrooms on not English major adult students’ EFL speaking skills. It was concluded that the participants were positively affected both in their speaking skill and in their attitude towards learning English.

Ahmad (2016) checked the efficacy of inverted classrooms to develop the listening skill of Egyptian EFL students. He concluded that the members of the experimental group showed more significant development in listening skill. He also claimed that flipped classrooms are appropriate enough to be implemented in other and various skills and subskills of language teaching at universities or other institutions. Mohammadi et al. (2019) in a paper entitled “The Effectiveness of Using Flipped Classroom Model on Iranian EFL Learners’ English Achievements and Their Willingness to Communicate” (p. 101) investigated the impact of flipped classrooms in a pre-experimental design among 95 students. The points to be measured were grammar, vocabulary, and reading comprehension. They mentioned that flipped classroom is a suitable approach through which English as a foreign language can be taught. Abaiean and Samadi (2016) investigated the impact of the inverted classroom on Iranian EFL learners’ L2 reading comprehension: focusing on different proficiency levels. After 18 sessions of instruction, they gave a post-test to the participants, in which the members of the experimental group performed were able to outperform the members of the control group.

However, Al-Ghamdi and Al-Bargi (2017) also investigated the role of flipped classrooms on the speaking of EFL Saudi learners. They witnessed no significant difference between the participants of both groups, which may be because the population of their study was not a big number. They also mention that since the flipped classroom is a student-centered approach, that is novel for the Saudi context; thus, it may not have had a significant impact on the participants’ performance. Review of the literature illustrates that flipped classrooms may have a more significant impact on the learners’ achievements than the traditional classrooms; hence, this study seeks to investigate the impact of flipped classrooms on Iranian EFL students’ language achievement. It also tries to check whether FC has a more significant impact on learners’ grammatical accuracy.
The burgeoning of English as a lingua franca has increased the significance of English language learning and turned it into a top priority worldwide, which has caused numerous methods of teaching to be developed, to enhance the efficacy and rate of teaching. Numerous researchers in the field of language teaching have engaged in establishing a methodology that meets all members' needs all around the world. This quest lasted for long times and decades; however, methodologies have seen rise and fall in their times and other methods have been replaced. Since each cultural setting and country has its significant characteristics, no method can fit all needs of the people worldwide; Thus, the chosen methodology must be in line with those characteristics; however, the existence of a shared feature all around the world, that is the universal interest in technology, can be appropriate enough to be employed in various countries.

Due to vast access and unquestionable advances of technology, one of the most significant and fruitful ways of teaching English is via employing technology, both inside and outside of the classroom. It may lead learners to move from more teacher-centered approaches to a more learner-centered approach. Increasing learner-centered approaches may lead learners to become active participants in the process of learning. Active learning may engage learners in various ways; thus, it can be more fruitful in the educational setting. Meeting the needs of the new era, it is suggested to move the educational environments through newer methodologies. One of these methods is flipped classroom, in which, the instruction is distributed among the students before the class, and in the classroom, the learners carry exercises out and the teacher provides necessary feedback simultaneously.

The inverted classroom is a type of approach through which learners receive the instruction a period before the actual class where they do exercises related to the instruction that they have already received; therefore, learners deal with the language both inside and outside the class. In addition, it fosters their autonomy since it provides the chance for learners to choose freely when, how, and where to learn. This may have the potential to provide a safe environment for the learners because they can read and re-read the content as much as they need to comprehend the introduced topics. They also provide learners with the opportunity to study whenever they need based on their schedule and needs, while affective factors can be more controlled here. Learners, based on their desires and preferences, can choose the time of the class and participate at that time depending on their mood as well as other psychological factors. This adds to the significance of this method because the students
have the chance to choose when and how to have access to the presented materials, by PCs, Mobiles, Tablets, iPads, iPods, or other devices. This can foster motivation and participation of the learners in the learning process, in contrast with traditional classes, they set their time and way of learning.

This approach has been carried out in various fields of study, such as engineering, medical education, business, history of the world, and education. Many scholars (Yavuz & Ozdemir, 2019; Sung et al., 2015; Afrilyasanti et al., 2017) have checked various aspects of the inverted classroom in EFL contexts. They have carried out both empirical research and case studies on the flipped classroom focusing on skills or sub-skills. Although many studies have been conducted out to examine the efficacy of flipped classrooms, few studies (Al-Harbi & Alshumaimeri, 2016) have investigated the impact of the inverted classroom in educating grammar. To shed more lights on this aspect of the flipped classroom, this study will try to investigate whether the flipped classroom has a significant impact on the outcome of the classes or not. The results of the current study can bridge the gap in the literature of flipped classroom methodology.

2. Literature Review

Flipped classrooms aim to prepare a situation in which learners take part in activities inside and outside of the classroom that can provide chances for learners to build knowledge (Yavuz & Ozdemir, 2019). Bergmann snd Sams (2012) simply defined flipped classroom as what is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class. In other words, as opposed to traditional classes in which the teacher delivers the lecture inside the class and learners carry the exercises out of the classroom, flipped classrooms follow an inverse process where the teacher sends the instruction through online applications to the learners outside the class and learners review the content outside the class and conduct the exercises inside the class. In brief, a learner acquires knowledge outside the class and manipulates it inside the class.

In one study, Fathi and Rahimi (2019) investigated the impact of flipped classrooms on the writing complexity, accuracy, and fluency of Iranian EFL learners. They concluded that both groups, experimental and control, had significant changes in their performance; however, the performance of the experimental group was able to outperform the performance of the control group.
Li and Suwanthep (2017) investigated the efficacy of flipped classrooms on EFL students’ speaking. The result of their study showed that the participants in the experimental group grew more significantly than those of the control group in the result of their post-test. Abdullah Hussin and Ismail (2019) also checked whether flipped classrooms have a significant impact on English-speaking performance. They concluded that the participants who received the instruction via flipped classroom approach had a more significant development than their peers who traditionally received the instruction. They claimed that flipped classrooms have a highly positive role in the development of speaking skills. In another study, Giman and Kaya (2019) investigated the impact of flipped classrooms on developing basic skills. They claimed that both learners and their parents had a positive attitude towards this approach. Yeşilçınar (2019) investigated the impact of flipped classrooms on not English major adult’ students of EFL speaking skill. It was concluded that the participants were positively affected both in their speaking skill and in their attitude towards learning English.

Strelan, Osborn, and Palmer (2020) reported the first comprehensive meta-analysis of the impact of flipped classes on learners’ performance. They reviewed 174 studies on 33678 students and concluded that flipped classes had a moderately positive effect on learners’ performance. The inverted classes were beneficial regarding the learners’ field of study. Ahmad (2016) investigated the efficacy of flipped classrooms to develop listening comprehension of Egyptian EFL learners. He concluded that the participants of the experimental group showed more significant development in listening skill. He also claimed that flipped classrooms are appropriate enough to be implemented in other and various skills and subskills of language teaching at universities or other institutions. Mohammadi et al. (2019) in a paper entitled “The Effectiveness of Using Flipped Classroom Model on Iranian EFL Learners’ English Achievements and Their Willingness to Communicate” (p. 102) investigated the impact of flipped classrooms in a pre-experimental design among 95 students. The points to be measured were grammar, vocabulary, and reading comprehension. They mentioned that flipped classroom is a suitable approach through which English as a foreign language can be taught. Abaeian and Samadi (2016) investigated the effect of the flipped classroom on Iranian EFL learners’ L2 reading comprehension: focusing on different proficiency levels. After 18 sessions of instruction, they gave a posttest to the participants,
in which the members of the experimental group performed significantly better than the members of the control group.

However, Al-Ghamdi and Al-Bargi (2017) also investigated the role of flipped classrooms on the speaking of EFL Saudi learners. They witnessed no significant difference between the participants of both groups, which may be due to the fact that the population of their study was not a big number. They also mention that since the flipped classroom is a student-centered approach, that is novel for the Saudi context, it may not have had a significant impact on the participants’ performance.

The review of the literature illustrates that flipped classrooms may have a more significant impact on the learners’ achievements than the traditional classrooms; hence, this study seeks to investigate the impact of flipped classrooms on Iranian EFL students’ language achievement. It also tries to check whether FC has a more significant impact on learners’ grammatical accuracy. Hence, the current study tried to answer the following questions:

1. Does teaching grammar through flipped classrooms have a significant impact on learners’ achievement?
2. Does employing flipped classroom methodology have a significant impact on learners’ accuracy?

3. Methodology

The current study was carried out in an empirical way in which the members of the experimental group were trained according to the principles of the inverted classroom. The groups were divided by tossing a coin. Later, a grammar section of a retired version of an EPT test was given to both groups.

3.1. Design and Context of the Study

This study was carried out in an experimental design to shed more light on the impact of inverted classrooms on Iranian EFL learners in Sanandaj, Kurdistan, Iran in the Winter of 2020. The participants were divided into two groups and the course of study was held for both of them.

3.2. Participants
Using convenient sampling (Dornyei, 2007), the participants of this study were 40 English advanced students who were studying C1 of English language in the Vaj Center, a private English institute in Sanandaj, Kurdistan, Iran, whose age range between 16-26, including both males (46%) and females (54%). Convenient sampling was used for this study.

3.3. Instruments

To homogenize the participants, a retired version of the IELTS test from the book *Cambridge IELTS 10*, test 1 was used. To carry this study out, two moderate groups on the application of Skype and two groups on Telegram, Signal, and WhatsApp were developed. The materials for the experimental group were developed via recording video from the teacher. The content of the book entitled *Grammar for IELTS* was used as the teaching material. For the extra assignments of both groups, exercises from the book *English Grammar Digest* were employed. For the post-test, the second test of the book *Cambridge IELTS 10* was used.

3.4. Data Collection Procedure

The learners were homogenized by employing a retired version of the IELTS test. 40 participants were selected for both groups. 2 classes of the learners were grouped through tossing a coin. Both classes had 20 sessions, each lasted 90 minutes, wherein each session, just 1 unit of the book was covered. 2 moderate groups were created on Skype, a free mobile-friendly application that is compatible with all systems. The content of the course is depicted in table 2 below.

Convenient sampling was used since the accessibility to the participant of the current study was an important factor. These participants were accessible at any time, anywhere, and in many applications such as Telegram, Signal, WhatsApp, Skype, or Instagram. The sample was divided into 2 groups via tossing a coin.

Both groups received instruction from the same teacher and the same book. They were homogenized through the implementation of a retired version of the IELTS test and then, an independent-sample T-test was used to check whether they are homogeneous, which no significant difference was reported. The result is illustrated in Table 1.

Table 1.
The Result of Independent Sample t-test for Homogenizing the Participants

<table>
<thead>
<tr>
<th>Score</th>
<th>F</th>
<th>Sig.</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
<th>Mean Difference</th>
<th>Std. Error Difference</th>
<th>95% Confidence Interval of the Difference</th>
<th>Lower</th>
<th>Upper</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equal variances assumed</td>
<td>.184</td>
<td>.673</td>
<td>-.048</td>
<td>18</td>
<td>.962</td>
<td>-.10000</td>
<td>2.06694</td>
<td>-4.44247</td>
<td>4.24247</td>
<td></td>
</tr>
<tr>
<td>Equal variances not assumed</td>
<td>-.048</td>
<td>17.945</td>
<td>.962</td>
<td>-.10000</td>
<td>2.06694</td>
<td>-4.44343</td>
<td>4.24343</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2.

Content of the Advanced Grammar Class for Both of the Groups

<table>
<thead>
<tr>
<th>Number of the Session</th>
<th>Grammar Focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Session</td>
<td>Present simple, past simple, and present perfect.</td>
</tr>
<tr>
<td>2nd Session</td>
<td>Present continuous, past continuous, and present perfect continuous.</td>
</tr>
<tr>
<td>3rd Session</td>
<td>Past perfect, used to, and would.</td>
</tr>
<tr>
<td>4th Session</td>
<td>Will and be going to</td>
</tr>
<tr>
<td>5th Session</td>
<td>Present continuous for future and future perfect.</td>
</tr>
<tr>
<td>6th Session</td>
<td>Punctuation rules and subject-verb-object (basics).</td>
</tr>
<tr>
<td>7th Session</td>
<td>Subject-verb agreement.</td>
</tr>
<tr>
<td>8th Session</td>
<td>Countable and uncountable nouns.</td>
</tr>
<tr>
<td>9th Session</td>
<td>Using articles (a, the, or no articles).</td>
</tr>
<tr>
<td>10th Session</td>
<td>Giving additional, opposite, and contrasting information.</td>
</tr>
<tr>
<td>11th Session</td>
<td>Comparative structures.</td>
</tr>
<tr>
<td>12th Session</td>
<td>Present modals</td>
</tr>
<tr>
<td>13th Session</td>
<td>Modals in the past</td>
</tr>
<tr>
<td>14th Session</td>
<td>Conditionals</td>
</tr>
<tr>
<td>15th Session</td>
<td>Tenses, time, and pronoun changes.</td>
</tr>
<tr>
<td>16th Session</td>
<td>Using reference words to remain cohesive.</td>
</tr>
<tr>
<td>17th Session</td>
<td>Organization of texts and paragraphs</td>
</tr>
<tr>
<td>18th Session</td>
<td>Simple passive</td>
</tr>
<tr>
<td>19th Session</td>
<td>Relative clauses</td>
</tr>
<tr>
<td>20th Session</td>
<td>Construction of noun phrases</td>
</tr>
</tbody>
</table>
The first group received the instruction traditionally, in which an online class through Skype was held and the teacher taught the content in the class. A moderate group was created and all the participants were added to the group. They were trained simultaneously and carried the exercises out and the teacher monitored and taught at the same time. In addition, the participants received assignments to do at home through Telegram, Signal, and WhatsApp and uploaded their answers within 48 hours in the same Telegram, Signal, and WhatsApp group, where the teacher could provide the necessary feedback.

The participants of the experimental group received the instructions 48 hours before the class in a WhatsApp group to have enough time to watch the material. The videos were developed by the teacher who taught the students of the control group. The participants watched the materials before the class and during their class time, which were held on Skype through an already created moderate group, where the students carried out some exercises related to the video that they gave already watched. The teacher just managed the class and corrected students’ errors. Additionally, the teacher provided feedback on learners’ activities simultaneously.

Regarding the data collection, the authors needed to focus on 2 tests, one administered as the pre-test before the course and the second one as the post-test after the instruction. For the pretest, a retired version of the IELTS test of the book Cambridge IELTS 10 was used. For the post-test, the second test of the book Cambridge IELTS 10 was used. The data collection process is depicted in figure 1 below.

3.4. Data Analysis Procedure

Because of the empirical nature of the data of the present study, Analysis of Covariant (ANCOVA) was run to check whether a significant difference exists among the members of the control and experimental group. The result revealed that both groups were significantly and positively made progress after the course; however, the members of the experimental groups were able to make more progress than the members of the control group.

4. Results

The results obtained from the Analysis of Covariant (ANCOVA) demonstrated that the participants of both groups were able to make significant progress; however, the participants of the experimental group were able to outperform the members of the control
group; therefore, they made a more significant progress than the members of the control group. The result of ANCOVA analysis is depicted in Table 3.

Table 3.

The results of ANCOVA analysis

<table>
<thead>
<tr>
<th>Tests of Between-Subjects Effects</th>
<th>Dependent Variable: Grammar Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Source</td>
<td>Type III Sum of Squares</td>
</tr>
<tr>
<td>Corrected Model</td>
<td>23.453*</td>
</tr>
<tr>
<td>Intercept</td>
<td>392.413</td>
</tr>
<tr>
<td>Post</td>
<td>2.428</td>
</tr>
<tr>
<td>Group</td>
<td>4.511</td>
</tr>
<tr>
<td>Error</td>
<td>198.322</td>
</tr>
<tr>
<td>Total</td>
<td>100923.000</td>
</tr>
<tr>
<td>Corrected Total</td>
<td>221.775</td>
</tr>
</tbody>
</table>

a. R Squared = .106 (Adjusted R Squared = .057)

5. Discussion

*Figure 1. The data collection process*
This study was conducted to check the effectiveness of inverted classrooms on Iranian EFL students’ grammatical accuracy and achievement. The results of the data analysis revealed that the members of both groups made significant progress after 20 sessions of instruction; however, the participants of the experimental group made more significant progress in comparison with their peers in the control group. The findings of the current study showed that inverted classrooms may be applied as a suitable approach in the Iranian EFL context. Hence, it is suggested that various language centers and universities employ flipped classrooms to increase the efficacy of their classes. The results of this study are in line with the studies of Lee (2017), Soltanpour and Valizadeh (2018), Haghighi et al. (2019), and Tsai (2019) who verified flipped classroom approach as a fruitful one.

The finding of the study shows that participants in the experimental group were able to choose where and when to learn the content of the course. This freedom can provide a safe environment for the learners to overcome the problems they have, as an example, they can watch the videos in an unlimited manner till they can comprehend the subject of the session, and if they were in the class, they may not have asked the teacher to repeat the subject, which may provide the safe environment for the learners to cope with their problems.

In this study, to minimize the amount of diffusion, the participants of both groups were told that their classes will be held through Skype application and they will receive some files via both Telegram, Signal, and WhatsApp. The materials were prepared and presented by the same teacher for both groups. The teacher developed videos about the content and shared them with the members of the experimental group. He also taught the same materials from the same source to the members of the control group; thus, the researchers had the chance to investigate the effectiveness of inverted classrooms.

This study aimed to check whether flipped classrooms have a significant impact on Iranian advanced EFL learners’ grammar accuracy. The results demonstrated that employing flipped classroom approach has a significant impact on Iranian EFL learners’ language achievement; therefore, it is recommended to use this approach in the Iranian EFL context. However, this must be reassured that all participants have the necessary devices to be connected to the class and follow the course. In addition, this approach may not be suitable in places where there is a poor network connection, especially in Iran where the connection is not strong enough everywhere. On the other hand, due to the high cost of technological devices nowadays, numerous problems may be caused for those who are not well-equipped
with technology; thus, it is recommended to choose the participants based on their desire, rather than random assignment.

6. Conclusion

The current study tried to investigate the impact of employing inverted classrooms on advanced Iranian EFL learners’ achievement. The results of the study revealed that using flipped classrooms was beneficial for Iranian EFL learners’ achievement. It was also concluded that flipped classes have a significant impact on students’ accuracy. Using flipped classes may be considered as a fruitful approach to be used in the Iranian EFL context. The results of the study suggest language planners, material developers, managers, and teachers include flipped classes in their syllabus and curriculum, since it may foster learners’ skills and abilities in various aspects of language. In addition, since students are accustomed to using technology, for many purposes of education such as translation, it may be fruitful for learners to use technological devices for learning as well as amusement. Furthermore, some characteristics of flipped classes such as promoting learner autonomy (Du, 2020), may also be beneficial for Iranian EFL learners; thus, it is recommended to employ inverted classes in more aspects of English language teaching.

References


Ahmad, S. Z. (2016). The flipped classroom model to develop Egyptian EFL students' listening comprehension. *English Language Teaching, 9*(9), 166-178.


