

The Effect of Flipped Learning in an EFL Classroom

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The purpose of the present study is to examine the impact of flipping the classroom on EFL students' academic performance. Also, this study aims to explore the participants' perceptions of flipped classroom. 133 university students were assigned to the experimental group (flipped learning) and control group (non-flipped learning). Data were collected via participants' learning outcomes, a questionnaire, and interviews. The two groups of students' pre and posttests scores were compared through a *t*-test. A questionnaire and interviews conducted by the students participating in the flipped classroom were analyzed to gain insights into the participants' flipped learning experiences. The results indicate that flipped learning is associated with significant improvement in the students' academic achievement. In addition, the findings show that students in the flipped classroom were highly positive in satisfaction, instructional effectiveness, desire to learn, and student engagement. It is hoped that this study will help pave the way for further research and for effective implementation of innovative instructional design in EFL classrooms.

[flipped learning/flipped classroom/blended learning/
플립러닝/거꾸로교실학습/블렌디드러닝]

I. INTRODUCTION

Over the past decade ESL/EFL educators and researchers have emphasized the potential value of student-centered learning environments in which learners are actively engaged in their own learning. Studies have indicated that student-centered instruction can lead to higher levels of learner autonomy, performance, and motivation (Y. Bang, 2006; Dickinson, 1987; Tudor, 1996). The flipped learning model, one of the most effective student-centered instructions, reverses the learning process from the conventional, teacher-

centered classroom by having students preview learning materials before they come to class. During the class session, teachers guide or monitor students through assignments, problem-solving exercises, and group-based activities (Bergmann & Sam, 2012).

Flipped learning has attempted to allocate more class time for active learning approaches by making the most of the advanced technologies to support a blended learning approach (Baepler, Walker, & Driessen, 2014; McDonald & Smith, 2013; Tucker, 2012). A typical flipped classroom provides students with access to online video lectures prior to in-class sessions so that students are prepared to participate in more interactive activities such as problem solving and discussion. Students benefit from out-of-class because they can allocate their time and pace to meet their individual levels of comprehension. In face-to-face classroom sessions, students have the opportunity to engage in more active and interactive group works rather than passively listening to lectures.

Although researchers in the field of social studies, natural science, and mathematics claim that students in flipped classroom outperform their counterparts in traditional lecture-based classroom and are given more opportunities to develop higher critical thinking skill under teacher's guidance and with peer support as needed (Alvarez, 2011; Butt, 2014; H. O. Chon, 2014; Gannod, Burge, & Helmick, 2007; Lage, Platt, & Treglia, 2000; G.-b., Park, 2014), little research to date has studied whether and how the flipping instruction can enhance students' learning in the field of ESL/EFL teaching. Therefore, the present study sets out to flip the classroom for EFL learners at a university to examine its pedagogical potential in language learning. The research questions that guided this study are as follows:

- 1) Were there any differences in the participants' learning outcomes between the flipped classroom and the conventional classroom?
- 2) What was the participants' perception of their learning experiences in the flipped classroom?

II. THEORETICAL BACKGROUND

1. Flipped Learning (FL)

In the conventional instruction, students acquire new knowledge in the classroom via lecture, and practice it at home via assignments. A flipped classroom, first introduced by Baker (2000) and Lage et al. (2000), describes a reversal of traditional teaching in which new information or academic content is presented at home while all practice work or engagement with the materials is done in the classroom; basically, students work on homework in class and on classwork at home. Flipped learning (FL), therefore, is a dynamic and interactive

learning environment approach which students gain first exposure to new knowledge outside of class, and then time is spent in class to have students engage collaboratively with the materials and to practice what is learned at home (McDonald & Smith, 2013).

FL is a type of blended learning that transposes the traditional learning environment by delivering instructional content outside the classroom. It can be conducted with many kinds of instructional videos and pre-class assignments, usually via reading materials or lecture videos, are presented together to help students better prepare for in-class participation. Thus, flipped classroom redefines in-class activities. It gives students a chance to engage with teacher and classmates while working on problem solving or assignments (Alvarez, 2011). Specifically, class time is dedicated to peer interaction, discussion, critical thinking, individual or group problem-solving activities since lectures can be viewed at home via videos or materials, where students can watch or review as many times as they need to fully grasp new knowledge and information. Also, teacher's interaction with students can be more personalized and less didactic, and students are actively involved in acquiring knowledge as they participate in and evaluate their learning (Berrett, 2012).

Although not every flipped classroom looks exactly the same, each implementation will differ due to a variety of factors such as class size, teaching style, technology, and resources. Strayer (2007) suggests a conceptual framework of flipped classroom in the following diagram (Figure 1). He claims that the learning environment in FL model is influenced by “the extensive use of educational technology outside of class” and “active learning during class time” (p. 15).

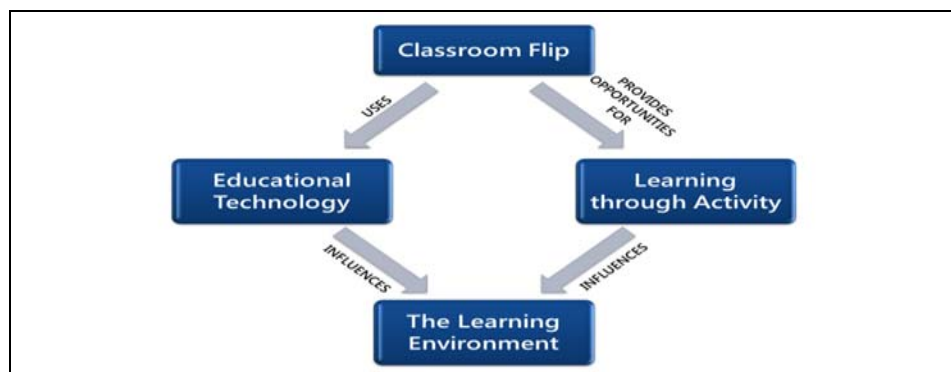


FIGURE 1 Theoretical Framework of the Flipped Classroom
(Adapted from Strayer, 2007)

FL implicitly includes use of technology for outside-the-classroom learning, requiring students to watch videos or pod casts created by the teacher, using other multimedia materials, and online interaction. This model aligns closely with the educational benefits of

computer-assisted language learning or mobile learning. Several research has indicated the effectiveness of digital learning in enhancing students' motivation to learn and willingness to participate because of the accessibility, portability, interactivity, and immediacy of technology devices, leading to more autonomous learning (Marek & Wu, 2012; Ryan, 2013).

In addition, the principles supporting FL are grounded in theoretical background of self-directed learning. Knowles (1975) defines self-directed learning as a process in which individuals take the initiative in understanding their learning needs, establishing learning goals, choosing and implementing appropriate learning strategies, and evaluating learning outcomes. When students prepare before class by watching the teacher's lecture videos, they can learn at their own pace because they are able to pause, rewind, and replay the videos at will. Repeated exposure to the learning materials strengthens and deepens the students' understanding of the content. The knowledge can then be applied in a richer scope during in-class activities (Dickinson, 1987).

FL is an instruction that inverts the teacher's role as a facilitator. Under this model, teachers are able to commit more in-class time to monitoring student performance and providing immediate feedback or response to individual or whole students while students take control of their own learning. Thus, this pedagogical model has become very popular with benefits among both teachers and students (Graham, 2013; Lage et al., 2000).

2. Prior Research on FL in ESL/EFL

As mentioned earlier, despite the excitement surrounding the potential of flipping in the field of other disciplines, a few, if not many, studies are available for the ESL/EFL flipped classroom as of yet. Webb, Doman, and Pusey (2014) analyzed 135 students taking the intermediate level English courses classes at a university in Macau, China. The study was concerned with students' and teachers' perceptions of the flipped instruction, and their teaching and learning preferences. Data gathered from questionnaires, teacher observations, and reflections based on the quasi-experimental study. Result revealed that students did not initially appear to support the flipped instruction; however there was a gradual shift in attitudes among students in the experimental classes over time. Students in the flipped classrooms appeared more comfortable with the model. Additional findings from teachers' journals indicated some skepticism among teachers in regards to applying the flipped concept to language instruction and struggles with student engagement with the materials. Three out of four teachers uncovered they recommend the flipped instruction for promoting creativity and opportunities for higher order learning in their classroom.

Hung (2015) examined the impacts of flipped teaching on learners' academic performance, learning attitudes, and participation levels. Adopting a quasi-experimental design, three different formats (flipped, semi-flipped, non-flipped class) for flipped

teaching were developed in the study. 75 participants were recruited from three EFL classes taking a communicative English course at a Taiwanese university. The findings show that the structured and the semi-structured flipped class were more effective instructional designs than the non-flipped class. With a varying extent, both the structured and the semi-structured flipped class helped the students attain better learning outcomes, develop better attitudes toward their learning experiences, and devote more effort in the learning process.

Y. S. Kim (2015) explored the effects of the FL implemented in a summer English program in a university in Korea. For the study, 37 students participated in a flipped class and 27 students participated in a traditional class. The dependent variables were positive affective experience, negative affective experience, class satisfaction, and language achievement. The findings indicated that the experimental group (flipped class) improved their positive experience during the treatment through statistically significant differences in pre- and posttest scores; while the control group (non-flipped class) did not. The negative experience decreased at the end of the class in both groups. Although the mean differences were not statistically significant, the mean of the negative experience in the experimental group was lower than that in the control group. The class satisfaction was significantly different between the two groups. Students in the experimental group improved their achievement on their final exam, while the control group's mean decreased.

N. Kang (2015) investigated the efficiency and the students' perceptions of flipped classrooms designed to integrate lecture-oriented videos and an activity-centered off-line class at a university in Gyeonggi province, Korea. 24 students taking in a general English course participated in this study. The regular and the flipped classrooms were compared in grammar and vocabulary knowledge by pre- and posttests. Data were conducted with student logs, questionnaire, and interviews to analyze the degree of integration of pre-preparation assignments and off-line class activities as well as the students' perceptions. Findings illustrated that only the flipped classroom produced statistically significant changes in both vocabulary and grammar knowledge. Additional findings from the questionnaire and interviews showed the flipped classroom was highly positive in satisfaction, helpfulness, in-class activities, and instructor's roles. They suggested that flipped classroom maximized face time, retained more interaction, and achieved learning goals.

III. METHOD

1. Participants

The participants of the study were 133 students enrolled in the required English II course

during 2016 fall semester at a university in Korea. The participants were 50 females and 83 males, at the age of 20 through 29. Their majors were various including humanistic sciences, social sciences, and business admiration etc. Four reading classes participated in this study. Two classes formed the experimental group and had 66 students (42 males and 24 females) and two classes formed the control group and had 67 students (41 males and 26 females). Both experimental and control group in this study were taught by the same instructor. All of them took a prerequisite course, English I, and varied in reading ability from low to high level. None of the participants had any flipped classroom experience prior to this study.

2. Research Context

The length of semester is 16 weeks, and classes are held for 50 minutes, twice a week. The comparison between the flipped and the conventional instructional process is illustrated in Figure 2. The two contexts mainly differed with regard to the structure and delivery of the respective learning materials, as well as the ways these materials were used to support teaching and learning.

| Conventional instruction | Flipped instruction |
|--|---|
| <ul style="list-style-type: none"> ● In-class meetings ● Preview activities of the reading unit ● Listen to the audio recording of the reading passage ● Go through the reading passage ● Elaboration of grammatical points ● Understanding of the reading passage ● Engage students into comprehension questions | <p>Self-study prior to class</p> <ul style="list-style-type: none"> ● Watching grammatical points covered on the video ● Listen to the audio recording of the reading passage ● Written work on the definition of the key words ● Preview activities based on the reading passage <p>In-class sessions</p> <ul style="list-style-type: none"> ● Review the key words and grammatical points ● Engage students into comprehension questions Collaborative activities (discussion and group work) |

FIGURE 2 Comparison Between The Flipped and the Conventional Instruction

1) Conventional Instruction (CI)

The context created for CI was a non-flipped classroom that adopted task-based learning activities in class and assigned homework to be completed after the class. Unlike the flipped classes that incorporated e-learning materials, the learning materials presented to the students were in the traditional print format, although the content remained identical. The class meetings included the instructor's explanations on vocabulary, grammatical

points, and contents for the reading unit as well as exercise activities were covered all in class time. And they were explained on instructor-narrated power-point in the classroom.

2) Flipped Learning Instruction

FL was carried out in a period of 14 weeks and divided into three major phases, including self-study prior to class session, and in-class instruction for the implementation of flipped instruction, and student's log.

(1) Phase I: Self-study prior to class

Before class, out-of-class learning materials were delivered to facilitate students' lesson preparation through the instructor's E-class. Students look up the definition of vocabulary in worksheets, read the assigned unit, and watch the grammar videos employed from DR. ESIA Grammar. Grammar videos based on the grammatical points in each reading unit were uploaded on the E-class of instructor.

(2) Phase II: In-class meetings

Since the participants had learned vocabulary, grammatical points, and the reading units before class, detailed elaboration about them was not necessary during class time. Class meetings consisted of interactive and collaborative group-based activities in which the students were able to demonstrate that they could understand the reading passage based on what they had learned. A check-up quiz was implemented to monitor their self-study. In the check-up quiz activities, questions for grammatical points and reading comprehension were allocated to check whether the students watched grammar videos and their understanding of the reading passage, as well as vocabulary puzzles or contextualized quizzes. In addition, the class meetings included the instructor's elaboration on vocabulary, grammatical point, and reading contents for each unit at students' requests.

(3) Phase III: Self-study log

All the students were required to keep their study logs and submit them to the instructor upon the completion of each lesson. The study logs were designed to guide the students to self-monitor and regulate their learning, while also providing the instructor with a window to understand their out-of-class participation. The students' participation levels were mainly measured by the lesson study logs, which were self-reported to reveal the estimated time in minutes and the number of times they watched related videos and materials as they studied for each lesson outside the classroom.

3. Data Collection and Data Analysis

To investigate the students' academic achievement comparing FL and CI, the instruments utilized in this study were a pre and posttest which was designed to assess the students' acquisition of the learning materials. The pre- and posttest include 30 multiple choice questions, respectively, with five answer choices for each question. The question items evaluate student's achievement in respect to content to be taught during the period of the study. The pretest was given on the first day of class and the posttest was given in the fifteenth week. Data from the pre and posttest instruments were analyzed using the SPSS 17.0 statistical software. To determine difference between two groups, a two-sample *t*-test was utilized. As seen in Table 1, statistically significant difference in the mean score of pretest between the two groups is not found at both-sided any conventional levels.

TABLE 1
Descriptive Statistics of the Control and Experimental Group's Pretest

| Group | <i>n</i> | <i>M</i> | <i>SD</i> | <i>t</i> | <i>p</i> |
|-------------------|----------|----------|-----------|----------|----------|
| Experimental (FL) | 66 | 10.95 | 4.75 | 0.0009 | 0.9993 |
| Control (CI) | 67 | 10.96 | 4.19 | | |

***p* < .01

For the research question 2, a questionnaire (see Appendix 1) was administered to the experimental group at the end of semester to understand the perceptions of the participants about FL experience. The questionnaire was modified from the survey developed by Hung (2015). The first part of questionnaire includes participants' background information, self-evaluation of reading ability, the previous FL experience, and average time and effort for self-study. Second part focuses on four constructs such as satisfaction, instructional effectiveness, desire to learn, and learner engagement. A 5-point Likert scale was utilized, and responses ranged from "strongly disagree" (1) to "strongly agree" (5). The questionnaire was conducted at the 12th week. The researcher used descriptive statistics to examine the participants' responses.

To elaborate the students' perceptions of FL experiences, 15 participants were invited to voluntarily take part in the follow-up interviews at the end of the research period. Semi-structured interview questions (Appendix 2) were added to provide a more comprehensive picture of the overall perspectives concerning FL. Each interview lasted for approximately 15 minutes, was recorded for subsequent transcription, and was coded based on content analysis procedures to generate possible themes pertaining to the research questions.

IV. RESULTS AND DISCUSSION

1. Participants' Achievement in FL and CI

The first research question of the study sought to determine whether the instructional type impacted the students' academic performance. Table 2 shows the descriptive statistics comparing the pre- and the posttest in FL and CI treatment. It indicates that in both types of instruction, the mean score of the posttest was higher than that of the pretest. Comparing the posttests, the mean score of FL ($M = 19.95$) was relatively higher than that of CI ($M = 16.70$). While the maximum scores of the pretest in both types of instruction were about the same, the maximum score of the posttest in FL ($M = 29$) was considerably higher than that in CI ($M = 25$).

TABLE 2
Descriptive Statistics of the Control and the Experimental Group's Pre and Posttest

| Test | Type | <i>n</i> | <i>M</i> | <i>SD</i> | <i>Min.</i> | <i>Max.</i> |
|----------|------|----------|----------|-----------|-------------|-------------|
| Pretest | FL | 66 | 10.95 | 4.75 | 4 | 20 |
| | CI | 67 | 10.96 | 4.19 | 4 | 20 |
| Posttest | FL | 66 | 19.95 | 5.33 | 10 | 29 |
| | CI | 67 | 16.70 | 4.47 | 9 | 25 |

In addition, a paired-samples *t*-test was employed to investigate whether significant differences existed in the students' learning outcomes after the treatment. Table 3 revealed that in both types of instruction, the participants achieved significantly better on the posttest ($p < .001$) compared to the pretest, that the posttest of FL was higher than that of CI at a significant level ($p < .001$). These findings indicate that while both instructional types enhanced the participant's academic achievement, FL contributed to significantly better learning outcomes than CI. These results imply that students learned more effectively during FL treatment, confirming the findings reported in the previous studies (Kang, 2015; Kim, 2015) that the flipped classrooms better facilitated student learning compared with the traditional, teacher-fronted classroom.

TABLE 3
Paired-Samples *t*-test of the Evaluation

| | <i>M</i> | <i>SD</i> | <i>SE</i> | <i>t</i> | <i>df</i> | <i>p</i> (2-tailed) |
|-----------------------|----------|-----------|-----------|----------|-----------|---------------------|
| post (FL) to pre (FL) | 9.00 | 1.65 | 0.20 | 44.18 | 132 | .000** |
| post (CI) to pre (CI) | 5.76 | 1.59 | 0.19 | 29.38 | 132 | .000** |
| post(FL) to post(CI) | 3.25 | 0.19 | 0.28 | 11.52 | 132 | .000** |

** $p < .001$

2. Participants' Perceptions and Attitudes Toward FL

The second research question examined the students' perceptions of and attitudes toward flipped learning, as measured by FL experience questionnaire and supplemented with the interview comments. The questionnaire consists of four constructs, including satisfaction, instructional effectiveness, desire to learn, and student engagement.

1) Satisfaction

With regard to learning satisfaction, FL participants expressed significantly higher levels of satisfaction. More specifically, as can be seen in Table 4, 51.5% of participants agreed and strongly agreed that they were satisfied with flipped learning approach ($M = 3.50$), and 48.5% the structure and instructional design of flipped classroom ($M = 3.45$). In short, the participants generally expressed a preference for flipped classroom over traditional classroom. Some commented that they thought the class time was used more efficiently than it was in other courses. "We did activities in class and no more lectures. I like it! The way the class time was spent is good for me!" A few students mentioned that they learned more than the textbook content. "The instructor gave us different learning materials in class, and the learning supplements helped me better understand the content."

Although many participants were satisfied with FL experience, 43% of participants agreed and strongly agreed with item "I prefer the flipped classroom to the conventional classroom," indicating relatively lower satisfaction level ($M = 3.27$) with some participants responding "strongly disagree." It is in line with that the findings presented in the interviews reporting that participants need to work harder during FL in comparison with CI, and that the students preferred the teacher-centered instruction because it required less work, regardless of their learning outcomes. They may naturally be inclined to believe that teacher-fronted instruction is better for learning as they have more experience with lecture-based instruction in their other subjects (Webb et al., 2014).

TABLE 4
Descriptive Statistics of Satisfaction With Flipped Classroom

| Item | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | <i>M</i> | <i>SD</i> |
|---|-------------------|-------------|-------------|-------------|----------------|----------|-----------|
| I am generally satisfied with flipped learning approach. | 2 3.0% | 8 12.1% | 22 33.3% | 23 34.8% | 11 16.7% | 3.50 | 1.01 |
| I am satisfied with the structure and instructional design of flipped learning. | 2 3.0% | 8 12.1% | 24 36.4% | 22 33.3% | 10 15.2% | 3.45 | 0.99 |
| I prefer the flipped classroom to the conventional classroom | 4 6.1% | 11 16.7% | 23 34.8% | 19 28.8% | 9 13.6% | 3.27 | 1.09 |

2) Instructional Effectiveness

As shown in Table 5, over 60% of participants agreed and strongly agreed that flipped learning approach greatly helped their learning outcomes ($M = 3.83$). 51.5% agreed and strongly agreed that FL was more effective and efficient way to learn ($M = 3.41$). 54.5% agreed or strongly agreed that the time and effort I spent in the flipped classroom was worthwhile ($M = 3.55$).

The qualitative results yielded supportive evidence for the highly rated efficiency of flipped teaching. Most of participants saw beneficial learning outcomes. Several students illustrated how successful pre-preparation assignments prior to class and in-class activities were for their learning outcomes. “I wasn’t used to the flipped learning in the beginning,” said one student, “but in the end, I think I have gained more through instruction.” Another student had a similar thought that “The learning outcome is obvious, because we had to engage in homework including previewing grammar videos, looking up key words, and reading the units. It dedicated definitely to improve my reading ability.” In-class activities such as low-stakes quizzes and formative assessments helped the students consolidate their understanding. A student said, “FL was organized in a meaningful manner, because checkup quizzes, class activities, and worksheet were the most helpful that were still in my memory, so I felt like learning faster and better.”

Moreover, many students cited several satisfying aspects of their flipped learning experiences, with the structure and instructional design of FL being contributed significantly to the students’ satisfaction with their flipped learning experiences. As one student reported in the interview, “My favorite part of FL experience was being able to study the learning materials at my own pace, and the way that the materials were organized was very easy to follow. This implies that the learning materials uploaded in the instructor’s E-class might have greatly assisted the students for learning in and out of class.

TABLE 5
Descriptive Statistics of Instructional Effectiveness

| Item | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | <i>M</i> | <i>SD</i> |
|--|-------------------|-------------|-------------|-------------|----------------|----------|-----------|
| Flipped learning approach greatly helped my learning outcomes. | 0 0% | 6 9.09% | 17 25.8% | 25 37.9% | 18 27.3% | 3.83 | 0.94 |
| Flipped classroom is more effective and efficient way to learn. | 4 6.1% | 10 15.2% | 18 27.3% | 23 34.8% | 11 16.7% | 3.41 | 1.12 |
| The time and effort I spent in the flipped classroom was worthwhile. | 3 4.5% | 8 12.1% | 19 28.8% | 22 33.3% | 14 21.2% | 3.55 | 1.10 |

Given the positive results of learning effectiveness, as shown in Table 6, this study took a step further to examine the students’ participation levels as reflected in their

average self-study time and effort each participant spent on their pre-class learning. Of 66 respondents, 29 students (43.9%) reported they spent averagely 1 hour to less than 2 hours studying the learning material. 17 students (25.8%) 30 minutes to less than 1 hour (25.8%), 11 students (16.7%) 2 to less than 3 hours, 5 students (7.5%) less than 30 minutes, and 4 students (6.1%) spent 3 hours or more. The result shows that most of students dedicated to their time and effort on this course, because the structure and instructional design prompted them to preview the learning materials for better in-class participation, and made it easier for them to review the lessons if they wanted to.

TABLE 6
Average Time and Effort for Self-Study ($n = 66$)

| Less than 30 min | 30 min ~ less than 1hr | 1 hr ~ less than 2 hrs | 2 hrs ~ less than 3 hrs | 3 hrs or more |
|---------------------|---------------------------|---------------------------|----------------------------|------------------|
| 5 (7.5%) | 17 (25.8%) | 29 (43.9%) | 11 (16.7%) | 4 (6.1%) |

3) Desire to Learn

As shown in Table 7, 50% percent of participants agreed and strongly agreed that FL enhances interest and motivation for learning ($M = 3.42$). 56.1% agreed and strongly agreed that FL increases the level of concentration on the lesson ($M = 3.59$). From the findings, we can see that the students enjoyed their learning in the flipped classroom. They were inspired by their progress, which reinforced their motivation. The results of the interview comments supported these findings, providing additional insights into the students' learning approaches. Pre-class assignments appear to have motivated many students to engage the classroom activities. A few students confessed, "Homework assignments made me feel more comfortable participating in-class activities than not doing homework. I felt like more confidence in class activities. What I learned at my self-study was reflected on checkup quizzes, so I got a good score."

TABLE 7
Descriptive Statistics of Desire to Learn

| Item | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | M | SD |
|--|----------------------|-------------|-------------|-------------|-------------------|------|------|
| FL enhances interest and motivation for learning. | 2 3.0% | 10 15.2% | 21 31.8% | 24 36.4% | 9 13.6% | 3.42 | 1.01 |
| FL increases the level of concentration on the lesson | 1 1.5% | 7 10.6% | 21 31.8% | 26 39.4% | 11 16.7% | 3.59 | 0.94 |

Although self-study prior to class might have provided the motivation required for flipped learning, the students focused on in-class activities in their comments. "I prefer flipped learning since I could get immediate feedback or answers during check-up quiz

activities, which enhances autonomous learning and absorption of knowledge,” said one student. Another student felt that “Actually, I had difficulties fully understanding the reading units through self-study, but in-class activities centered on the content elaboration, meaning clarification, and opinion sharing. The advantage is that it is a very efficient method of learning.” This statement illustrates not only the nature of immediate feedback from the teacher and peer students but also the participants’ active engagement. It could be interpreted that in-class activities were challenging but well-designed to draw their motivation and interests to improve their learning. Also, some students mentioned the enjoyment of working with peer students, a lively learning atmosphere, and feeling a sense of accomplishment. “I prefer the flipped learning,” said one student. “It was more effective and interesting. I think the teacher-fronted class is boring for me.”

4) Students Engagement

Regarding the perceived learning engagement, as indicated in Table 8, 53% percent of participants agreed and strongly agreed that they participated and engaged themselves more in learning in the flipped classroom ($M = 3.55$). 34 students (51.6%) agreed or strongly agreed that they devoted themselves more to the instructional/class activities in the flipped classroom ($M = 3.44$). One positive impact on the learning engagement was illustrated in pair or group work class activities. Students perceived that the flipped classroom activities promoted students’ positive affect and interaction than those of conventional classroom, with many agreeing that in-class activities helped them engage more in collaboration with peers and thus were helpful to their understanding.

TABLE 8
Descriptive Statistics of the Perceived Learning Engagement

| Item | Strongly Disagree | Disagree | Neutral | Agree | Strongly Agree | <i>M</i> | <i>SD</i> |
|--|-------------------|-------------|-------------|-------------|----------------|----------|-----------|
| I participated and engaged myself more in learning in the flipped classroom. | 2 3% | 7 10.2% | 22 33.3% | 23 34.8% | 12 18.2% | 3.55 | 1.01 |
| I devoted myself more to the instructional/ class activities in the flipped classroom. | 3 4.5% | 10 15.2% | 20 30.3% | 24 36.4% | 10 15.2% | 3.44 | 1.05 |

Furthermore, flipped classroom helped students to regulate learning by themselves or by peers in terms of goal setting, monitoring their progression, and evaluating their own learning. They felt that the FL design made them less nervous because self-study made them feel more comfortable to engage in class activities. One of students mentioned, “I was so nervous, but gradually relieved and motivated to get involved in class, because

the design gives me the opportunity to use knowledge I have learned.”

In particular, class environment for interaction with their classmates makes them consider their comments and responses without feeling the pressure of needing to make an immediate reply. Another student explained “The class environments were very open. It eases my nervous feeling while having a face-to-face interaction with others, and I feel myself confidence in my learning.” These findings confirm Hung’s study (2015) that suggested exposing students to the structured flipped classroom, in comparison to the traditional classroom, could effectively engage them in deep learning.

Despite these positive findings, a few students’ confession implied that successful face-to-face interaction in the flipped classroom depends on the extent to which students prepared before engaging in in-class activities. “When I didn’t have enough time to prepare the homework assignments, my involvement in class activities was low and passive.” Without preparation meant low participation in a group work. Another student had a similar thought, “I found more and more classmates coming to the classes prepared, and they are becoming more positive in class activities.”

5) The Most Satisfying Aspects of FL Experiences

(1) Self-directed learning

One of the benefits of FL is that students perceived flipped learning was more student-oriented, which broadens their learning experience. As expected, the qualitative and quantitative results were consistent in demonstrating that many students are able to prepare for in-class activities by exploring learning materials out-of-class according to their own time schedules and levels of understanding, thus leading to more participation during in-class activities. Several students mentioned that FL was a good experience and useful training for self-directed learning. Some students specified that while they were forced to conduct previews, they regarded the exercise as a way to train them, and thus valued it highly. “We were required to do previews, which was difficult to achieve. But I can see that this type of learning can develop our self-discipline disposition.” Other students agreed that “I appreciate the fact that the instructor made sure that we did the previews. Doing previews kind of helps me learn to self-regulate and self-study.”

A high-performing student commented on the helpfulness of having access to the learning materials, stating that “Thanks to the self-study prior to class, whenever the teacher or my classmates mention something important that I missed during my lesson preview I can always prepare the content to be learned in classroom.” One student who reported English skill as her weakness noted that: “I often feel anxious in English

classes, but I feel more comfortable and confident to the reading units through self-study, because I preview the content before class as many times as I need to until I gain full comprehension.” On that account, FL seems to offer more flexible learning opportunities for preview and review, and thus better meets the students’ individual needs. This implies that the successful development of students’ autonomy introduced innovative changes into students’ attitudes toward learning, and enhanced their academic achievement.

According to Baker (2000), the flipped learning is a teaching model where students do traditional classroom activities at home, resulting in more time for engaging practice activities in class. It’s a nice setup because students studying lesson materials at home can set whatever pace they are comfortable with. Lower level students, for instance, can preview and review materials multiple times at their own pace and according to their own needs and higher level students can breeze through everything more quickly.

(2) Active and cooperative learning

The second most satisfying aspect the participants reported was that FL students were stimulated to become more active and cooperative in learning. Working in groups was identified as an advantage of flipped learning. In other words, students’ engagement in group activities is likely to strengthen their understanding of the content, to foster active learning, and to enhance motivation. From the interviews, the students with different proficiency levels seemed to appreciate and benefit from flipped classroom. As one student put it, “The flipped classroom activities were valuable because they allowed me to collaborate with people in the class. I am a new student at this university so this allowed me to meet people and network. It was also an interesting approach toward class activities.” Another student says, “In the flipped classroom we can work in groups, hear varieties of opinions, and share lots of knowledge.”

Moreover, the findings revealed FL enhanced interaction with the instructor and classmates. Several students mentioned that it was less intimidating to bring their own questions to the instructor during the feedback sessions in the flipped classroom, in contrast to traditional whole-class instruction. Some student commented, “It seems that I am exposed to more meaningful contexts through interaction with others during in-class activities. For sharing ideas and expressing opinions were the best interesting to me.” It indicates effectiveness of an active and cooperative learning strategy for flipped teaching. This result confirms Strayer’s study (2007) highlighted FL students were more open to cooperation when compared with non-flipped students for both their preferred learning environment and their actual classroom experience.

6) Challenges Students Experienced

(1) Time and effort commitment

Students were not very familiar with current method and may be resistant to the flipped classroom that demands them to be more engaged in the homework assignments for the effective in-class activities. One of difficulties students experienced was closely related to the students' commitment of the amount of time and effort required by the flipped instruction. Most noted that they spent relatively more time and effort in the flipped instruction than the conventional class. Some students saw the time and effort requirements as invading their leisure time, and disliked the flipped classroom because they were unwilling to conduct the previews before coming to class. They made comments like, "I prefer the conventional teacher-fronted instruction because it is not that demanding" and "it takes too much time both in school and at home in the flipped classroom."

Some students had concerns regarding individual difference, such as, "I hate the flipped classrooms. I admit I lack of self-discipline skill. I don't feel like my learning needs were met." Other students admitted that there were merits in flipped learning but felt hesitant to have FL for the entire semester and for all the course content. One complained, "Sometimes I just can't understand the content when I read. I'd rather the instructor's lectures and I don't need to take extra time outside the classroom." It appeared that flipped classrooms cannot be applied to all students, all contexts, and all disciplines. Clearly, individual differences are an issue to consider in flipped classrooms.

(2) Nervousness in group work

There were some difficulties especially for lower level students. Some students considered the flipped classroom was relatively satisfied and helpful but often analyzed their experiences in terms of their level of nervousness. A few students noted that they did not feel comfortable with flipped classrooms due to their low level of English ability. "I still prefer the teacher-centered classroom because my reading ability is not so good," said one student, adding that "When the content was getting difficult to comprehend, I had difficulty and low motivation to do previews and felt great pressure in the flipped classroom."

Students who tended to be shy reported difficulty in maintaining engagement in group work for the duration of class time. One student noted, saying, "I feel nervous about in-class activities because I have to be engaged in face-to-face interaction. Participating in-class group activities gives me uncomfortable." Another had a similar thought that they often experience anxiety in front of their classmates for fear of making mistakes. "Teacher-centered classroom might be less nervous because I fear of making mistakes in group activities."

V. CONCLUSION

This study contributes to the literature by expanding the application of the flipped learning to EFL reading classes. With the multiple sources of data collected in this study, the analysis of the comparison between posttests for each treatment, questionnaire, and the interviews revealed that the study has yielded generally positive results on the students' flipped learning. Concerning the specific impacts of this pedagogical approach on student learning, this study demonstrates students' academic achievement and attitude are likely to increase by self-regulated learning, more motivated, active and collaborative learning compared to those in the conventional classroom.

First, the findings of this study mirror much of the research conducted in many fields about autonomous and self-regulated learning, in that flipped teaching enabled learners to preview and review the material based on their needs and at their own pace. In a traditional classroom, on the other hand, students of various levels all have to follow the same pace set by the teacher and this is less than ideal for many students. In flipped classrooms, thus, teachers are more involved in practice activities which are done in class, rather than for homework. This allows teachers to see exactly where students struggle and adjust their teaching accordingly.

Another strength of flipped classroom that it represents a structured attempt to flip lessons using the active learning strategy to foster a learning community. The result shows that the structure of learning materials, augmented by the use of active learner involvement and participation, had a positive impact on how students perceived the learning environment and engaged in the learning process. A learning community can provide students with space to take in new ideas by learning from one another. It is critical for teachers to create learning communities that connect students and help them collaborate well (Lage et al., 2000). Especially since group work continues to be a universal challenge, there should be well-prepared facilitation and guidance for student collaboration. In-class group work appears to be difficult for many students (i.e., group dynamics, roles and levels of participation). Students valued the effect of peer collaboration in groups or as a whole group while they often encountered the lack of guidance to equip better group work. Therefore, teachers could utilize a cooperative and interactive strategy to guide their flipped teaching practices and the design of the associated learning materials (Hung, 2015).

Overall, implementing the flipped classroom will move teaching practices away from teacher-fronted classes that focus on delivery of direct instruction, completion of worksheets, and checking textbook exercises. Moreover, this instructional model promotes active learning, with frequent opportunities for student output and interaction, thereby encouraging student's motivation and engagement, and resulting in positive learning outcomes (Graney, 2013).

There are reliable benefits of flipped classroom for both teachers and students. One of the benefits often cited for flipped teaching is that students are given more opportunities to develop their ability under teacher's guidance and with peer support as needed. We see how the elements of immediate relevance and interconnectedness are fostered in the flipped classroom where the teacher is a facilitator and initiator, building a good community and collaborative learning culture, and learning is an active process with students dynamically engaged in their own learning process. Teachers have a duty to students to help them to obtain the skills that they need to flourish in- and out of classroom.

Student-centered classrooms that value and incorporate technology-enhanced learning, pair and group work, and independent learning are necessary if students are to obtain the skills that they need to develop. For teachers, face time can be best used in a systematic manner by supporting student centered activities, promoting more interaction on/offline. There are, however, some negative sides of flipped classroom such as "not doing assignments" which may demotivate the students or disturb other group members. Thus, flipped classroom requires expert teacher with access of other sources as well as engagement.

The positive results of this study are restricted to the specific research context and the learning environment. Therefore, they are not meant to be generalized due to limited sample size. Rather, the major strength of this research is to pave the way for further research, and for effective implementation of new and innovative instructional design in EFL classroom.

REFERENCES

- Alvarez, B. (2011). Flipping the classroom: Homework in class, lessons at home. *Education Digest: Essential Readings Condensed for Quick Review*, 77(8), 18-21.
- Baeppler, P., Walker, J. D., & Driessen, M. (2014). It's not about seat time: Blending, flipping, and efficiency in active learning classrooms. *Computers & Education*, 78, 227-236.
- Baker, J. W. (2000). The classroom flip: Using web course management tools to become the guide by the side. In J. A. Chambers (Ed.), *Selected papers from the 11th international conference on college teaching and learning* (pp. 9-17). Jacksonville, FL: Florida Community College at Jacksonville.
- Bang, Youngjoo. (2006). Self-regulated learning: Components and self-regulated learning model. *Modern English Education*, 7(1), 139-160.
- Bergmann, J., & Sam, A. (2012). *Flip your class room: Reach every student in every class every day*. Alexandria VA: International Society for Technology in Education.
- Berrett, D. (2012). How "flipping" the classroom can improve the traditional lecture. *Education Digest: Essential Readings Condensed for Quick Review*, 78(1), 36-41.
- Butt, A. (2014). Student views on the use of a flipped classroom approach: Evidence from

- Australia. *Business Education & Accreditation*, 6(1), 33-43.
- Chon, Hee-Ok. (2014). Using flipped classroom model in the social studies instruction. *Journal of the Korean Association for the Social Studies Education*, 21(4), 51-70.
- Dickinson, L. (1987). *Self-direction in language learning*. Cambridge: Cambridge University Press.
- Gannod, G. C., Burge, J. E., & Helmick, M. T. (2007). *Using the inverted classroom to teach software engineering* (Computer Science and Systems Analysis Technical Reports. No. Mu-SEAS-CSA-2007-001). Oxford, Ohio: Miami University.
- Graham, J. (2013). *Student perceptions of the flipped classroom*. Unpublished doctoral dissertation, The University of British Columbia, British Columbia.
- Graney, J. (2013). Flipping your ESL classroom. *TESOL Connections*. Retrieved from the World Wide Web: <http://newsmanager.commpartners.com/tesolc/issues/html>.
- Hung, H. T. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning*, 28(1), 81-96.
- Kang, Namhee. (2015). The comparison between regular and flipped classrooms for EFL Korean adult learners. *Multimedia-Assisted Language Learning*, 18(3), 41-72.
- Kim, Yong-Suk. (2015). The effect of the flipped class on the affective experience, learning achievement, and class satisfaction of college English language learners. *Foreign Languages Education*, 22(1), 227-254.
- Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. Chicago: Follet.
- Lage, M., Platt, G., & Treglia, M. (2000). Inverting the classroom: A gateway to creating an inclusive learning environment. *Journal of Economic Education*, 31(1), 30-43.
- Marek, M. W., & Wu, P. H. N. (2012). Selecting CMC systems for EFL Instruction: Can standard social media platforms succeed? *Proceedings of World Conference on Educational Multimedia, Hypermedia and Telecommunications, USA*, 967-972.
- McDonald, K., & Smith, C. (2013). The flipped classroom for professional development: Part I. benefits and strategies. *Journal of Continuing Education in Nursing*, 44(10), 437-438.
- Park, Gee-bum. (2014). Exploration of the possibility of flipped learning in social studies. *Social Studies Education*, 53(3), 107-120.
- Ryan, B. (2013). Flipping over: Student-centered learning and assessment. *Journal of Perspectives in Applied Academic Practice*, 1(2), 30-39.
- Strayer, J. F. (2007). *The effects of the classroom flip on the learning environment: A comparison of learning activity in a traditional classroom and a flipped classroom that used an intelligent tutoring system*. Unpublished doctoral dissertation, The Ohio State University, Columbus.
- Tucker, B. (2012). The flipped classroom. *Education Next*, 12(1), 26-45.
- Tudor, I. (1996). *Learner-centeredness as language education*. Cambridge: Cambridge

University Press.

Webb, M., Doman, E., & Pusey, K. (2014). Flipping a Chinese university EFL course: What students and teachers think of the model. *The Journal of Asia TEFL*, 11(4), 53-87.

APPENDIX 1

Questionnaire for Student's Flipped Learning Experience

A. Background Information

1. Major _____ Age _____ Male _____ Female _____

2. Self-Evaluation of English Reading Ability

Very High or High _____ Intermediate _____ Low or Very Low _____

3. Have you ever experienced flipped classroom in the previous semesters? Yes ____ No ____

If you have experienced before, which subject? How many courses?

4. How long did you put into your average time and effort for self-study prior to class?

① less than 30 min. ② 30 min. ~ less than 1hr ③ 1 hr. ~ less than 2 hrs. ④ 2 hrs. ~ less than 3 hrs.

⑤ more than 3 hrs.

B. Perception of Flipped Learning Experience

Check the following questions about flipped classroom with 5 Likert scale (1= Strongly disagree; 2= Disagree; 3= Neutral; 4= Agree; 5= Strongly agree).

| | | | | | | |
|----|---|---|---|---|---|---|
| 1 | I am generally satisfied with flipped learning approach. | 1 | 2 | 3 | 4 | 5 |
| 2 | I am satisfied with the structure and instructional design of flipped classroom. | 1 | 2 | 3 | 4 | 5 |
| 3 | Flipped learning approach greatly helped my learning outcomes. | 1 | 2 | 3 | 4 | 5 |
| 4 | The time and effort I spent in the flipped classroom was worthwhile. | 1 | 2 | 3 | 4 | 5 |
| 5 | Flipped classroom is a more effective and efficient way to learn. | 1 | 2 | 3 | 4 | 5 |
| 6 | Flipped classroom enhances interest and motivation for learning. | 1 | 2 | 3 | 4 | 5 |
| 7 | Flipped classroom increases the level of concentration on the lesson. | 1 | 2 | 3 | 4 | 5 |
| 8 | I participated and engaged myself more in learning in the flipped classroom. | 1 | 2 | 3 | 4 | 5 |
| 9 | I devoted myself more to the instructional/class activities in the flipped classroom. | 1 | 2 | 3 | 4 | 5 |
| 10 | I prefer the flipped classroom to the conventional classroom. | 1 | 2 | 3 | 4 | 5 |

APPENDIX 2

Semi-structured Interview Questions

1. What do you think are the most satisfying aspects of flipped learning classroom?
2. What difficulties or challenges did you have in this learning classroom?
3. Did you observe any changes in your attitudes toward this learning experience? How did they happen, and why?

Examples in: English

Applicable Languages: English

Applicable Levels: Tertiary

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