The effect of the flipped classroom model on Iranian English foreign language learners: Engagement and motivation in English language grammar

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Abstract: Flipped Learning is a rather new approach to teaching. In this approach, the place of teacher’s lectures in the classroom and homework assignments are exchanged to enhance active learning, engagement, and motivation. The aim of this research was to determine the effect of the flipped classroom model on intermediate and upper-intermediate learners’ engagement and motivation in learning English grammar. In the current study, quasi-experimental research was used. This research was conducted within the English course for six weeks’ period in the summer term in 2019. Three hundred and sixty English learners have been chosen through multi-stage cluster sampling from four different institutes. They were randomly assigned to control and experimental groups. Data were collected both pre-test and post-test. Among 50 grammar videos, eight grammar contents based on CVI (content validity index) CVR (content validity ratio) (0.42, 0.79) were selected. Questionnaires’ validity was checked by some experts and their reliability was checked through Cronbach’s Alpha test. Questionnaires were Hermense (motivation, α = 0.97) and SEI (engagement, α = 0.93). In the current study, descriptive statistics, and
1. Introduction

Education experts are always looking for new teaching methods in teaching and learning environments (Biggs & Tang, 2011). Researchers are working to enhance student learning through new teaching methods. “Flipped Learning” is one of the new approaches that has been proposed recently. In this educational approach, direct teaching of a teacher is transferred to the outside of the classroom. In contrast, the classroom time is spent on doing homework and activities under the supervision of the teacher as a facilitator (Ojalvo & Doyne, 2011).

While there is a great deal of research about flipped learning, there is little research to be found concerning language instructing, particularly with non-English students in subjects with a strong grammatical component. (Chen Hsieh et al., 2016; Hwang et al., 2015; Law et al., 2020). This dearth of research intrigued us progressively about the impacts of flipped instructing on the EFL field, particularly with non-English intermediate and upper-intermediate students’ motivation and engagement with grammar learning.

Due to the development of technology, teaching and learning are not just limited to the classroom. The intensity of “Flipped Classroom” and flipped learning have developed and adjusted the traditional teaching method to a new approach which is needed to improve their learning skills. Many teachers deliberately pursue this pattern and enthusiastically need to improve their guidance through flipped instructing. Much research on flipped classrooms (Alias et al. (2020); Moravec et al., 2010) indicate many advantages for students such as upgrading students’ learning motivation, academic performance and overall engagement. In a flipped setting students can learn at their own pace more easily especially where watching instructor recordings forms part of the flipped instructional process. (Filiz & Kurt, 2015; Namazianost et al., 2020; Wanner & Palmer, 2015). Some studies (Ferreri & O’Connor, 2013; Zappe et al., 2009) found that this sort of instructing strategy will assist students to learn effectively. After pre-learning the substance, students will come to class with some fundamental ideas of that class. Furthermore, in the class, students will have more occasions and chances will be able to engage in greater depth with the content and essentially use what they have realized ahead of time through some collective, task-based, critical thinking exercises (Balan et al., 2015). In spite of the fact that this encouraging strategy appears giving student a chance to learn a second or foreign language and develop their very own insight toward the substance, to students with different learning motivation, engagement, capability, and other diverse individual attributes, changing of educating and learning techniques may not always produce positive results (McNally et al., 2017). Likewise, the impacts of flipped learning may not be the equivalent in various subjects (Strayer, 2012). The Flipped Classroom has been one of the new phenomena (Blair et al., 2016) and has made significant progress so that educational experts believe that this will revolutionize learning environments. The use and interest in this approach are on the rise (Bergman & Sams, 2012). The flipped classroom is one of the topics that will attract the attention of the world of education in the coming years (Law et al.). With these positive findings,
this paper calls for more studies with respect of flipped classroom across other English skills, disciplines and theories.

This study investigated the following research questions:

(1) 1-Does the experience Flipped Classroom significantly enhance upper-intermediate learners’ motivation?
(2) 2-Does the experience Flipped Classroom significantly improve upper-intermediate learners’ engagement?

3-Does the experience Flipped Classroom significantly enhance intermediate learners’ motivation?

4-Does the experience Flipped Classroom significantly improve intermediate learners’ engagement?

2. Literature review

2.1. Flipped classroom

The flipped classroom was first mooted as an instructional strategy by Wesley Baker in the late 1980s (Segolsson et al., 2017). His idea was not plausible to any great degree since PC advancement had not progressed to a level that allowed full integration of his ideas. As technology capability increased at the beginning of the twenty-first century—most especially the Internet and YouTube in 2006, Baker’s considerations have been given recognition thus prompting engagement with the concept of the flipped classroom by a broad spectrum of educators.

Flipped Learning is an educational approach in which the conventional order of receiving knowledge is reversed (Segolsson et al., 2017). In flipped learning, the initial stage of receiving knowledge starts before attending class, when students study the teacher-assigned materials and complete their assignments (Mehring, 2016). Afterward, they enter class to reinforce what they have covered prior to class (Flipped Learning Network, 2014). Researchers and teachers have successfully implemented flipped learning in different courses from various disciplines and areas, requiring skills practice or mere recitation of content. For example, flipped learning has been incorporated in algebra, biology, computer programming, engineering, information and communications technology (ICT), medical education, and multimedia production.

In the area of English as a foreign language (EFL), flipped learning has been implemented to improve students’ knowledge of English idioms (Chen Hsieh et al., 2017); and to promote students’ active learning in terms of becoming more willing to communicate, enhancing their speaking skills, and increasing their satisfaction with the flipped approach (H.-T. Hung, 2017). The effects of flipped learning have also been investigated in other EFL-related areas, such as: English speaking (Li & Suwanthep, 2017), English writing (Ahmed, 2016), reading comprehension (Abaeian & Samadi, 2016), English pronunciation (Zhang et al., 2016), and translation (Shu, 2015).

Flipped learning changes the role of learners and instructors. H.-T. Hung (2017) recommended an acquisition-rich environment where students can benefit from both fluency and accuracy. This suggests that teachers should design syllabi that cover both meaning negotiation and linguistic instruction.

The flipped classroom has a similar establishment as the informative classroom, specifically Lev Vygotsky’s sociocultural point of view (Vygotsky, 1978). “Learning awakens a variety of internal developmental processes that are able to operate only when the child is interacting with people in his environment and in cooperation with his peers ... Learning is not development; however, properly organized learning results in mental development and sets in motion a variety of
developmental processes that would be impossible apart from learning. Thus, learning is a necessary and universal aspect of the process of developing culturally organized, specifically human, psychological functions” (Vygotsky, 1978, p. 90 as cited in John-Steiner & Mahn, 1996, p. 198). Consequently, the four needs of the open classroom are firmly identified with how one should function with the flipped classroom technique. Furthermore, with the additional time in the classroom that can be invested in collaborative learning exercises, the students will have a greater opportunity to personalize their speech and develop the confidence needed to express their opinions.

2.2. Classroom engagement
Classroom engagement is characterized as the willingness of the student to participate in daily school exercises, for example, proceeding to class, doing schoolwork, and tuning in to the teacher in class. Low degree of classroom engagement prompts negative impacts on learning performance and the learning procedure (Wang et al., 2014). In this regard, Ayciçek and Yanpar Yelken (2018) pointed out that student engagement is the consequence of effective classroom instructing and school advancement exercises and that it is an undeniably significant concept of that sense. Bond et al. (2020) underline the significance of dynamic and collaborative learning, academic exercises, effective communication with the teacher, and instructive encounters inside the extent of classroom engagement.

Alavi et al. (2017, pp. 471–496) have demonstrated “the effect of Flipped Learning on the professional development of novice English teachers: Attitude and engagement.” To this aim, they chose 150 females, novice English teachers, purposefully from different institutes, and private schools in Tehran. Teachers were put into two control and experimental groups, randomly. They passed the “class management” course for six weeks. The questionnaire was used for data collection. Finally, the results reveal that teachers’ engagement has been increased and they have got a positive attitude toward Flipped Classroom in comparison to the traditional classes. This study has focussed on teachers but the effect on students still remains.

2.3. Students’ emotional engagement
Emotional engagement implies that the students have turned out to be energetic or associated with their learning. Emotional engagement centers around the degree of positive (and negative) responses to teachers, schoolmates, academics, and school. Positive emotional engagement is dared to make student binds to the establishment and impact students’ eagerness to work (Fredricks et al., 2011; Ghanizadeh et al., 2020). Emotional engagement is the individual reaction that an individual need to learning and a craving to seek after an activity or thought. This can feel hard to support secondary school students since they battle with emotional reactions (Schnitzlzer et al., 2020).

Ayciçek and Yanpar Yelken (2018, pp. 385–398) studied “The Effect of Flipped Classroom Model on Students’ Classroom Engagement in Teaching English”. In this study which has been conducted the effect of the Flipped Classroom model on students’ classroom engagement in teaching English was determined. In the study, a pretest/post-test quasi-experimental plan with the control group was connected. In the present investigation, engaging insights, Mann Whitney U Test and Wilcoxon Sign Test were utilized in the examination of the quantitative information. It was presumed that there is a huge distinction between the pre-test and post-test scores of the test group while there is no noteworthy contrast between the pre-test and post-test scores of the control group.

2.4. Motivation
The term “motivation” concerns the course and greatness of human behavior and it is in charge of why individuals choose to accomplish something, to what extent they are eager to continue the movement, and how hard they are going to seek after it (Wen & Piao, 2020). Motivation has consistently been a key angle in clarifying second language learning processes and human the
behavior driving it. As a point broadly alluded to in L2 learning research, motivation is an indispensable emotional factor (Dörnyei, 2020) that impacts any achievement or disappointment in L2 learning. Nguyen et al. (2020) attest that L2 motivation is one of the most significant variables that is identified with the rate and accomplishment of L2 fulfillment. Correspondingly, Hung et al. (2018) likewise, see L2 motivation as the main impetus that empowers students to consume continued exertion that is expected to learn L2.

Hung et al. (2018, pp. 1028–1046) studied “the Effects of flipped classrooms integrated with MOOCs and game-based learning on the learning motivation and outcomes of students from different backgrounds.” This examination planned to research the impact of flipped classrooms incorporated with Massive Open Online Courses (MOOCs) and game-based learning with respect to the learning motivation and learning results of students from various foundations (as far as sexual orientation, grade, fearlessness pointers in science, and jobs played in the game-based learning process). A semi-structured open-ended questionnaire was utilized for information accumulation, including a fundamental data poll (to comprehend the members’ experiences), a survey on learning motivation (the Motivated Strategies for Learning Questionnaire, MSLQ), a trial of learning accomplishments in mathematics, and a semi-structured open-ended questionnaire (to comprehend the students’ feelings). Quantitative examination results demonstrated that flipped classrooms coordinated with MOOCs and game-based learning can upgrade students’ learning motivation and results. The level of capability is the most significant part which has been examined in this examination yet here it is for school students not for English students at all which can be another examination for further investigations.

2.5. Characteristics and challenges of the flipped classroom and flipped learning
Stone (2012) stressed that educators need to make extra efforts in order to meet the expected outcomes of the flipped classroom. Students’ opinions and learning status can be widely accepted by educators through flipped learning. Drawing together the ideas of different scholars, the following characteristics of the flipped classroom are proposed (Abeysekera & Dawson, 2015; Bishop & Verleger, 2013, June):

1-Changes in the usage of class time: Those teaching contents that were traditionally taught through direct instruction and can be understood by students themselves are provided in other forms, such as video, for students to learn outside the classroom. Besides, in-class discussion, projects, and problem-solving are included in the class to help students apply what they have learned and to cultivate their analytical and judging abilities.

2- Changes in the usage of time outside the class: The time used to do homework is moved to the class time. Different ways of self-learning, such as watching videos, are scheduled before the class time.

3- The time outside the class time is designed for students to gain knowledge at the remembering and understanding levels.

4- Peer interaction, student–teacher interaction and problem-solving skills are emphasized in class. Students gain knowledge at applying, analyzing, and evaluating levels.

5- Technology is used, especially video. While some scholars have argued that technology is not a necessary element for self-learning before class time, undeniably, it is the easiest way to present teachers’ instruction of the learning contents. Besides, teachers can manage the video and teaching materials for students more conveniently through teaching platforms or other online systems and have interaction with students before and after class. Therefore, technology benefits the implementation of the flipped classroom.
2.6. Active learning
The flipped classroom model has been recognized as promoting student-centered learning and active learning (Pierce & Fox, 2012). Active learning is one of the strategies used to address the students’ needs and to ensure appropriate instructional design support for critical thinking in certain contexts (Kim et al., 2012). However, according to Dixon (2010), there is no significant difference between student engagement in active and passive activities, though the content of online learning could be used to engage students by incorporating assignments, discussion forums, and web pages that help to enhance students’ social presence.

In short, the flipped classroom is a pedagogical approach that moves the learning contents taught by teachers’ direct instruction to the time before class in order to increase the chances for the students and teachers to interact. Therefore, teachers would have more time to guide the learning activities and solve students’ problems in order to promote the learning effects.

The leaders of flipped learning argue that the implementation of a flipped classroom approach can bring about positive effects of flipped learning, but it is not guaranteed. Teachers’ preparation is the key element. Some teachers have already used some methods to flip the class, for instance, letting students learn outside the class, offering video clips as supplementary materials, and cultivating the students’ problem-solving abilities. However, more requirements need to be met to achieve flipped learning. In other words, “flipped learning” is a higher level and stricter definition of the “flipped classroom.” In this paper, the two terminologies are not strictly distinguished. The emphasis is on organization and good implementation.

3. Method

3.1. Participants
The participants of this study were 360 English learners within the range of 13–19 years’ old who were studying in intermediate and upper-intermediate level from four institutes. They were selected through multiple stage cluster sampling. In a way that from 110 institutes in Zanjan, the researchers selected four institutes based on multiple stage cluster sampling. According to the informatics statistic of the educational office in Zanjan province, Iran, the whole population of this study was 19,400 males and females English learners from 110 institutes in Zanjan who were studying English in Spring, 2019. Based on the information from institutes almost 10% in this study were in intermediate and upper-intermediate levels. Two classes in the level of intermediate and two upper-intermediate classes (based on placement test) were selected from each institute. In order to have a homogeneous group, the Oxford placement test administered. Students who were able to answer 28–36 of the 60 questions posed were regarded as being at intermediate level and those with 48–55 correct answers were put into the upper-intermediate level of proficiency.

3.2. Instruments
In the present study, Oxford Placement Test (OPT), Engagement, Motivation questionnaires and eight grammar movies were used.

Oxford Placement Test (OPT)

To meet the aforementioned purposes, initially, a language proficiency test version 2, including 60 items (i.e., matching, cloze passages, and multiple-choice questions) was administered to ensure the homogeneity of the learners. The test items mainly focused on reading skills, grammar, and vocabulary. The participants were given 30 minutes to answer. Those learners whose scores fell between 28 and 38 were considered as intermediate ones and 37–47 upper-intermediate ones (Appendix A).
3.3. Engagement
Classroom engagement, which is one of the important factors to create an effective learning environment, is considered as an indicator of student achievement (Handelsman et al., 2005). In the simplest terms, classroom engagement can be defined as the active involvement of the student for learning activities (Skinner et al., 2009) and Chapman (2003).

In this study, engagement was measured through the ISA scale. It has developed through academic research studies that have demonstrated the scale to be statically valid and reliable, and have shown the scale to measure engagement in such a way that is clearly distinct. The ISA scale is based on the view that engagement has an intellectual, a social, and affective dimension. Taken together, these three given an overall level of engagement for each person. Participants were asked nine questions on a seven-point scale from strongly disagree to strongly agree. This gave an overall engagement score, and a score for each of three facets of engagement as follows:

Intellectual engagement (questions 1–3): this measures the extent to which people are intellectually absorbed in their work, or think hard about the work they are doing. Calculate the average score for the three questions.

Social engagement (questions 4–6): this measures the degree to which individuals feel socially connected in their work environment, and share the values of their colleagues. Calculate the average score for the three questions.

Affective engagement (questions 7–9): this measures the extent to which individuals experience positive and energizing feelings about their work. Calculate the average score for the three questions.

Overall engagement (questions 1–9): calculate the average score overall for the nine questions (Appendix B).

3.4. Motivation
Eagerness and willingness to do something without needing to be told or forced to do it, the reason you want to do something. Language learning motivation plays an important role, specifically, learning English in the Asian context. Regarding the research of language learning motivation, researchers investigated students' language learning motivation from different perspectives. In an L2 learning motivation, Dörnyei (2005) proposed a new language learning motivation theory- The L2 Motivational Self System, which consisted of 14 language learning-related constructs. The 14 constructs include Criterion Measures, Ideal L2 Self, Ought-To L2 Self, Parental Encouragement/Family Influence, Instrumentality—Promotion, Instrumentality—Prevention, Linguistic Self-confidence, Attitudes Toward Learning English, Travel Orientation, Fear of Assimilation, Ethnocentrism, English Anxiety, Integrativeness, Cultural Interest, and Attitudes Toward L2 Community. This theory combined the concepts of Markus and Nurius (1986) and Higgins (1987) possible selves, ideal self, and ought self, expanding instrumental motivation and integrative motivation dichotomy that Gardner proposed (1985). In the Asian context, research on language learning motivation revealed some interesting results (Appendix C).

3.5. Grammar videos
There were 50 different types of grammar subjects. Researcher chose eight important topics. Those topics were asked from experts and experienced teachers and based on CVR and CVI formula.

In this study, students faced with video grammars at home and do exercises in the Flipped Classroom with teachers’ guidance and supervision. These were 50 video grammars for intermediate and upper-intermediate learners. On the basis of CVR evaluated using Lawsh’ CVR (Content Validity Ratio) and CVI (Content Validity Index). Lawsh formula is as follows:

\[
CVR = \frac{[N_r - N - 2]}{N - 2}
\]
According to the Lawsh CVR, an item should gain a CVR of higher than 0.42 in order to be validated. Then, CVI of the words were calculated using Waltz and Bausell (1981). CVI formula is as follows:

\[
CVI = \frac{\text{Number of experts who scored item 3 or 4}}{\text{Total number of experts}}
\]

It should be mentioned that the acceptable index of CVI equals 0.79 and if there is an item with CVI lower than 0.79, the item should be removed. After extracting the data from the questionnaires, the Cronbach’s Alpha value of the motivation and engagement variables were calculated as follows (Table 1):

| Questionnaire         | Question number | Cronbach’s Alpha |
|-----------------------|-----------------|------------------|
| Motivation (Hermense) | 17              | 0.971            |
| Engagement (SEI)      | 33              | 0.935            |

SEI questionnaire was in English which was translated into Persian. To this aim, backward and forward translation was used.

### 3.6. Design of the study

The design of the study was quasi experimental. In the current study, a pre-test was used and the participants were randomly assigned to two groups; however, since there was a control group, this study had an experimental comparison group design. The main independent variable was flipped classroom with two levels (intermediate vs. upper-intermediate), and the dependent variables were two dimensions’ motivation and engagement.

### 3.7. Data collection

This study was conducted among four classes in the levels of upper-intermediate and intermediate. In each level, some of the participants were randomly assigned to control and experimental groups. All of the participants answered two questionnaires before being taught through the flipped classroom method as a pre-test. Then, control groups did not have any movies about the grammatical subjects which were included in their coursebook; however, the experimental groups received the related movies before each session and they had the chance to watch the movies more times and had some background information about that subject. Each level had different grammatical movies based on their level. Subjects for intermediate learners were present perfect, simple and progressive, past perfect simple and progressive, passive voices, conditionals and simple future and for upper-intermediate learners, they were future perfect and progressive, part of speech, phrasal verbs, reported speech, causative sentences, and relative pronouns. After six-week period, they answered so-called questionnaires again, and their motivation and engagement in grammatical subjects were measured.

### 3.8 Data analysis

To analyze the data collected from these participants, SPSS 22 software was used. Afterward, one-sample Kolmogorov-Smirnov tests, Bar Chart, and histograms were conducted in order to check the distribution of the data for normality and to see whether the assumptions required for ANCOVA tests were met. In each question, there was one independent variable (Flipped Classroom) and one dependent variable (one of the dimensions). In this study, an experimental study was assigned in order to monitor the effect of the flipped classroom on students’ motivation and engagement in teaching grammar for Iranian intermediate and upper-intermediate level learners. The researchers conducted a pre-test and post-test for both experimental and control groups. Learners watched the grammatical movies at home and the next session teacher taught those contents in the class.
and they did the corresponding exercises and appropriate pair works. It was done for six weeks each semester. Control groups were taught through traditional methods. To analyze the data collected from these participants, SPSS 22 software was used and some statistical tests were utilized.

4. Results

In order to become more familiar with the nature of the research variables, it was necessary to describe them before analyzing the data, because the statistical description of the data precedes statistical inference and helps to identify patterns in the data. Descriptive tendencies for the scores of variables in the upper-level experimental group were calculated.

Descriptive indices related to the scores of variables and their dimensions in the control group were computed at the upper-intermediate level and the results were presented. Table 2 shows the central indices and distribution of motivation and Engagement in the pre-test and post-test of the Upper Learners’ experimental group. Based on the values of standard deviation, the maximum and minimum variables are considered. Distribution of respondents’ opinions in the motivation and Engagement variables in the pre-test is higher than in the post-test.

The central indicators and the scatter of motivation and engagement in the pre-test and post-test of the Upper Learners control group in Table 3 show that based on the standard deviation values, the maximum and minimum variables are observed that the scatter of respondents' opinions in the motivation variable is more in the post-test than in the pre-test and in the engagement variable the pre-test values are more scattered than in the post-test.

| Table 2. Central tendencies and dispersion for variables in experimental group for upper learners |
|-----------------|--------|---------|----------------|--------|--------|
| Group           | N     | Mean    | Std. Deviation | Minimum | Maximum |
| experiment      |       |         |               |         |         |
| Motivation pre  | 80    | 33.19   | 5.41           | 24.00   | 42.00   |
| Motivation post | 80    | 51.53   | 4.73           | 41.00   | 62.00   |
| Engagement pre  | 80    | 85.31   | 6.95           | 74.00   | 98.00   |
| Engagement post | 80    | 112.98  | 6.19           | 101.00  | 122.00  |
| Valid N (list wise) | 80  |         |               |         |         |

| Table 3. Central tendencies and dispersion for variables in the control group for the upper-intermediate learners |
|-----------------|--------|---------|----------------|--------|--------|
| group           | N     | Mean    | Std. Deviation | Minimum | Maximum |
| Control         |       |         |               |         |         |
| Motivation pre  | 80    | 32.81   | 4.44           | 26.00   | 41.00   |
| Motivation post | 80    | 35.34   | 5.37           | 28.00   | 44.00   |
| Engagement pre  | 80    | 87.58   | 11.33          | 65.00   | 102.00  |
| Engagement post | 80    | 88.91   | 8.03           | 72.00   | 112.00  |
| Valid N (list wise) | 80  |         |               |         |         |
Table 4. Central tendencies and dispersion for variables in the experimental group for intermediate learners

| group       | N  | Mean | Std. Deviation | Minimum | Maximum |
|-------------|----|------|----------------|---------|---------|
| experiment  |    |      |                |         |         |
| Motivation  | 100| 31.24| 4.59           | 24.00   | 42.00   |
| pre         |    |      |                |         |         |
| Motivation  | 100| 59.09| 3.06           | 54.00   | 64.00   |
| post        |    |      |                |         |         |
| Engagement  | 100| 77.44| 9.15           | 58.00   | 99.00   |
| pre         |    |      |                |         |         |
| Engagement  | 100| 116.84| 6.46         | 104.00  | 128.00  |
| post        |    |      |                |         |         |
| Valid N (list wise) | 100 |      |                |         |         |

Table 5. Central tendencies and dispersion for variables in control group for intermediate learners

| group       | N  | Mean | Std. Deviation | Minimum | Maximum |
|-------------|----|------|----------------|---------|---------|
| Control     |    |      |                |         |         |
| Motivation  | 100| 31.38| 4.83           | 25.00   | 40.00   |
| pre         |    |      |                |         |         |
| Motivation  | 100| 30.52| 3.43           | 25.00   | 37.00   |
| post        |    |      |                |         |         |
| Engagement  | 100| 77.04| 10.03          | 58.00   | 97.00   |
| pre         |    |      |                |         |         |
| Engagement  | 100| 90.77| 9.77           | 77.00   | 110.00  |
| post        |    |      |                |         |         |
| Valid N (list wise) | 100 |      |                |         |         |

Table 6. One-sample kolmogorov-smirnov test output to check the normality of upper-level experimental group variables

| variable     | Kolmogorov-Smirnov Z | Asymp. Sig. (2-tailed) | Test result |
|--------------|-----------------------|------------------------|-------------|
| Motivation pre | 1.227                 | 0.092                  | Acceptance of the H₀ hypothesis |
| Motivation post | 1.225                | 0.099                  | Acceptance of the H₀ hypothesis |
| Engagement pre | 0.961                 | 0.314                  | Acceptance of the H₀ hypothesis |
| Engagement post | 1.035                 | 0.234                  | Acceptance of the H₀ hypothesis |

Given the values of Sig in Table 6, all of which were higher than 0.05, the assumption of the null hypothesis meant that the variables in question were normal at the significance level of 0.05.

Table 4 shows the central indices and distribution of motivation and engagement in the pre-test and post-test of the Intermediate Learners experimental group. Based on the values of standard deviation, maximum and minimum variables, it is observed that the scattering of respondents’ opinions in motivation and engagement variables in the pre-test is more than post-test.
Table 5 shows the central indices and distribution of motivation and engagement in the pre-test and post-test of the Intermediate Learners control group. Based on the values of standard deviation, maximum and minimum variables, it is observed that the scattering of respondents’ opinions in motivation and engagement variables in the pre-test is more than post-test.

Given the values of Sig in Table 7, all of which were higher than 0.05, the assumption of the null hypothesis meant that the variables in question were normal at the significance level of 0.05.

Table 7. One-sample kolmogorov-smirnov test output to check for normality of upper-level control group variables

| variable       | Kolmogorov-Smirnov Z | Asymp. Sig. (2-tailed) | Test result |
|----------------|----------------------|------------------------|-------------|
| Motivation pre | 1.083                | 0.191                  | Acceptance of the H₀ hypothesis |
| Motivation post| 1.284                | 0.074                  | Acceptance of the H₀ hypothesis |
| Engagement pre | 1.233                | 0.091                  | Acceptance of the H₀ hypothesis |
| Engagement post| 1.275                | 0.076                  | Acceptance of the H₀ hypothesis |

Given the values of Sig in Table 7, all of which were higher than 0.05, the assumption of the null hypothesis meant that the variables in question were normal at the significance level of 0.05.

Table 8. One-sample kolmogorov-smirnov test output to check for normality of intermediate level experimental group variables

| variable       | Kolmogorov-Smirnov Z | Asymp. Sig. (2-tailed) | Test result |
|----------------|----------------------|------------------------|-------------|
| Motivation pre | 0.803                | 0.641                  | Acceptance of the H₀ hypothesis |
| Motivation post| 1.072                | 0.196                  | Acceptance of the H₀ hypothesis |
| Engagement pre | 0.605                | 0.820                  | Acceptance of the H₀ hypothesis |
| Engagement post| 0.503                | 0.880                  | Acceptance of the H₀ hypothesis |

Given the values of Sig in Table 8, all of which were higher than 0.05, the assumption of the null hypothesis meant that the variables in question were normal at the significance level of 0.05.

Table 9. One-sample kolmogorov-smirnov test output to check for normality of intermediate level control group variables

| variable       | Kolmogorov-Smirnov Z | Asymp. Sig. (2-tailed) | Test result |
|----------------|----------------------|------------------------|-------------|
| Motivation pre | 1.523                | 0.053                  | Acceptance of the H₀ hypothesis |
| Motivation post| 1.032                | 0.201                  | Acceptance of the H₀ hypothesis |
| Engagement pre | 0.852                | 0.553                  | Acceptance of the H₀ hypothesis |
| Engagement post| 1.116                | 0.212                  | Acceptance of the H₀ hypothesis |

Given the values of Sig in Table 9, all of which were higher than 0.05, the assumption of the null hypothesis meant that the variables in question were normal at the significance level of 0.05.
4.1. *Kolmogorov-smirnov test (normality test)*  
Given the values of Sig in the table above, all of which were higher than 0.05, the assumption of null hypothesis meant that the variables in question were normal at the significance level of 0.05.

| Test of Homogeneity of Variances | Levine's test | df1 | df2 | Sig. |
|----------------------------------|---------------|-----|-----|------|
| Motivation pre                   | 1.277         | 1   | 158 | 0.088|
| Motivation post                  | 1.903         | 1   | 158 | 0.065|
| Engagement pre                   | 1.343         | 1   | 158 | 0.086|
| Engagement post                  | 0.165         | 1   | 158 | 0.685|

| Test of Homogeneity of Variances | Levine's test | df1 | df2 | Sig. |
|----------------------------------|---------------|-----|-----|------|
| Motivation pre                   | 3.444         | 1   | 198 | 0.065|
| Motivation post                  | 2.452         | 1   | 198 | 0.119|
| Engagement pre                   | 0.707         | 1   | 198 | 0.401|
| Engagement post                  | 1.513         | 1   | 198 | 0.276|

Given the values of Sig in *Table 12*, all of which were higher than 0.05, the assumption of null hypothesis meant the assumption of a homogeneous slope of the regression line between the covariate and independent variables were at the significance level of 0.05.

| Source                           | F   | Sig. | Conclusion            |
|----------------------------------|-----|------|-----------------------|
| group * Motivation pre           | 1.532 | 0.292 | Verify regression slope homogeneity |
| group * Engagement pre           | 2.433 | 0.098 | Verify regression slope homogeneity |

Given the values of Sig in *Table 13*, all of which were higher than 0.05, the assumption of null hypothesis meant the assumption of a homogeneous slope of the regression line between the covariate and independent variables were at the significance level of 0.05.

| Source                           | F   | Sig. | Conclusion            |
|----------------------------------|-----|------|-----------------------|
| group * Motivation pre           | 1.312 | 0.324 | Verify regression slope homogeneity |
| group * Engagement pre           | 2.915 | 0.061 | Verify regression slope homogeneity |
Table 14. The test of linearity of the correlation of the independent and dependent variable in the upper group

| Source            | F    | Sig. | Conclusion                                      |
|-------------------|------|------|-------------------------------------------------|
| Motivation pre    | 66.274 | 0.000 | Linear correlation between the covariate and the independent variable |
| Engagement pre    | 26.890 | 0.000 | Linear correlation between the covariate and the independent variable |

Given the values of Sig in Table 14, all of which were less than 0.05, the assumption of one meant the assumption of a linear correlation between the covariate and the independent variable were at the significance level of 0.05.

Table 15. The test of linearity of the correlation of the independent and dependent variable in the intermediate group

| Source            | F    | Sig. | Conclusion                                      |
|-------------------|------|------|-------------------------------------------------|
| Motivation pre    | 36.048 | 0.000 | Linear correlation between the covariate and the independent variable |
| Engagement pre    | 31.890 | 0.000 | Linear correlation between the covariate and the independent variable |

Given the values of Sig in Table 15, all of which were less than 0.05, the assumption of one meant the assumption of a linear correlation between the covariate and the independent variable were at the significance level of 0.05.

Table 16. The result of the analysis of covariance for upper-level students’ motivation

| Source            | Type III Sum of Squares | df | Mean Square | F    | Sig. |
|-------------------|--------------------------|----|-------------|------|------|
| Corrected Model   | 11,682.329               | 2  | 5841.164    | 322.352 | 0.000 |
| Intercept         | 13,275.244               | 1  | 13,275.244  | 732.610 | 0.000 |
| Motivation pre    | 1200.923                 | 1  | 1200.923    | 66.274  | 0.000 |
| Group             | 10,738.180               | 1  | 10,738.180  | 592.599 | 0.000 |
| Error             | 2844.915                 | 157| 18.120      |       |      |
| Total             | 316,331.000              | 160|             |       |      |
| Corrected Total   | 14,527.244               | 159|             |       |      |

As shown in Table 16, the value of F in the analysis of covariance for the motivation variable for upper-level students was 592.599 and since sig = 0.000 was less than 0.05, it was significant at the 0.05 level and assumes no effect of the method. Flipped classroom overrides motivation, so it can be concluded that the mean of the two groups in the post-test after adjusting the pre-test scores are significantly different. As shown in the tables above, the mean motivation of upper-intermediate students in the control group was 32.81 in the pre-test and 35.33 in the post-test, whereas the average motivation of upper-intermediate students in the experimental group was 33.19 in the pre-test and 51.53 in the post-test. Have been considering the significant difference between the post-test scores in the two control and experimental groups, it is concluded that removing the pre-test co-factor increases the effect of upper-intermediate learners’ motivation.

Given the values of Sig in the table above, all of which were higher than 0.05, the assumption of null hypothesis meant that the variables in question were normal at the significance level of 0.05.
As shown in Table 17, the value of F in the analysis of covariance for the subjective occupational variable of upper-level students was 489.063 and since sig = 0.000 and less than 0.05 was significant at the 0.05 level, assuming no effect the flipped learning method overrides engagement so it can be concluded that the mean of the two groups in the post-test after adjusting the pre-test scores were significantly different. As shown in the tables above, the mean level of engagement of upper-intermediate learners in the pre-test, experimental and control groups were 87.58 and 85.31, respectively, while the mean level of mental activity of upper-intermediate learners in the experimental group was 88.91 and in the post-test respectively was 112.98. Considering the significant difference between the post-test scores in the two groups of control and experiment, it is concluded that by eliminating the pre-test co-factor, the effect of the flipped learning method improves upper-intermediate learners' engagement.

### Table 18. The result of the analysis of covariance for intermediate learners' motivation

| Source          | Type III Sum of Squares | df | Mean Square | F     | Sig. |
|-----------------|-------------------------|----|-------------|-------|------|
| Corrected Model | 41,136.017^a            | 2  | 20,568.008  | 2.290E3 | .000 |
| Intercept       | 5794.227                | 1  | 5794.227    | 645.121 | .000 |
| Motivation pre  | 323.772                 | 1  | 323.772     | 36.048 | .000 |
| Group           | 40,911.666              | 1  | 40,911.666  | 4555.046 | .000 |
| Error           | 1769.378                | 197| 8.982       |       |     |
| Total           | 444,403.000             | 200|             |       |     |
| Corrected Total | 42,905.395              | 199|             |       |     |

As shown in Table 18, the value of F in the covariance analysis for the motivational variable of intermediate level students was 4555.046 and since sig = 0.000 was less than 0.05 significant at 0.05 level and assuming no effect of the method. It can be concluded that the mean of the two groups in the post-test after adjusting the pre-test scores are significantly different. As shown in the tables above, the mean motivation for learners in the Intermediate level in the control group was 31.38 in the pre-test and 30.52 in the post-test, whereas the average motivation of students in the Intermediate level in the experimental group was 31.24 in the pre-test and 59.09 in the post-test. Have been considering the significant difference between the post-test scores in the two control and experimental groups, it is concluded that by eliminating the pre-test co-factor, the effect of the reversal learning method increases the students’ motivation to the Intermediate level.

Given the values of Sig in the table above, all of which were higher than 0.05, the assumption of null hypothesis meant that the variables in question were normal at the significance level of 0.05.

Given the values of Sig in the table above, all of which were higher than 0.05, the assumption of null hypothesis meant that the variables in question were normal at the significance level of 0.05.

**4.2. Homogeneity of variances**

Subjects should be homogeneous in terms of variance. In this study, Levine's test was used to investigate the variance of the variance, the results of which are presented in Tables 10 and Tables 11.
Table 19. The result of the analysis of covariance for intermediate learners’ engagement

| Source                  | Type III Sum of Squares | df  | Mean Square | F         | Sig.    |
|-------------------------|-------------------------|-----|-------------|-----------|---------|
| Corrected Model         | 35,874.910a             | 2   | 17,937.455  | 302.321   | 0.000   |
| Intercept               | 18,760.625              | 1   | 18,760.625  | 316.195   | 0.000   |
| Group                   | 33,632.437              | 1   | 33,632.437  | 566.848   | 0.000   |
| Error                   | 11,688.485              | 197 | 59.332      |           |         |
| Total                   | 2,202,659.000           | 200 |             |           |         |
| Corrected Total         | 47,563.395              | 199 |             |           |         |

Given the values of Sig in Table 19, all of which were higher than 0.05, the assumption of null hypothesis meant that the homogeneity of variances was accepted at the significant level of 0.05, and thus the assumption of homogeneity of the variance in the pretest group was accepted at 5% error level.

4.3. Covariate run before starting the research
This assumption was met and the pre-test was performed before the independent variable, the flipped learning method was implemented.

4.4. Homogeneity of regression slope
To check the homogeneity of the regression slope, we need to calculate the F value of the interaction between the covariate and the independent variable, if this index is not significant (Sig> 0.05), this default is met. The results of the study are as follows:

Given the values of Sig in the table above, all of which were higher than 0.05, the assumption of null hypothesis meant the assumption of a homogeneous slope of the regression line between the covariate and independent variables were at the significance level of 0.05.

Given the values of Sig in the table above, all of which were higher than 0.05, the assumption of null hypothesis meant the assumption of a homogeneous slope of the regression line between the covariate and independent variables were at the significance level of 0.05.

4.5. The linearity of the correlation between the covariate variable and the independent variable
To check the linearity of the correlation of the independent and the covariate, we need to calculate the F of the correlation variable, if this index is significant this assumption is respected. The results of the survey were as follows:

Given the values of Sig in the table above, all of which were less than 0.05, the assumption of one meant the assumption of a linear correlation between the covariate and the independent variable were at the significance level of 0.05.

Given the values of Sig in the table above, all of which were less than 0.05, the assumption of one means the assumption of a linear correlation between the covariate and the independent variable were at the significance level of 0.05.

4.6. Testing research hypotheses

Hypothesis 1: Flipped classroom enhanced upper-intermediate learners’ motivation.
Covariance analysis was used to test the above hypothesis. The assumptions required for the analysis of covariance are examined and these assumptions are in place. The results of the analysis of covariance are listed in the following tables:

As shown, the value of F in the analysis of covariance for the motivation variable for upper-level students was 592.599 and since sig = 0.000 was less than 0.05, it was significant at the 0.05 level and assumes no effect of the method. Flipped classroom overrides motivation, so it can be concluded that the mean of the two groups in the post-test after adjusting the pre-test scores are significantly different. As shown in the tables above, the mean motivation of upper-intermediate students in the control group was 32.81 in the pre-test and 35.33 in the post-test, whereas the average motivation of upper-intermediate students in the experimental group was 33.19 in the pre-test and 51.53 in the post-test. Have been considering the significant difference between the post-test scores in the two control and experimental groups, it is concluded that removing the pre-test co-factor increases the effect of upper-intermediate learners’ motivation.

**Hypothesis 2:** Flipped Learning improved upper-intermediate learners’ engagement.

Covariance analysis was used to test the above hypothesis. As noted, the assumptions required for the analysis of covariance are examined and these assumptions are in place. The results of the analysis of covariance are listed in the following table:

As shown, the value of F in the analysis of covariance for the subjective occupational variable of upper-level students was 489.063 and since sig = 0.000 and less than 0.05 was significant at the 0.05 level, assuming no effect the flipped learning method overrides engagement so it can be concluded that the mean of the two groups in the post-test after adjusting the pre-test scores were significantly different. As shown in the tables above, the mean level of engagement of upper-intermediate learners in the pre-test, experimental and control groups were 87.58 and 85.31, respectively, while the mean level of mental activity of upper-intermediate learners in the experimental group was 88.91 and in the post-test, respectively, was 112.98. Considering the significant difference between the post-test scores in the two groups of control and experiment, it is concluded that by eliminating the pre-test co-factor, the effect of the flipped learning method improves upper-intermediate learners’ engagement.

**Hypothesis 3:** Flipped Learning enhanced intermediate learners’ motivation.

Covariance analysis was used to test the above hypothesis. As noted, the assumptions required for the analysis of covariance are examined and these assumptions are in place. The results of the analysis of covariance are listed in the following tables:

As shown, the value of F in the covariance analysis for the motivational variable of intermediate level students was 4555.046 and since sig = 0.000 was less than 0.05 significant at 0.05 level and assuming no effect of the method. It can be concluded that the mean of the two groups in the post-test after adjusting the pre-test scores are significantly different. As shown in the tables above, the mean motivation for learners in the Intermediate level in the control group was 31.38 in the pre-test and 30.52 in the post-test, whereas the average motivation of students in the Intermediate level in the experimental group was 31.24 in the pre-test and 59.09 in the post-test. Have been considering the significant difference between the post-test scores in the two control and experimental groups, it is concluded that by eliminating the pre-test co-factor, the effect of the reversal learning method increases the students’ motivation to the Intermediate level.
Hypothesis 4: Flipped Learning improved intermediate learners' engagement.

Covariance analysis was used to test the above hypothesis. As noted, the assumptions required for the analysis of covariance are examined and these assumptions are in place. The results of the analysis of covariance are listed in the following tables:

As shown in the table above, the F value in the analysis of covariance for the subjective occupation variable of Intermediate level learners was 566.848 and with sig = 0.000 and less than 0.05 significant at 0.05 level, assuming no effect of learning method on engagement is rejected so it can be concluded that the mean of the two groups in the post-test after adjusting the pre-test scores are significantly different. As seen in the tables above, the mean of pre-test students “mean engagement in the pre-test was 77.04 and 90.77 in the post-test, while the mean of the Intermediate learners” pre-test was 77.44 and in the post-test, respectively, was 116.84. Considering the significant difference between the post-test scores in the two control and experimental groups, it is concluded that by eliminating the pre-test co-factor, the effect of the reversal learning method improves the learners’ engagement in the Intermediate level.

5. Discussion
The findings of this study are discussed in relationship to the literature reviewed. In order to provide a comprehensive discussion, the researchers made every attempt to report perspectives for both affirmations and disapproving outcomes of the flipped classroom.

The first research question was, “Does the experience of using a flipped classroom approach significantly enhance upper-intermediate learners’ motivation in learning grammar?”

As mentioned before, the Hermense questionnaire was used for measuring learners’ motivation. Which has 17 incomplete sentences with four completion choices.

According to the results of the covariance analyses, it was revealed that the flipped classroom has an effect on learners’ motivation in upper-intermediate. It enhances upper-intermediate learners’ motivation and the null hypothesis which says flipped classroom does not enhance the upper-intermediate learners’ motivation is rejected.

The experiment was designed to determine if the students would develop their learning of English grammar and positively change their motivation for learning English as a result of the use of Flipped classroom. All students of the experimental group showed an increase in their performance on the grammar achievement posttest. Furthermore, the experimental group also showed obvious positive change towards English language on the post application of the learning motivation scale after the implementation of Flipped classroom. Such positive change was very clear through students’ responses to the motivation scale. This meant that using an integrative grammar teaching model such as Flipped classroom where students are at the center of the learning-teaching process was very effective.

These findings could be attributed to the nature of the Flipped classroom which provides a sequence of instruction that places students at the center of their prior experiences and emphasizes collaborative learning that helps students develop their higher order thinking skills. The researcher found that the students in the experimental group liked learning cooperatively and were able to learn the grammar more easily and faster. Furthermore, such findings can be attributed to the fact that using Flipped classroom with the experimental group raised their interactivity and participation as well as their motivation to learn, which in turn raised their enjoyment and love of using the model in learning grammar. This was also reflected positively on their motivation for learning English.
Higher motivation levels could also result from active learning activities done in the classroom. Active learning is one of the effective ways to increase motivation (Day & Foley, 2006). Students accessed learning resources whenever they wanted and progressed at their own pace; this may ensure students remain motivated. This is supported by other studies (Abeysekera & Dawson, 2015; Arshad & Imran, 2013; Bayraz, 2014; Strayer, 2012; Turan, 2015). Moreover, Hamdan et al. (2013) emphasized that because students prepare before the lesson outside the class environment in the flipped classroom model, they are more motivated and feel secure in the classroom and these studies confirmed that flipped classroom had a positive impact on developing students' interest, motivation and achievement.

2- The second research question was, “Does the experience of using a flipped classroom approach significantly improve upper—intermediate learners’ engagement in learning grammar?”

As discussed before for measuring engagement SEI (Student Engagement Scale) questionnaire was used, which has 35 Likert scale.

Based upon the results of covariance analysis, flipped classroom improves upper-intermediate learners’ engagement. Considering the significant difference between the pre-test and post-test scores in the two groups of control and experiment, it is concluded that the flipped classrooms improved upper-intermediate learners’ engagement. The null hypothesis was rejected.

In the flipped classroom, when the lecturer posts questions on the discussion board or asks a question in class, students are cognitively engaged by trying to make connections with their own experiences, relate the ideas to what they already know, endeavor to fit different ideas together and make sense of them, and generate their own examples to understand the concepts. Asking questions results in communication between the lecturer and the students, which, as reported by Dixon (2010), will result in a higher level of engagement and will produce active learning. Students engage, but not at a higher level. Because it is their first experience in a flipped classroom, students do not yet fully contribute their own learning material during class (Ramsden (2003) (as cited in Barr, 2013). However, there is engagement when students let the lecturer know what they need and want, communicate their interests, ask the lecturer if they need something in class, make adjustments and attempt to make whatever they are learning as interesting as possible (Sherab, 2013).

Findings in this section are in line with the results of the study by Alebrahim (2016); Aycicek and Yanpar Yelken (2018); Cooper (2014), Elmaeadway (2018). They worked on the effect of Flipped Learning on the professional development of novice English teachers: Attitude and Engagement. The results revealed that teachers’ engagement has increased and they have developed a positive attitude toward Flipped Classroom in comparison to more traditional classes.

The third research question asked, “Does the experience of using a flipped classroom approach significantly enhance intermediate learners’ motivation in learning grammar?”

As mentioned before, the Hermes’s questionnaire was used for measuring learners’ motivation. Which has 17 incomplete sentences with four completion choices.

Based on the results of covariance analysis flipped classrooms enhance intermediate learners’ motivation. The flipped classroom does enhance intermediate learners’ motivation; therefore, null hypothesis was rejected. The findings in this section are in line with the results of the study by Bahrami and Badri (2018); Segolsson et al. (2017). These studies showed that most students had positive motivation for learning English and also revealed that much of student-centered activities in the teaching process resulted in much more positive motivation for learning English.
Motivation is an important factor in increasing achievement (Deveci-Topal, 2013). The findings of studies show that the flipped classroom model has increased student achievement (Boyraz, 2014; Chao et al., 2015; Day & Foley, 2006; H. Hung, 2015; Tune et al., 2013; Turan, 2015). Although many studies in the literature have supported the findings of this study, some studies found that the flipped classroom model has no positive effect on achievement (Findlay-Thompson & Mombourquette, 2014; Overmyer, 2014). In other words, results have differed in studies examining the effect of the flipped classroom model on student achievement. This difference can be attributed to the different processes, materials, and environments used in applying the FC model. The effect of this model on student achievement showed a difference because different materials were used during different lessons. The types of materials used and the surrounding learning environment.

The fourth research question asked, “Does the experience of using a flipped classroom approach significantly improve intermediate learners' engagement in learning grammar?”

As discussed before for measuring engagement SEI (Student Engagement Scale) questionnaire was used. Which has got 35 Likert scale alternatives. Findings in this section are in line with the results of the study by Butt (2014), Hilpert and Husman (2016), and Roehl et al. (2013).

According to the results of the covariance analysis, flipped classroom improves intermediate learners' engagement. Considering the significant difference between the pre-test and post-test scores in the two control and experimental groups, it is concluded that flipped classroom improves intermediate learners' engagement in learning grammar.

Being able to work at their own pace increased their academic success in the flipped classroom. Students reported that being in a flipped classroom supported their learning better by having more time during the class period to ask questions and felt the flipped classroom structure engaged them more than the traditional classroom. Overall, combining all of these previously mentioned aspects of support in the flipped classroom allowed the majority of students to do better academically in the flipped classroom as compared to the traditional classroom. A vast majority of the students noted the flipped classroom supported them positively, because the teaching format decreased the amount of workload they had outside the classroom.

5. Conclusion
The purpose of this study was to investigate the effect of flipped classrooms on motivation and engagement. The first major finding was that the flipped classroom does improve and enhance all two characteristics of intermediate and upper-intermediate learners. The second major finding was that the flipped classroom enhances learners' motivation. The third major finding was that the flipped classroom improves learners' engagement. Engagement in all three possible dimensions will be increased. Emotional, intellectual, cognitive engagement are all possible factors that are included in engagement.

Although motivation and engagement are essential and required characteristics for individuals in the learning context, they are ignored in schools and classrooms. However, in today’s up-to-date world which needs thoughtful well-performed people, these features should be prioritized and applied in educational systems. Certainly, there are other factors involved in the flipped classrooms such as students’ preferences, learning strategies, instructional strategies, teachers’ roles, parents’ roles, etc.

5.1. Limitations of the study
The present study suffered from some limitations which were beyond the control of the researcher and, thus, may place restrictions on the conclusions of the study. In this research, the participants limited the study’s generalizability. Besides, there might be some sources of intervening variables such as respondents’ linguistic, social, and cultural background knowledge that the researchers would fail to control. On the other hand, since completing the two questionnaires was time-consuming and students hadn't enough time to answer the questionnaires at institutes, they...
were asked to answer them at home which led to a waste of time (due to problems such as forgetting, missing the questionnaires, and unwillingness to answer them). Some other limitations may have been occurred which are collected as follows:

1. All of the learners did not access the Internet and computer easily and they had to use computers in public sites that would threaten the privacy of flipped classroom.

2. The best performance in flipped classroom depends on learners’ motivation. Demotivated learners in these kinds of classes may perform lazily.

3. In Iran, the speed of the Internet for downloading high-quality movies is inadequate.

5.2. Recommendations

5.2.1. Recommendation
In the light of the study findings and conclusions, the following recommendations have been put forward for different parties involved in English language learning-teaching process:

5.2.2. Recommendation to the ministry of education
The Ministry of Education is recommended to:

1. Conduct workshops and training programs on Flipped classroom aiming at familiarizing teachers with Flipped classroom and using it in teaching all English language skills and areas (i.e. vocabulary, structure, phonology, and functions).
2. Include the Flipped classroom in Teachers’ Guide books and distribute it among teachers.
3. Develop and enrich the Teacher’s Guide with approaches and techniques that increase and enhance the teaching and learning of grammar.

5.2.3. Recommendations to English language teachers
English language teachers are recommended to:

1. Keep in touch with the latest trends in the field of TEFL and benefit from the findings of the educational research.
2. Change the methods and approaches of teaching from traditional ones to more interactive ones based on the students’ real involvement in the teaching learning process.
3. Select effective methods and techniques which activate students’ motivation, participation and the degree of competition and challenge among students.
4. Change their role from instructors who dominate the class into educators whose role is to organize, help, guide, coordinate and support the students to communicate and acquire language. This can be achieved via the Flipped classroom in which the role of students and teachers differs from the traditional one.

5. Strengthen the relationship with the students, which creates a non-threatening classroom atmosphere and facilitates the learning-teaching process.

6. Consider students’ individual differences and learning styles in Flipped classroom.

5.2.4. Recommendations for further studies
The researchers suggested the following recommendations for further studies:

1. It is recommended that more studies should use the Flipped classroom in the future.

2. The current study was limited to teaching and learning grammar. More studies should focus on using Flipped classroom with other English skills, sub-skills and areas.

3. Future research is also recommended to investigate the effectiveness of using Flipped classroom on other school subjects.

4. It is also recommended to investigate the effectiveness of using Flipped classroom on students’ motivation for learning other school subjects.

5.3. Disadvantages of flipped classroom/learning

1. More one-to-one time with teacher or lecturer

The flipped classroom model provides more time for one-to-one between the lecturer or teacher and students. This means the students have more time to ask questions or ask for help if there are any issues.

2. More group work or student collaboration/interaction time

Students have more group work or student collaboration time to cover subject activities, discussions and peer reviewing.

3. Self-paced learning
Student learning can be self-paced to help them learn at their own pace and in their own time. This can be particularly effective for slower learners.

4. Improved engagement

Students are more engaged with flipped classrooms or lectures as they are researching, completing activities or discussing the subject. With traditional teaching, the teacher would generally be providing all of the information to them.

5. Deeper subject understanding

As students are researching and discussing themselves, the students gain a deeper understanding of the subject and related subjects.

6. Work accessibility

Homework and work tends to be more accessible with the flipped classroom or lecture model. Teachers have to provide learning materials for the subject making the work provided available over the school, college or university's intranet system.

7. May improve test performance

Some recent studies have shown that flipped classrooms or lectures can improve test performance. The Flipped Learning network completed a survey in 2014 that showed 71% of teachers had seen test score improvements from using a flipped classroom model.

8. Transparency for parents

Parents have more access to the learning materials and their performance so far. Parents can help if there are any issues with the student’s understanding.

9. Absences aren’t as problematic

A student can catch up on missed lectures or classes using the flipped classroom model. The initial information required for the class will be online and the student can catch up themselves.

10. Richer content

Flipped classrooms or lectures encourage richer content. With traditional teaching, the students would be provided with one way of looking at the subject, whereas flipped lectures or classrooms encourage the student to find many different ways of looking at a topic including different diagrams, wording and videos.

11. More freedom for teacher

Teachers or lecturers have more freedom to spend with the students they feel need more support or assistance using the flipped classroom method.

5.4. Disadvantages of flipped classroom/learning

1. Relies on student preparation

The flipped method does rely on students preparing for their classes ahead of time. If the student is already a social loafer, then this method will mean they don’t complete their own work or learn.
2. Increased screen time

Due to the nature of the research, activities and discussion required, computers or tablets tend to be used more using the flipped teaching method. This can add to an already high screen time in students.

3. May exacerbate digital divide issues

Lack of access to the internet or a home computer can result in a lack of access to the learning materials provided. This may exacerbate digital divide and learning issues already caused by students coming from lower income families.

4. Time and effort for teacher

The time and effort required from a teacher’s perspective initially when creating the flipped class material is higher than for a traditional class. However, the material can be re-used the next year.

5. May not cover everything required for a test

Students in flipped classes may not cover the entire subject required for a test. The depth of the subject can be dictated by the student themselves or the group the student is working with.

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Appendix A

Quick Placement Test

Version 1

This test is divided into two parts:

Part One (Questions 1–40)

Part Two (Questions 41–60)

Do not start this part unless told to do so by your test supervisor.

Time: 30 minutes

Questions 1–5

Part 1

Where can you see these notices?

For questions 1 to 5, mark one letter A, B or C on your Answer Sheet.

Questions 6–10

Part 2

• In this section you must choose the word which best fits each space in the text below.

• For questions 6 to 10, mark one letter A, B or C on your Answer Sheet.

Scotland

Scotland is the north part of the island of Great Britain. The Atlantic Ocean is on the west and the North Sea on the east. Some people (6) ………. Scotland speak a different language called Gaelic.

There are (7)………………. five million people in Scotland, and Edinburgh is (8)………………. most famous city.
Scotland has many mountains; the highest one is called “Ben Nevis”. In the south of Scotland, there are a lot of sheep. A long time ago, there (9) .................. many forests, but now there are only a (10) .................. Scotland is only a small country, but it is quite beautiful.

6. A. on  B. in  C. at
7. A. about  B. between  C. among
8. A. his  B. your  C. its
9. A. is  B. were  C. was
10. A. few  B. little  C. lot

Questions 11–20

• In this section you must choose the word which best fits each space in the texts.

• For questions 11 to 20, mark one letter A, B, C or D on your Answer Sheet.

Alice Guy Blaché

Alice Guy Blaché was the first female film director. She first became involved in cinema whilst working for the Gaumont Film Company in the late 1890s. This was a period of great change in the cinema and Alice was the first to use many new inventions, (11) .................. sound and color.

In 1907 Alice (12) .................. to New York where she started her own film company. She was (13) .................. successful, but, when Hollywood became the centre of the film world, the best days of the independent New York film companies were (14) .................. When Alice died in 1968, hardly anybody (15) ............... her name.

11. A. bringing  B. including  C. containing  D. supporting
12. A. moved  B. ran  C. entered  D. transported
13. A. next  B. once  C. immediately  D. recently
14. A. after  B. down  C. behind  D. over
15. A. remembered  B. realized  C. reminded  D. repeated

UFOs—do they exist?

UFO is short for “unidentified flying object”. UFOs are popularly known as flying saucers, (16) .................. that is often the (17) .................. they are reported to be. The (18) .................. “flying saucers” were seen in 1947 by an American pilot, but experts who studied his claim decided it had been a trick of the light.

Even people experienced at watching the sky, (19) .................. as pilots, report seeing UFOs. In 1978 a pilot reported a collection of UFOs off the coast of New Zealand. A television (20) .................. went up with the pilot and filmed the UFOs. Scientists studying this phenomenon later discovered that in this case they were simply lights on boats out fishing.
Questions 21–40

• In this section you must choose the word or phrase which best completes each sentence.

• For questions 21 to 40, mark one letter A, B, C or D on your Answer Sheet.

21. The teacher encouraged her students .......... to an English pen-friend.
   A. should write        C. wrote
   B. write               D. to write

22. They spent a lot of time .......... at the pictures in the museum.
   A. looking             C. to look
   B. for looking         D. to looking

23. Shirley enjoys science lessons, but all her experiments seem to .......... wrong.
   A. turn                C. end
   B. come                D. go

24. .......... from Michael, all the group arrived on time.
   A. Except              C. Besides
   B. Other               D. Apart

25. She .......... her neighbor’s children for the broken window.
   A. accused             C. blamed
   B. complained          D. denied

26. As I had missed the history lesson, my friend went .......... the homework with me.
   A. by                  C. over
   B. after               D. on

27. Whether she’s a good actress or not is a .......... of opinion.
   A. matter              C. point
   B. subject             D. case
28. The decorated roof of the ancient palace was ................ up by four thin columns.
   A. built  
   B. carried  
   C. held  
   D. supported

29. Would it .................. you if we came on Thursday?
   A. agree  
   B. suit  
   C. like  
   D. fit

30. This form .................. be handed in until the end of the week.
   A. doesn't need  
   B. doesn't have  
   C. needn't  
   D. hasn't got

31. If you make a mistake when you are writing, just .................. it out with your pen.
   A. cross  
   B. clear  
   C. do  
   D. wipe

32. Although our opinions on many things .................., we're good friends.
   A. differ  
   B. oppose  
   C. disagree  
   D. divide

33. This product must be eaten .................. two days of purchase.
   A. by  
   B. before  
   C. within  
   D. under

34. The newspaper report contained .................. important information.
   A. many  
   B. another  
   C. an  
   D. a lot of

35. Have you considered .................. to London?
   A. move  
   B. to move  
   C. to be moving  
   D. moving

36. It can be a good idea for people who lead an active life to increase their .................. of vitamins.
   A. upturn  
   B. input  
   C. upkeep  
   D. intake
37. I thought there was a …………………. of jealousy in his reaction to my good fortune.
A. piece          C. shadow
B. part          D. touch

38. Why didn't you …………………. that you were feeling ill?
A. advise          C. remark
B. mention          D. tell

39. James was not sure exactly where his best interests ………………….
A. stood          C. lay
B. rested          D. centered

40. He's still getting …………………. the shock of losing his job.
A. across          C. over
B. by          D. through

Part 2
Do not start this part unless told to do so by your test supervisor.

Questions 41–50
• In this section you must choose the word or phrase which best fits each space in the texts.
• For questions 41 to 50, mark one letter A, B, C or D on your Answer Sheet.

The tallest buildings—SKYSCRAPERS

Nowadays, skyscrapers can be found in most major cities of the world. A building which was many (41) …………………. high was first called a skyscraper in the United States at the end of the 19th century, and New York has perhaps the (42) …………………. skyscraper of them all, the Empire State Building. The (43) …………………. beneath the streets of New York is rock, (44) …………………. enough to take the heaviest load without sinking, and is therefore well-suited to bearing the (45) …………………. of tall buildings.

41. A. stages          B. steps          C. stories          D. levels
42. A. first-rate          B. top-class          C. well-built          D. best-known
43. A. dirt          B. field          C. ground          D. soil
44. A. hard          B. stiff          C. forceful          D. powerful
45. A. weight          B. height          C. size          D. scale
SCRABBLE

Scrabble is the world's most popular word game. For its origins, we have to go back to the 1930s in the USA, when Alfred Butts, an architect, found himself out of (46) .................. He decided that there was a (47) .................. for a board game based on words and (48) .................. .... to design one. Eventually he made a (49) .................. from it, in spite of the fact that his original (50) .................. was only three cents a game.

|   |   |   |   |
|---|---|---|---|
| 46. | A. earning | B. work | C. income | D. job |
| 47. | A. market | B. purchase | C. commerce | D. sale |
| 48. | A. took up | B. set out | C. made for | D. got round |
| 49. | A. wealth | B. fund | C. cash | D. fortune |
| 50. | A. receipt | B. benefit | C. profit | D. allowance |

Questions 51–60

• In this section you must choose the word or phrase which best completes each sentence.

• For questions 51 to 60, mark one letter A, B, C or D on your Answer Sheet.

51. Roger's manager ............... to make him stay late if he hadn't finished the work.

A. insisted  \hspace{1cm} C. threatened
B. warned \hspace{1cm} D. announced

52. By the time he has finished his week's work, John has hardly ............... energy left for the weekend.

A. any \hspace{1cm} C. no
B. much \hspace{1cm} D. same

53. As the game ............... to a close, disappointed spectators started to leave.

A. led \hspace{1cm} C. approached
B. neared \hspace{1cm} D. drew

54. I don't remember ............... the front door when I left home this morning.

A. to lock \hspace{1cm} C. locked
B. locking \hspace{1cm} D. to have locked

55. I ............... to other people borrowing my books: they always forget to return them.

A. disagree \hspace{1cm} C. dislike
B. avoid \hspace{1cm} D. object
56. Andrew's attempts to get into the swimming team have not ................................ with much success.

A. associated  C. joined
B. concluded  D. met

57. Although Harry had obviously read the newspaper article carefully, he didn't seem to have … ........................ the main point.

A. grasped  C. clasped
B. clutched  D. gripped

58. A lot of the views put forward in the documentary were open to ..............................

A. enquiry  C. question
B. query  D. wonder

59. The new college ............................... for the needs of students with a variety of learning backgrounds.

A. deals  C. furnishes
B. supplies  D. caters

60. I find the times of English meals very strange—I’m not used .............................. dinner at 6pm.

A. to have  C. having
B. to having  D. have

The test ranking is as follows:

1–17 Beginner
18–27 Elementary
28–36 Lower-intermediate
37–47 Upper-intermediate
48–55 Advanced
56–60 Very advanced
# Appendix B Student Engagement Instrument (SEI)

| NO | Strongly disagree | Disagree | Agree | Strongly agree |
|----|-------------------|----------|-------|---------------|
| 1. | My family/guardian(s) are there for me when I need them. |          |       |               |
| 2. | After finishing my school work I check it over to see if it's correct. |          |       |               |
| 3. | My teachers are there for me when I need them. |          |       |               |
| 4. | Other students here like me the way I am. |          |       |               |
| 5. | Adults at my school listen to the students. |          |       |               |
| 6. | Other students at the school care about me. |          |       |               |
| 7. | Students at my school are there for me when I need them. |          |       |               |
| 8. | My education will create many future opportunities for me. |          |       |               |
| 9. | Most of what is important to know you learn in a school. |          |       |               |
| 10. | The school rules are fair. |          |       |               |
| 11. | Going to school after high school is important. |          |       |               |
| 12. | When something good happens at a school my family Guardians want to know about it. |          |       |               |
| 13. | Most teachers at my school are interested in me as a person not just as a student. |          |       |               |
| 14. | Students here respect what I have to say. |          |       |               |

(Continued)
|   | Strongly disagree | Disagree | Agree | Strongly agree |
|---|------------------|----------|-------|----------------|
| 15. When I do school work I checked to see whether I understand what I'm doing.|          |        |      |                |
| 16. Overall my teachers are open and honest with me. |          |        |      |                |
| 17. I plan to continue my education following high school. |          |        |      |                |
| 18. I'll learn but only if the teacher gives me a reward. |          |        |      |                |
| 19. School is important for achieving my future goals. |          |        |      |                |
| 20. When I have problems at the school my family/ Guardians are willing to help me. |          |        |      |                |
| 21. Overall, adults at my school treat students fairly. |          |        |      |                |
| 22. I enjoy talking to the teachers here. |          |        |      |                |
| 23. I enjoy talking to the students here. |          |        |      |                |
| 24. I have some friends at a school. |          |        |      |                |
| 25. When I do well in school it's because I work hard. |          |        |      |                |
| 26. The tests in my classes do a good job of measuring what I’m able to do. |          |        |      |                |
| 27. I feel safe at school. |          |        |      |                |
| 28. I feel like I have it say about what happens to me at a school. |          |        |      |                |
| 29. My family/guardian what me to keep trying when things are tough at the school. |          |        |      |                |
Appendix C Hermense Academic Achievement Motivation Questionnaire (1970)

Dear students, the questionnaire you have is made up of 17 incomplete sentences. Select and tick the best answer (A- B-C-D). Try to answer the questions carefully and be sure that your answers will be considered confidential.

1- Working is something that ………
   A. I do not like to do it at all  B. I do not like to do it C. I like to do it D. I like to do it very much

2- In school, they think that I am a person ……. … A. I am very hardworking B. I am hard-working C. I am relatively comfortable D. I am very comfortable

3- Other people say that ……… A. I am very hardworking, B. I am hardworking. I am not hardworking, D. I am not hardworking at all

4- If we prepare ourselves for a task long ago …………
   A. It is really meaningless B. It is meaningless C. Acceptance is reality D. It is essential for success

5- What I expect from myself when working is ……… A. It is very high, B. It is high C. It is low D. It is very low

6- When the teacher teaches in the classroom ………… A. I usually use my whole being to do my job in the best way and give the teacher a good idea B. They usually pay a lot of attention to the lessons that are said C. When teaching, my thoughts are diverted to other things D. They are more interested in things that are not related to school

7- When I was in the lower grades, I thought that achieving a high position in society (position and gaining a position) is …...
A-very little important B- less important C- more important D-very important

8- When I have a problem with doing something, A. I give up very quickly B. They give up very quickly C. I do not give up very soon D. I usually do it.

9- In general, ........

A. I am very futuristic B. I am very futuristic C. I am not futuristic D. I am not futuristic at all

10- In school, I think students who study a lot ........

A. They are very good people 2 They are good people C. They are not very good people D. They are not good people

11- At school, those who have achieved very high positions ........ A. I admire very much B. I admire a lot C. I admire D. I do not admire at all

12- To use the extra pleasures and entertainment of life .......... A. I do not have time at all B. I do not have time C. I usually have enough time D. I always have time

13- I am usually a person ........ A. I am very busy B. I am busy C. I am not famous D. I am not famous at all

14. Without getting tired, I can work on a certain thing for a very long time B. I can work on a certain thing for a long time C. I can work on a certain thing for a short timen. D. I can work on a certain thing for a very short time

15. When I was in a lower grade, having a good relationship with my teachers ............ A. It was very much appreciated B. It was much appreciated C. I did not think it was important D. It was important

16. Sons follow their fathers’ job as the director of an institution because ........ A. They want to develop the activity of the institution B. They are happy that their fathers are the director C. They can put their new ideas into action D. They can meet their material needs

17. When I was in the lower grades, I wanted to be ........ A. To be a very important person B. To be important C. To be important person d. To be ordinary PERSON
