

A STUDY OF TASK-BASED LANGUAGE INSTRUCTION IN FLIPPED  
ENGLISH AS FOREIGN LANGUAGE CLASSROOMS IN CHINA

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By

Bing Zhou

Dissertation Committee:  
Seungoh Paek, Chairperson  
Catherine Fulford  
Christine Sorensen Irvine  
Peter Leong  
Min Liu

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revised taxonomy

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## ABSTRACT

This study investigated the effect of implementing a flipped classroom model, constructed using Bloom's taxonomy, task-based instruction (TBI) and Gagne's nine events, on student learning, perceptions of learning, and student interactions in Chinese College English as Foreign Language (EFL) courses. In this embedded mixed methods study, the sample population was comprised of the first-year college students enrolled in a comprehensive public university in China. The quantitative component of this study utilized a quasi-experimental design. Three classes of college EFL courses respectively employed a fully flipped instructional design model (EG1), a semi-flipped instructional design model (EG2), and a traditional instructional design model (CG). To investigate any differences among the three formats of instruction, students' academic performances, students' perceptions on their learning experiences and their cognitive development, students' frequencies of interactions were compared and analyzed. The qualitative component of the study explored students' learning experiences through semi-structured interviews. This study yielded promising results involving the fully flipped model of instruction and significantly improved student learning outcome on reading comprehension in the final examination. With better use of class time and improved instructional practices, the fully flipped model of instruction allowed the students the opportunity to demonstrate their understanding and knowledge through the various tasks not commonly utilized or observed in the traditional classroom. After completion of the analyses and interpretation of the results, recommendations for future research were given.

*Keywords:* flipped classroom, instructional design, EFL, TBI, Gagne's nine events, Bloom's revised taxonomy

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## **CHAPTER 1. INTRODUCTION**

China has the largest English-learning population in the world, which is even more than the English-speaking population of the United States (Wei, 2016). It is estimated that 25 million college students in China are learning English (National Bureau of Statistics of China, 2012). However, traditional English as a Foreign Language (EFL) courses in China's higher education have many problems: Classes are large and multilevel (Yan & Ding, 2013), teacher-centered, and lecture-oriented (Wei, 2016; Yu, 2015). Therefore, input exceeds output, which leads to poor oral proficiency (Zhao, 2014). As a consequence, students are not confident in or capable of communicating in English (Yu, 2015; Zhao, 2014). They generally only use English in the classroom (Jin et al., 2014) and speak English for the sake of practice instead of as a tool of communication (Li et al., 2016). At the same time, students have difficulty applying their language resources to deal with practical problems in reality (Wang, 2009; Zhang, 2009). Influenced by Confucianism, the relationship between students and teachers in China is strict in nature, which contributes to the lack of in-class participation (Lu, 2014) and critical thinking in traditional classrooms (Zhang et al., 2015). So, the question arises: What can we do to improve China's college-level EFL classes?

### **Statement of the Problem**

In order to deal with the above-mentioned problems, the Ministry of Education (MOE) of China released the College English Curriculum Requirements in 2007 and promulgated the Guidelines on College English in 2015. The 2007 Requirements issued a timely proposal to introduce a combination of computer-based and classroom-based teaching models, intending to

remold the traditional teacher-centered model with the help of Information and Communication Technology (ICT) (MOE, 2007). The 2015 Guidelines encouraged the adoption of task-based, project-based, inquiry-based, and case-based teaching methods, and particularly called for the development of hybrid teaching models based on the “flipped classroom” pedagogy (MOE, 2015). The flipped classroom pedagogy is currently often referenced in ICT-supported learning to describe an inversion of the traditional in-class and out-of-class components of the learning and teaching process (Jenkins et al., 2017).

As a consequence, teachers in many Chinese universities have implemented a flipped classroom approach in practice (Chen & He, 2015; Qiang et al., 2015; Zhang et al., 2015). Yang and Dang (2014) identified the problem and development path of the practice of flipped classroom teaching in China and constructed a localizational strategy, a system of teaching modes from the three dimensions of consciousness, practice, and model innovation. Xie and Xu (2015) proposed applying a flipped classroom teaching model that consisted of three stages: pre-class study with hierarchical lecture videos as the core; inquiry-based, task-driven classroom interaction; and diversified evaluation of post-class reflection. Chen (2015) carried out innovative research on the content, skills, task and evaluation systems of this interpretation of teaching and created a corpus-driven interpreting “flipped classroom” teaching mode.

Previous academic research has shown many positive aspects of flipped classrooms. The flipped strategy extends the borders of the classroom (Chen & He, 2015), provides more engaging and less embarrassing out-of-classroom work (Qiang et al., 2015), and allows students to evaluate in different forms, for example, to record a response to a video orally, to write an essay collaboratively online, or to make a video with group members (Zhang et al., 2015). But it is worth noting that the flipped approach is not a panacea. Problems exist for flipped classroom

methods. From the students' perspectives, there are complaints about the lack of access to online materials, lack of technological skills, lack of time to learn outside the classroom (Han, 2015; Kang, 2015; Webb & Doman, 2016), and lack of experience with learner-centered instruction in China (Yu, 2015). Besides challenges for students, instructors also face problems in practicing flipped learning, including, technology issues, ICT implementation, and instructional design (Chen et al., 2014; Zhang, 2017).

Moreover, previous studies on the flipped classroom strategy suggest that further research should examine 1) students' aptitudes, learning styles, and cognitive and metacognitive strategies, which may contribute to the success of flipped instruction in language learning, and 2) the design of in-class activities and projects to motivate students to do their pre-class work, active learning and communication, and ways to provide teachers with instructional support (Ahmad, 2016; Al-Harbi & Alshumaimeri, 2016; Alsowat, 2016; Berrett, 2012; Chen Hsieh et al., 2016; Hall & DuFrene, 2016; Lage et al., 2000).

Responding to the above-mentioned research needs, the present study probed the instructional design of flipped language classrooms, with a special focus on the design of the in-class, face-to-face sessions, examining how well-designed tasks could impact student learning. The instructional model was constructed based on Bloom's revised taxonomy (Anderson et al., 2001), task-based instruction (TBI) (Ellis & Shintani, 2013), and Gagne's nine events of instruction (Gagne et al., 2005). These will be fully described in Chapter 2. Tasks in the fully flipped model focused on meaning, had some gaps, contained familiar information, and had a clearly defined non-linguistic outcome. The fully flipped model followed Gagne's nine instructional events that mirrored the cognitive stages associated with the adult learning process (Gagne, 1985; Gagne & Briggs, 1974), and had the potential to help learners achieve

remembering, understanding, applying, analyzing, evaluating and creating skills as described by Bloomberg (Anderson et al., 2001; Bloom, 1969).

### **Purpose Statement**

The purpose of this mixed methods study was to examine the impact of implementing a flipped classroom model, constructed using Bloom's taxonomy, TBI and Gagne's nine events, on student learning, perceptions of learning, and student interactions in Chinese EFL courses.

### **Research Questions**

To examine how the fully flipped model impacted students' learning in flipped EFL classrooms, this study looked at three groups: a fully flipped classroom implementing the fully flipped model in which students completed pre-class assignments at home and did in-class tasks based on the fully flipped model during class time; a semi-flipped classroom in which students completed pre-class assignments at home and did traditional in-class activities during class time; and a traditional EFL class in a Chinese university.

The following research questions (RQ) were created to guide this study:

RQ 1: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what differences exist if any, in student learning outcomes in midterm and final examination scores?

RQ 2: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what perceptions do they possess regarding their learning experiences, and are there differences between the three groups?

RQ 3: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what perceptions do they possess regarding their higher order knowledge acquisition and application, and are there differences between the groups?

RQ 4: How does interaction differ for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom?

RQ 5: What are the participants' overall learning experiences in a traditional, a semi-flipped, and a fully flipped college EFL classroom?

### **Significance of the Study**

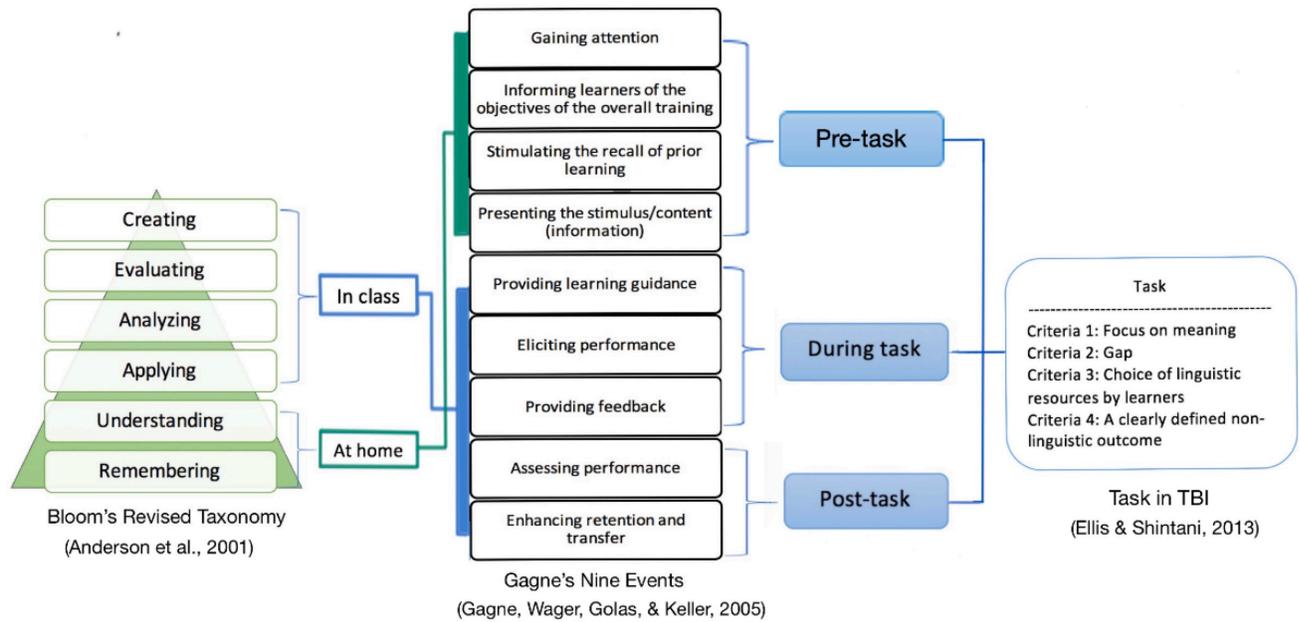
Little or no research has rigorously studied whether and how well-designed in-class tasks as part of a flipped classroom can promote student learning. Zhang (2015) reported that students felt they gained the most knowledge before or after class, rather than in class, which led to the conclusion that a combination of in-class teaching and online self-learning is necessary. Many studies have called for future research on in-class instructional design that provides various activities and materials. Ahmad (2016) suggested devoting class time to active learning rather than lecturing, and Al-Harbi and Alshumaimeri (2016) recommended that instructors use well-designed activities to promote active learning. Sung (2015) noted that collaborative activities or tasks provide ample chances for students to engage in learning, interact with other students and the instructor, and expand their learning through the use of tools. Therefore, it needs to be considered how well-designed tasks can impact student learning, especially in flipped formats. Additionally, it needs to be considered how to further develop and evaluate the flipped EFL course in China's universities. The findings of this study could inform the instructional design for flipped classrooms.

## **Conceptual Framework**

The genesis of this study was based on Bloom's revised taxonomy (Anderson et al., 2001). Based on previous studies on task-based language instruction, it can be predicted that when a task meets the four criteria proposed in Ellis and Shintani (2013), it will likely satisfy students' higher level learning needs on Bloom's revised taxonomy. Gagne's nine events of instruction also mirror the cognitive stages associated with the adult learning process and correlate with Bloom's revised taxonomy (Gagne et al., 2005). This suggests that TBI could utilize well-designed tasks that meet the four criteria in Ellis and Shintani (2013) and fit into Gagne's nine events as a new instructional design model for a flipped language classroom. The fully flipped model integrates pre-class sessions with in-class sessions into a complementary unit. Based on this premise, the conceptual constructs for this study are Bloom's revised taxonomy, TBI, and Gagne's nine events (presented in Figure 1). Each of these components will be described in more depth in Chapter 2.

**Figure 1**

*The Fully Flipped Model*



### Summary of Methodology

An embedded mixed methods design was used to explore the effects of a flipped classroom approach on students' learning experiences in first-semester university EFL classes. The purpose of this study was to examine the impact of implementing a flipped classroom model, constructed using Bloom's taxonomy, TBI, and Gagne's nine events, on student learning, perceptions of learning, and interactions for students in Chinese EFL courses.

### Description of Research Methodology

This study adopted a mixed methods design. The quantitative component utilized a quasi-experimental design consisting of three groups: a fully flipped group, a semi-flipped group, and a traditional group. The qualitative component explored student' learning experiences in each of

the three groups. Multiple sources of data collection were used to understand the perceptions of the participants about their flipped learning experience including midterm and final examinations, surveys, interviews, and observations. More details on methodology will be provided in Chapter 3

### **Participants**

The participants were students enrolled in the College EFL Course I in one Chinese university. There were 104 students enrolled who made up the sample: 35 in the fully flipped group, 36 in the semi-flipped group and 33 in the traditional group. Each student had had an English proficiency placement test and been put into the corresponding course level after admission into the university. All participants in this study were at the same English proficiency level. All three groups (fully flipped, semi-flipped, and traditional) had the same instructional content, syllabus, course objectives, and examination papers.

### **Instrumentation and Data Collection**

1) A Likert scale questionnaire that consists of two independent scales was administered to students at the last class of the fall 2019 semester. Data were collected anonymously using a paper-based questionnaire. 2) Students' scores, from both midterm and final examinations, were collected. 3) Students' class interactions were videotaped and audiotaped and analyzed with SCORE journals. 4) Semi-structured interviews were conducted with students from all three groups. Audiotapes and written notes were taken. A transcription was made. Instruments and data collection procedures will be further described in Chapter 3.

## **Data Analysis**

The quantitative survey data and test scores were recorded into Microsoft Excel and then imported into the statistical package for the social sciences (SPSS). Descriptive statistics, multivariate analysis of variance and follow-up univariate tests were used to analyze all quantitative data, comparing differences in academic performance, students' perceptions and cognitive development among the three groups. The SCORE journal counted classroom interactions. Data were transformed into quantitative numbers (quantified) and put into different categories of interactions.

The qualitative interview data were transcribed, coded, categorized and themed. They were uploaded into Nvivo qualitative analysis software. Open coding was used to identify codes and categories relevant to the research questions.

## **Role of the Researcher**

I am a lecturer at the university in which the research will take place, and I have been in the language learning field for 10 years. Since my first experience teaching English, I have been deeply interested in how students gain language proficiency and am eager to understand how to improve the effectiveness of this process. Fortunately, my own personal and professional interests align with the research interests of the leadership of the university, who are interested in topics associated with English teaching and educational technology. I did not teach the semi-flipped group or the traditional group. As I developed the fully flipped model, I had a more thorough understanding of the model and was teaching the students in the fully flipped group, which had the possibility of influencing the study. To minimize the inference, both midterm and final examinations were determined by other English lecturers of the College English Department at ACPU, and both midterm and final examinations were normally used for the class

and were not designed specifically for this study. Moreover, the survey was anonymous. At the end of the fall 2019 semester, I contacted all interviewees from three groups and conducted semi-structured interviews with them. The interview began when the course was completely finished. While I worked at the same university and know the teacher who was teaching the semi-flipped group and the control group, I did not oversee that teacher (although I was in the months following the data collection).

### **Limitations**

One limitation to the generalizability of this study is that there is no evidence to determine whether the participants are representative of college students in general. Also, the data have been collected during one academic semester; a longitudinal study might generate more in-depth data.

Focusing on EFL courses in one Chinese university at a higher education level could be perceived as limited in scope for a study of instructional design. Care should be taken in generalizing the results and recommendations to other contexts and institutions.

Subjectivity could be considered another limitation in this study. Although measures have been put in place to maximize credibility and dependability, it is possible that different interviewers with different interviewees might have different findings. Interviewees may also be hesitant to reveal their perceptions on a particular topic or subject (Alshenqeeti, 2014; Tashakkori & Teddlie, 1998). They may have inaccurate memories of experiences, or they may be untruthful or give socially acceptable responses.

Another factor to consider is selection bias. It is possible that students who desire to participate in this study might be somehow different from those who elect not to take the courses with intervention, or those who decide not to participate after screening.

## **Definitions of Key Terms**

### ***Bloom's Revised Taxonomy***

Bloom's taxonomy of cognitive domain was revised by Anderson et al. (2001). The revised taxonomy provides six levels of learning arranged from the lowest level to the highest level in cognitive domain: remembering, understanding, applying, analyzing, evaluating and creating.

### ***English as Foreign Language (EFL)***

EFL is a traditional term for the use or study of the English language by non-native speakers in countries where English is generally not a local medium of communication (Celce-Murcia & McIntosh, 1979). EFL countries do not use English as a medium of instruction in education or in government documents. But English is taught in schools. China, Japan, and South Korea are examples of EFL countries.

### ***Flipped Classroom***

The Flipped Learning Network (2014) proposed the following definition of flipped learning. Flipped Learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides students as they apply concepts and engage creatively in the subject matter ("Definition of Flipped Learning," para. 2).

### ***Fully Flipped Classroom***

A fully flipped classroom implementing the fully flipped model in which students complete pre-class assignments at home and do in-class tasks based on the fully flipped model during class time. In a fully flipped classroom, Gagne's nine events of instruction is fully

implemented, TBI is used in class, and both lower order and higher order thinking of Bloom's revised taxonomy are emphasized.

### ***Gagne's Nine Events of Instruction***

Gagne (1985) created a nine-step process called the events of instruction, which correlate to and address the conditions of learning. The nine instructional events are 1) gain attention, 2) inform learners of objectives, 3) stimulate recall of prior learning, 4) present the content, 5) provide "learning guidance", 6) elicit performance (practice), 7) provide feedback, 8) assess performance, and 9) enhance retention and transfer to the job.

### ***Instructional Design***

The term instructional design refers to the systematic and reflective process of translating principles of learning and instruction into plans for instructional materials, activities, information resources, and evaluation (Smith & Ragan, 2005). Instructional designers plan their work based upon principles of instruction and learning that have been successful in the past, and establish problem-solving procedures that they use to guide them in making decisions about their designs.

### ***Interaction***

This study will use classroom observations to find out the classroom interaction in the following categories: 1) frequency of the questions that the instructor asks the whole class, 2) frequency of the questions the instructor asks individuals, 3) frequency of students' responses to these questions, 4) frequency of the output with errors, 5) frequency of the questions that students ask, 6) frequency of the comments that students make to the class as a whole, 7) frequency of student-to-student interactions, and 8) frequency of student-to-instructor interactions.

### ***Seating Chart Observation Record (SCORE)***

As a seating chart, SCORE was developed by Acheson and Gall in 1980. SCORE could be used as an instrument to record classroom communication patterns (Farrell, 2011).

### ***Semi-Flipped Classroom***

A semi-flipped classroom in which students complete pre-class assignments at home and do traditional in-class activities during class time. In a semi-flipped classroom, Gagne's nine events of instruction is partially implemented, lecture-based instruction is used in class, the lower order thinking of the taxonomy is achieved and higher order thinking is partially emphasized.

### ***Task-Based Instruction (TBI)***

TBI is a well-established pedagogy that includes the following characteristics: major focus on authentic and real-world tasks, choice of linguistic resources by learners, and a clearly defined non-linguistic outcome (Ellis, 2003). TBI "involves learners in comprehending, manipulating, producing, or interacting in the target language while their attention is focused on mobilizing their grammatical knowledge in order to express meaning, and in which the intention is to convey meaning rather than to manipulate form" (Nunan, 2004, p. 4).

### ***Traditional Classroom***

A traditional classroom uses a traditional lecture-based instruction during class time. In a traditional classroom, Gagne's nine events of instruction is partially implemented, lecture-based instruction is used in class, the lower order thinking of the taxonomy is achieved and higher order thinking is partially emphasized.

## Summary

Traditional College EFL classes in China are mostly multi-level, large size, teacher-centered and lecture-oriented. To improve the pedagogy, teachers in some Chinese universities have implemented flipped classroom approach in practice. An increased understanding of how well-designed flipped classrooms with the fully flipped model works on College EFL courses might support educators designing curricula and facilitating both teachers and students.

This chapter gives an overview to the study. Chapter Two includes a review of the literature focusing on flipped classroom overview, flipped strategies' affordances and limitations on language learning and teaching, and the conceptual framework for EFL instructional design. Chapter Three incorporates a description of the methodology and an explanation of procedures in terms of the data collection and data analysis. Chapter Four presents a detailed interpretation of the collected data using the research methods described in Chapter Three. Finally, Chapter Five offers a discussion of the findings, and presents implications for other teachers, instructional designers and researchers.

## **CHAPTER 2. REVIEW OF LITERATURE**

This chapter presents a review of the literature on flipped classrooms and the implementation of this strategy in language learning. The chapter also describes the conceptual framework for the study, elaborating how task-based instruction (TBI) and Gagne's nine events can be used to design in-class activities for flipped language classrooms.

### **The Flipped Classroom**

The challenge of how best to use technology to help students learn is a persistent one. One strategy relies on technology to introduce course content to students outside of the classroom, enabling students to engage with the content at a deeper level than they would inside the classroom (Baker, 2000; Collins et al., 2001; Gannod et al., 2008; Lage et al., 2000; Strayer, 2009). This has been referred to as the flipped classroom (Baker, 2000). This section examines the definition and history of the flipped classroom, as well as the benefits and challenges of this strategy.

### **History of the Flipped Classroom**

Over the past ten years, many studies on the flipped classroom have been completed. The flipped classroom model has been implemented in both primary/secondary education and higher education in various disciplines. The Flipped Learning Network (2014) proposed the following definition of flipped learning:

Flipped learning is a pedagogical approach in which direct instruction moves from the group learning space to the individual learning space, and the resulting group space is transformed into a dynamic, interactive learning environment where the educator guides

students as they apply concepts and engage creatively in the subject matter (“Definition of Flipped Learning,” para. 2).

In the flipped model, materials and resources that are used to deliver instruction are provided to students before class (Tucker, 2012; Zhang et al., 2015); thus, in-class time is used for hands-on learning, individualized instruction, group collaboration, and creative projects that allow students to master learning objectives (Du et al., 2014). This model allows teachers to spend greater amounts of time tutoring students rather than lecturing them (Wallace, 2014). In the flipped classroom model, the role of the teacher changes from a provider of knowledge to a guide, facilitator, and organizer (Basal, 2015).

The term “flipped classroom” developed out of the idea of the inverted classroom (Lage et al., 2000) and was popularized by Khan Academy (Weaver & Sturtevant, 2015) and by the practice of a Colorado high school chemistry class (Bergmann & Sams, 2012). Traditionally cited as the first reference to the inverted classroom, Lage et al. (2000) used technology to invert the traditional teaching environment by delivering lectures online as homework and directing teaching toward multiple learning styles in the classroom. Lage et al. reported that students generally preferred this inverted format. Baker (2000) also flipped the traditional class format by conducting lectures outside the classroom and focusing on active learning activities in the classroom. Students felt they experienced increased collaboration, personal attention, and engagement in critical thinking as a result of this inverted classroom style.

Khan Academy popularized the term “flipped classroom” (Weaver & Sturtevant, 2015). According to Salman Khan’s 2011 TED talk, Khan Academy has a YouTube repository of more than 3,100 video “micro lectures” covering subjects from math and medicine to history and economics. Students watch the videos at home and pair them with computer exercises found on

the academy's website. According to Khan, the flipped strategy of sending schoolwork home in the form of short video lectures and doing homework at school made this format popular among the millions of Khan Academy students.

Flipped classrooms gained further recognition in 2012. Colorado high school teachers Jonathan Bergmann and Aaron Sams (2012) created teacher-narrated videos for students missing their classes, sparking a new pedagogical trend.

### **Benefits of the Flipped Classroom**

Studies show that flipped classroom instruction benefits students. McCallum et al. (2015) found that flipped classrooms fostered student academic involvement—represented through note-taking, viewing video lectures, active in-class learning, and collaboration—which they recognized as a positive contributor to student success. A well-designed flipped model of instruction may help students achieve academic success (Ahmad, 2016; Obari & Lambacher, 2015; Van Sickle, 2016; Weaver & Sturtevant, 2015; Webb & Doman, 2016; Zhonggen & Guifang, 2016). Students in flipped science, technology, engineering, and mathematics (STEM) classrooms had greater learning gains and more positive perceptions of the learning environment than students in traditional STEM classrooms (Love et al., 2014). English as a second language (ESL) students also learned more in flipped classrooms than in traditional classrooms, positively reviewed their flipped classroom courses, and asked for more lecture videos and more flipped classes (Hung, 2015).

The flipped classroom helps promote student engagement (Alsowat, 2016; Thompson & Ayers, 2015) and motivation (Balzotti & McCool, 2016; Obari & Lambacher, 2015). The term “student engagement” is used to describe students’ active learning or desire to actively participate in routine class activities such as submitting homework, listening to lectures, working

on tasks assigned by the instructor, and actively attending class (Delialioglu, 2012). Students found that the flipped classroom enhanced their engagement in classroom activities and participation in discussions and problem-solving with their peers; thus, they became confident in their ability to apply the knowledge they gained inside and outside the classroom (McLaughlin et al., 2014). Furthermore, Alsowat (2016) indicated high significant relationships between higher order thinking skills (HOTS) and student engagement, HOTS and satisfaction and between student engagement and satisfaction on a flipped classroom teaching model. The findings demonstrated that the flipped instruction increased student engagement and satisfaction and they were significantly related. When students engaged in classroom they achieved high grades in HOTS. Also, their satisfaction on the flipped instruction increased their engagement and HOTS.

Thompson and Ayers (2015) found that student engagement was impacted by course preparation, perceived content relevance, and value of peer interactions. Satullo (2013) indicated that engagement was boosted through in-class activities. Because flipped instruction strategies strengthen team-based skills, Millard (2012) demonstrated that asynchronous technology-driven team interaction—such as taking a group quiz using an electronic response system (for example, clickers or a phone app)—was a natural fit for the flipped classroom, encouraging class attendance and participation. Chen et al. (2014) reported that students in flipped classrooms were satisfied with class meetings, improved their class attendance, and felt that they had opportunities for active learning. Additionally, McGivney-Burelle and Xue (2013) found that the flipped classroom better engaged students in learning various subjects than traditional classroom. They noted that students enjoyed having their instructor available in class to help while they worked on problems.

Student interaction—in either the regular classroom or through distance learning—is another positive impact of a flipped classroom (Chen Hsieh et al., 2016; Sung, 2015). Student interaction refers to student communication with all of the elements in the learning environment, including the instructor, other students, content (Woo & Reeves, 2007), and technology tools (Hillman et al., 1994). It is an important element in the flipped classroom approach, in which technology is used to interact outside the classroom (Kim et al., 2014; McLaughlin et al., 2014; Roach, 2014). Hung (2015) reported that 64% of students in flipped classrooms increased their interactions with the instructor and their classmates. Roach (2014) found that students responded positively to flipped classrooms because their instructors helped them to collaborate with one another to solve problems. The flipped classroom enabled students to build a learning community and exchange ideas to solve problems (Kim et al., 2014). Another study showed that students in a flipped classroom enriched their dialogue with friends both inside and outside the classroom because the activities of teaching and learning were not just limited to the interior of the classroom (McLaughlin et al., 2014).

Flipped instruction methods allow teachers to offer more personalized student guidance than traditional instruction methods: because instructors in flipped classrooms assign quizzes that cover out-of-class assignments before class meetings, they are able to identify common problem areas that need to be addressed and reinforced in person (Sams & Bergmann, 2013). Flipped instruction methods focus on classroom discussion because students report to class sessions with an understanding of the larger topic areas for discussion. This allows students to provide more meaningful input and even impact the direction of in-class discussions (Herreid & Schiller, 2013). Students indicated a high level of support for the flipped classroom (Alsowat, 2016; Obari & Lambacher, 2015; Zhonggen & Guifang, 2016), emphasizing its positive effects on student

responsibility and active learning (Thompson & Ayers, 2015). Studies also show that flipped classrooms, and the resulting increase in active learning, lead to equal or greater gains, compared to traditional classrooms, in content knowledge, even when students spend less time in the classroom (Baepler et al., 2014; Diego, 2016).

The flipped classroom also has benefits from the teacher's perspective. Using flipped instructional design allows teachers to better create authentic learning experiences (Mazur et al., 2015). It provides teachers with freedom and empowers them to build collaboration with other teachers (Hall & DuFrene, 2016). Under this model, standardized lectures can be developed and shared among faculty, while classroom time is utilized to address areas of student confusion and apply lecture concepts (Ash, 2012).

### **Challenges of the Flipped Classroom**

The flipped classroom also creates challenges for both teachers and students. Teachers must address video production time, equipment costs, and the required expertise to produce video lectures (Hall & DuFrene, 2016). They may need additional time to create electronic lectures (Gannod et al., 2008) and new in-class learning activities (Lage et al., 2000), as well as the software to create instructional videos or podcasts (Yarbro et al., 2014). Additionally, instructors in a flipped classroom must relinquish some control over learning to students who may not be willing or able to take charge of their education in a responsible way (Kovach, 2014). Hall and DuFrene (2016) pointed out that instructors may also lack the support to flip their classroom. They need investments of time, training, and technology—which are often in short supply—to successfully establish a flipped classroom (Berrett, 2012).

Even if teachers have the resources to create videos for a flipped classroom, these videos must be made in formats that are widely accessible for students, and students must have access to

networked technology (Ullman, 2013). Alternatives—such as videos that are accessible on DVDs or USBs—must be available (Bergmann & Sams, 2012; Ullman, 2013). For students without at-home computer access, teachers must also provide class time to watch videos or access to computers outside of the classroom (Ullman, 2013).

It can also prove challenging for teachers to design intellectually engaging learning materials that support active learning. Research indicates that some students report being less attentive and self-disciplined when watching video lectures, as compared to live instruction, because the videos are perceived as a less formal learning environment (Foertsch et al., 2002). The flipped model of instruction can lead to a drop in attendance because students feel that viewing the video lectures is sufficient to pass the course (Blair et al., 2016). Additionally, Lage et al. (2000) reported that when students were provided with printouts of course notes, along with the ability to review video lectures, many were discouraged from taking their own notes. Nonetheless, students do benefit from receiving outlines and graphic organizers that act as a scaffold for note-taking and facilitate greater understanding of lecture material (DeZure et al., 2001).

Furthermore, Bergmann and Sams (2012) found that some students missed the opportunity to ask questions during lectures when viewing course materials outside of the classroom. The student-teacher interactions that occurred in flipped classrooms were not balanced; capable students usually got more chances to talk than struggling students, and students' fear of being wrong further limited their class interactions (Van Sickle, 2016). Because such a passive learning style is not conducive to flipped classroom instruction, teachers must consider methods for encouraging intellectual engagement when designing flipped instructional materials. For example, interactive videos and outlines that provide scaffolding and direction for

learners can be used to ensure that students are actively engaging with materials outside of the classroom.

Another potential drawback of the flipped classroom, identified by Toto and Nguyen (2009), is some students' preference to attend lectures rather than watching or listening to virtual lessons. Students noted a tendency to be more easily distracted from learning while watching video lectures and expressed concern over the quality of recorded lectures, including volume, the size of video windows, and platform compatibility. Furthermore, students lost interest in virtual lessons longer than thirty minutes. Despite these challenges, Mazur et al. (2015) found that students were open to flipped classroom instruction for 25–50% of class time.

## **The Flipped Strategy in Foreign Language Teaching and Learning**

This section examines the implication of flipped instruction strategies for foreign language classrooms, as well as their benefits and challenges in this setting. In particular, the section analyzes English as a foreign language (EFL) instruction in higher education.

### **The Flipped Model in Language Classrooms**

In the field of foreign language instruction, technology has been employed to enhance student learning for several decades (Wang & Heffernan, 2010). İlin et al. (2013) reported that, when learning English, students need to follow a step-by-step process and practice a lot. The researchers recommended using digital devices like videos and websites for English instruction; these allow students to practice English at their own pace, not only in the classroom but also after class. Flipped learning is an alternative approach that integrates technology into language learning, and that contributes to ample opportunities for students to learn (Chen Hsieh et al., 2016; Hung, 2015; McLaughlin et al., 2014). In a conventional class, new knowledge is

introduced in the classroom, usually via lecture, and students practice using the knowledge at home, via homework. Flipped learning reverses this paradigm, with information introduced to students before class using technology. This allows more advanced learning activities during in-class time, meaning students are given more opportunities to participate in meaningful engaging activities, thus enhancing the learning outcomes (Boucher et al., 2013). Zainuddin and Halili (2016) also found that the flipped classroom is an innovative approach that uses emerging technology for teaching and learning activities.

Studies on proficiency-oriented instructional curricula with a flipped format in ESL/EFL courses indicate that flipped classrooms that employ technology can be used to enhance student learning. Zhang (2015) flipped her business English course for EFL students at one of China's universities. She created pre-class lecture videos, did in-class activities, and provided for after-class feedback and evaluation. She compared the effectiveness of the flipped classroom to the regular classroom and found that her students were highly satisfied with the flipped classroom. They gained a lot of vocabulary, had more chances to exchange opinions than in a traditional classroom, and practiced listening and speaking in English. Their increased level of interaction also made them more motivated learners.

Ahmad (2016) also concluded that the flipped classroom had a significant effect on the listening comprehension of Egyptian EFL university students, encouraging them to use available learning resources on the Internet. Sung (2015) flipped his English content-based class for twelve Korean EFL university students; the course evaluation showed that the students had positive opinions about the instructor's passion, felt that they received sufficient feedback and ample chances to discuss and interact with the instructor, appreciated the class's collaborative learning

style, felt that the exams were appropriate, retained their learning, and the real-life setting projects developed their in-depth thoughts.

Engin (2014) examined the impact of student-crafted videos, created as an in-class activity, for eighteen Emirati EFL university students taking an academic writing course. These student videos promoted second-language learning through research, simplification, and explanation and promoted accuracy in English. In developing their own videos, the students were more likely to become an expert on their chosen topic, developing higher order thinking skills; practice summarizing and synthesizing; and focus on accuracy of content and language.

However, the challenges of flipped classrooms—overlapping contexts, overly concise explanations on videos, burdensome assignments, less differential feedback on projects—may lead to student aversion to this model (Ahmad, 2016; Engin, 2014; Sung, 2015; Webb et al., 2014; Zhang, 2015). Zhang (2015) found that some students said “they don’t gain much knowledge in class, the key is pre-class or after-class” (p. 180). Ahmad (2016) suggested teachers devote class time to active learning, providing students adequate opportunities to practice the knowledge they gain through video lectures. Kang (2015) indicated that although flipped classrooms provide a flexible environment for assignments and technology-based activities inside and outside the classroom, the biggest obstacle to this instruction method is students’ disinclination to complete assignments. These studies demonstrated the importance of combining in-class teaching and online self-learning; the advantages of both supplement each other and lead to improved language knowledge skills.

### **Student Achievement in the Flipped Language Classroom**

Studies suggest that the flipped classroom positively affects student performance and proficiency levels in various areas of English language learning. Hung (2015) found that

implementing the flipped classroom model in English classes improved students' academic performance in general. Obari and Lambacher (2015) noted that flipping English classes improved students' speaking skills (DewiSuryani, 2014) and reinforced their listening comprehension (Han, 2015; Hung, 2015; Kang, 2015). Even when the flipped classroom was utilized to promote other areas of English language instruction such as grammar, vocabulary, and idiomatic knowledge, studies showed that students' confidence and oral fluency skills improved (Chen Hsieh et al., 2016; Han, 2015; Kang, 2015).

Furthermore, the flipped classroom strategy can encourage learners and make them more attentive to the learning process. Hung (2015) confirmed that 80% of participants in flipped classrooms spent more time and effort learning on their own compared to students in traditional classrooms, indicating that they participated more in the learning process. Similarly, Han (2015) noted that students independently devoted time and effort to find the technological learning tools and resources they needed to expose themselves to English for an ungraded project, showing motivation and interest in English learning.

### **Attitudes and Perceptions toward the Flipped Classroom Strategy in Language Classes**

Students have varied perceptions and attitudes toward the flipped classroom strategy. While some students confirmed that the flipped classroom enabled them to better comprehend the content they were learning (Zhang, 2015), others complained about the technology requirements for out-of-class assignments (Han, 2015; Kang, 2015). Nonetheless, on the whole, attitudes and perceptions of the flipped classroom are positive. Students evaluated the flipped classroom strategy as highly satisfactory, since coming to class prepared increased their self-confidence and classroom participation (Basal, 2015; Chen Hsieh et al., 2016; Kang, 2015). In addition, the availability and accessibility of varied e-learning materials and online resources

positively influenced students' attitudes (Ishikawa et al., 2015; Obari & Lambacher, 2015). According to Kostka and Brinks Lockwood (2015), students reported that flipping English classes made learning more productive, fruitful, and engaging. Furthermore, the researchers found that it was useful to assign a short online quiz or ask students to complete a worksheet after reviewing out-of-class materials to keep track of students' progress (Kang, 2015; Kostka & Brinks Lockwood, 2015).

Another feature of flipped classrooms that received positive feedback from students was the incorporation of e-communication tools that allowed students to share their work and get comments from their classmates and teacher (Chen Hsieh et al., 2016; Haake, 2013; Han, 2015). Students reported that utilizing online communication tools reduced their anxiety since it freed them from the pressure of an immediate reply; they could consider their answers and comments before sending them (Wu et al., 2017).

### **Motivation and Engagement in the Flipped Language Classroom**

Motivation is defined as the spirit, initiative, and willingness of students to attend class and learn material (Cole et al., 2004). In education, motivation is acknowledged as one of the most crucial elements in student performance and achievement. It plays a significant role in the flipped classroom (Obari & Lambacher, 2015).

Many studies have shown that flipped classrooms increase student motivation in relation to learning activities (Al-Harbi & Alshumaimeri, 2016; Chen Hsieh et al., 2016; Obari & Lambacher, 2015). Chen Hsieh et al. (2016) indicated that constructive, collaborative, contextual, and self-directed pre-class tasks, as well as in-class activities, effectively motivated students to become more engaged and encouraged them to apply what they had learned in real-life contexts. Similarly, students reported that flipped instructional design prompted them to

preview a course's learning materials so as to better participate in the classroom and also made it easier for them to review lessons if they wanted to (Hung, 2015). The study suggested the use of WebQuest, an active learning strategy that belongs to the camp of inquiry-based learning, to effectively engage students in deep learning in the flipped classroom. Obari and Lambacher (2015) also found that students were excited to use a variety of emerging new technologies, which enabled them to effectively learn English by accessing learning materials on their mobile devices. The flipped classroom increased students' perceived knowledge and self-efficacy in terms of independent learning (Al-Harbi & Alshumaimeri, 2016; Chen Hsieh et al., 2016; Han, 2015).

Zepke et al. (2009) found that student engagement resulted from motivation. Hung (2015) reported that students engaged in the learning environment and the learning process in the flipped classroom and seemed stimulated to become more active in learning. In the study, one student noted "more and more classmates were coming to class prepared and expressing themselves in English conversation activities" (p. 92). Chen Hsieh et al. (2016) indicated that, in flipped instruction, the online learning community not only resulted in meaningful learning while facilitating positive interaction and collaboration, but also significantly enhanced the participants' oral proficiency, making them more engaged in learning activities such as storytelling, dialogue, class discussion, and group presentations. Sung (2015) indicated that students appeared to take their responsibilities for both individual and team work seriously, completing this work before, during, and after class. This led to an increased amount of interaction among students and personalized contact with the instructor. Sung pointed out that traditional lecture-based language classrooms tend to produce a disengaged learning environment.

## **Active Learning in the Flipped Language Classroom**

Active learning is an umbrella term that “involves students in doing things and thinking about the things they are doing” (Bonnell & Eison, 1991, p. 2). According to this definition, Hung (2015) linked active learning to a vast range of learning activities, instructional strategies, teaching methods, and pedagogical approaches intended to activate or develop students’ thinking in the learning process. Examples include group discussions, case studies, collaborative learning, problem-based learning, and inquiry-based learning.

Several studies have indicated that flipped classrooms can foster active learning and higher order thinking (Baepler et al., 2014; Hung, 2015; Zappe et al., 2009). Bishop and Verleger (2013) contended that a flipped classroom is an educational technique that consists of two important components: computer technologies such as video lectures and interactive learning activities. This indicates that the flipped classroom holds promise as an innovative approach that facilitates active learning. Hung (2015) found that structuring learning materials based on the five essential elements of WebQuest—introduction, process, task, evaluation, and conclusion—was an effective strategy that facilitated students’ active learning in coursework.

The active learning component of the flipped classroom may also explain why this strategy is so effective in improving students’ language proficiency (Obari & Lambacher, 2015). In Ahmad (2016), class time was used to engage participants in active learning activities based on collaboration, interaction, and discussion in English; this may have improved participants’ listening comprehension. This result echoes Jones’s (2006) assertion that collaborative activities have long been shown to enhance learners’ comprehensible input, which, in turn, leads to greater understanding of aural texts.

Studies have suggested devoting class time to active learning instead of lecturing (Ahmad, 2016; Baepler et al., 2014; Hung, 2015). Hung (2015) recommended that future studies probe the effects of well-structured (versus ill-structured) or guided (versus unguided) flipped classroom lessons on student learning, using different instructional design techniques or active learning strategies.

### **Challenges in the Flipped Language Classroom**

Flipped classroom instruction is not a panacea; evidence of its effectiveness is based primarily on anecdotal testimonies, mostly by teachers rather than students (Sung, 2015). In Al-Harbi and Alshumaimeri (2016), few students agreed that the flipped classroom enhanced or elevated their self-learning skills. This may be because these students completed few out-of-class activities, and those that they did complete consisted solely of watching videos. In contrast, Han (2015) demonstrated that flipping English classes fostered students' autonomous learning because it provided them with various materials to explore and learn from. This implies that additional activities beyond videos should be used to foster students' autonomous learning.

The failure of a flipped classroom may be caused by obstacles like lack of access to online materials, lack of technological skills, or lack of time to learn outside the classroom (Webb & Doman, 2016). Students suggested conditions for success in flipped instruction, including making sure of students' work in advance, cultivating close relationships between experts in flipped teaching and teachers who are interested in this strategy, providing a more helpful and specialized support system for teachers, and enhancing teachers' and students' willingness to participate in flipped language classrooms (Sung, 2015). It is also crucial to employ strategies to encourage students to watch assigned videos outside of the classroom such as mandatory commenting or quizzes (Chen Hsieh et al., 2016).

The key to the success of flipped instruction is students' preparation outside the classroom. If students do not properly prepare, the teacher cannot engage them at an advanced level in the classroom. Kang (2015) suggested that skipping pre-class assignments might make students uncomfortable about participating in class and disturb group work. Many strategies have been suggested to help teachers ensure that students complete pre-class work (November & Mull, 2012). Chen Hsieh et al. (2016) overcame this challenge and motivated students to do their pre-class work by rooting the instructional design in the output materials. Other studies have shown that considering students' workload is crucial to their acceptance of out-of-class extra tasks (Al-Harbi & Alshumaimeri, 2016; Kang, 2015; Kostka & Brinks Lockwood, 2015; Obari & Lambacher, 2015).

### **Further Study**

The existing literature highlights a consistent pattern of findings that argue for the flipped classroom's ability to enhance language teaching in terms of students' cognitive learning outcomes, motivation, engagement, and more student-oriented exploitation of face-to-face sessions (Al-Harbi & Alshumaimeri, 2016; Alsowat, 2016; Obari & Lambacher, 2015; Sung, 2015). These findings are complemented by students' positive perceptions of the added value of the flipped model in enhancing the overall learning experience (Hung, 2015).

Shifting from a traditional teaching model to a flipped teaching model in instructional practice requires a shift in how instructors are prepared and supported (Zappe et al., 2009). Instructors' preparations to flipped classroom model include cognitive, curricular, and student notification; adoption of pedagogy and practice strategies in teaching environments; and reflections on the benefits and challenges of adopting the model (Fairbairn, 2009). According to Berrett et al. (2014), switching from the role of "sage on the stage" to "guide on the side"

requires a professional and cultural shift that many faculty members resist. Furthermore, one more challenge that educators of a flipped course might face is the implementation and evaluation of the effectiveness of their flipped classrooms (Hamdan et al., 2013). It is evident that educators do recognize the value of using sound pedagogical approaches to enhance the student experiences through curriculum renewal, but need support to develop skills needed to effectively guide the systematic use of technologies and translate conceptual thinking into planned learning sequences (Brewer & Movahedazarhouli, 2018).

Compared with studies on students' perceptions, instructors' roles and lecture videos in flipped classrooms, little or no research has rigorously studied whether and how well-designed in-class tasks can promote student learning. Zhang (2015) reported that students felt they gained the most knowledge before or after class, rather than in class, which led to the conclusion that a combination of in-class teaching and online self-learning is necessary. Many studies have called for future research on in-class instructional design that provides various activities and materials. Ahmad (2016) suggested devoting class time to active learning rather than lecturing, and Al-Harbi and Alshumaimeri (2016) recommended that instructors use well-designed activities to promote active learning. Sung (2015) noted that collaborative activities or tasks provide ample chances for students to engage in learning, interact with other students and the instructor, and expand their learning through the use of tools.

Addressing the above-mentioned characteristics, benefits, and challenges of flipped classrooms for language learning from previous studies, further studies are suggested to examine (1) students' aptitudes, learning styles, and cognitive and metacognitive strategies, which may contribute to the success of flipped instruction in language learning (Alsowat, 2016); and (2) the design of in-class activities and projects, which motivated students to do their pre-class work

(Chen Hsieh et al., 2016), how to promote active learning and communication (Ahmad, 2016; Al-Harbi & Alshumaimeri, 2016), and how to provide teachers with instructional support (Berrett, 2012; Hall & DuFrene, 2016; Lage et al., 2000).

Responding to the above-mentioned research needs, the present study probes the instructional design of flipped language classrooms, with a special focus lying on the design of the in-class, face-to-face sessions, examining how well-designed tasks can impact student learning.

## **Conceptual Framework**

The conceptual framework of this study was developed from Bloom's revised taxonomy, TBI, and Gagne's nine events of instruction. This section explains how TBI works in the design of in-class tasks, and how Gagne's nine events can guide the development of learning tasks in flipped language classrooms.

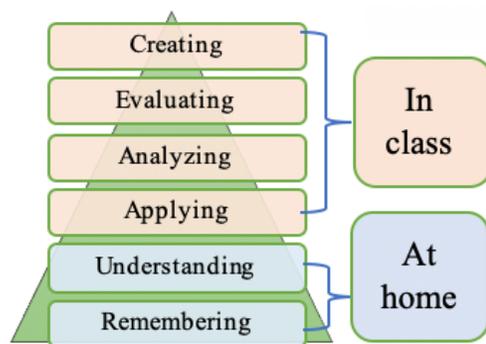
### **Bloom's Revised Taxonomy**

The cognitive domain of Bloom's taxonomy was revised by Anderson et al. in 2001; the learning objectives of the revised version are remembering, understanding, applying, analyzing, evaluating, and creating. The cognitive model represents a continuum of increasing cognitive complexity—from remembering to creating. Zainuddin and Halili (2016) related cognitive phases in flipped classrooms to Bloom's revised taxonomy, the lower levels of the taxonomy are presented prior to class through recorded lectures and videos; readings, simulations, and other materials provide foundational support for learning so that in-class time can be spent working on the higher levels of the taxonomy. Similarly, Lankford (2013) mentioned that the flipped classroom focuses on supporting learners in achieving a higher level of the taxonomy domain.

Nederveld and Berge (2015) added that, in flipped learning, class time is spent on application and higher level learning rather than listening to lectures and other lower level thinking tasks. As Figure 2 shows, implementing flipped learning allows students to spend more time in class supporting higher level learning tasks, while lower level tasks such as knowledge growth and comprehension are completed independently outside the classroom.

**Figure 2**

*Bloom's Revised Taxonomy and Its Relationship to the Flipped Classroom*



Zainuddin and Halili (2016) explained the six levels of learning in flipped classrooms based on Bloom's revised taxonomy for the cognitive domain:

1. Remembering: In this stage, students try to recognize and recall the information they receive. They also try to understand the basic concepts and principles of the content they have learned.
2. Understanding: The students try to demonstrate their understanding, interpret information, and summarize what they have learned. As basic levels of cognitive activity, remembering and understanding happen whenever students learn. They mainly take place before class, when students are studying recorded lectures and videos. They also happen in class when students recognize particular words, phrases, or pieces of information.

3. Applying: The students practice what they have learned or apply knowledge to a real-life situation.

4. Analyzing: The students use their critical thinking skills to solve a problem, debate with friends, compare answers with peers, or produce a summary. They obtain new knowledge and ideas after implementing critical thinking or debating as part of group activities. At this level of learning, the students also produce creative thinking.

5. Evaluating: The students assess or establish peer-review knowledge and judge it in relational terms. In this stage, students are evaluating whole learning concepts, as well as how much they have successfully learned.

Creating: The students are able to design, construct, and produce something new from what they have learned (p. 315).

## **Task-Based Instruction (TBI)**

### ***Definition of TBI and Tasks***

Since the 1980s, the concept of TBI has held a predominant position in language pedagogy. It has gained popularity as a prominent instructional method for learners to effectively develop a second language (L2) (Bygate et al., 2001; East, 2012; Ellis, 2003; Ellis & Shintani, 2013; Lee, 2000; Nunan, 2013). Nunan (2004) defined TBI as instruction that “involves learners in comprehending, manipulating, producing, or interacting in the target language while their attention is focused on mobilizing their grammatical knowledge in order to express meaning, and in which the intention is to convey meaning rather than to manipulate form” (p. 4). The term is often taken to refer exclusively to grammar; however, Ellis et al. (2001) insisted that its focus should also be directed at phonology, vocabulary, grammar, and discourse. Moreover, Ellis (2016) explained that TBI’s focus on form occurs in activities where meaning is primary but

attempts are made to attract attention to form; thus, TBI is not an approach but rather a set of techniques deployed in a communicative context by a teacher and/or learners to draw attention implicitly or explicitly (often briefly) to linguistic forms that are problematic for learners (p. 411). He also concluded that central to all instruction based on form is some kind of meaning-focused task that provides context for the focus on form; thus, focus on form is integral to task-based language teaching. In Ellis (2003), task-based language instruction is a well-established pedagogy that includes the following characteristics: major focus on authentic and real-world tasks, choice of linguistic resources by learners, and a clearly defined non-linguistic outcome.

In TBI the primary unit for designing a language program and planning individual lessons is the task (Ellis, 2009). Tasks have been defined in a number of different ways in L2 pedagogy and research literature (Samuda & Bygate, 2008). Some scholars such as Scrivener (2011), the author of an ESL pedagogy textbook that is widely used in teacher education programs, take a very broad view, considering *tasks* and *activities* to be interchangeable terms:

The basic building block of a lesson is the activity or task. We'll define this fairly broadly as "something that learners do that involves them using or working with language to achieve some specific outcome." The outcome may reflect a "real world" outcome or it may be purely a "for-the-purposes-of-learning" outcome (p. 37).

Scrivener (2011) included in his definition drill-like activities such as repeating sentences after the teacher to improve pronunciation (p. 38).

Other researchers distinguish between tasks and activities, seeing the former as a subset of the latter (Philp et al., 2014; Samuda & Bygate, 2008). Samuda and Bygate (2008) described a task as a holistic activity in which learners make use of their knowledge of various subareas of language (vocabulary, phonology, grammar, discourse structures) simultaneously to achieve a

meaningful outcome. Van den Branden (2006) pointed out that the various definitions share a common understanding—that people not only learn language in order to make functional use of it, but also learn language by making functional use of it. He also stressed the importance of understanding the construct of a task, explaining that some definitions identify the importance of learners drawing on their own linguistic and cognitive resources for task completion.

In order to assess to what extent an activity was a task, Ellis (2012) proposed a set of criteria that draws on definitions provided by Bygate et al. (2001), Samuda and Bygate (2008), and Willis (1996). He further elaborated on and explained these four key criteria (Ellis & Shintani, 2013, p. 135):

1. The primary focus should be on “meaning” (i.e., learners should be mainly concerned with encoding and decoding messages, not with focusing on linguistic form).
2. There should be some kind of “gap” (i.e., a need to convey information, to express an opinion or to infer meaning).
3. Learners should largely rely on their own resources (linguistic and non-linguistic) in order to complete the activity. That is, learners are not “taught” the language they will need to perform the task, although they may be able to “borrow” from the input the task provides to help them perform it.
4. There is a clearly defined outcome other than the use of language (i.e., the language serves as the means for achieving the outcome, not as an end in its own right). Thus, when performing a task, learners are not primarily concerned with using language correctly but rather with achieving the goal stipulated by the task.

### *Affordances and Constraints of TBI*

Studies suggest that TBI promotes actual language use that facilitates the successful integration of language abilities. Nunan (1999) supported this idea when stating that TBI requires listening, speaking, reading, and writing in the same exercise to complete the problem posed by the task. Nunan (2005) explained that the use of TBI in the classroom usually includes real-life work that allows for the practice of all language abilities, helping students to explore different communication opportunities inside and outside the classroom that benefit the practice of language. Córdoba Zúñiga (2016) also indicated that TBI was a good approach for the promotion of skills integration and language competences. Richards and Rodgers (2014) highlighted TBI's ability to enhance the creation of learning tasks that suit the needs of learners and help them master skills successfully by providing different class exercises to complete their work. Kurniasih (2011) also pointed out that the objective of TBI in English language learning is to enhance the use of language as a means to focus on authentic learning.

BavaHarji et al. (2014) found that scaffolding learners in performing tasks with increasing levels of complexity in a multimedia task-based language teaching/learning context results in improved L2 oral production, particularly in terms of accuracy, fluency, and complexity. Robinson (2011) also determined that a simple task leads to less complex language production, while a complex task elicits richer language production in terms of complexity in the syntactic mode. The findings of Starkey-Perret et al. (2017) echoed research on L2 acquisition and TBI, showing that language learning is enhanced when learners become aware of the gaps that exist between what they want to communicate and what they are able to communicate. Calvert and Sheen (2015) increased students' familiarity with both cultural concepts and linguistic items and provided students with language practice and preparation, leading to greater

accuracy in students' responses. Gleason and Slater (2017) found that the unique patterns of tasks and oral interactions that helped build students' academic bi-literacy also helped build their knowledge of the relationships between wording and meaning, culture, and writing tasks; this supported their evolving understanding of how language construes content.

As for the outcomes of TBI, Rubin (2015) pointed out that promoting goal setting and task analysis adds value by helping learners plan how they approach a task. If teachers take the time to help students understand how to plan their individual approach to a task, the results can be rewarding for both teacher and students. These rewards include a transformed learning environment, as learners show increased motivation, especially feelings of self-efficacy; increased self-esteem, problem-solving skills, and ability to take control of learning; greater focus on the learning process; and even application of planning skills to other areas (Castrillón et al., 2013; Clemente & Rubin, 2008; Tutistar Jojoa & Ballesteros Muñoz, 2013).

There are also criticisms of TBI. Seedhouse (2005) argued that a task was not a valid construct on which to base a language teaching program. Sheen (1994) claimed that the TBI approach was relevant only to the L2 classroom because, in foreign language learning, there is no opportunity for students to communicate outside the classroom and therefore no motivation to work at more widely applicable tasks. Swan (2005) maintained that TBI was unsuitable for beginning learners because, without a foundation in grammar, students would not be able to communicate in a second language.

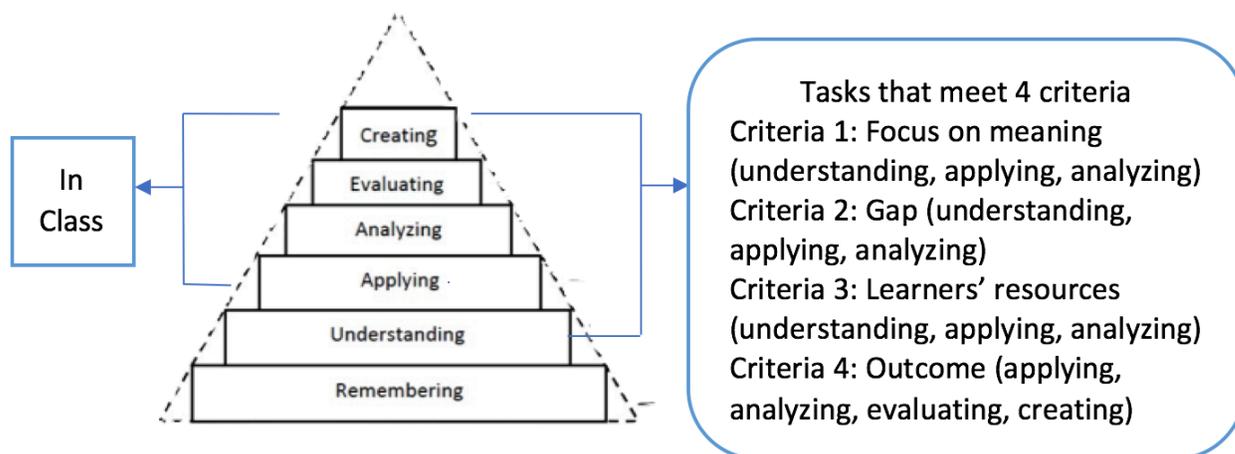
Ellis (2009), however, countered these arguments. He explained that it was wrong to assume that TBI requires only production and pointed out the difference between input-providing and output-prompting tasks. He referred to Prabhu's (1987) examples of tasks requiring beginning learners to work only with language input and maintained that an input-based

approach enables students to build the grammatical resources they need for language production. Ellis also claimed that TBI is well suited to an acquisition-poor or foreign language learning context in that it gives students the opportunity to communicate inside the classroom what they lack the skills to communicate outside of classroom.

Figure 3 shows how TBI relates to in-class learning objectives in the cognitive domain.

**Figure 3**

*Task Characteristics in the Cognitive Domain*



Regarding task characteristics and conditions, Table 1 summarizes how performance is affected by task characteristics proposed by Ellis and Shintani (2013) and the level of Bloom's revised taxonomy with which the task can be correlated.

**Table 1***Summary of Task Characteristics and Influences*

Task Characteristic	Influence on Performance and Research Basis	Level of Bloom's Revised Taxonomy
Focus on meaning (authentic and real-world tasks)	Allows for the practice of all language abilities, promotes skills integration and language competences (Córdoba Zúñiga, 2016; Gleason & Slater, 2017; Nunan, 1999; Nunan, 2005; Richards & Rodgers, 2014)	Understanding, applying, analyzing
Gap	Increasing level of task complexity results in greater oral fluency, accuracy, and complexity (BavaHarji et al., 2014); proficiency gap enhances learning (Starkey-Perret et al., 2017)	Understanding, applying, analyzing
Learners' resources (familiar information)	Greater fluency and accuracy (Calvert & Sheen, 2015; Ellis, 2009)	Understanding, applying, analyzing
Clearly defined non-linguistic outcome	Enhances the use of language as a means to focus on authentic learning (Kurniasih, 2011); goal setting and task analysis are rewarded (Castrillón et al., 2013; Clemente & Rubin, 2008; Rubin, 2015; Tutistar Jojoa & Ballesteros Muñoz, 2013)	Applying, analyzing, evaluating, creating

***Task Implementation and Gagne's Nine Events of Instruction***

The process of implementing TBI in English classes has been heavily discussed by various language theorists (Estaire & Zanón, 1994; Lee, 2000; Prabhu, 1987; Skehan, 1996; Willis, 1996). According to Ellis (2003), TBI uses a basic pedagogical sequence of pre-task, during task, and post-task, focusing on structured tasks to elicit tangible learning outcomes. Chou (2017) adopted pre-task, during task, and post-task implementation on the experimental group. The experimental group received strategy embedded task-based listening instruction for 18 weeks, whereas the control group received only strategy-based instruction. Students in both experimental group and control group were taking English for General Academic Purposes

(EGAP) courses that aimed to develop their metacognitive awareness of listening comprehension. In the task input phase, students were given photographs and videos and asked questions for discussion to increase their familiarity with the tasks. The experimental group improved their metacognitive awareness of strategies for listening and outperformed the control group in the listening test. They considered tasks to be an important medium of input enhancement for improving their listening ability. Studies have found that allotting time for activities in the pre-task stage results in more fluent (Mehnert, 1998; Ortega, 1999; Skehan & Foster, 1997) and more complex speech production in the during-the-task stage (Crookes, 1989; Foster & Skehan, 1996; Ortega, 1999; Yuan & Ellis, 2003). Studies provide evidence to suggest that when explicit instruction, especially when combined with corrective feedback, is integrated into the performance of a task, it can have a beneficial effect on learners' procedural use of the target structure as they perform the task (Samuda, 2001) and also on acquisition (Samuda, 2001; Spada et al., 2014). Samuda (2001) proposed a long class-oriented sequence which follows the stages 1) input data, 2) operations on input data, and 3) consolidation and reflection. Norris (2011), summarizing several TBI accounts (Chaudron et al., 2005; Long & Crookes, 1993; Skehan, 1996; Willis, 1996), suggested that a task-based lesson typically has, but is not restricted to, four principal phases: task input phase in the pre-task stage, pedagogical task work phase and target task performance phase in during task stage, and task follow-up phase in post-task stage.

Moreover, to develop a module-oriented lesson planning, Gagne proposed nine events in a systematic instructional design process, which combines the cognitive approach to learning with a focus on the outcomes or behaviors of instruction (Gagne et al., 1992). The general idea behind Gagne's system is that effective learning involves a series of "events" that begin with drawing student attention to the subject being taught. From that point, the instructor uses a series

of steps related to the development of learning expectations, the introduction of stimuli or new information, and the recall of related ideas to move concepts from the students' short-term to long-term memories. By the end of this process, Gagne claimed, students are able to draw upon what they have learned in a way that permits them to apply their knowledge to new situations. Gagne developed a nine-part learning approach that he thought mirrored the cognitive stages associated with this adult learning process (Gagne, 1985; Gagne & Briggs, 1974). The stages, their related cognitive processes and TBI pedagogical sequences, as well as their correlation to Bloom's revised taxonomy, are shown in Table 2. Gagne argued that his nine-part approach allowed students to apply their knowledge beyond the confines of classroom activities.

**Table 2**

*Alignment of Gagne's Nine Events, Cognitive Processes, TBI Pedagogical Sequences and Levels of Bloom's Revised Taxonomy*

Gagne's Nine Event	Cognitive Process in Gagne's Nine Events	TBI Pedagogical Sequence	Level of Bloom's Revised Taxonomy
Gaining attention	Stimuli provided by the instructor activates receptors in the student's brain	Pre-task	Remembering, understanding
Informing learners of the objectives	Creates a level of expectation for learning in the student		Remembering, understanding
Stimulating the recall of prior learning	Prompts retrieval of information and moves ideas to short-term memory		Remembering, understanding
Presenting the stimulus/content (information)	Creates the selective perception of content in the mind of the student		Remembering, understanding
Providing learning guidance	Causes semantic encoding in a way that moves information to the student's long-term memory		Remembering, understanding
Eliciting performance	Student responds to subject-based activities in a manner that enhances encoding and verification in memory	During task	Understanding, applying, analyzing, creating
Providing feedback	Reinforces ideas and confirms student assessment of correct performance based on ideas/processing or application of information		Applying, analyzing, evaluating
Assessing performance	Prompts the student to retrieve information in a way that also reinforces final understanding of the information		Analyzing, evaluating
Enhancing retention and transfer	Causes the student to retrieve and generalize what he or she has learned so as to apply learning to new situations	Post-task	Applying, analyzing, evaluating, creating

### ***The Fully Flipped Model***

Because tasks are considered the building blocks of language learning, and the literature reveals many positive effects of TBI, this study examines how TBI can be implemented in face-to-face, in-class sessions for flipped EFL classrooms. Based on previous studies on task-based language instruction, it can be predicted that when a task meets the four criteria proposed by Ellis and Shintani (2013), it will likely satisfy students' higher level learning needs based on Bloom's revised taxonomy. Gagne's nine events also mirror the cognitive stages associated with the adult learning process and correlate with Bloom's revised taxonomy. This suggests that TBI should utilize well-designed tasks that meet Ellis and Shintani's four criteria and fit into Gagne's nine events as a new instructional design model of a flipped language classroom. Moreover, the fully flipped model integrates pre-class sessions with in-class sessions into a complementary unit. Based on this premise, the conceptual constructs for this study are Bloom's revised taxonomy, TBI, and Gagne's nine events. Table 3 shows how tasks characteristics and Gagne's nine events work in different cognitive phases in flipped language classrooms.

**Table 3**

*Alignment of Gagne's Nine Events, Cognitive Processes, Levels of Bloom's Revised Taxonomy and Task Characteristics*

Gagne's Nine Event	Cognitive Process in Gagne's Nine Events	Level of Bloom's Revised Taxonomy	Task Characteristic
Gaining attention	Stimuli provided by the instructor activate receptors in the student's brain	Remembering, understanding	Focus on meaning, learners' resources
Informing learners of the objectives of the overall training	Creates a level of expectation for learning in the student	Remembering, understanding	Gap
Stimulating the recall of prior learning	Prompts retrieval of information and moves ideas to short-term memory	Remembering, understanding	Learners' resources
Presenting the stimulus/content (information)	Creates the selective perception of content in the mind of the student	Remembering, understanding	Focus on meaning, learners' resources
Providing learning guidance	Causes semantic encoding in a way that moves information to the student's long-term memory	Remembering, understanding	Focus on meaning, gap
Eliciting performance	Student responds to subject-based activities in a manner that enhances encoding and verification in memory	Understanding, applying, analyzing, creating	Focus on meaning, gap, learners' resources, outcome
Providing feedback	Reinforces ideas and confirms student assessment of correct performance based on ideas/processing or application of information	Applying, analyzing, evaluating	Focus on meaning, gap, outcome
Assessing performance	Prompts the student to retrieve information in a way that also reinforces final understanding of the information	Analyzing, evaluating	Focus on meaning, gap, outcome
Enhancing retention and transfer	Causes the student to retrieve and generalize what he or she has learned so as to apply learning to new situations	Applying, analyzing, evaluating, creating	Outcome

## Summary

The flipped classroom approach with well-designed in-class session has the potential to create a learner-centered classroom that fosters language proficiency, improve learning experiences, and promote interactions when guided by appropriate instructional purposes and theories.

The preceding discussion on Bloom's revised taxonomy, TBI, and Gagne's nine events constructs an instructional model, the fully flipped model. Tasks in this model focus on meaning, have some gaps, contain familiar information, and have a clearly defined non-linguistic outcome. The fully flipped model follows Gagne's nine instructional events that mirror the cognitive stages associated with the adult learning process, and has the potential to help learners achieve remembering, understanding, applying, analyzing, evaluating and creating skills.

Therefore, the proposed study exploring the effects of the fully flipped model for the English learning and teaching in flipped format will guide my own instructional practices and will provide a framework for others to consider in enhancing their foreign language teaching.

## **CHAPTER 3. METHODOLOGY**

This chapter presents the research questions, research design, sampling strategy, instruments, data collection procedure, and data analysis for the present study. It also includes a detailed account of the process of creating lecture videos and developing instructional materials for use in the courses, as this study is intended to serve as a guide for instructors seeking to design and implement a flipped classroom approach in their language classrooms using the fully flipped model.

### **Research Design**

An embedded mixed methods design was utilized to explore the effects of a flipped classroom approach on students' learning experiences in first-semester university EFL classes. The purpose of this study was to examine the impact of implementing a flipped classroom model, constructed using Bloom's revised taxonomy, task-based instruction (TBI), and Gagne's nine events, on student learning, perceptions of learning, and interactions for students in Chinese EFL courses.

### **Research Design**

To examine how the fully flipped model impacts students' learning in flipped EFL classrooms, this study looked at three groups: a fully flipped classroom implementing the fully flipped model in which students complete pre-class assignments at home and do in-class tasks based on the fully flipped model during class time as experimental group 1 (EG1); a semi-flipped classroom in which students complete pre-class assignments at home and do traditional in-class

activities during class time as experimental group 2 (EG2); and a traditional EFL class in a Chinese university as the control group (CG).

EG1 fully implemented Gagne's nine events of instruction. Although both EG2 and CG followed Gagne's nine events such as gaining students' attention, stimulating recall of prior learning, presenting content, providing learning guidance, eliciting performance, they omitted some instructional events due to the lack of time or other reasons.

EG1 implemented TBI as the in-class pedagogical approach, and both EG2 and CG implemented lecture-based instruction. But studies point out that in lecture-based classrooms, students' higher levels of the cognitive domains in Bloom's revised taxonomy such as applying, analyzing, evaluating and creating are developed through exercises, homework or nothing (Lankford, 2013; Zainuddin & Halili, 2016).

Zainuddin and Halili (2016) related cognitive phases in flipped classrooms to Bloom's revised taxonomy, the lower levels of the taxonomy, such as understanding and remembering, are presented prior to class through recorded lectures and videos; readings, simulations, and other materials provide foundational support for learning so that in-class time can be spent working on the higher levels of the taxonomy, such as applying, analyzing, evaluating and creating. Therefore, in EG1, implementing the fully flipped model allowed the students to spend more time supporting higher level learning tasks such as a group discussion, while lower level tasks such as knowledge and comprehension were completed independently outside the class (Nederveld & Berge, 2015). In EG2, students were expected to achieve lower levels of the taxonomy through watching recorded lecture videos outside of the class; and in CG, lower order thinking of the taxonomy were expected to achieve through lectures, questions and answers (Zainuddin & Halili, 2016).

In conclusion, in EG1, Gagne’s nine events of instruction was fully implemented, TBI was used in class, and both lower order and higher order thinking of Bloom’s revised taxonomy were emphasized; while, in both EG2 and CG, Gagne’s nine events was partially implemented, lecture-based instruction was used in class, the lower order thinking of the taxonomy was emphasized and higher order thinking was partially emphasized. These are shown in Table 4.

**Table 4**

*Three Groups and Instructional Components*

Group	Instructional Design	In-class Instructional Approach	Cognitive Phases Emphasized in Bloom’s Revised Taxonomy
The fully flipped group (EG1)	Gagne’s nine events of instruction was fully implemented.	TBI was implemented.	
The semi-flipped group (EG2)	Gagne’s nine events of instruction was not fully implemented.	Lecture-based instruction was employed.	
The traditional group (CG)	Gagne’s nine events of instruction was not fully implemented.	Lecture-based instruction was employed.	

## Research Questions

The following research questions (RQ) were created to guide this study:

RQ 1: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what differences exist if any, in student learning outcomes in midterm and final examination scores?

H1o: There is no statistically significant difference in student learning outcomes measured by midterm and final examination scores for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

H1a: There is a statistically significant difference in student learning outcomes measured by midterm and final examination scores for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

RQ 2: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what perceptions do they possess regarding their learning experiences, and are there differences between the three groups?

H2o: There is no statistically significant difference in student perceptions of their learning as measured by a satisfaction scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

H2a: There is a statistically significant difference in student perceptions of their learning as measured by a satisfaction scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

RQ 3: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what perceptions do they possess regarding their higher order knowledge acquisition and application, and are there differences between the groups?

H3o: There is no statistically significant difference in perceptions of higher order knowledge acquisition and application, as measured by a cognitive presence scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

H3a: There is a statistically significant difference in perceptions of higher order knowledge acquisition and application as measured by a cognitive presence scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

RQ 4: How does interaction differ for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom?

RQ 5: What are the participants' overall learning experiences in a traditional, a semi-flipped, and a fully flipped college EFL classroom?

### **Mixed Methods Design**

Creswell and Plano Clark (2017) defined mixed methods research as the type of research in which the researcher collects and analyzes both qualitative and quantitative data rigorously in response to research questions and hypotheses, integrates (or mixes or combines) the two forms of data and their results, organizes these procedures into specific research designs that provide the logic and procedures for conducting the study, and frames these procedures within theory and philosophy.

According to Ary et al. (2018), mixed methods research can take advantage of the combined strengths of qualitative and quantitative approaches and can use the strengths of one method to overcome the weaknesses of the other. Moreover, this study examined the effectiveness of the fully flipped model through classroom experiments. In this situation, the qualitative method was embedded within a primary experimental methodology (Creswell & Plano Clark, 2017). As experimental studies provide quantitative tests of the effectiveness of a

treatment for producing certain outcomes, in some situations, a secondary qualitative research method can be added to an experimental study to provide an enhanced understanding of some aspect of the intervention (Creswell & Plano Clark, 2017). As an example of enhancing an experimental study with a qualitative method, Donovan et al. (2002) added a qualitative component in which they interviewed participants to determine how best to recruit them into the trial, and later reflected on the value of this preliminary, smaller, qualitative component used to design procedures for recruiting individuals to the trial:

We showed that the integration of qualitative research methods allowed us to understand the recruitment process and elucidate the changes necessary to the content and delivery of information to maximize recruitment and ensure effective and efficient conduct of the trial (p.768).

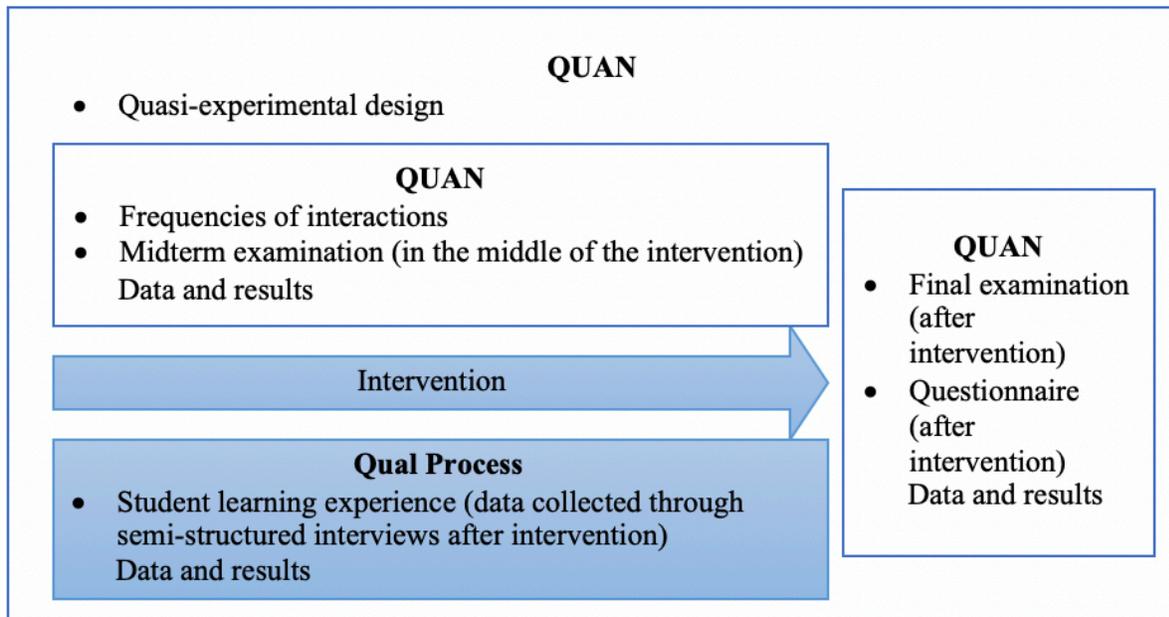
Although mixed methods design is not the answer for every researcher or every research problem, and it does require researchers to have certain skills, time, and resources for extensive data collection and analysis and to be able to educate others who may be less familiar with the basic ideas of mixed methods research. Mixed methods research provides a way to harness strengths that offset the weaknesses of both quantitative and qualitative research (Creswell & Plano Clark, 2011). Mixed methods research provides more evidence for studying a research problem than either quantitative or qualitative research alone (Donovan et al., 2002). Researchers are able to use all of the tools of data collection available rather than being restricted to those types typically associated with quantitative research or qualitative research, and mixed methods research helps answer questions that cannot be answered by quantitative or qualitative approaches alone (Creswell & Plano Clark, 2017).

There are several core mixed methods designs that provide useful frameworks for researchers planning their studies. The present study used the embedded mixed methods design, which has a rationale that a single dataset is not sufficient to answer different questions, and each type of question requires different types of data (Ary et al., 2018).

As one of the mixed methods approaches introduced in Ary et al. (2018), the embedded mixed methods strategy has a primary method that guides the project and a second form of data that provides support within a single study. The secondary method (qualitative in this study) would be embedded in the primary method (quantitative), and qualitative data can support statistical results by addressing questions that are unanswerable using experimental or correlation research. Figure 4 presents a diagram of the embedded mixed methods design for the present study.

**Figure 4**

*Embedded Mixed Methods Design for the Present Study*



The quantitative component of this study utilized a quasi-experimental design. A quasi-experimental design is used rather than an experimental one when a random selection and random assignment cannot be done by the researchers (McMillan, 2006). Three classes of college EFL courses respectively employed a fully flipped instructional design model (EG1), a semi-flipped instructional design model (EG2), and a traditional instructional design model (CG). Both EG1 and EG2 employed a flipped classroom approach that provided students materials and resources that were used to deliver instruction before class (Tucker, 2012; Zhang et al., 2015), and CG employed a traditional lecture-based classroom approach that gave lectures in class and assigned homework after class. In EG1, Gagne's nine events of instruction was fully implemented, TBI was used in class, and both lower order and higher order thinking of Bloom's revised taxonomy were emphasized; while, in both EG2 and CG, Gagne's nine events of instruction was partially implemented, lecture-based instruction was used in class, the lower order thinking of the taxonomy is emphasized and higher order thinking is partially emphasized. The three formats of instructional design models were viewed as three independent variables, and their effects were examined in the quasi-experimental study. In order to investigate any differences in students' academic performances, scores from a midterm and a final examination were compared among the three groups. Students' perceptions on their learning experiences and their cognitive development in the three different settings were collected with two 5-point Likert scales and were compared. Moreover, this study examined the flow of verbal interaction in all three classrooms, such as the amount of time spent in dialogue by the instructor and the students and the number of times a student responded in class (Acheson & Gall, 1997). These communication patterns were quantified and compared to assess the benefit of flipped classroom interaction in second language development (Gass & Mackey, 2006). Using a quasi-

experimental design also increased the ecological validity of the study due to the environments being the same and of normal conditions for all the study groups (Schmuckler, 2001). This strengthened the internal validity of the study (Campbell & Stanley, 1963; Gall et al., 2007).

The qualitative component of the study explored students' overall learning experiences through semi-structured interviews to assess students' learning methods, concerns, problems, changes, and feedback towards the instructional approach of their group.

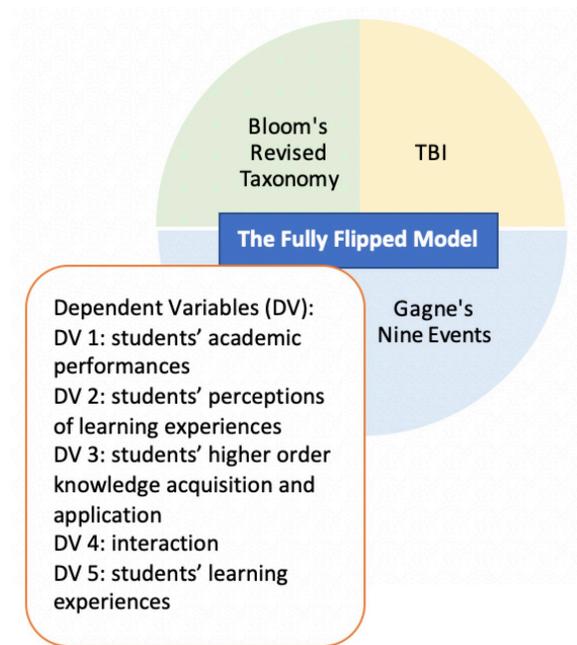
In this embedded design framework, both qualitative and quantitative approaches to data collection and analysis were used, as a quantitative paradigm had the strength to test hypotheses and validate already constructed theories (Johnson & Onwuegbuzie, 2004). On the other hand, the quantitative data analysis would generate comparatively large errors because of small sample size. In quantitative research a sample size of 30 is the minimum number recommended for statistical analysis to be meaningful (Morse & Niehaus, 2009), and the smaller the sample, the greater the potential error that the sample will be different from the population (Creswell, 2005). As the sample consisted of 104 students: 35 enrolled in the fully flipped group, 36 in the semi-flipped group, and 33 in the traditional group, the issue of sample sizes in the present study was supplemented by qualitative methods. Additionally, a qualitative paradigm was able to bring forward meaning and accounts of lived experience that typically do not arise from quantitative research (Jeanty & Hibel, 2011). By using both methods, the weaknesses of the quantitative method were offset by the qualitative method (Creswell & Plano Clark, 2011). Moreover, according to Creswell (2005), collecting and converging different kinds of data on the same phenomenon referred to triangulation, which could improve the investigation.

## Conceptual Framework

The conceptual framework for this study was constructed based on Bloom's revised taxonomy (Anderson et al., 2001), the four criteria proposed in Ellis and Shintani (2013) on TBI, and Gagne's nine events (Gagne et al., 2005). Based on previous studies on task-based language instruction, it could be predicted that when a task met the four criteria proposed in Ellis and Shintani (2013), it would likely satisfy students' higher level learning needs on Bloom's revised taxonomy. Gagne's nine events of instruction also mirrored the cognitive stages associated with the adult learning process and correlated with Bloom's revised taxonomy (Gagne et al., 2005). This suggested that TBI could utilize well-designed tasks that met the four criteria in Ellis and Shintani (2013) and fitted into Gagne's nine events as a new instructional design model for a flipped language classroom. As mentioned in Chapter 2, researchers found a number of positive impacts of using flipped classroom approach, TBI and Gagne's nine events in students' learning practice: students' achievement, students' satisfaction, students' higher order thinking skills, and students' interaction (Alsowat, 2016; Al-Zahrani, 2015; Chen Hsieh et al., 2016; Han, 2015; Hung, 2015; Kang, 2015; Obari & Lambacher, 2015; Zhang, 2015). Therefore, the purpose of this mixed methods study was to examine the impact of implementing a fully flipped classroom model, constructed basing on the conceptual framework, on students' academic performances, students' perception of learning experiences, higher order knowledge acquisition and application, interaction and learning experiences in Chinese EFL courses. Figure 5 shows the framework of the research design.

**Figure 5**

*Conceptual Framework for Research Design*



***Students' Academic Performances***

A well designed flipped model could be helpful for students to obtain favorable academic achievements (Triantafyllou & Timcenko, 2014). For the purpose of comparing groups and/or measuring change resulting from experimental treatments, repeated tests designs are widely used in research (Dimitrov & Rumrill, 2003). To measure students' learning outcomes after intervention, a midterm and final examination were given to each subject in this study.

***Students' Perception of Learning Experiences***

On the whole, attitudes and perceptions of the flipped classroom were positive. Students evaluated the flipped classroom strategy as highly satisfactory since coming to class prepared increased students' self-confidence and participation (Basal, 2015; Chen Hsieh et al., 2016; Kang, 2015). Students confirmed that flipping their learning enabled them to better comprehend the content (Homma, 2015). In addition, availability and accessibility of varied e-learning

materials and online resources positively influenced students' attitudes (Ishikawa et al., 2015; Obari & Lambacher, 2015). To measure students' satisfaction, this study adapted the satisfaction scale developed in Al-Zahrani (2015) from three dimensions: content, performance, and collaboration.

### ***Students' Higher Order Knowledge Acquisition and Application***

As mentioned in Chapter 2, implementing flipped learning allowed students to spend more time in class supporting higher level cognitive phases of Bloom's revised taxonomy, while lower level tasks such as knowledge growth and comprehension were completed independently outside the classroom (Lankford, 2013; Nederveld & Berge, 2015; Zainuddin & Halili, 2016). Students' higher order knowledge acquisition and application were evaluated with the cognitive presence scale from the community of inquiry (CoI) scale developed by Arbaugh et al. (2008). Cognitive presence was originally defined by the Practical Inquiry Model consisting of four phases—trigger event, exploration, integration, and resolution/application—which reflects higher order knowledge acquisition and application and is most associated with the literature and research related to critical thinking (Garrison et al., 2001).

### ***Students' Interaction***

Based on previous studies on task-based language instruction, TBI is able to give more opportunities for oral interaction in the classroom, and is one of the communicative approaches that has shown positive results in environments where students have little contact with the English language (Lochana & Deb, 2006; Mangu, 2008; Shintani, 2011; Thanh & Huan, 2012; Yim, 2009). Research acknowledges TBI's advantages in issues related to communication and oral interaction when learning a foreign language (Barnard & Viet, 2010; Plews & Zhao, 2010; Tabatabaei & Atefeh, 2011; Xiongyong & Moses, 2011). On the other hand, studies find flipped

classroom approach supports interaction as well. The students in Sung's (2015) study appeared to take their responsibilities of doing both individual and team work before, during and after class, resulting in an increasing amount of interaction and of personalized contact time with the instructor. One student found more and more classmates coming to the class prepared, and classmates were becoming more expressive in oral English conversation activities (Hung, 2015). Overall, the online learning community in the flipped instruction not only led to meaningful learning while facilitating positive interaction and collaboration, but also significantly enhanced the participants' oral proficiency, making them more competent in learning activities, such as storytelling, dialogue interaction, class discussion, and group presentations (Chen Hsieh et al., 2016). To evaluate interaction in EG1, EG2 and CG, this study used classroom observations to find out the classroom interaction in the following categories: 1) frequency of the questions that the instructor asked the whole class, 2) frequency of the questions the instructor asked individuals, 3) frequency of students' responses to these questions, 4) frequency of the output with errors, 5) frequency of the questions that students asked, 6) frequency of the comments that students made to the class as a whole, 7) frequency of student-to-student interactions, and 8) frequency of student-to-instructor interactions.

### ***Students' Learning Experiences***

To supplement the data, semi-structured interviews were conducted to explore students' overall learning experiences by assessing their learning methods, concerns, problems, changes, and feedback towards the instructional approach of their group.

In summary, this study employed an embedded mixed methods study to examine five dependent variables (DV) that aligned with the five research questions. Midterm and final examination scores were collected and analyzed to explain DV1 students' academic

performance. A satisfaction scale was used to explain DV2 students' perceptions of learning experiences (Al-Zahrani, 2015). A cognitive presence scale was used to explain DV3 students' perceptions of cognitive development (Arbaugh et al., 2008). Classroom observation was used to explore DV4 interaction. To supplement the data, semi-structured interviews were conducted to explore DV5 individual students' learning experiences in both the control group and experimental groups.

## **Study Context and Participants**

In this section, the university in which the study took place, as well as the curriculum and course, was described. In addition, a description of the participants was included.

### **Study Context**

#### ***A Comprehensive Public University (ACPU)***

This study took place at ACPU. ACPU is a comprehensive public research university in China. At present, the university has 3 faculties, 27 full-time schools, 2 colleges, 8 advanced research institutes, a college of further education, and a national training center for secondary principals with 58 departments offering 80 undergraduate programs in humanities, education, science, engineering, economics, management, philosophy, psychology, law, history and art. Currently, the number of full-time undergraduate students is 14,405.

#### ***College English Curriculum at ACPU***

College English is the EFL course for all non-English major undergraduate students at ACPU. Students are placed into four different levels—D, C, B, and A. Specially recruited students, minority students in co-training programs, and students whose first foreign language is not English are placed in Level D. Students majoring in art and kinesiology are placed in Level

C. Other non-English major undergraduate students need to take a placement test before they register for courses and are placed in Level B or A based on their English proficiency. Level C and D students who have high English proficiency are encouraged to take placement tests and apply for placement in Level A or B. Up to 70% of all first-year students in ACPU are placed at Level B. Participants in this study will be comprised of Level B students (shown in Table 5).

**Table 5**

*Four Language Proficiency Levels*

Proficiency Level	Description
Level A (10% of students)	Four-year undergraduate students with higher English Proficiency
Level B (70% of students)	Four-year undergraduate students with lower English Proficiency
Level C (10% of students)	Four-year undergraduate students majoring in art and kinesiology
Level D (10% of students)	Specially recruited students, minority students in co-training programs, and students whose first foreign language is not English

***The College EFL Course I***

The College EFL Course I (*EFL I*) is one of the required core courses for students in Level B. *EFL I* uses *Active Reading for General Academic Purposes Book 1 and 2* as textbooks. The class was scheduled once per week, 90 minutes per session. Instructors who taught *EFL I* all follow the same syllabus. The syllabus gives detailed weekly tasks, exercises, and homework. Table 6 demonstrates the instructional plan for week 10 as an example from the syllabus.

**Table 6***Example from the EFL I Syllabus*

Week	In-Class Activity	Thinking and Discussing	In-Class Practice/Test	After-Class Task
10	Reading: “The Dusty Drawer” (pp. 363–374) [Mystery Story] {Suspense}	Discussion/ composition: (p. 377)	Vocabulary from context: (pp. 377–378) Vocabulary review: (pp. 380–381)	Dictionary study: (p. 379)

Teachers must stick to the above-mentioned syllabus, but they are allowed to have personal teaching styles or add additional exercises. In week 10, students were expected to learn a long reading, “The Dusty Drawer.” In week 9, students had been assigned to preview the reading.

### **Participants**

Participants in this study were Level B students in their first semester at ACPU. All participants were from different majors and were taking the *EFL I* in their fall 2019 semester. When fully flipped, semi-flipped, and traditional *EFL I* classes were available for course selection, they were marked with asterisks. There were important notes in the course remarks column that introduced this study and notified the students of intervention and audio and video recordings in the classroom. Participants enrolled in three different classes were correspondingly assigned to three different *EFL I* classes—one fully flipped class, one semi-flipped class, and one traditional class. There were 104 participants: 35 enrolled in the fully flipped group, 36 in the semi-flipped group, and 33 in the traditional group. All participants in this study were at the same English proficiency level. All three groups (the fully flipped, the semi-flipped, and the traditional) had the same instructional content, syllabus, course objectives, and examination papers.

## **Role of the Researcher**

I am a lecturer at the university in which the research took place, and I have been in the language learning field for 10 years. Since my first experience teaching English, I have been deeply interested in how students gain language proficiency and am eager to understand how to improve the effectiveness of this process. Fortunately, my own personal and professional interests align with the research interests of the leadership of the university, who are interested in topics associated with English teaching and educational technology. I did not teach the semi-flipped group or the traditional group. As I develop the fully flipped model, I had a more thorough understanding of the model and was teaching the students in the fully flipped group, which had the possibility of influencing the study. To minimize the inference, both midterm and final examination were determined by other English lecturers of the College English Department at ACPU, and both midterm and final examinations were normally used for the class and were not designed specifically for this study. Moreover, the survey was anonymous. At the end of the fall 2019 semester, I contacted 18 interviewees from three groups and conducted semi-structured interviews with them. The interview began when the course was completely finished. While I work at the same university and know the teacher teaching the semi-flipped group and the control group, I did not oversee the teacher (although I was in the months following the data collection).

## **Instrumentation and Procedures**

Multiple sources of data collection were used to understand the perceptions of the participants about their flipped learning experience, including 1) midterm and final examination of overall English proficiency, 2) two scales that examined students' perception of learning

experience and students' perception of cognitive development, 3) classroom observations, and 4) semi-structured interviews. The researcher of this study had done a pilot study at the same university where the study was conducted. Sixty-three college EFL students at ACPU participated to the pilot study ( $n = 63$ ). Two scales that examined students' perception of learning experience and students' perception of cognitive development, the observation instrument and open-ended questions of the semi-structured interviews were all piloted.

## **Instrumentation**

### ***Paper-Based Tests***

Both midterm and final examinations were determined by the English lecturers of the College English Department at ACPU. Items in the paper-based tests included vocabulary multiple choice, reading comprehension, and writing. The readability of sentences and reading passages in these tests range from 30 to 60 on the Flesch Reading Ease scale, indicating the levels of difficulty of the two tests were the same. The midterm and final examinations were parallel tests. The total score for the midterm and final was 100. Both midterm and final were normally used for the class and were not designed specifically for this study. The midterm was administered at the middle of the semester, and the final was administered at the end of the semester.

### ***Questionnaire***

The questionnaire used to evaluate students' perceptions of learning experiences and higher order knowledge acquisition and application came from two different studies (Appendix A). The questionnaire includes 24 items in total that are distributed across two major sections. The first section evaluates the students' general views about their learning experience. The second section assesses students' perceptions of higher order knowledge acquisition and

application. The questionnaire uses a 5-point Likert scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, and 5 = *Strongly Agree*).

**Section 1 (Satisfaction Scale).** Questionnaire items adapted from Al-Zahrani (2015) were used to assess participants' perceptions of learning experiences in the conventional lecture-based classroom, the semi-flipped classroom, and the fully flipped classroom. Items 2 and 14 were removed from the original scale to eliminate confusion. Item 2, "I was able to access to the online course tools and materials," is not suitable for the context of this study because students in traditional *EFL I* class do not use learning management systems or other online course tools. Additionally, item 14, "I prefer the flipped classroom over the traditional lectures," is not comprehensible to students in non-flipped classes. The present satisfaction scale consists of 12 items, and each item has its Chinese translation underneath. Sixty-three college EFL students at ACPU participated to pilot this adjusted scale ( $n = 63$ ). Principal component analysis (PCA) was run. Tabachnick and Fidell (2007, p. 646) argue that "Look at the factor correlation matrix for correlations around .32 and above. If correlations exceed .32, then there is 10% (or more) overlap in variance among factors, enough variance to warrant oblique rotation (e.g., direct oblimin or promax from SPSS) unless there are compelling reasons for orthogonal rotation." As the lowest score in the component correlation matrix is .389, oblimin was then used as the rotation method. According to the results, these 12 items were divided into three dimensions: "content" (items 1, 6, and 7), such as "I was able to review the lectures as many times as I need to"; "performance" (items 2, 3, 4, 5, and 8), such as "I was able to connect theory with practice in real life"; and "collaboration" (items 9–12), such as "this class facilitates more communication between me and my teacher." The Cronbach's  $\alpha$  values of the individual dimensions were 0.66, 0.83 and 0.86, respectively, showing acceptable internal consistencies. The Cronbach's  $\alpha$  value

for the overall scale was 0.90, showing an excellent internal consistency. Table 7 presents the result of factor analysis and Cronbach's  $\alpha$  values in the satisfaction scale.

Permission was gained via email from Dr. Al-Zahrani in order to use and modify the content from the instrument he developed (Appendix B).

**Table 7***Factor Analysis Results and Cronbach's Alpha Values of the Satisfaction Scale*

Items/Factor loadings	Construct		
	Collaboration	Performance	Content
S1: I was able to review the lectures as many times as I need to.	.091	.189	<b>.746</b>
S2: I was able to have rich learning experiences.	<b>.498</b>	-.379	.065
S3: I was able to connect theory with practice in real life.	<b>.667</b>	-.043	.257
S4: I was able to manage my learning activities.	<b>.947</b>	.173	-.013
S5: This class helps me to use various learning resources.	<b>.374</b>	-.191	.283
S6: This class helps me to develop my problem-solving skills.	-.121	-.209	<b>.777</b>
S7: This class facilitates my personalized learning.	.033	-.122	<b>.708</b>
S8: This class helps me to effectively cooperate with my classmates.	<b>.443</b>	-.415	.148
S9: This class facilitates more communication between me and my teacher.	-.043	<b>-.823</b>	.128
S10: This class facilitates more communication between me and my classmates.	-.115	<b>-.916</b>	.037
S11: This class helps me to effectively participate in the learning activities.	.549	<b>-.568</b>	-.107
S12: Overall, I am satisfied with my learning experience in this class.	.347	<b>-.563</b>	.056
Cronbach's alpha	<b>.83</b>	<b>.86</b>	<b>.66</b>

*Note.* Factor loadings and Cronbach's alpha are boldfaced.

**Section 2 (Cognitive Presence scale).** Twelve items adopted from one subscale (cognitive presence scale) of the Community of Inquiry (CoI) Scale were constructed to measure the developmental nature of the learning process (Arbaugh et al., 2008). Arbaugh et al. (2008) determined the items to be reliable (alpha reliability of .95) and valid, and the study's factor analysis indicated that the items all loaded heavily on the cognitive factor with high reliability, suggesting that the items can be confidently used to measure the developmental nature of the learning process across disciplines. The adapted cognitive presence scale keeps all original items and wording but adds the Chinese translation under each item. According to the pilot study results ( $n = 63$ ), these 12 items were divided into three dimensions: "exploration" (items 1–5), such as "problems posed increased my interest in course issues"; "integration" (items 6–9), such as "discussions were valuable in helping me appreciate different perspectives"; and "resolution" (items 10-12), such as "I can describe ways to test and apply the knowledge created in this class." The Cronbach's  $\alpha$  values of the individual dimensions were 0.88, 0.85, and 0.90, respectively, showing good internal consistencies. The Cronbach's  $\alpha$  value for the overall cognitive presence scale reached 0.93, showing an excellent internal consistency. Table 8 presents the result of factor analysis and Cronbach's  $\alpha$  values in the cognitive presence scale. PCA was employed and followed by a direct oblimin rotation. The resulting correlation matrix for the factors showed the highest correlation is .289. Since none of the correlations exceeds the Tabachnick and Fidell (2007) threshold of .32 that "the solution remains nearly orthogonal." Thus, varimax was used as the rotation method.

The CoI questionnaire was developed and validated by Arbaugh et al. (2008). The CoI survey is an open resource under Creative Commons license. Permission is granted, free of

charge, to any person obtaining a copy of the CoI survey to use, share, copy, adapt, merge, publish, or distribute in any medium or format for any purpose, provided that appropriate credit is given and any modified material is distributed under the same Creative Commons license.

**Table 8***Factor Analysis Results and Cronbach's Alpha Values of the Cognitive Development Scale*

Items/Factor loadings	Construct		
	Integration	Exploration	Resolution
C1: Problems posed increased my interest in course issues.	.372	<b>.716</b>	.281
C2: Class activities piqued my curiosity.	.515	<b>.722</b>	.059
C3: I felt motivated to explore content related questions.	.325	<b>.788</b>	.328
C4: I utilized a variety of information sources to explore problems posed in this class.	-.166	<b>.632</b>	.461
C5: Brainstorming and finding relevant information helped me resolve content related questions.	.379	<b>.717</b>	.290
C6: Discussions were valuable in helping me appreciate different perspectives.	<b>.723</b>	.241	.179
C7: Combining new information helped me answer questions raised in course activities.	<b>.639</b>	.219	.536
C8: Learning activities helped me construct explanations and solutions.	<b>.661</b>	.199	.402
C9: Reflection on course content and discussions helped me understand fundamental concepts in this class.	<b>.881</b>	.235	.063
C10: I can describe ways to test and apply the knowledge created in this class.	.115	.360	<b>.814</b>
C11: I have developed solutions to course problems that can be applied in practice.	.390	.168	<b>.820</b>
C12: I can apply the knowledge created in this class to my work or other non-class related activities.	.218	.283	<b>.814</b>
Cronbach's alpha	<b>.85</b>	<b>.88</b>	<b>.90</b>

*Note.* Factor loadings and Cronbach's alpha are boldfaced.

### ***Classroom Observations***

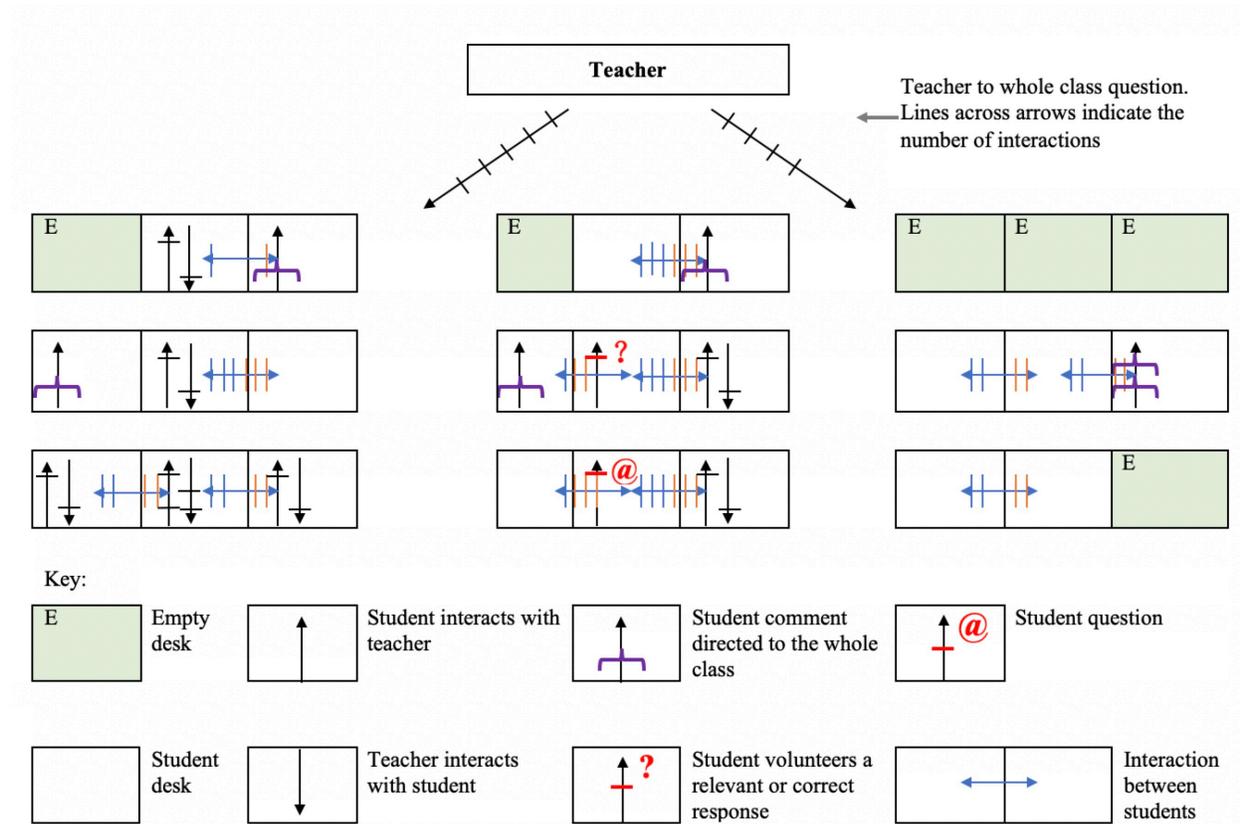
In order to compare the number of differences in classroom interactions between the control group (CG) and the experimental groups (EG1 and EG2), four 45-minute face-to-face instructional times in all sections of the *EFL I*, totaling 12 sessions, were videotaped for an observation during weeks 2–15. One camcorder was placed at the front of the classroom.

Through classroom observation, the classroom communication patterns were recorded using a technique called the Seating Chart Observation Record (SCORE) (Acheson & Gall, 1997).

Additionally, a verbal flow technique will be employed for the present study. Verbal flow is primarily a technique for recording who is talking to whom. It is also useful for recording categories of verbal interaction “for example, teacher question, student answer, teacher praise, student question” (Acheson & Gall, 1997, p. 96). While there are several ways to draw this chart, this study is modeled after the one presented by Richards and Lockhart (1994). The observation instrument has been piloted in one EFL class at ACPU. Figure 6 presents an example of the teacher’s interaction with students during a class.

**Figure 6**

*The Teacher's Interaction with Students During a Class*



This observational instrument includes a classroom seating chart and arrows that indicate the flow of verbal interaction. The base of the arrow indicates the person who initiates a verbal interaction, and the head of the arrow indicates the person to whom the comment is directed. To keep the chart simple, notches in the arrows are used to indicate repeated interactions. While it can be utilized for various purposes, the classroom observation in this study was used to find out the classroom interaction through observing the frequency of 1) the questions that the instructor asks the whole class (F1), 2) the questions the instructor asks individuals (F2), 3) students' responses to these questions (F3), 4) the output with errors (F4), 5) the questions that students ask (F5), 6) the comments that students make to the class as a whole (F6), 7) student-to-student

interactions (F7), and 8) student-to-instructor interactions (F8). These categories were chosen because the purpose of the observation was to identify explicit classroom interactions, which may be related to the development of language skills.

Following the suggestion in Acheson and Gall (1997), Table 9 presents observation symbols and corresponding interpretations.

**Table 9**

*Observation Symbols and Interpretations*

Symbol	Interpretation	Category
→	Interaction	F7 & F8
→ W?	Teacher to whole class question	F1
→ I?	Teacher to an individual student question	F2
→ @	Student volunteers a relevant or correct response	F3
→ *	Student volunteers an irrelevant or incorrect response	F3 & F4
→ ?	Student question	F5
→ }	Student comments directed to the whole class	F6

***Semi-Structured Interviews***

Semi-structured interviews involve asking more open-ended questions of several participants, but allows the interviewee to go further than the precise question with opinions, thoughts, and questions (Kuhne & Quigley, 1997). The purpose of interviews in this study was to develop an understanding of learning experiences from the perspective of students in EG1, EG2, and CG. Data gathered from open-ended interviews allowed the researcher to acquire information that might not have emerged from questionnaires, and these data added depth, detail, and meaning at a very personal level of experience (Patton, 2002).

On the one hand, unstructured interviews would encourage a more conversational atmosphere, but there would not be the same consistency in questions with each participant, as

the questions are developed during the interview (Patton, 2002). On the other hand, structured interviews would encourage consistency between all questions and responses, but would not allow the participants to input their “rich, thick descriptions” (Bloomberg & Volpe, 2008, p. 82).

Therefore, semi-structured interviews were selected due to their ability to be developed in advance and to ensure that all participants address the same questions, but at the same time permit the participants the freedom to respond to interview questions based on their perspectives (Patton, 2002).

In phenomenology, Dukes (1984) recommends studying 3–10 participants, and Morse (1994) suggests at least six. Polkinghorne (1989) and Creswell (1998) both recommend that researchers interview 5–25 individuals who have all experienced the phenomenon. Although this study employed a mixed-method design instead of phenomenology, it recruited 18 interviewees from all three groups for 6 interviewees from each group.

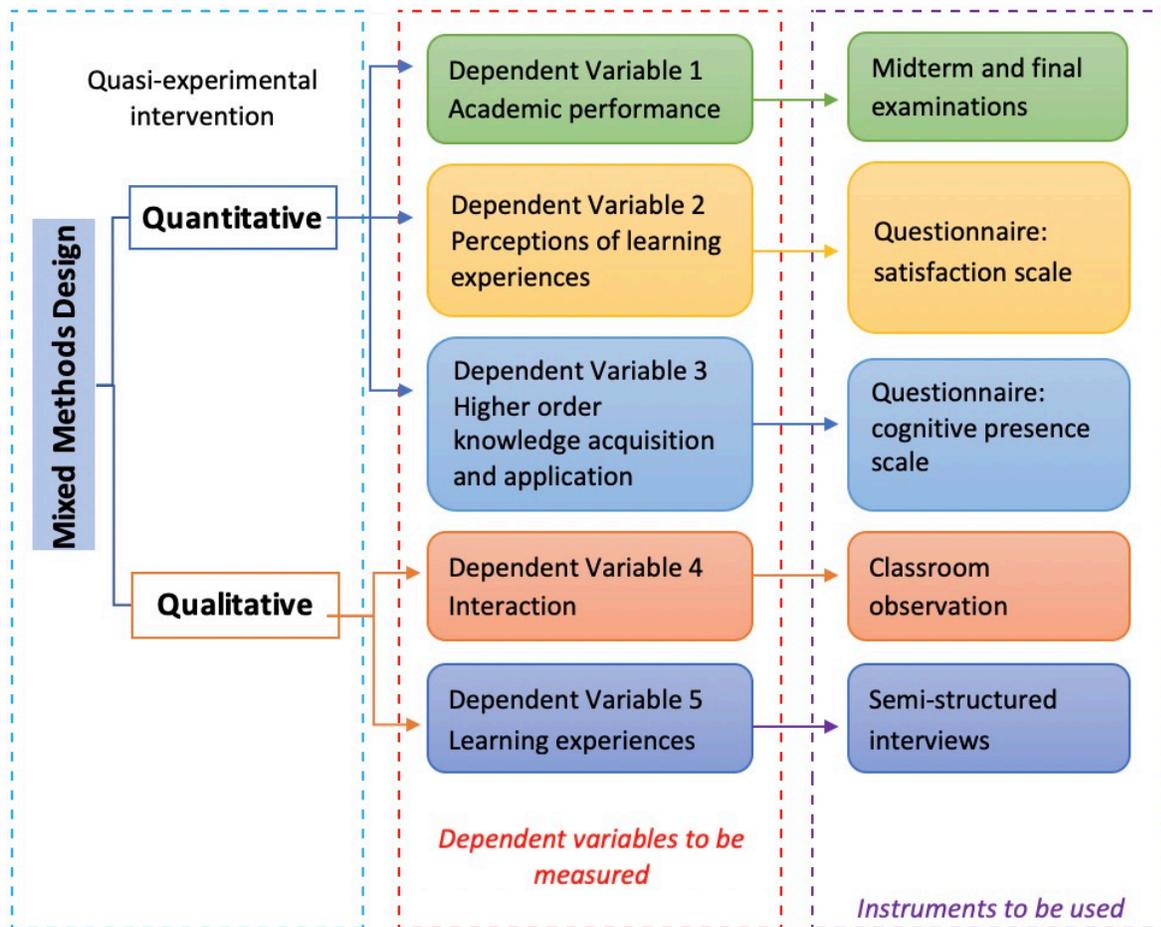
The semi-structured, open-ended interviews were scheduled with 18 participants during the last week of the semester. Two weeks prior to the interviews, all students were given a piece of paper and asked if they were willing to participate in an approximately one-hour-long interview. Students were instructed to write “yes, willing to be interviewed” or “no, not willing to be interviewed” on the piece of paper, along with their name. A purposeful sample of six students was chosen from the pool in each group.

The interview protocol consists of 10 questions (Appendix C). Interviews were scheduled for one hour or less and were conducted once. Interviews were recorded and the audio transcribed.

Figure 7 shows how the dependent variables measured, research questions, and data collection align.

**Figure 7**

*Dependent Variables to Be Measured and Instruments to Be Used in this Study*



### **IRB Procedures**

Institutional Review Board (IRB) approval was obtained from the Institutional Review Board of the University of Hawaii at Manoa prior to the recruitment of the participants for this study (Appendix D).

When fully flipped, semi-flipped and traditional *EFL I* classes were available for course selection, they were marked with asterisks. There were important notes in their remark column that introduced this study and notified students of video and audio recordings in class. Students who enrolled in EG1, EG2, and CG were contacted via email before the courses start. The

purpose of the study and the instructions on how to participate in this study was elaborated in this email.

There were five consent forms in total, three for classroom intervention, one for direct surveys and one for interviews (Appendix E). There were three separate consent forms for three different classroom interventions. On the first day of *EFL I*, the researcher explained the intervention consent form to students, including instructional treatment and video and audio recordings. Students were asked to sign the consent form in week 1, and intervention started in week 2. Participation was entirely voluntary. Data collected from students, who wanted to take this course but did not want to participate in this study, were not used for analysis. For the paper-based questionnaire, the consent form was embedded into the questionnaire. Going to the first page of the questionnaire was considered as the participant's consent to participate in this study. For the semi-structure interviews, the consent form was explained to the participants individually, and they were asked for a signature before their interview. All consent forms for intervention, direct surveys, and interviews cover the content in terms of the purpose of the study, the time commitment, the benefits and risks, and the participants' confidentiality and privacy. The respondents' participation was on a completely voluntary basis in this study.

## **Treatment**

### **Flipped Classroom Model**

In the flipped model, the materials and resources used to deliver instruction were provided for students to complete before class (Tucker, 2012; Zhang et al., 2015), thus in-class time can be used for hands-on learning, individualized instruction, group collaboration, and creative projects in order to master the learning objectives (Du et al., 2014).

As shown in Table 10, implementing flipped learning allows the students to spend more time supporting higher level learning tasks such as a group discussion, while lower level tasks such as knowledge and comprehension are completed independently outside the class.

**Table 10**

*Comparison Between Traditional Classrooms and Flipped Classrooms*

Level of Learning in Bloom's Revised Taxonomy	Traditional Classroom	Flipped Classroom
Remembering	Face-to-face lecture	Pre-recorded lecture, reading material, and watching video lectures independently
Understanding	Question and answer	Reflection, peer-to-peer discussion, and collaboration
Analyzing	Homework	Classroom activities such as group discussions
Applying, evaluating, and creating	Homework or N/A	Student projects, presentations, and peer/instructor evaluation.

***Pre-Recorded Videos***

The present study utilized video as the mode of lecture delivery to provide concurrent access to a presentation along with an oral explanation. The lecture design is guided by the cognitive theory of multimedia learning, which posits that multimedia instruction requires well thought out design in order for meaningful learning to take place (Mayer, 2005). Under the cognitive theory of multimedia learning, multimedia instruction should be designed to facilitate understanding without unnecessary cognitive overload, as meaningful learning requires a significant amount of cognitive processing while the learner's information processing system is limited (Mayer & Moreno, 2003). In a word, the lecture videos for the current study were designed with minimal text, visual images, annotations, and audio explanations, in accordance with the cognitive theory of multimedia learning.

In addition to the general principles of the cognitive theory of multimedia learning, Guo et al. (2014) conducted an empirical study that surveyed the effects of different video production styles on students' engagement. It summarized six effective characteristics of lecture videos: 1) use segmented videos, shorter than 6 minutes; 2) display the instructor's head on the screen occasionally; 3) film in an informal setting; 4) use motion and continuous visual flow, along with unrehearsed speech; 5) show enthusiasm; and 6) add support for re-watching and skimming.

In summary, the videos that were created for *EFL I* in the present study mainly utilized narrated video with slideshows to describe topics on politics, culture, language, and literature. Annotations were inserted to highlight important information. Various tools such as PowToon, Adobe Sparks, and Animoto were also used to make the lecture videos. The videos were segmented, and each individual video was shorter than 6 minutes. A table of contents was provided along with each video, which supported re-watching and skimming. An example is demonstrated in Figure 8.

**Figure 8**

*Pre-Recorded Videos for Week 10*

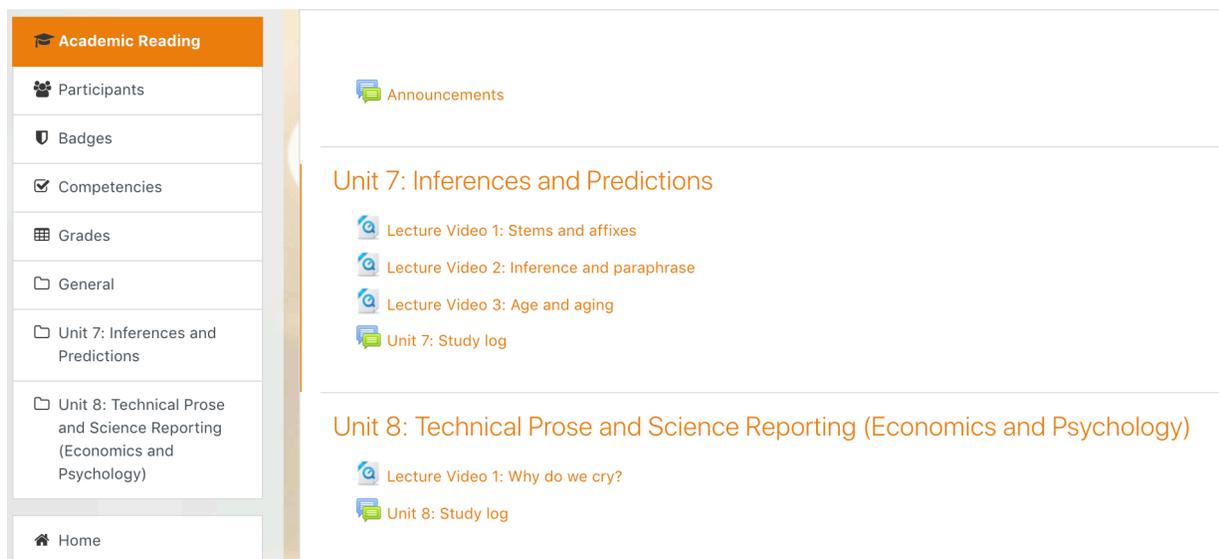
Video	Example	Table of Contents
<p>Lecture 1 for week 10: Go through the reading part 1 – plots and vocabularies</p>	 <p>Indulgently (adv.) 放任地 patiently, kindly</p> <p>Version (n.) 版本; 译法 an interpretation of a matter from a particular viewpoint</p> <p>go a long, long way: 大大提升 get significant promotion</p> <p>He told Logan he was going a long, long way in the bank</p>	<p>0:00-0:52 Introduction 0:53-2:00 Act 1 Cafeteria (1:20 Restrain, Futility; 1:39 Indulgently, Version, Go a long, long way, Jeopardize) 2:00-2:10 Exercise 1 2:11-4:00 Act 2 In the Bank (2:40 Stumble upon; 2: 43 Overhang; 2:57 Compel; 3:09 Cluttered; 3:55 Revenge, Pin sth. on sb.) 4:00-4:20 Exercise 2</p>

***Learning Management System***

The learning management system (LMS) called Moodle (<https://moodle.org/>) was used. Students were able to access the class’s Moodle site with student numbers and unified passwords. Students were able to change their passwords or set personal passwords if needed. Pre-recorded videos were uploaded to the Moodle site. Students could engage in discussions or team activities on lesson content. Figure 9 shows an example of the Moodle site.

**Figure 9**

*Screenshot of the Moodle Site*



### **The Fully Flipped Model**

The fully flipped model was constructed based on Gagne’s Nine Events and TBI strategies. Gagne proposed nine events as a systematic instructional design process that shares the behaviorist approach to learning, with a focus on the outcomes or behaviors of instruction or training (Gagne et al., 1992). Tasks were sequenced following Gagne’s nine events and met the four key criteria from Ellis and Shintani (2013): 1) the primary focus should be on “meaning”; 2) there should be some kind of “gap”; 3) learners should largely rely on their own resources (linguistic and non-linguistic) in order to complete an activity; and 4) there is a clearly defined outcome other than the use of language.

### ***The Control Group (CG): A Traditional EFL I Classroom***

Teachers must stick to the syllabus, but they were allowed to have personal teaching styles or add additional exercises in traditional classrooms. In week 10, students were expected to learn a long reading “The Dusty Drawer.” Many teachers still reviewed the reading in class



Phase One—Before class: Students were guided to 1) read weekly readings and view lecture videos on the topics of that week and 2) engage in discussion or team activities on lesson content in the LMS. The lesson plan for week 10 in Figure 11 demonstrates the instructional design and procedures for the fully flipped group.

**Figure 11**

*Lesson Plan for EGI—Before Class*

<b>Lesson Plan for Week 10 (Pre-class) (T = teacher, Ss = students)</b>		
<b>Materials:</b> 1. Lecture video: The Dusty Drawer 2. Textbook 3. Moodle Discussion Board		
<b>Gagne’s Nine Events</b>	<b>Pedagogical Design/Task Design</b>	
1. Gain attention of the students	<p><b>Task 1: Video Studying</b> Task type: problem-solving Ss are expected to watch the video, read assigned paragraphs, and complete reading exercises</p>  <p>(A screenshot of the lecture video)</p>	<p><b>Task 2: Discussion – Study Log</b> Task type: problem-solving Ss are expected to answer 2 questions regarding their pre-class video learning. (1) What useful vocabulary and concepts did you learn from this lesson? (2) Please comment on the characteristics of Logan and Tritt.</p>  <p>(A screenshot of the discussion board)</p>
2. Inform students of the objectives		
3. Stimulate recall of prior learning		
4. Present the content		

Phase Two—During class: Students completed tasks designed based on the fully flipped model in the *EFL I* classroom. The lesson plans for week 10 in Figure 12 demonstrate instructional design and procedures in the fully flipped group.

Phase Three—After class: Students completed unfinished tasks/assignments.

Figure 12

Lesson Plan for EGI—During Class

Lesson Plan for Week 10 (In-class) (T = teacher, Ss = students)	
<b>Materials:</b> 1. Presentation Slides 2. Kahoot 3. Character Trading Cards 4. Task Handout 5. Textbook	
Gagne's Nine Events	Pedagogical Design/Task Design
5. Provide learning guidance	Before Ss do each task, T will either 1. provide examples, or 2. present multiple versions of the same content, e.g., video, demonstration, lecture, podcast, group work. T provides explanations after demonstrations. When Ss are doing each task, T will provide instructional support as needed – as scaffolds (cues, hints, prompts) which can be removed after the student learns the task or content.
6. Elicit performance (practice)	<p><b>Warming up</b>  <b>Activity 1: Bingo</b>            T makes a bingo vocabulary test. Ss are expected to get as many points as possible to show their mastery of vocabularies. Vocabularies are from the pre-class lecture.</p> <p><b>Activity 2: Warming-up questions</b>            T can dress like Logan (the main character in week 10's reading) and carry a fake revolver.</p> <p><b>Task 1: Role-play</b>            Task type: Problem-solving            1. T reviews the text structure by showing the picture of each scene of the story (from pre-class lecture 2). Ss are expected to restate what has been happening in these scenes.            2. Ss work in pairs. One acts as Mr. Logan and the other as Mr. Tritt, and they replay the scene in their own words.</p> <p><b>Task 2: Character Trading Card</b>            Task type: Problem-solving, opinion-exchanging            1. Ss work in groups. T asks Ss to go to the character trading cards online tool (paper-based handouts are prepared as option 2). Ss will apply what they have learned about the characters through their knowledge and understanding of the reading. For this story, students will analyze the main characters, Mr. Logan and Mr. Tritt, and then exchange cards to learn what others think about the characters.</p>  <p>(An example of a character trading card)</p> 2. Once students have finished, ask them to exchange their cards with another group to compare ideas about the character they analyzed. 3. Allow five minutes for students to read what others have written on their cards, and lead a class discussion (Task 3). <p><b>Task 3: Discussion</b>            Task type: opinion-exchange            T leads a class discussion over 4 questions:            1. Do you believe that Tritt stole \$200 from Logan? On what do you base your opinion? (How did you learn that the money was missing?)            2. What is the nature of the crimes committed in "The Dusty Drawer"? What is the difference between the consequences of Tritt's actions as compared to Logan's? Is there any moral difference between the two men? Is one better than the other?            3. Was Logan justified in doing what he did? How would you defend him? Has he committed a crime? Are there any considerations that should be used to judge his actions besides the questions of whether or not he has broken the law?            4. Has justice been served in "The Dusty Drawer"?            Ss work in groups and put their opinions on a shared document. T summarizes Ss' opinions.</p>
7. Provide feedback	After Ss' performance/practice, T provides immediate feedback to assess and facilitate learning (e.g., T provides Ss with suggestions, recommendations, and information for them to correct their performance).
8. Assess performance	T Embeds questions throughout instruction through oral questioning and/or quizzes (e.g., bingo game, role-play performance, etc.).
9. Enhance retention and transfer to the job	T asks Ss to use reflection journals to note what they have learned from this lesson and the story. Journal questions: 1. What did you learn from the story? 2. How did the tasks (e.g., character trading cards) help you organize your ideas or understand the characters/story better? 3. Do you think you will apply these strategies in other texts?

## The Experimental Group 2 (EG2): A Semi-Flipped EFL I Classroom

In EG2, students watched pre-recorded lecture videos and previewed in-class content at home before class. They received traditional instruction during class time.

In EG2, there were three stages for each week's class:

Phase One—Before class: Students watched pre-recorded lecture videos and previewed in-class content.

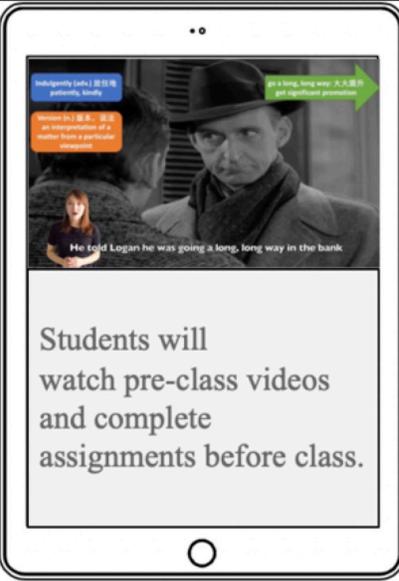
Phase Two—During class: The teacher gave lectures, and students completed class activities.

Phase Three—After class: Students completed unfinished tasks/assignments.

Figure 13 shows an example of the instructional design for EG2 in week 10.

**Figure 13**

*An Example of Semi-Flipped Instructional Design for Week 10*

Before class	During class																														
 <p>Students will watch pre-class videos and complete assignments before class.</p>	<p><b>Step 1. Inform Students what they are going to learn</b></p> <p>WEEK 10 THE DUSTY DRAWER</p>	<p><b>Step 2. Before reading – ask students warm-up questions</b></p> <p>WARMING UP</p> <ol style="list-style-type: none"> <li>1. How do you feel about the title?</li> <li>2. Why do you think the author chose this title?</li> </ol>	<p><b>Step 3. Before reading – introduce author</b></p> <p>ABOUT THE AUTHOR – WERRY FIELD FLEMING (1894-1962)</p> 	<p><b>Step 4. Before reading – introduce vocabulary</b></p> <p>VOCABULARY FROM CONTEXT</p> <table border="1"> <tr><td>Indulgently</td><td>adj.</td><td>欣然地</td></tr> <tr><td>particularity</td><td>n.</td><td>特别地</td></tr> <tr><td>lovely</td><td>adj.</td><td>可爱的</td></tr> <tr><td>intensity</td><td>n.</td><td>强烈地</td></tr> <tr><td>intensity</td><td>n.</td><td>强烈地</td></tr> <tr><td>intensity</td><td>n.</td><td>强烈地</td></tr> <tr><td>intensity</td><td>n.</td><td>强烈地</td></tr> <tr><td>intensity</td><td>n.</td><td>强烈地</td></tr> <tr><td>intensity</td><td>n.</td><td>强烈地</td></tr> </table>	Indulgently	adj.	欣然地	particularity	n.	特别地	lovely	adj.	可爱的	intensity	n.	强烈地															
Indulgently	adj.	欣然地																													
particularity	n.	特别地																													
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	<p><b>Step 5. Go through the reading – plot</b></p> <p>THE DUSTY DRAWER – PLOT</p> <p>The story is set in a bank and is about a man who is looking for a dusty drawer. He finds it and is surprised to find that it contains a large amount of money. He is then forced to hide the money and is eventually caught by the police.</p>	<p><b>Step 6. Go through the reading – techniques (1)</b></p> <p>LET'S ANALYSE THE STORY FROM THE FOLLOWING PARTS</p> <p>1. Setting 2. Characters 3. Plot 4. Theme</p>	<p><b>Step 6. Go through the reading – techniques (2)</b></p> <p>LET'S ANALYSE THE STORY FROM THE FOLLOWING PARTS</p> <p>1. Setting 2. Characters 3. Plot 4. Theme</p>	<p><b>Step 6. Go through the reading – techniques (3)</b></p> <p>LET'S ANALYSE THE STORY FROM THE FOLLOWING PARTS</p> <p>1. Setting 2. Characters 3. Plot 4. Theme</p>																											
	<p><b>Step 7. Go through the reading – characters (1)</b></p> <p>THE DUSTY DRAWER – CHARACTERS</p> <p>The main character is a man who is looking for a dusty drawer. He is a young man who is working in a bank. He is a very honest and hardworking man. He is a very good person and is very popular with his colleagues.</p>	<p><b>Step 7. Go through the reading – characters (2)</b></p> <p>THE DUSTY DRAWER – CHARACTERS</p> <p>The main character is a man who is looking for a dusty drawer. He is a young man who is working in a bank. He is a very honest and hardworking man. He is a very good person and is very popular with his colleagues.</p>	<p><b>Step 8. Comprehension exercises (1)</b></p> <p>COMPREHENSION EXERCISES</p> <ol style="list-style-type: none"> <li>1. What is the main idea of the story?</li> <li>2. Why is the man looking for a dusty drawer?</li> <li>3. What happens when he finds it?</li> <li>4. How does he feel about it?</li> </ol>	<p><b>Step 8. Comprehension exercises (2)</b></p> <p>COMPREHENSION EXERCISES</p> <ol style="list-style-type: none"> <li>1. What is the main idea of the story?</li> <li>2. Why is the man looking for a dusty drawer?</li> <li>3. What happens when he finds it?</li> <li>4. How does he feel about it?</li> </ol>																											
	<p><b>Step 9. Discussion</b></p> <p>DISCUSSION/COMPOSITION</p> <p>Write a short story about a man who is looking for a dusty drawer. Use the same characters and setting as the story above.</p>	<p><b>Step 10. Assignment</b></p> <p>ASSIGNMENT</p> <ol style="list-style-type: none"> <li>1. Read the story and answer the questions.</li> <li>2. Write a short story about a man who is looking for a dusty drawer.</li> <li>3. Write a short story about a man who is looking for a dusty drawer.</li> </ol>	<p><b>Step 11. Closure</b></p> <p>Thank you!</p>																												

## **Data Collection**

The research protocol was submitted to the IRB of the University of Hawaii for approval prior to the data collection. Students who enrolled in EG1, EG2, and CG were notified about this study, including the intervention, midterm and final examinations, video-recording sessions, the questionnaire, and semi-structured interviews.

### **Quantitative Data**

#### ***Midterm Examination Scores***

The midterm examination data were collected in week eight of the fall 2019 semester. It took 60 minutes for students in EG1, EG2, and CG to complete the test. The instructor of each group individually graded the paper-based test using the same answer key and rubric. Test scores were later recorded in Microsoft Excel. This test was typically used for the class and was not designed specifically for this study.

#### ***Final Examination Scores***

The final examination data were collected at the last class session. It took 60 minutes for students to complete the test. The instructor of each group individually graded the paper-based test using the same answer key and rubric. Tests scores were later recorded in Excel. Again, this was the normal test used in this class.

#### ***Questionnaire***

Once students finished the final examination paper, the questionnaire was distributed to them face-to-face at the same session. In order to avoid probable technique problems, the questionnaires were paper-based instead of web-based. The questionnaire was covered by a survey consent form. It was estimated to take 15 minutes for students to fill out the

questionnaire, which included two independent scales. Completed questionnaires were dropped by students into a ballot box placed in the back of the classroom to maintain confidentiality.

### ***Classroom Observations***

Classroom observation data were collected from week 2 to week 15. Four 45-minute face-to-face instructional times in EG1, EG2, and CG, totaling 12 sessions, were videotaped for observation. One camcorder was placed at the front of the classroom. Extra class sessions were videotaped in order to help students become accustomed to being videotaped and to minimize a possible Hawthorne Effect, which is a psychological phenomenon that possibly affects students by causing them to exhibit positive behaviors or performances as a result of being in a study or experiment (Chiappone, 2008). Among all video data, four for each class (totaling 12 videos) were randomly selected for observation analysis. The researcher counted the number of interactions and the quality of students' responses from these recorded videos. Then, these numbers were recorded in Excel. The numbers of the data from the SCORE among the CG, EG1, and EG2 were compared to study the differences in the number of interactions.

### **Qualitative Data**

#### ***Semi-Structured Interviews***

The semi-structured interviews were scheduled when the course was completely finished. The interviewer met the interviewees for the interviews at a location and time convenient for the individual interviewees. Before each interview, the interviewer explained interview consent to the interviewee. Interviews were recorded with QuickTime player, and audios were transcribed and saved in Microsoft Word.

## **Summary**

The flipped classroom approach with well-designed in-class session has the potential to create a learner-centered classroom that fosters language proficiency, improve learning experiences, and promote interactions when guided by appropriate instructional purposes and theories.

The preceding discussion on Bloom's revised taxonomy, TBI, and Gagne's nine events constructs an instructional model, the fully flipped model. Tasks in this model focus on meaning, have some gaps, contain familiar information, and have a clearly defined non-linguistic outcome. The fully flipped model follows Gagne's nine instructional events that mirror the cognitive stages associated with the adult learning process, and has the potential to help learners achieve remembering, understanding, applying, analyzing, evaluating and creating skills.

## **Data Analysis**

Data from the midterm and final examinations were recorded into Excel where they were checked for errors, omissions or other issues. Then, the data were imported into statistical package for the social sciences (SPSS) for statistical analysis. Analysis of covariance (ANCOVA) were used to examine if students made any progress or regress compared to themselves, and if there were any significant differences between the three groups. The midterm scores were used as the covariate to control for initial differences in performance.

Paper-based survey data were also manually recorded into Excel to check for errors, omissions, or other issues, and later imported into SPSS for statistical analysis. In order to quantify the responses in questionnaire, the researcher assigned a single-item score to each answer aligned with a Likert scale. The next step in cleaning the data was to inspect the file for

scores that were not valid or perhaps missing from the dataset (Creswell, 2008). In order to represent general trends, frequency data and descriptive statistics were used, including measures of central tendency, such as the mean. The measures of variability, such as the range and standard deviation, indicated the spread of scores (Creswell, 2008). Tables and charts were generated, using statistical software. Analysis of variance (ANOVA) was used to analyze data and compare differences between EG1, EG2 and CG. Similarly, survey data for students' higher order knowledge acquisition and application were examined through descriptive statistics and ANOVA.

Multivariate analysis of variance (MANOVA) and follow-up univariate tests were used to analyze all quantitative data, comparing differences in students' perception of learning experiences, and cognitive development among the three groups.

Observations were interpreted through symbols and notes on SCORE journals. The observational instrument included a classroom seating chart and arrows that indicated the flow of verbal interaction. The base of the arrow indicated the person who initiated a verbal interaction, the head of the arrow indicated the person to whom the comment was directed, and the notches in the arrows were used to indicate repeated interactions. Classroom interactions were categorized based on the following frequencies: 1) the questions that the instructor asks the whole class (F1), 2) the questions the instructor asks individuals (F2), 3) students' responses to these questions (F3), 4) the output with errors (F4), 5) the questions that students ask (F5), 6) the comments that students make to the class as a whole (F6), 7) student-to-student interactions (F7), and 8) student-to-instructor interactions (F8). The categorized data were then quantified and put into SPSS for statistical analysis.

The qualitative interview data were conducted in interviewees' own language, Chinese, so that the interviewees are able to fully understand questions, explain their ideas or present arguments (Maude, 2011). The qualitative data were transcribed and organized by pseudonyms. Both Chinese and English versions of transcripts were reread several times in order to check for accuracy. And both versions were coded for best capturing the meaning of what participants expressed. Open coding was used to explore the data prior to an iterative process of thematic refinement involving member checks and the exploration of alternative interpretations (Creswell, 2017). These interpretations were presented to participants, providing them with the opportunity to provide further comment. Nvivo software was used to create a codebook and mark the evidence in alignment with each code. Two outside coders were invited to review the coding of several randomly selected excerpts from the interview transcripts based on the codebook. The researcher then clustered codes into larger categories and identified 5–7 emerging themes (Creswell, 2017). Themes and findings were related to the conceptual framework in order to answer each research question. The final step was to integrate the quantitative and qualitative results into a coherent whole. Table 11 illustrates the research questions and data analysis strategies.

**Table 11***Research Questions and Data Analysis Methods*

Research Question	Instrument	Data Analysis Method
RQ1: Academic performance	Midterm and final examinations	ANOVA & ANCOVA
RQ2: Perceptions of learning experiences	Questionnaire: satisfaction scale	Descriptive statistics, ANOVA
RQ3: Higher order knowledge acquisition and application	Questionnaire: cognitive presence scale	Descriptive statistics, ANOVA
RQ4: Interaction	SCORE journal	Descriptive (frequencies, percentages, categories)
RQ5: Learning experiences	Semi-structured interview	Codebook, Descriptive (themes and findings)

**Validity**

Fraenkel (2006) states that triangulation, or using a variety of instruments to collect data improves the quality of data and the accuracy of data interpretation. In order to address research questions, various instruments were used for data collection in this study. When the data were triangulated, investigators could improve their inquiries through comparison and integration, thus “blending the strengths of one type of method and neutralizing the weaknesses of the other” (Creswell, 2005, p. 511).

For the quantitative strand, as described in the instrumentation section of this chapter, the survey instruments had been validated in the course of their use in previous studies. Validity was attended to in the use of previously validated reliable instruments. Moreover, a pilot study had been conducted to validate the reliability of scales. Statistical analyses, such as factor analysis, were conducted after data collection to provide further information about instrument reliability, item quality, and construct validity.

For the qualitative strand, member checking was used to address rigor for the semi-structured interviews (Creswell, 2017). A semi-structured interview protocol was used to strengthen the consistency of procedures across multiple sessions. After the interview data were transcribed, translated, and analyzed, the researcher sent interpretations and conclusions back to the interviewees so that they could judge the accuracy and credibility of the account. This practice of member checking is consistent with the underlying belief in qualitative inquiry that reality is what participants perceive it to be, so member checks strengthen the validity of the recorded accounts as well as the findings based on the participants' perspectives (Creswell, 2017). Moreover, two outside coders were invited to review the coding of several randomly selected excerpts from the interview transcripts based on the codebook.

As this study took place in a Chinese university, and participants were of medium English proficiency, survey instruments included both English and its Chinese translations to reduce misunderstanding. Moreover, the semi-structured interviews were conducted in Chinese. For validation, translated Chinese and English documents, including instruments, and interview transcriptions, were reviewed by a third party, Shanghai E-Visa Investment Consulting Corporation, that provides professional translation services (Appendix F).

## **Summary**

This study employed an embedded mixed methods design to explore the effects of the fully flipped model on English language learning through the comparison of students' learning outcomes, perceptions, cognitive development, interaction and learning experiences. In order to address the research questions, both quantitative and qualitative data were collected through a variety of instruments. Findings may indicate relations between instructional design models and

students' academic performances, or correlation between or among variables. By analyzing these relations and correlations, it is possible to build a more effective instructional design model for language learning.

## CHAPTER 4. FINDINGS

The review of literature for this mixed methods study indicated a need to further investigate the impact of the fully flipped model of instruction on students' learning outcomes, perceptions, cognitive development, interaction, and learning experiences. Thus, the fully flipped model of instruction was implemented over an eighteen-week period with the first-year university students enrolled in the College EFL Course I (*EFL I*) course. To examine the impact of task-based language teaching methods in class, the semi-flipped model was implemented with another *EFL I* class. A third *EFL I* class that implemented traditional instruction was included in this study as the control group. Changes in students' learning outcomes, perceptions, cognitive development, interaction, and learning experiences were evidenced and evaluated through the completion of midterm and final examinations, a satisfaction scale, a cognitive presence scale, classroom observations, and semi-structured interviews. This chapter discusses the data analysis procedures and presents the results. The following areas are included in this chapter: description of the sample, quantitative results, qualitative findings, and summaries to research questions.

### Description of the Sample

The research site in this study was a comprehensive public research university in China with 14,405 full-time undergraduate students. The university offered 84 classes of *EFL I* in fall 2019 semester. Three *EFL I* classes at the research site were randomly selected as the context for this study.

Participants in this study were in their first semester at the university and were taking the *EFL I* in fall 2019. All were placed at the same English proficiency level before they matriculated. All participants were from China and aged between 18 and 20. There were 104

participants: 35 enrolled in the fully flipped group, 36 in the semi-flipped group, and 33 in the traditional group. All three groups (the fully flipped, the semi-flipped, and the traditional) had the same instructional content, syllabus, course objectives, and examination papers.

## **Quantitative Findings**

Quantitative data analysis was conducted on the midterm and final examination scores, the satisfaction scale, and the cognitive presence scale.

### **The Midterm and Final Examinations**

The midterm examination was held in the eighth week and the final examination in the eighteenth week of the fall 2019 semester. Both the midterm and the final examinations were typically used for the *EFL I* course and were not designed specifically for this study. About 2600 students in 84 *EFL I* classes completed the examinations. They had 60 minutes to complete the paper-based test in class. Instructors of EG1, EG2 and CG individually graded the test using the same answer key and rubric. Test scores were later recorded in Microsoft Excel.

Both the midterm and final examinations had the same formats. Part one included multiple choice and fill-in-the-blank items, assessing students' mastery of words and phrases from textbooks. Part two focused on reading proficiency, while part three looked at writing ability. The total score for the midterm examination and final examination was 100 points. Items in the examinations tested vocabulary, reading comprehension, and writing; and were worth 40, 50, and 10 points, respectively.

Data from midterm and final examinations were used to answer research question one:

RQ 1: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what differences exist if any, in student learning outcomes in midterm and final examination scores?

H1o: There is no statistically significant difference in student learning outcomes measured by midterm and final examination scores for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

H1a: There is a statistically significant difference in student learning outcomes measured by midterm and final examination scores for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

Descriptive statistics for the midterm and final examinations are presented in Table 12. Students in EG1 had higher average score for both midterm and final examinations than students in EG2 and CG. Moreover, EG1 over-performed EG2 and CG on vocabulary and reading comprehension in two exams. But the average writing score of EG1 was the lowest in two exams.

**Table 12**

*Descriptive Statistics for the Midterm and Final Examinations*

Classroom Type	n	Variable	M	SD	Variable	M	SD
EG1	35	Midterm	76.43	9.31	Final	74.06	14.44
EG2	36	(Total)	68.36	12.50	(Total)	67.47	20.58
CG	33		70.12	14.37		69.72	17.71
EG1	35	Midterm	31.66	4.01	Final	29.71	7.36
EG2	36	(Vocabulary)	24.17	8.67	(Vocabulary)	26.78	10.50
CG	33		25.45	8.91		28.18	9.10
EG1	35	Midterm	37.60	6.61	Final	37.40	7.82
EG2	36	(Reading)	36.72	5.86	(Reading)	33.42	10.93
CG	33		37.29	7.00		32.15	9.36
EG1	35	Midterm	7.08	.62	Final	6.84	.61
EG2	36	(Writing)	7.26	.76	(Writing)	7.17	.70
CG	33		7.14	1.48		7.08	.68

The ANOVA result (shown in Table 13) and follow-up pairwise comparison (shown in Table 14) among EG1, EG2 and CG are presented below. According to the result, there was significant difference in students' midterm total scores:  $F(2, 101) = 4.256, p = .017, \eta_p^2 = .078$ ; and the significance in students' midterm vocabulary was found between the three different instructional methods:  $F(2, 101) = 9.953, p < .01, \eta_p^2 = .165$ . A further pairwise comparison showed that students in EG1 ( $M = 76.43, SD = 9.31$ ) did significantly better than students in EG2 ( $M = 68.36, SD = 12.50$ ) for the overall midterm examination ( $p < .05$ ). The difference of average midterm scores between EG1 and CG ( $M = 70.12, SD = 14.37$ ) was just very slightly missed the significance level ( $p = .089$ ). More specifically, students' performance on vocabulary in the midterm examination was significantly different: Student in EG1 ( $M = 31.66, SD = 4.01$ ) did significantly better than students in both EG2 ( $M = 24.17, SD = 8.67$ ) ( $p < .001$ ) and CG ( $M = 25.45, SD = 8.91$ ) ( $p = .003$ ).

**Table 13***ANOVA Result on Student Learning Outcome (Midterm Total and Vocabulary)*

		Sum of Squares	df	Mean Square	F	Sig.	$\eta^2$
Midterm (total)	Between Groups	1265.723	2	632.862	4.256	.017	.078
	Within Groups	15018.392	101	148.697			
	Total	16284.115	103				
Midterm (vocabulary)	Between Groups	1125.971	2	562.985	9.953	.000	.165
	Within Groups	5713.068	101	56.565			
	Total	6839.038	103				

**Table 14***Multiple Comparisons of Student Learning Outcome (Midterm Total and Vocabulary)*

Tukey HSD

Dependent Variable	(I) Group	(J) Group	Mean		
			Difference (I-J)	Std. Error	Sig.
Midterm (total)	EG1	EG2	8.067*	2.895	.017
		CG	6.307	2.959	.089
	EG2	EG1	-8.067*	2.895	.017
		CG	-1.760	2.939	.821
	CG	EG1	-6.307	2.959	.089
		EG2	1.760	2.939	.821
Midterm (vocabulary)	EG1	EG2	7.490*	1.785	.000
		CG	6.203*	1.825	.003
	EG2	EG1	-7.490*	1.785	.000
		CG	-1.288	1.813	.758
	CG	EG1	-6.203*	1.825	.003
		EG2	1.288	1.813	.758

\*. The mean difference is significant at the 0.05 level.

For the students' final examination, students' test scores were analyzed using ANCOVA: group was the between-subjects factor (EG1, EG2, CG) and midterm examination score was the covariate (total, vocabulary, reading, and writing) to control for the preexisting differences on the students' final score (total, vocabulary, reading, and writing). The homogenous slopes assumptions were applied to all cases. There were no significant differences found in student final examination scores, in student learning outcomes related to vocabulary, or in student final examination scores in relation to writing across the three groups. However, results showed that reading comprehension scores of the three groups varied significantly,  $F(2, 100) = 3.703, p < .05, \eta_p^2 = .069$ . The follow-up pairwise comparisons showed that there was a significant difference between the fully flipped group ( $M = 37.40, SD = 7.82$ ) and the traditional group ( $M = 32.15, SD = 9.36$ ) ( $p < .05$ ), indicating that the difference in students' reading comprehension of English varied between the two groups. The interaction between groups and midterm reading scores was not significant,  $F(2, 98) = 1.596, p = .208$ , which confirms the influence of midterm scores on students' final reading outcomes was not varied by the groups using the three different instructional methods. The ANCOVA result on students' reading comprehension (shown in Table 15) and the follow-up pairwise comparison (shown in Table 16) are listed below.

**Table 15***ANCOVA Result on Students' Reading Comprehension*

Dependent Variable: Final (reading)

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3693.794 <sup>a</sup>	3	1231.265	20.911	.000	.385
Intercept	14.223	1	14.223	.242	.624	.002
Group	436.065	2	218.032	3.703	.028	.069
Midterm (reading)	3177.350	1	3177.350	53.963	.000	.350
Error	5888.043	100	58.880			
Total	132335.000	104				
Corrected Total	9581.837	103				

a. R Squared = .385 (Adjusted R Squared = .367)

**Table 16***Multiple Comparisons of Students' Reading Comprehension*

Dependent Variable: Final (reading)

Tukey HSD

(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
EG1	EG2	3.225	1.824	.240
	CG	4.979*	1.862	.026
EG2	EG1	-3.225	1.824	.240
	CG	1.754	1.850	1.000
CG	EG1	-4.979*	1.862	.026
	EG2	-1.754	1.850	1.000

*Note.* Based on estimated marginal means

\*. The mean difference is significant at the 0.05 level.

b. Adjustment for multiple comparisons: Bonferroni.

### ***Summary of Research Question 1***

Results suggested that students in EG1 scored higher on average than students in EG2 and CG on both midterm and final examinations. In particular, students in EG1 did better on vocabulary and reading than the other two groups in both exams. However, the writing scores of students in EG1 were not as high as those of students in the other two groups. ANOVA results showed that students in EG1 did significantly better than students in EG2 on the midterm examination. To be more specific, students in EG1 did significantly better on midterm vocabulary than students in EG2 and CG.

As for extant differences in student learning outcome on reading comprehension in final examination scores, students in EG1 showed significantly better performance than did students in CG.

### **Student Questionnaire**

The questionnaire used to evaluate students' perceptions of learning experiences and higher order knowledge acquisition and application came from two different studies. The questionnaire includes 24 items in total that are distributed across two major sections, the satisfaction scale and the cognitive presence scale. The first section evaluates the students' general views about their learning experience. Twelve items are included in section one and are adapted from Al-Zahrani (2015). The second section assesses students' perceptions of higher order knowledge acquisition and application, adopted from the Community of Inquiry (CoI) Scale. The questionnaire uses a 5-point Likert scale (1 = *Strongly Disagree*, 2 = *Disagree*, 3 = *Neutral*, 4 = *Agree*, and 5 = *Strongly Agree*). Permission was gained via email from Dr. Al-Zahrani in order to use and modify the content from the instrument he developed. The CoI survey is an open resource under Creative Commons license, so its permission is granted.

Once students finished the final examination paper in class in the eighteenth week, the paper-based questionnaire was distributed to them at the same session. The students completed a survey consent form, took about 10 minutes to fill out the questionnaire, and then dropped it into a ballot box placed in the back of the classroom. As a result, 99 participants, among which 34 from EG1, 34 from EG2, and 31 from CG, were included in the statistical analysis of students' satisfaction and cognitive development.

### ***The satisfaction scale***

Data gathered from the satisfaction scale were used to answer research question two, as follows:

RQ 2: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what perceptions do they possess regarding their learning experiences, and are there differences between the three groups?

H2o: There is no statistically significant difference in student perceptions of their learning as measured by a satisfaction scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

H2a: There is a statistically significant difference in student perceptions of their learning as measured by a satisfaction scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

The descriptive statistics of students' perceptions of their learning in EG1, EG2, and CG can be found in Table 17. Data were further analyzed using ANOVA. Results indicated that there was no significant difference between the three groups for the overall satisfaction,  $F(2, 96) = 1.315, p > .05, \eta_p^2 = .027$ . To examine more closely, the null hypothesis was rejected in item 1 ("I was able to review the lectures as many times as I need to"), item 7 ("This class facilitates my

personalized learning”) and item 9 (“This class facilitates more communication between me and my teacher”), showing that there were differences in student perceptions of their learning toward reviewing, personalized learning, and communicating. Table 18 presents the ANOVA result of items 1, 7, and 9 of the satisfaction scale and Table 19 shows a follow-up post hoc test.

**Table 17***Descriptive Statistics of Student Perceptions of Their Learning*

Item		n	Mean	Std. Deviation	Std. Error	Item		n	Mean	Std. Deviation	Std. Error
S1: I was able to review the lectures as many times as I need to.	EG1	34	3.50	.749	.128	S7: This class facilitates my personalized learning.	EG1	34	3.59	.892	.153
	EG2	34	3.12	.913	.157		EG2	34	3.91	.866	.148
	CG	31	3.03	.706	.127		CG	31	3.32	.871	.156
	Total	99	3.22	.815	.082		Total	99	3.62	.900	.090
S2: I was able to have rich learning experiences.	EG1	34	3.88	.729	.125	S8: This class helps me to effectively cooperate with my classmates.	EG1	34	3.91	.866	.148
	EG2	34	3.82	.834	.143		EG2	34	4.03	1.000	.171
	CG	31	3.74	.682	.122		CG	31	3.81	1.046	.188
	Total	99	3.82	.747	.075		Total	99	3.92	.965	.097
S3: I was able to connect theory with practice in real life.	EG1	34	3.24	.699	.120	S9: This class facilitates more communication between me and my teacher.	EG1	34	3.76	.855	.147
	EG2	34	3.32	.976	.167		EG2	34	4.24	.699	.120
	CG	31	2.90	.746	.134		CG	31	3.77	1.023	.184
	Total	99	3.16	.829	.083		Total	99	3.93	.884	.089
S4: I was able to manage my learning activities.	EG1	34	3.62	.853	.146	S10: This class facilitates more communication between me and my classmates.	EG1	34	3.76	.890	.153
	EG2	34	3.44	.705	.121		EG2	34	4.12	.769	.132
	CG	31	3.39	.919	.165		CG	31	3.77	1.117	.201
	Total	99	3.48	.825	.083		Total	99	3.89	.936	.094
S5: This class helps me to use various learning resources.	EG1	34	3.82	.758	.130	S11: This class helps me to effectively participate in the learning activities.	EG1	34	3.97	.717	.123
	EG2	34	3.74	.864	.148		EG2	34	4.12	.640	.110
	CG	31	3.61	.919	.165		CG	31	3.94	.854	.153
	Total	99	3.73	.843	.085		Total	99	4.01	.735	.074
S6: This class helps me to develop my problem-solving skills.	EG1	34	3.76	.699	.120	S12: Overall, I am satisfied with my learning experience in this class.	EG1	34	4.26	.790	.136
	EG2	34	3.88	.844	.145		EG2	34	4.50	.663	.114
	CG	31	3.68	1.013	.182		CG	31	4.58	.672	.121
	Total	99	3.78	.852	.086		Total	99	4.44	.717	.072

**Table 18***ANOVA Result of Item 1, 7, 9 in Satisfaction Scale*

		Sum of Squares	df	Mean Square	F	Sig.	$\eta^2$
S1	Between Groups	4.114	2	2.057	3.237	.044	.063
	Within Groups	60.997	96	.635			
	Total	65.111	98				
S7	Between Groups	5.669	2	2.835	3.690	.029	.071
	Within Groups	73.745	96	.768			
	Total	79.414	98				
S9	Between Groups	4.850	2	2.425	3.249	.043	.063
	Within Groups	71.655	96	.746			
	Total	76.505	98				

**Table 19***Multiple Comparisons of Item 1, 7, 9 in Satisfaction Scale*

Tukey HSD

Dependent Variable	(I) Group	(J) Group	Mean Difference		Sig.
			(I-J)	Std. Error	
S1	EG1	EG2	.382	.193	.123
		CG	.468	.198	.052
	EG2	EG1	-.382	.193	.123
		CG	.085	.198	.903
	CG	EG1	-.468	.198	.052
		EG2	-.085	.198	.903
S7	EG1	EG2	-.324	.213	.285
		CG	.266	.218	.444
	EG2	EG1	.324	.213	.285
		CG	.589*	.218	.022
	CG	EG1	-.266	.218	.444
		EG2	-.589*	.218	.022
S9	EG1	EG2	-.471	.210	.069
		CG	-.009	.215	.999
	EG2	EG1	.471	.210	.069
		CG	.461	.215	.085
	CG	EG1	.009	.215	.999
		EG2	-.461	.215	.085

\*. The mean difference is significant at the 0.05 level.

**Satisfaction Scale Item 1: I Was Able to Review the Lectures as Many Times as I Need to.** According to the ANOVA result presented in Table 4.7, there was significant difference between the three groups in student perceptions of their ability to review lectures as many times as they needed,  $F(2, 96) = 3.237, p < .05, \eta_p^2 = .063$ . The Tukey HSD result showed that the difference between EG1 ( $M = 3.50, SD = .749$ ) and CG ( $M = 3.03, SD = .706$ ) regarding access to lectures was close to being statistically significant ( $p = .052$ ), suggesting that students in EG1 were more able to review the lectures than students in CG. This is not a surprising finding, considering the difference in availability of lecture videos between the three groups. Students in EG1 were able to watch the teacher's pre-class lecture videos that analyzed the background of class contents, vocabularies, text structures, and articles in textbooks online. On the other hand, students in CG did not have access to pre-class lecture videos; their review materials were limited to textbooks and the notes they took in class.

**Satisfaction Scale Item 7: This Class Facilitates My Personalized Learning.** ANOVA result rejected the null hypothesis that there was no significant difference in student perceptions of personalized learning,  $F(2, 96) = 3.690, p < .05, \eta_p^2 = .071$ . The Tukey HSD result (presented in Table 4.8) showed that there was significant difference between EG2 ( $M = 3.91, SD = .886$ ) and CG ( $M = 3.32, SD = .871$ ) regarding the perception of personalized learning ( $p < .05$ ) and that students in EG2 agreed that *EFL I* facilitated their personalized learning more than students in CG. Similarly, this finding is not surprising as students in EG2 got pre-class lecture videos and previewing assignments from their teacher, while students in CG did not get any preview materials. This difference might explain the students' differing perceptions. However, this is not the case for EG1. Although students in EG1 also got pre-class lecture videos and assignments,

there is no statistically significant difference between EG1 and CG in student perceptions of personalized learning.

**Satisfaction Scale Item 9: This Class Facilitates more Communication between Me and My Teacher.** The null hypothesis that there was no significant difference in student perceptions regarding communication with teachers was rejected by ANOVA results,  $F(2, 96) = 3.249, p < .05, \eta_p^2 = .063$ . The Tukey HSD result, as seen in Table 4.8, showed that the difference between EG1 ( $M = 3.76, SD = .855$ ) and EG2 ( $M = 4.24, SD = .699$ ) on student perception of communication with teachers approached the borderline of significance ( $p = .069$ ), and the difference between EG2 ( $M = 4.24, SD = .699$ ) and CG ( $M = 3.77, SD = 1.023$ ) was marginally significant ( $p = .085$ ). Data showed that students in EG2 agreed most with the statement that the class facilitated increased teacher-student communication, while students in EG1 agreed least with the statement.

### ***Summary of Research Question 2***

Mentioned in Chapter 3, the 12 items on the satisfaction scale were divided into three dimensions: “content” (items 1, 6, and 7), “performance” (items 2, 3, 4, 5, and 8). and “collaboration” (items 9, 10, 11, and 12). Although there was no significant difference among EG1, EG2 and CG in student perceptions of their performance, data suggested students had significantly different opinions toward items in the course content and collaboration dimensions.

Data suggested that students in EG1 were more able to review the lectures than students in CG. Also, data showed that students in EG2 agreed more with the statement that the class facilitated teacher-student communication than the other two groups. It was significant that students in EG2 agreed that *EFL I* facilitated their personalized learning more than students in CG.

## **The cognitive presence scale**

Data gathered from the cognitive presence scale were used to answer research question three. The descriptive statistics could be found in Table 20.

RQ 3: For students in a traditional, a semi-flipped, and a fully flipped college EFL classroom, what perceptions do they possess regarding their higher order knowledge acquisition and application, and are there differences between the groups?

H3o: There is no statistically significant difference in perceptions of higher order knowledge acquisition and application, as measured by a cognitive presence scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

H3a: There is a statistically significant difference in perceptions of higher order knowledge acquisition and application as measured by a cognitive presence scale for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom.

**Table 20***Descriptive Statistics of Student Perceptions of Their Higher Order Knowledge Acquisition and Application*

Item		n	Mean	Std. Deviation	Std. Error	Item		n	Mean	Std. Deviation	Std. Error
C1: Problems posed increased my interest in course issues.	EG1	34	3.74	.666	.114	C7: Combining new information helped me answer questions raised in course activities.	EG1	34	3.85	.657	.113
	EG2	34	3.85	.821	.141		EG2	34	3.79	.687	.118
	CG	31	4.06	.772	.139		CG	31	3.81	.873	.157
	Total	99	3.88	.760	.076		Total	99	3.82	.734	.074
C2: Class activities piqued my curiosity.	EG1	34	3.71	.719	.123	C8: Learning activities helped me construct explanations and solutions.	EG1	34	3.71	.906	.155
	EG2	34	3.91	.933	.160		EG2	34	3.62	.604	.104
	CG	31	3.87	.846	.152		CG	31	3.61	.919	.165
	Total	99	3.83	.833	.084		Total	99	3.65	.812	.082
C3: I felt motivated to explore content related questions.	EG1	34	3.62	.652	.112	C9: Reflection on course content and discussions helped me understand fundamental concepts in this class.	EG1	34	3.74	.751	.129
	EG2	34	3.62	.817	.140		EG2	34	3.79	.880	.151
	CG	31	3.55	.810	.145		CG	31	3.77	.920	.165
	Total	99	3.60	.755	.076		Total	99	3.77	.843	.085
C4: I utilized a variety of information sources to explore problems posed in this class.	EG1	34	3.88	.769	.132	C10: I can describe ways to test and apply the knowledge created in this class.	EG1	34	3.32	.806	.138
	EG2	34	3.74	.790	.136		EG2	34	3.21	.880	.151
	CG	31	3.39	.955	.172		CG	31	3.03	.983	.176
	Total	99	3.68	.855	.086		Total	99	3.19	.888	.089
C5: Brainstorming and finding relevant information helped me resolve content related questions.	EG1	34	3.79	.729	.125	C11: I have developed solutions to course problems that can be applied in practice.	EG1	34	3.44	.786	.135
	EG2	34	3.82	.758	.130		EG2	34	3.35	.884	.152
	CG	31	3.52	.996	.179		CG	31	3.29	.938	.168
	Total	99	3.72	.833	.084		Total	99	3.36	.863	.087
C6: Discussions were valuable in helping me appreciate different perspectives.	EG1	34	3.97	.758	.130	C12: I can apply the knowledge created in this class to my work or other non-class related activities.	EG1	34	3.71	.836	.143
	EG2	34	4.15	.744	.128		EG2	34	3.41	.892	.153
	CG	31	3.90	.978	.176		CG	31	3.35	1.018	.183
	Total	99	4.01	.827	.083		Total	99	3.49	.919	.092

Data were further analyzed using ANOVA. Results indicated that there was no significant difference between the three groups for student overall cognitive development,  $F(2, 96) = .366, p > .05, \eta_p^2 = .008$ . Moreover, there were no significant difference in student perceptions for every single item on the scale. However, the difference in student perceptions of item 4 (“I utilized a variety of information sources to explore problems posed in this class”) was at the margin of statistical significance,  $F(2, 96) = 2.954, p = .057, \eta_p^2 = .058$ . A follow-up Tukey HSD result of item 4 showed the difference between EG1 ( $M = 3.88, SD = .769$ ) and CG ( $M = 3.39, SD = .955$ ) was provisionally significant ( $p = .05$ ). Results suggested that students in EG1 were more likely to utilize a variety of information sources to explore problems posed in this class than were students in CG. Table 21 presents the ANOVA result of item 4 in the cognitive presence scale and Table 22 shows the follow-up Tukey HSD result.

**Table 21***ANOVA Result of Item 4 in Cognitive Presence Scale*

	Sum of Squares	df	Mean Square	F	Sig.	$\eta^2$
C4 Between Groups	4.155	2	2.077	2.954	.057	.058
Within Groups	67.502	96	.703			
Total	71.657	98				

**Table 22***Multiple Comparisons of 4 in Cognitive Presence Scale*

Tukey HSD

Dependent Variable	(I) Group	(J) Group	Mean Difference (I-J)	Std. Error	Sig.
C4	EG1	EG2	.147	.203	.750
		CG	.495	.208	.050
	EG2	EG1	-.147	.203	.750
		CG	.348	.208	.221
	CG	EG1	-.495	.208	.050
		EG2	-.348	.208	.221

### ***Summary of Research Question 3***

The adapted cognitive presence scale was divided into three dimensions: “exploration” (items 1, 2, 3, 4, and 5), such as “problems posed increased my interest in course issues”; “integration” (items 6, 7, 8, and 9), such as “discussions were valuable in helping me appreciate different perspectives”; and “resolution” (items 10, 11, and 12), such as “I can describe ways to test and apply the knowledge created in this class.”

Results suggested that students in EG1 were more likely to utilize a variety of information sources to explore problems posed in this class than were students in CG. It is very close to significant that students have different perceptions of exploration in EG1, EG2 and CG. Furthermore, no significance had been found in student perceptions of integration or resolution in EG1, EG2 and CG.

### **Classroom Observations**

Between weeks 2 and 15, four class sessions from EG1, EG2, and CG, totaling 12 sessions, were videotaped for observation. The videos from those sessions were used to count the number of outputs, which were recorded onto SCORE sheets. Table 23 presents the output count for both instructors and students.

**Table 23***Comparison of the Frequency of Interactions*

	F1 T-W	F2 T-I	F3 S-T	SVC	SVE	F4 S-E	F6 S-W	F7 S-S	Total
<b>Session 1</b>									
EG1	6	20	20	0	0	0	30	37	113
EG2	3	11	11	0	0	4	0	10	35
CG	14	8	10	0	0	2	7	11	40
EG1									
Differences%	-133.3	60	50	0	0	0	76.7	70.3	64.6
EG2									
Differences%	-366.7	27.3	9.1	0	0	50	0	-10	-14.3
<b>Session 2</b>									
EG1	6	7	7	0	0	2	18	15	53
EG2	1	11	11	0	0	0	0	13	36
CG	4	2	2	0	0	0	3	19	30
EG1									
Differences%	33.3	71.4	71.4	0	0	100	83.3	-26.7	43.4
EG2									
Differences%	-300	81.2	81.2	0	0	0	0	-46.2	16.7
<b>Session 3</b>									
EG1	7	21	21	0	0	5	6	31	86
EG2	4	8	8	0	0	4	1	16	37
CG	6	3	5	1	1	1	3	11	28
EG1									
Differences%	14.3	85.7	76.2	0	0	80	50	64.5	67.4
EG2									
Differences%	-50	62.5	37.5	0	0	75	-200	31.3	24.3
<b>Session 4</b>									
EG1	11	19	19	0	0	4	15	1	65
EG2	5	4	4	0	0	0	3	0	16
CG	4	8	8	0	0	2	0	9	29
EG1									
Differences%	63.6	57.9	57.9	0	0	50	100	-800	55.4
EG2									
Differences%	20	-100	-100	0	0	0	100	0	-81.3

Note. a.  $EG1 \text{ Differences\%} = (EG1 - CG) / EG1 * 100$

b.  $EG2 \text{ Differences\%} = (EG2 - CG) / EG2 * 100$

c. F1 (T-W): questions that the instructor asks the whole class

d. F2 (T-I): questions the instructor asks individuals

- e. F3 (S-T): students' responses to these questions
- f. SVC: Student volunteers a relevant or correct response
- g. SVE: Student volunteers an irrelevant or incorrect response
- h. F4 (S-E): student responses in error to the instructor's question
- i. F6 (S-W): comments that students make to the class as a whole
- j. F7 (S-S): Interaction between students
- k. Counts of SVC, SVE, S-E are all included in S-T

Data were used to answer the fourth research question, as follows:

RQ 4: How does interaction differ for students in a traditional, a semi-flipped, and a fully flipped college EFL classroom?

**What are the differences in the number of teacher-to-students whole-class questions?** Data show that the number of teacher-to-students whole-class questions were higher in EG1 than in the other two groups in session 2, 3 and 4. However, in session 1, CG had the largest number of questions. According to classroom observation, the teacher in CG checked students' understanding and assured they were following his lecture by frequently asking whole-class questions: "Do you understand?," "Are you with me?," and "Shall we move on?"

**What are the differences in the number of teacher-to-individual student questions?** Data reveal that the instructor of EG1 asked many more questions to individual students than the instructors of the other two groups in session 1, 3 and 4. However, in session 2, the instructor of EG2 asked more questions to individual students. According to classroom observation notes, students in EG2 did not voluntarily answer any questions and had very few comments in session 2. Therefore, the instructor had to call on individual student to answer his questions.

**What are the differences in the number of students' responses to teachers' questions?** The frequency of students' responses to teachers' questions were highly related to teacher-to-individual student questions. Students in EG1 responded more frequently to the instructor's questions than those in the other two groups in session 1, 3 and 4. But it's noticeable that, in CG, one student volunteered both a correct answer and an incorrect answer. In EG1 and EG2, there were no volunteers to answer the teachers' questions. The observation note showed that the student who voluntarily answered these questions had already commented to the whole class before raising his hand. As the teacher had somehow neglected his comments, he then

volunteered to answer. This suggests that students do not usually volunteer answer any questions but instead comment to the whole class.

**What are the differences in the number of students' responses to teachers' questions with errors?** According to the classroom observations, the students' incorrect responses could be divided into two categories: "incorrect answers with content" and "I don't know". The observer noted down 12 "I don't know" out of the 24 incorrect responses: two from EG1, seven from EG2 and three from CG.

**What are the differences in the number of student-to-whole class comments?** Data show that the number of students-to-whole-class comments was higher in EG1 than in EG2 or CG in all four sessions. Observation notes of the four sessions suggested that students were more likely to comment to the whole class after discussion. However, it is noticeable that, in EG2, students generated very few student-to-whole-class comments after discussion in sessions 1, 2, and 3. The comparison of the number of student-to-whole-class comments and teacher-to-individual-student questions between EG2 and CG revealed that the instructor was likely to ask individual students questions if there were few classroom comments. Moreover, students' comments were mostly about vocabulary, which included words and phrases. For example, in session 1, students of EG2 were assigned to do a translation exercise. No student made comments to the whole class about how they translated the paragraph. Students in session 1 of the CG did the same exercise as the students of EG2. However, students in CG commented some key words to the whole class when the teacher asked, "How do you translate this word?"

**What are the differences in the number of interactions between students?** As indicated in Table 23, the number of interactions between students in EG1 was higher than that of EG2 and CG in session 1 and 3. The instructor of EG1 organized group discussions, while the

instructor of EG2 and CG encouraged peer discussions. No discussion activities were observed in session 4 of EG1 and EG2, which might explain why there were very few student interactions in these two groups.

#### ***Summary of Research Question 4***

The comparison of total interactions in the classroom between EG1, EG2, and CG indicated that EG1 had a higher frequency of interactions overall than did EG2 and CG. The instructor of EG1 asked more questions to individual students, and students in EG1 responded more frequently to the instructor's questions than the other two groups in most cases. Data showed that the number of students-to-whole-class comments was higher in EG1 than in EG2 and CG in all four sessions. There were no noticeable differences between EG2 and CG in terms of classroom interactions.

### **Qualitative Findings**

The qualitative data were collected via semi-structured interviews to supplement the quantitative data.

#### **Semi-structured Interviews**

The semi-structured interviews were conducted in the interviewees' own language, Chinese, so that they could fully understand the questions, explain their ideas, or present arguments (Maude, 2011). The qualitative data was transcribed and organized by pseudonyms. Transcriptions were translated from Chinese to English and were reviewed by a third party, Shanghai E-Visa Investment Consulting Corporation, that provides professional translation services. Both Chinese and English versions of the transcripts were reread several times in order to check for accuracy, and both versions were coded to best capture the meaning of what the

participants expressed. Open coding was used to explore the data prior to an iterative process of thematic refinement involving member checks and the exploration of alternative interpretations (Creswell, 2017). The qualitative data was analyzed and revisited until the point of saturation was reached. Creswell (2008) noted, “Saturation is the point where you have identified the major themes and no new information can add to your lists of themes or to the detail for existing themes” (p. 257). Two outside coders were invited to review, based on the codebook, the coding of several randomly selected excerpts from the interview transcripts. In order to obtain confirmability in this study, the researcher employed a reflexivity journal (Lincoln & Guba, 1985). The reflexivity journal is a diary where the researcher makes regular entries reflecting on decisions, logistics, and feelings about the progress and direction of the study. To accomplish this, I documented all teaching entries, reflections, observation notes and interview comments.

Six interviewees were recruited from the fully flipped group (EG1), the semi-flipped group (EG2), and the control group (CG), for a total of 18 interviewees. Students from EG1 were coded as E1, E2, E3, E4, E5, and E6; students from EG2 were G1, G2, G3, G4, G5, and G6; and students from CG were organized as C1, C2, C3, C4, C5, and C6. According to the 18 interviewees, 12 of them had studied English for 10 years, four had studied English for 12 years, and two had studied English for six years. The time they spent learning English varied from one hour per week to 10 hours per week. But the majority of interviewees, 10 out of 18, spent two to four hours per week after class on their English studies. For students in EG1, they studied English for 10.67 years averagely and spent 3.92 hours to study this course per week. For EG2 students, their average English learning year is 10.33 years and average study hour per week is 4.50 hours. As for CG, students’ average English learning year is 9 years and average study hour per week is 4.83 hours. Their weekly routine included previewing articles assigned for reading

exercises, memorizing words, checking words' meanings and practicing new words, reading extra-reading materials, doing homework, and reviewing. For students in EG1, they not only did the above-mentioned work every week, but also launched the Learning Management System (LMS) to finish assignments and watch lecture videos. The following table presents the basic information and learning routines of interviewees.

**Table 24***Basic Learning Information and Learning Routines of Interviewees*

Interviewee	English Learning Year	Study Hour per Week	Self-Learning Routine
E1	10 years	1 hour before midterm, 7 hours after midterm	Check word meaning, write, and practice; Preview reading articles; Do LMS assignments; Review
E2	10 years	2 to 3 hours	Check word meaning, write, and practice; Preview reading articles; Memorize words; Do LMS assignments
E3	12 years	3 to 4 hours	Check word meaning, write, and practice; Memorize words; Watch lecture videos; Do textbook exercises; Do LMS assignments; Go through extra-reading materials; Review
E4	12 years	5 hours	Check word meaning, write, and practice; Memorize words; Do LMS assignments
E5	10 years	3 to 4 hours	Check word meaning, write, and practice; Memorize words; Watch lecture videos; Search the Internet for more resources; Do LMS assignments
E6	10 years	5 hours	Check word meaning, write, and practice; Preview reading articles; Memorize words; Do LMS assignments; Go through extra-reading materials; Review
G1	10 years	2 to 3 hours	Check word meaning, write, and practice;
G2	10 years	More than 10 hours	Check word meaning, write, and practice; Go through extra-reading materials; Review
G3	12 years	3 hours	Preview reading articles; Memorize words; Do textbook exercises
G4	10 years	7 hours	Check word meaning, write, and practice; Preview reading articles; Memorize words
G5	10 years	3 to 4 hours	Check word meaning, write, and practice; Preview reading articles; Memorize words; Review
G6	10 years	1 hour	Preview reading articles; Memorize words

**Table 24***(Continued) Basic Learning Information and Learning Routines of Interviewees*

Interviewee	English Learning Year	Study Hour per Week	Self-Learning Routine
C1	10 years	7 hours	Search the Internet for more resources; Do homework; Memorize words
C2	6 years	2 to 3 hours	Check word meaning, write, and practice; Memorize words; Do homework
C3	12 years	More than 10 hours	Check word meaning, write, and practice; Memorize words; Go through extra-reading materials; Review
C4	10 years	3 to 4 hours	Preview reading articles; Memorize words; Go through extra-reading materials
C5	6 years	3 to 4 hours	Memorize words
C6	10 years	2 to 3 hours	Memorize words; Preview reading articles

Data from semi-structured interviews were used to answer the fifth research question:

RQ 5: What are the participants' overall learning experiences in a traditional, a semi-flipped, and a fully flipped college EFL classroom?

Four themes were emerged from the analysis of the interview transcriptions: (1) course content, (2) interactions, (3) instructional activities and materials, and (4) learning strategies. Each category is briefly described below.

### ***Course Content***

Interviewees shared their feelings about the essential content of this course in terms of words, textbooks and exams. First of all, several of the participants mentioned that this course was very difficult, as there were many new words. Three students from EG1, three from EG2, and two from CG expressed that new words made this course challenging for them, and they had to spend a large amount of time checking word meanings. E2 commented, "Every time when I preview a new article, I have to check words' meanings all the time. There are about 30-50 new words in a 1000-word-article."

At the same time, almost all students felt words were of central importance to this course. It suggests that, from the students' perspectives, the course objectives placed great emphasis on expanding vocabulary. Therefore, all participants found that memorizing words was very important to succeeding in this course. Some students felt that, once they mastered the vocabulary, they were able to get an acceptable grade and more easily understand articles and grammar. Some others complained that this course focused more on vocabulary than on reading or writing.

Regarding the memorization of words, five students, two from EG1, two from EG2, and one from CG, expressed that they had problems. Memorizing words took a lot of time and effort,

and students were forced to review words repeatedly. One student in EG2 commented that the new words made the experience stressful: “I spend enormous time, maybe 10 hours a week, to read the text and then memorize the words or check the meaning of the words. It’s time-consuming and stressful.” The reason students struggled to learn vocabulary words might be explained by one student from CG—she never paid attention to pronunciation when memorizing words.

C1: “I found that I know the meaning of the word, but when the teacher read it, I couldn't recognize the word. The reason might be that the teacher’s pronunciation of the word is different from mine. I didn’t pay attention to the pronunciation when I memorize the word.”

To help students expand their vocabulary and check their self-learning, teachers from EG1, EG2, and CG would dictate words and phrases from textbooks. The teacher of EG1 dictated at the end of every even-numbered unit, while the teacher of EG2 and CG began paying attention to dictation after the midterm examination. On the one hand, three students, two from CG and one from EG1, did not like dictation because they did not want to be forced to memorize words. C4 said, “I think that dictation is the worst part. It may be the reason why I don't put efforts in English learning. I feel terrible every time I had dictation.” On the other hand, two students from CG found that dictation was helpful. As C5 said, “dictations forced me to learn, which is not bad, and learning one unit per week is better than cramming all units before exams.”

Further, participants felt that confusing words and complex sentences were very challenging. To begin with, one student in EG2 struggled with words that have multiple meanings: “A lot of words have two meanings, which would be a huge trouble when understanding sentences. For example, the word *reserve*, I always thought it meant *to save or*

*retain*, so I was confused when I encountered a sentence with the word functioning in another meaning.” Not only this student found vocabulary comprehension hindered sentence comprehension, four students, two from EG1, one from EG2, and one from CG, also mentioned that complex sentences were challenging because of unfamiliar words, confusing grammar, or complicated logical relations. E3 commented, “As for long and difficult sentences, I have to read slowly. Some articles are academic, and some are relatively long.”

Talking about challenging content in textbooks, students felt that the textbook content was difficult because there were too many new words, the readings were long and academic, and the sentences and grammar were confusing. Three students from EG2 commented that there were too many new words in the textbooks. Three students, two from EG1 and one from CG, felt that the readings in the course textbooks were longer than those in high school textbooks and readings could be understood from different perspectives. One student from EG1 felt that the professional or academic contents was confusing and boring:

E4: “When I studied this course, I found that there are many texts with strong academic background, posing difficulties to read. You may know all the words well, but if you put them together, you don't know what the article is talking about. Something like that would make me confused. Also, professional knowledges can be boring. After reading too much of them, you might be caught up with other distractive things.”

Moreover, one student from CG thought that the grammar in the textbooks was strange:

C2: “It's the grammar that makes me confused. Sometimes I feel that the grammar in those articles is not like what I have learned before. I mean I know the grammar well, but I never know it could be understood in this way. I feel that some sentences are

problematic. I find it's very strange to translate those sentences like this. I still feel confused even after the teacher's explanation.”

However, students had different opinions toward the usefulness of the textbook content. One student from CG thought that the textbook articles did not help improve her English proficiency, while one student from EG1 felt that the textbook content was rich and beneficial. Two students, one from EG1 and one from EG2, suggested that the textbooks could be improved to be more practical.

G5: “I think the textbook can be changed to be more practical. I think some parts are too theoretical and cannot be applied to our daily life. For example, textbooks can add some contents that teach us some useful English writing skills, give some examples and then explain in detail how to use them. The current textbooks, full of articles and questions, may not be so handy for some students who have begun the preview, because they can't figure out where the key points are.”

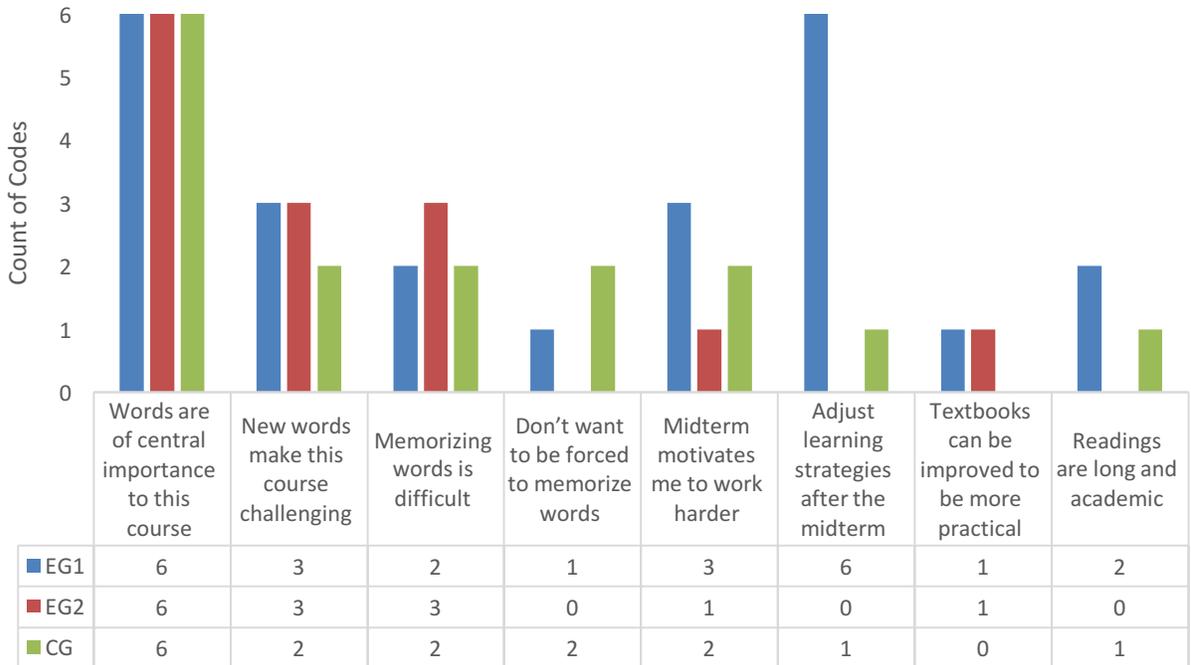
In addition, many interviewees said the midterm examination was a turning-point in their learning. First, unsatisfactory grades may motivate students to work harder. After the midterm, students spent more time on this course, frantically memorized words, and reviewed entire textbooks. Similarly, satisfactory grades might motivate students as well. One student from EG1 said that “the happy moment is every time I have been graded at high scores after I submitted my homework. I also felt enjoyed when I got a high score for tests or dictations.” Additionally, it is evident that students adjusted their learning strategies after taking the midterm examination. They realized the importance of memorizing words and tried to expand their vocabulary in an efficient way. Interview data revealed that all interviewees from EG1 had adjusted their learning strategies, while only one student from CG mentioned some changes after the midterm. Students

from EG1 all realized the importance of daily accumulation of English, and E3 even developed a teamwork scheme to review words.

In conclusion, data suggested that students from all three groups had to spend a large amount of time dealing with words—checking their meanings, memorizing them, and analyzing sentences that contain them. Though all participants admitted the importance of memorizing words in this course, some did not enjoy the process of accumulating words. Also, the teachers laid great emphasis on expanding students' vocabulary and would perform dictations regularly to encourage them to study words after class. Many interviewees felt textbook content is difficult to understand, and could be improved. They felt the midterm examination motivated them to work harder. To deal with exams and to find a more efficient way to study, all participants from EG1 and one from CG adjusted their learning strategies and realized the importance of reviewing words every day. Figure 14 presents interviewees' attitudes toward course content.

**Figure 14**

*Interviewees' Attitudes toward Course Content*



**Interactions**

The category interactions emerged from codes, and the following words and phrases were often repeated in this category: guidance, questions, peer-discussions, pacing of the teacher, and center of the class. First, in terms of teacher-to-individual-student interactions, some students liked guidance from teachers. One student from EG1 liked their teacher’s individual guidance when students were preparing for tasks. She commented that “I felt I could understand the paragraphs in textbooks very quickly with the teacher’s help.” A student from EG2 felt that one-on-one individual guidance from the teacher helped her gain a lot. However, one student from CG felt uncomfortable communicating individually with teachers in class. Because his language proficiency was limited, he felt that the experience of talking with the teacher was stressful.

Another type of teacher-to-individual-student interaction is questions that are addressed to individual students in class. Two students from EG1 liked the teacher's random but frequent questions that were addressed to individual students. They felt it was very exciting and challenging. "I think randomly asking students questions is very exciting. I think this is a magic weapon that keeps me maintaining a relatively sober state in class."

However, several participants had difficulties communicating with teachers, as the teachers spoke English only and talked at a fast pace in classroom; "I think the teacher usually talks too quickly," said a student from EG2. To dealing with this problem, four students, two from EG1 and two from EG2, suggested that the teachers speak more slowly and elaborate whenever the students looked confused. Just as E6 said, "I suggest the teacher speak a little bit more clearly, and if we have a confused expression, explain it again." What is more, one student from EG2 felt that unknown words prevented her from understanding the teacher's lectures: "During the teacher's lecture, sometimes, I need to check what a word means. Because the teacher talks quickly, after I figure out the meaning of the word, I can't follow the teacher. I have no idea where I am."

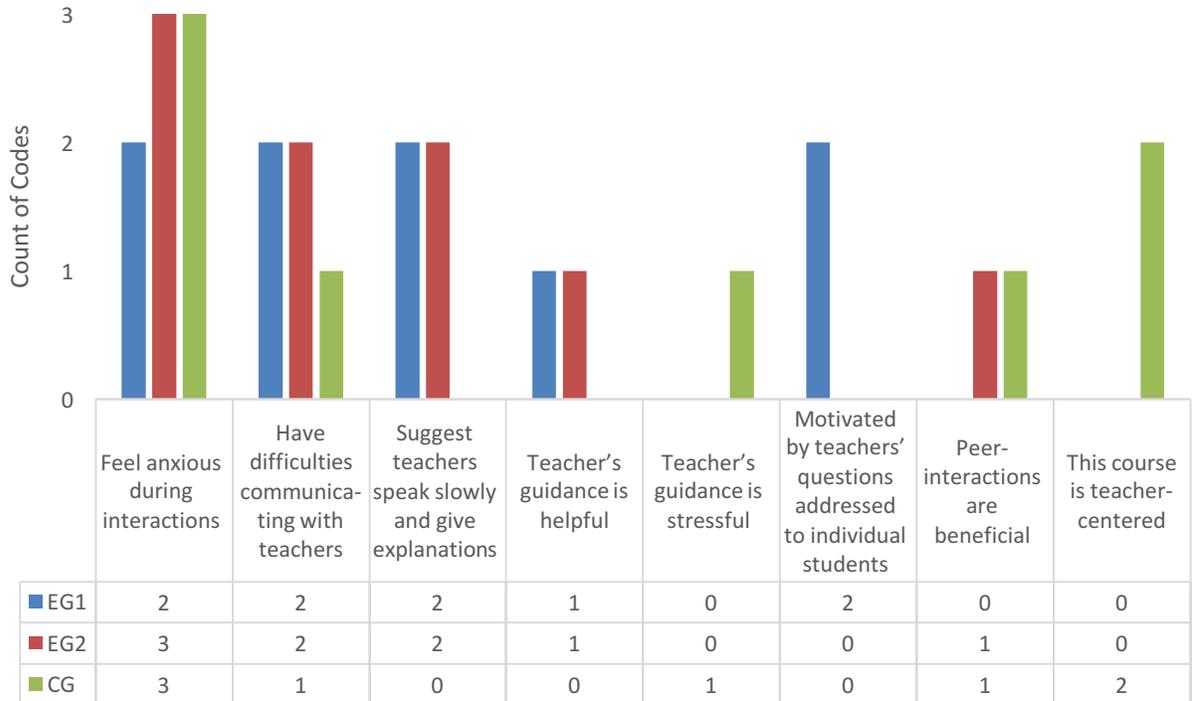
At the same time, eight students, two from EG1, three from EG2, and three from CG, mentioned they felt frustrated and anxious during classroom communications. Six of them felt embarrassed if they failed to answer their teachers' questions, and two of them felt frustrated when they could not articulate their ideas or feelings. Two of the eight students, G5 and C3 had similar concerns about peer discussion: G5 liked group discussion as they considered it to be less stressful, and C3 enjoyed discussing the teacher's questions with peers as it was mind-opening. These comments indicate that peer discussions might be useful to reduce students' stress during in-class communications.

Further, several students from CG felt that this course was teacher-centered. One student said, “We were often spoon-fed by the teacher with heads muddled during class time.” On one hand, one student preferred to be led by the teacher: “I felt more comfortable if the teacher took the lead. I am used to the learning style of listening to teachers. If the teacher asks me to take care of myself in class, I will easily get lost and even feel sleepy or cannot help talking with classmates.” On the other hand, another student did not like being supervised too closely: “College teachers should not be like high school teachers. It's better to give us resources directly and encourage us to study by ourselves.” These quotes suggest that the traditional classroom, in which the teacher gives lectures and students listen to the teacher, is very teacher-centered and not very active. One student from CG commented, “I think there are few interactions among classmates,” and another added that “the classroom atmosphere is not very active.”

In conclusion, students from EG1, EG2, and CG mentioned in-class interactions from the perspective of teacher-to-student interactions, peer interactions and challenges. One student from EG1 and one from EG2 liked guidance from the teacher, while one student from CG felt that guidance from the teacher was stressful. Further, two students in EG1 liked their teacher’s random questions that were addressed to individual students in class. Students liked peer interactions in-class to reduce pressure and open their mind. Slow down the pace when lecturing and explain when students looking confused are suggestions given by interviewees from EG1, EG2 and CG. Figure 15 shows interviewees’ attitudes toward interactions.

**Figure 15**

*Interviewees' Attitudes toward Interactions*



***Instructional Activities and Materials***

Students commented on their most- and least-favorite in-class tasks and activities, instructions from teachers, and design of this course. Several students talked about practicing writing in class, discussion topics and questions, multimedia materials and presentations. Particularly, students from EG1 shared their special learning experiences with the fully flipped model. Interviewees from all groups commented that this course helped them expand their horizons.

First, students have different views toward writing in class: participants from EG2 and CG considered it is a beneficial technique, while participants from EG1 did not like summarizing in class. Two participants, one from EG2 and one from CG, felt summarizing main ideas in class was a useful way to improve language proficiency. G3 mentioned, “You can sort out the article

ideas and make a summary. Summarize the meaning of paragraph and iron out an outline is useful.” Moreover, two students, one from EG2 and one from CG, learned to think deeper when reading an article, such as analyzing its structure instead of merely memorizing words. However, two students from EG1 did not like summarizing main ideas when the task was challenging. Although they admitted that summarizing was useful, if they could not work out a proper summary, they felt that the exercise was meaningless. Different from students in EG2 and CG, students from EG1 were assigned to do Reading Journals—students were assigned to summarize a reading article in one paragraph and write their reflection in another paragraph after class. E3 felt that the Reading Journal provided an opportunity to practice words and writing techniques they had learned in class, while E1 thought the Reading Journal was nothing but summarizing.

The special learning experience of students in EG1 might explain their different opinions regarding summarizing the main ideas of different paragraphs in class. Students in EG1 practiced summarizing skills when doing the Reading Journals, which were assigned after studying an article in class. Therefore, students in EG1 tended not to spend a large amount of class time repeating work. Similarly, the instructors’ foci in class is different. In EG1, the instructor asked students to summarize main ideas of different paragraphs as a way to check students’ self-learning before class. Conversely, in EG2 and CG, summarizing main ideas took up a large proportion of class time, as one student from EG2 commented: “I think the class focused more on summarizing meanings of paragraphs and some writing techniques.”

Second, four students, two from EG2 and two from CG, mentioned that they liked their teacher’s discussion topics and questions, as those questions were inspiring and interesting. By exploring these questions, the teacher led students to analyze the entire article in a formulaic way. Alternatively, students could practice writing by responding to the teacher’s questions and

then express ideas by discussing those questions with peers. In the following quotation, one student from EG2 described an experience of suddenly understanding a previously ignored problem by thinking and discussing the teacher's questions in class.

G3: "There is an article titled limited food. In the beginning, I read it myself and marked all the new words, without noticing anything wrong. However, under the reminding of our teacher, I found that this article didn't fit well with its title. Then the teacher said that the source he traced was a preface written by someone else, not the author. It was a short paragraph from the excerpt and a title was added, which actually did not match with the article. He asked us, 'Did you feel anything strange?' We all answered that 'we didn't'. Enlightened by his question, we all discovered that it didn't seem to match later. But I didn't find it when I read it by my own. I was really impressed."

Moreover, one student from EG1 and one from EG2 suggested that teachers should organize more group discussions, which would give students more confidence to talk in class. G3 said, "I think more group discussions would be nice. It may be nervous to talk to the teacher, but it's ok to talk to classmates. You would think of many things without feeling shy when you speak. You are not afraid to make mistakes."

However, discussion is not enough to create a vivid classroom atmosphere, several of the participants wanted to have more classroom activities and more formats of classroom activities. One student from EG1 and one from CG suggested that teachers should deliver lectures in new forms, such as playing games, so that the class could be more interesting. Also, three students from EG1, EG2, and CG mentioned that they wish they had more opportunities to apply their knowledge in the class through well-designed tasks.

Third, some students commented on multimedia as a strategy to reduce pressure and motivate them in class. Two interviewees from EG1 particularly liked lead-in videos in class because they were interesting and motivated them to complete the tasks that followed:

E5: "I think I like it very much when I watch the video. I remembered there was a section where we watched the video and guessed what would happen next, then we watched the lead-in video, the teacher asked the question, and the student answered. I liked the interaction very much."

On the contrary, one student from CG did not show any interest in multimedia materials, and another student from CG said it was easy to be distracted by the content of videos. C1 commented, "I don't think multimedia matters. I don't particularly care about whether the class is interesting. Funny doesn't work."

Not only in-class videos helped motivate students, out of classroom multimedia materials were also useful. Two students from EG1 liked pre-class lecture videos because they facilitated their understanding of textbook readings. Another student from EG1 commented that even the recommended videos from the textbooks helped: "I think the videos in textbooks, accessed by scanning QR codes, are very interesting and can expand knowledge out of classroom." One student from EG1 and one from EG2 suggested that the addition of multimedia materials related to this course might make students more motivated. Even non-course-related multimedia materials motivate students. One student in EG2 mentioned that watching documentaries and dramas helped to improve their English: "I would suggest people who take this course watch some BBC documentaries, American dramas, and the like."

Fourth, students from EG1 thought doing presentations brought various benefits, while students from the two other groups did not like doing presentations. Four interviewees from EG1

mentioned that they liked presentations very much, as they felt the presentation was interesting, helped them learn texts, and expanded their knowledge. In addition, one student thought that doing presentations provided them with an opportunity to challenge themselves. On the contrary, in many cases, students from EG2 and CG did not like doing presentations in class. One student from CG said, “I feel particularly useless to do the presentation. It is a waste of time. It’s nothing but the teacher gives you a topic, and you do another discussion, and then you show the discussion process to your classmates.” And one student from EG2 commented that “I thought it was sort of useful, but I was not used to doing presentations.” This was very interesting finding showing clear differences between EG1 and the other two groups.

Fifth, participants suggested that this course could be improved by providing materials, information as well as explanations. Nine participants from three groups wanted teachers to provide supplemental materials such as extra exercises and readings. Five students from CG and two from EG2 asked for extra reading materials for self-learning out of the classroom. Although students have their own preferences about the formats of articles (G2 suggested that the teacher send articles through group chat apps and C4 preferred paper-based versions), they all felt that more self-study materials should be provided. Also, three students from CG mentioned that they wanted to be pushed to learn. C2 wanted to have more homework, C5 asked for mini quizzes in class, and C6 requested more reading assignments every week. Moreover, several students wanted to have access to practice exercises. Two students from CG asked for exercises to practice the words they had learned so that they might more efficiently memorize new words and feel more comfortable. This was another noticeable finding that no student from EG1 requested more instructional materials while students from EG2 and CG mentioned the need for extra readings and assignments.

Although students asked for more exercises and assignments, they still felt that the teacher could improve current assignments or in-class tasks through explaining tasks in details and providing learning guidance in advance. One student from CG felt that some in-class tasks were very confusing and suggested that the teacher give more detailed task guidance and explanation. This student also suggested that the teacher put instructions on PPT slides: “I think putting task requirements on PPT might be helpful. Because it is easier to see a new word than to listen to a new word. And seeing might promote more understanding.” However, one student from EG2 and one from CG still felt confused, even if the teacher had explained the task or in-class activity. It might have been helpful for students to know teacher’s focus and intentions when they were previewing, just as C4 mentioned: “When the teacher talks about extra-curricular materials, if I am given a handout or a PPT and send them to me in advance, it would be better.”

Last but not least, in contrast to students in EG2 and CG, students from EG1 had their own views toward the fully flipped classroom. One student enjoyed the combination of textbooks and online learning after class, as pre-class lecture videos facilitated the understanding of articles in textbooks and quizzes on LMS provided immediate feedback. This student also liked in-class tasks and felt that they were diverse and enriching.

E3: “I think the class contents are rather colorful. Sometimes the teacher would share small tips, her experiences, and funny stories during the class. For example, I remembered she talked about table etiquette, folding napkins. Maybe it was because the topic was so close to life that I felt so fascinated during that class.”

Also, students from EG1 might benefit from collaborating. One student from EG1 mentioned that the Vocabulary Wiki, a collaborative vocabulary building activity in the LMS,

helped summarize useful words and phrases from the textbooks. Each student in EG1 was assigned to define three confusing words or phrases before each class session, but they were not allowed to choose a word or phrase that other classmates had chosen.

E1: “I like doing Vocabulary Wiki on LMS. Because there are too many new words, and there is no vocabulary list in the textbook, you have to summarize the new words from textbooks by yourself. If you have this Vocabulary Wiki there, you know which new words are involved in this book. Going back and forth and go through those words when you have spare time. I think it's good.”

Moreover, one student from EG1 felt that the course was more systematic than other English courses because of the combination of LMS and classroom learning.

E4: “The instructions facilitated me to master all the knowledge. The teacher assigned preview tasks in LMS, posted pre-class lecture videos, and provided quizzes and exercises for self-assessment. During class time, the teacher would analyze sentences in the text in more detail, and then summarize some PPTs when reviewing the lessons. I feel this method really useful.”

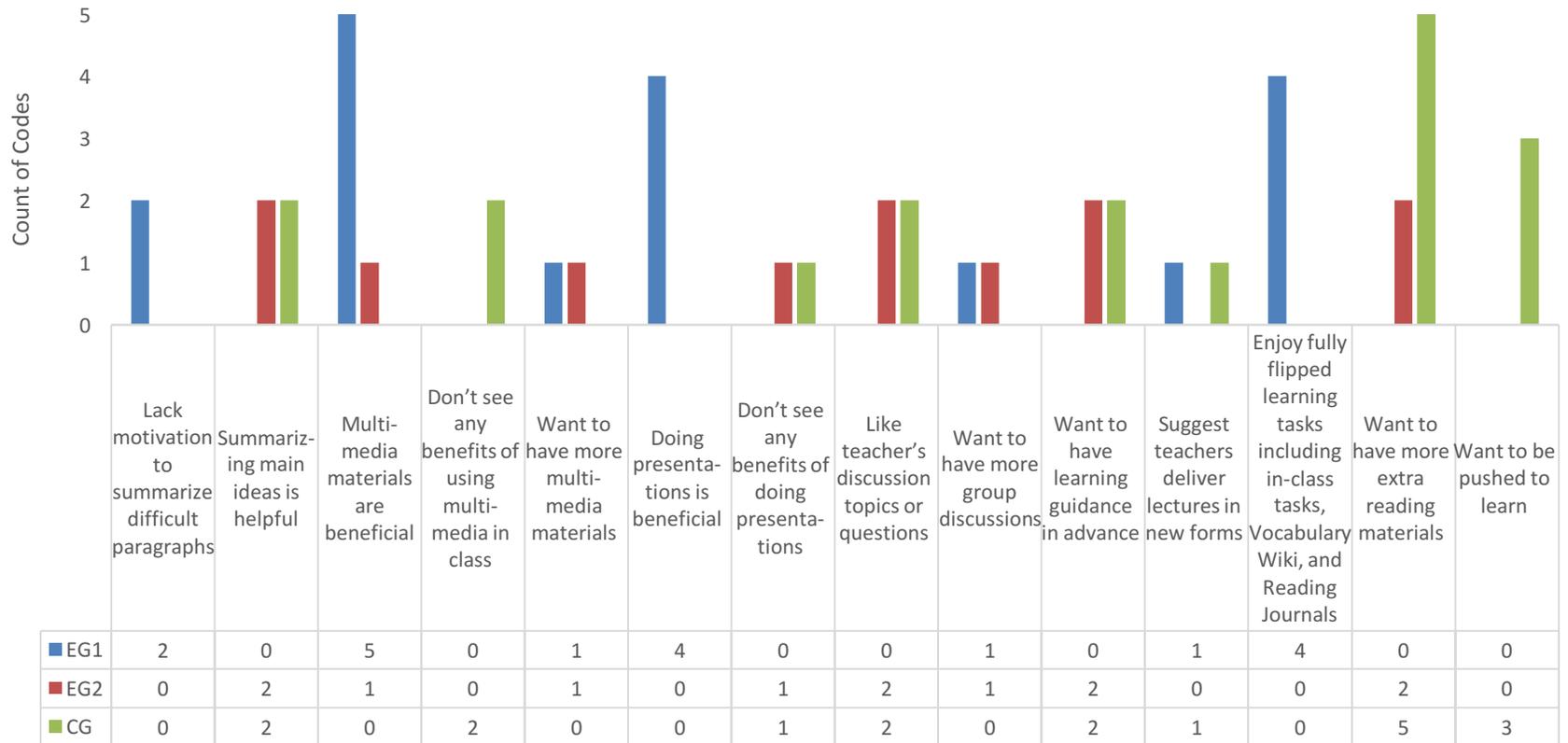
In conclusion, students in EG1 lacked motivation to summarize difficult paragraphs, held positive opinions towards doing presentations, and asked for more multimedia materials; while students in EG2 and CG favored summarizing main ideas, did not find any benefits of doing presentations, and requested learning guidance and more assignments. Firstly, students from EG1 did not like spending time in class summarizing main ideas, while students from EG2 and CG felt this process was helpful. Second, several participants, from all three groups, wanted to have more classroom activities and to create a more vivid classroom atmosphere by engaging in group discussions, adding more formats to classroom activities, including some multimedia materials,

and doing presentations. But students from EG1 had very clear differences on preference of classroom activities from those in the other two groups: five EG1 students liked multimedia materials, and four EG1 students favored doing presentations; while only one student in EG2 found multimedia materials were useful, and no one in EG2 or CG supported doing presentations in class. Referring to extra materials, seven participants, two from EG2 and five from CG wanted teachers to provide supplemental materials such as exercises and extra readings. Some students asked for quizzes that could help them practice using new words, supplemental learning materials that facilitated self-learning, and more readings that keep up with the trend.

Students in EG1 had a learning experience that was unique from those in EG2 and CG. One student enjoyed the combination of LMS learning and in-class learning, while another felt that this course was more systematic than other English courses in their college. One student liked in-class tasks, another liked the Vocabulary Wiki, and two thought that the Reading Journals were helpful. Figure 16 shows interviewees' attitudes toward instructional activities and materials.

**Figure 16**

*Interviewees' Attitudes toward Instructional Activities and Materials*



### *Learning Strategies*

Participants reflected on their learning strategies in terms of self-learning, tips to learn words, and methods to develop reading abilities. First of all, nearly all participants realized the importance of self-learning. They mentioned that previewing before class, listening carefully in class, and reviewing after class were of vital importance. One student from EG1, two from EG2, and one from CG mentioned the importance of previewing. The student in EG1 said, “I would suggest everyone preview in advance,” because previewing helped students better prepare and ask effective questions. Two students from CG and one from EG1 mentioned that listening carefully in class was helpful for “expanding horizons,” “understanding words and sentences,” and “solving problems.” Seven students, four from EG1, two from EG2, and one from CG, underlined the importance of reviewing. They suggested that students make learning a routine in which they review frequently, preferably after every class. Four students emphasized that cramming in finals week was not effective. Moreover, two students from EG1 suggested that students could use English learning applications (APPs) or software to check meaning, memorize words, or facilitate self-learning. Two students, one from EG2 and one from CG, mentioned the importance of asking teachers for help. As they seldom asked teachers questions when taking this course, they felt that improving teacher-student interactions might help them learn.

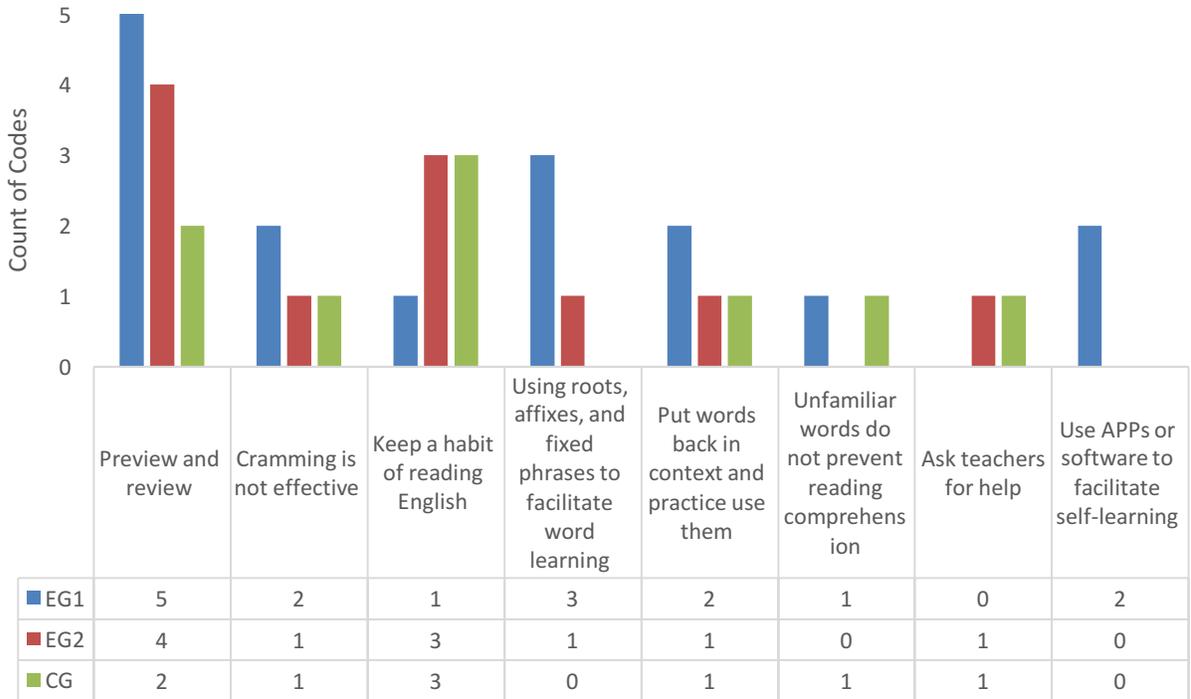
Second, half of the interviewees learned words using various strategies that included paying attention to fixed phrases, putting words in context, practicing using words, and using roots and affixes to guess meanings. One student from EG2 mentioned that “there are some fixed collocations, phrases that you must master to understand better.” One student from EG2 and another from CG mentioned that simply checking the word meaning is useless, because they might need to check the meaning again when next they encounter the word. Therefore, two

students from EG1 and one from EG2 suggested that students practice putting the words back into context, which helped them to understand the words and to learn how to use them. Beside putting words into context, a student from EG1 suggested practicing how to build sentences with words so that students could master how to use them. Also, three students from EG1 mentioned that roots and affixes are useful when guessing the meaning of a word. Moreover, two students, one from EG1 and one from CG, felt that sometimes unfamiliar words did not prevent reading comprehension and that it was not necessary to check every word when reading.

Finally, 13 interviewees shared tips to improve reading abilities that included focusing on textbooks, cultivating a habit of reading English texts, and thinking when reading. Four students, two from EG1 and two from CG, felt that textbooks were important for people who wanted a high grade. Nine participants, two from EG1, four from EG2, and three from CG, thought it was important to make a habit of reading English texts. They felt that reading is a good way to expand horizons, practice reading comprehension, and supplement necessary knowledge for class. One student from EG2 suggested thinking deeply and doing some practice while reading. Figure 17 presents interviewees' learning strategies when taking this course.

**Figure 17**

*Interviewees' Learning Strategies*



***Group Comparison of Student Learning Experience***

Comparing the interview data from the three groups, suggested that there were some similarities and some differences across groups. In terms of course content, students from EG1, EG2 and CG all described the course focus on words, sentences, readings, textbooks and tests. All three groups reported words were of central importance. They all commented that this course was difficult featuring challenging words, complex sentences, and long academic articles. Moreover, participants from all three groups commented that they worked harder after the midterm exam. On the other hand, there were some interesting differences. Students from EG2 commented that this course focused on writing and summarizing techniques, and paid more attention to logical thinking; While EG1 and CG students felt that this course emphasized

reading and vocabulary. Moreover, EG1 students described the course as practical and systematic.

As for interactions, all three groups reported the same communication problems with their teachers, as teachers spoke English only in class. They suggested that teachers speak slower and give more explanations. Moreover, all three groups mentioned anxious feelings when they failed to answer teachers' questions. Interestingly, EG2 and CG described their teacher as humorous and knowledgeable. EG2 and CG students also commented on beneficial peer discussions. Two students in CG mentioned their class was teacher-centered. Some students in EG1 commented that the frequent teacher-to-individual questions in class helped them. Of note in this study, EG2 and CG classes were taught by the same instructor, while EG1 was taught by the researcher.

In terms of instructional activities and materials, students from EG1, EG2 and CG shared the same opinions on the need for more discussions and well-designed tasks. Students had different opinions towards having multimedia materials, doing presentations and doing summary activities in class. Students from EG1 and EG2 provided positive comments about multimedia materials, while one CG student commented that multimedia materials were "funny but not work". On the other hand, students in EG1 had different opinions towards summary activities. Comments from EG1 were negative, while comments from EG2 and CG were mostly positive about summarizing main ideas in class. Students' opinions varied in doing presentations, too. EG1 students commented that doing presentation "added a lot to our knowledge bank and built our abilities"; while one EG2 student and one CG student described in-class presentations as "a waste of time." Moreover, students in EG2 and CG asked for self-learning materials and detailed learning guidance. Different from EG2 and CG, EG1 students had a unique fully flipped learning

experience: they did reflection journals that made them summarize reading texts, presentations that expanded their knowledge bank, quizzes that provided them with practice, and a vocabulary wiki that helped them prepare for dictations and review.

Finally, opinions did not vary strongly regarding learning strategies, most of the students from EG1, EG2, and CG realized the importance of self-learning in college, focused on broadening their English vocabulary and paid attention to their grades. Table 25 shows the similarities and differences in student learning experience across the three groups in terms of the categories within each theme.

**Table 25***Group Comparison of Student Learning Experience*

Theme	EG1	EG2	CG
Course content	<ul style="list-style-type: none"> <li>• Words</li> <li>• Sentences</li> <li>• Readings</li> <li>• Textbooks</li> <li>• Tests</li> <li>• Focus on reading and vocabulary</li> <li>• Practical and systematic</li> </ul>	<ul style="list-style-type: none"> <li>• Words</li> <li>• Sentences</li> <li>• Readings</li> <li>• Textbooks</li> <li>• Tests</li> <li>• Focus on writing</li> </ul>	<ul style="list-style-type: none"> <li>• Words</li> <li>• Sentences</li> <li>• Readings</li> <li>• Textbooks</li> <li>• Tests</li> <li>• Focus on reading and vocabulary</li> </ul>
Interactions	<ul style="list-style-type: none"> <li>• Difficulty and suggestion</li> <li>• Error anxiety</li> <li>• Teacher-to-individual questions</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty and suggestion</li> <li>• Error anxiety</li> <li>• Instructor</li> <li>• Discussion</li> </ul>	<ul style="list-style-type: none"> <li>• Difficulty and suggestion</li> <li>• Error anxiety</li> <li>• Instructor</li> <li>• Discussion</li> <li>• Teacher-centered</li> </ul>
Instructional activities and materials	<ul style="list-style-type: none"> <li>• Activities</li> <li>• More multimedia materials</li> <li>• More presentations</li> <li>• Negative summary</li> <li>• Fully flipped experience</li> </ul>	<ul style="list-style-type: none"> <li>• Activities</li> <li>• More multimedia materials</li> <li>• No presentation</li> <li>• Positive summary</li> <li>• More self-learning materials</li> <li>• Detailed learning guidance</li> </ul>	<ul style="list-style-type: none"> <li>• Activities</li> <li>• Necessary multimedia</li> <li>• No presentation</li> <li>• Positive summary</li> <li>• More self-learning materials</li> <li>• Detailed learning guidance</li> <li>• Practice</li> </ul>
learning strategies	<ul style="list-style-type: none"> <li>• Self-learning</li> <li>• Tips to learn words</li> <li>• Improve reading</li> </ul>	<ul style="list-style-type: none"> <li>• Self-learning</li> <li>• Tips to learn words</li> <li>• Improve reading</li> </ul>	<ul style="list-style-type: none"> <li>• Self-learning</li> <li>• Tips to learn words</li> <li>• Improve reading</li> </ul>

### ***Summary of Research Question 5***

The 18 interviewees, six of whom were recruited from the fully flipped group (EG1), six of whom from the semi-flipped group (EG2), and six of whom from the control group (CG), had an average of 10 years of English instruction. The average time that they spent on study for this course was 4.42 hours per week. Their weekly routine included previewing reading articles, memorizing words, checking the meaning of words and practicing new words, reading extra reading materials, doing homework, and reviewing. The most frequent tasks that students did every week were checking words' meanings, memorizing words, and previewing reading articles.

Results revealed that students did not vary strongly on attitudes toward the course content. All participants believed learning words were of central importance to this course. Therefore, they spent a large amount of time dealing with words—checking their meanings, memorizing them, and analyzing sentences that contain them.

However, students' opinions differed toward multimedia materials. Five students from EG1 and one student from EG2 thought multimedia materials were beneficial, while two students from CG did not see any advantages of using multimedia in class. This might have resulted from different instructional designs. According to instructors' journals and classroom observation notes, students in EG1 studied pre-class videos on LMS and encountered various multimedia materials in class. While students in EG2 received pre-class lecture videos on WeChat, a messaging and calling application that enables group chat and supports voice, photo, video, and text messages, students in CG did not get any pre-class videos. Both students in EG2 and CG had very few multimedia materials in class. These results suggest that students who experienced multimedia had more positive attitudes toward it and were more likely to enjoy

learning with multimedia materials, while students who never experienced multimedia tended to have little interest in it.

Similarly, interviewees' differing opinions toward presentations might have resulted from different instructional designs. Students from EG1 thought doing presentations brought various benefits, while students from the two other groups did not like doing presentations. According to the classroom observation and teachers' journals, the presentation task was assigned differently in EG1 than in the other two groups. In EG1, a group of three or four students was assigned to do a 15-minute presentation closely related to the reading materials that would be analyzed in class. All students were asked to review readings one week before. The presentation group was asked to give a brief introduction about the background, analyze the structure of the reading article, pick out some words or sentences that they felt were difficult or confusing, and organize a whole-class discussion with well-developed topics. Therefore, the presentation in EG1 was closely related to the classroom content. However, in EG2 and CG, the teacher did not assign or design any presentation tasks.

Moreover, students from EG1 and students from the other two groups differed in their opinions on supplemental materials. Students of EG1 wanted more interactive multimedia materials and group discussions, while students in the other two groups asked for extra reading materials and mandatory exercises to push self-learning and explanations for confusing tasks in class. Moreover, two students from CG wanted to know their teacher's focus and intentions when they were previewing. On the other hand, there were no students in EG1 who asked the teacher to clarify the focus of the class before it began, as objectives and guidance had been posted on the LMS. This suggests that, if students know the teacher's intentions and focus when

previewing, they will have a more systematic view toward the course, and will not be easily confused or aimless.

In conclusion, data suggested that most of the students from EG1, EG2, and CG realized the importance of self-learning in college, focused on broadening their English vocabulary and paid attention to their grades. Difference in instruction between EG1 and the other two groups led to disparate influences on students' views toward summarizing of main ideas, doing presentations, having multimedia materials, and interacting with teachers.

## **Summary**

A description of the student participants was provided at the beginning of the chapter. Analysis of each research question and a brief summary were presented in this chapter. Descriptive statistics, ANOVA and ANCOVA were utilized to analyze scores of students' midterm and final examinations. This study yielded promising results involving the fully flipped model of instruction and improved student learning outcome on reading comprehension.

A questionnaire consisting of two separate scales, the satisfaction scale and the cognitive presence scale, were used to probe students' perceptions regarding their learning experiences and their higher order knowledge acquisition and application. MANOVA was used to compare differences in students' perception of learning experiences, and cognitive development among the three groups, but no statistically significant differences were found. Moreover, no statistically significant differences were found relative to students' overall satisfaction or overall perceptions towards cognitive development. ANOVA was then used to examine every single item in the two scales. Results showed significant differences between the semi-flipped group and the traditional

group concerning attitudes toward personalized learning. The semi-flipped group agreed that *EFL I* facilitated their personalized learning more than did the traditional group.

The classroom observations and semi-structured interviews supplemented the quantitative data. The comparison of total interactions in the classroom between EG1, EG2, and CG indicated that EG1 had a higher frequency of interactions overall than did EG2 and CG. Four categories emerged from students' interview data were content, interactions, instructional materials and learning strategies. Interview data indicated that most of students in the three groups realized the importance to expand vocabulary, improve interactions with peers and teachers, and be self-autonomous. Students had different preferences towards classroom activities because they received different instructions. Interview data also provided positive evidence supporting the fully flipped model — interviewees in the fully flipped group had positive learning experiences and tended to be independent learners as they formed a systematical learning routine and were able to adapt their learning strategies to solve problems. However, students' interviews also revealed that most of the students who received the traditional instructional approach also had positive learning experiences.

## **CHAPTER 5. CONCLUSIONS AND DISCUSSION**

This chapter provides a summation and discussion of the findings of the study. In the proceeding sections, findings and interpretations, along with implications, limitations, and conclusion, will be discussed.

### **Findings and Interpretations**

The purpose of this embedded mixed methods study was to examine the impact of implementing a flipped classroom model, constructed using Bloom's taxonomy, task-based instructions (TBI) and Gagne's nine events, on student learning, perceptions of learning, and student interactions in Chinese EFL courses. The sample population consisted of the first-year university students enrolled in the College EFL Course I (*EFL I*) course.

The quantitative component of this study utilized a quasi-experimental design (McMillan, 2006). To examine how the fully flipped model impacted students' learning in flipped EFL classrooms, this study looked at three groups: a fully flipped classroom (EG1) in which students completed pre-class assignments at home and did in-class tasks based on the fully flipped model during class time, a semi-flipped classroom (EG2) in which students completed pre-class assignments at home and did traditional in-class activities during class time, and a traditional EFL class (CG) in a Chinese university. The qualitative component of the study explored students' learning experiences. In this embedded design framework, both qualitative and quantitative approaches to data collection and analysis were used; a quantitative paradigm had the strength to test hypotheses and validate already constructed theories (Johnson & Onwuegbuzie, 2004), and a qualitative paradigm was able to bring forward meaning and

accounts of lived experience that typically do not arise from quantitative research (Jeanty & Hibel, 2011).

### **Evaluation of the Learning Outcomes**

Previous studies indicate the well-designed flipped model of instruction help students achieve academic success (Ahmad, 2016; Obari & Lambacher, 2015; Van Sickle, 2016; Weaver & Sturtevant, 2015; Webb & Doman, 2016; Zhonggen & Guifang, 2016). Also, studies showed that flipped classroom could be used to promote areas of English language instruction such as grammar, vocabulary, and idiomatic knowledge (Chen Hsieh et al., 2016; Han, 2015; Kang, 2015; Zhang, 2015). One purpose of the current study was to evaluate the effect of the fully flipped model on students' learning outcomes concerning vocabulary, reading comprehension and writing. In this study, learning outcomes were examined by analyzing test scores from both midterm and final examinations. Results are listed as follows:

- 1) Overall, both midterm and final average scores of students in EG1 were higher than students in EG2 and CG.
- 2) Students in EG1 had higher average score on vocabulary and reading in both exams than students in the other two groups.
- 3) Students in EG1 had lower average score on writing than students in the other two groups in both exams.
- 4) Students in EG1 scored significantly higher than students in EG2 on the midterm examination in general.
- 5) More specifically, students in EG1 scored significantly higher on vocabulary in the midterm than did students in EG2 and CG.

- 6) In the final examination, students in EG1 got significantly higher reading comprehension scores than did students in CG.

Results of this study provided positive evidence that the fully flipped classroom model in English classes may have helped students' academic performance in general. Descriptive statistics supported EG1 got higher vocabulary scores in both exams. The higher vocabulary score achieved by the EG1 in the midterm might be explained by the comments given by students in the interview that students in EG2 and CG did not pay as much attention to words as students in EG1. According to interview data, students in EG2 and CG did not have dictations until several weeks after the midterm. However, students in EG1 had regular dictations in class and did quizzes on vocabulary every week on LMS. Moreover, interviewees from EG1 all realized the importance of daily accumulation of English. It suggests the fully flipped instructional design, including exercises, quizzes, dictations and so on, might improve students' autonomy and help students master vocabulary. ANCOVA results showed that EG1 students more significantly improved their reading comprehension than CG students in the final examination. The above-mentioned evidence suggests the fully flipped instruction might improve students' reading comprehension more than traditional instruction.

On the other hand, it is noticeable that the average writing score of students in EG1 was not as high as students in the other two groups in both exams. One possible explanation for this difference is that the instructor of EG2 and CG spent much time on doing writing activities such as summarizing main ideas in class. According to observation and interview data, most students in EG2 and CG enjoyed this process and felt it was helpful; while, some students in EG1 tended not to spend much time in class doing repeated work, because students in EG1 practiced summarizing skills when doing Reading Journals, which were assigned after learning an article

in class. As EG1 students mainly practiced writing after class by their own, their writing proficiency might not be emphasized by TBI. Previous studies on TBI found that TBI is mainly beneficial for speech production. Allotting time for activities in the pre-task stage results in more fluent and more complex speech production in the during-the-task stage (Ortega, 1999; Yuan & Ellis, 2003). The finding of this study adds evidence that TBI is beneficial for reading and vocabulary development. However, other studies show that TBI has potential to improve students' writing scores by involving students actively in classroom activities (Qader & Yalcin Arslan, 2019). Therefore, further research might continue to look at how TBI can be used to design in-class activities focusing on writing.

### **Evaluation of Students' Perceptions of Learning Experiences and Cognitive Development**

Previous studies presented varied perceptions of students toward the flipped strategy. While some students confirmed that the flipped classroom enabled them to better comprehend the content they were learning (Zhang, 2015), others complained about the technology requirements for out-of-class assignments (Han, 2015; Kang, 2015). In this study, students' perceptions of learning experiences were analyzed using the satisfaction scale adapted from Al-Zahrani (2015) that consists of 12 5-point Likert scale items. 99 students, 34 from EG1, 34 from EG2, and 31 from CG, answered the questionnaire. Results showed that no significant differences have been found between the three groups on students' perceptions of learning experiences and cognitive development. When each item was compared, however, there were three items that had significant differences:

- 1) Students in EG2 agreed more strongly that *EFL I* facilitated their personalized learning than did students in CG ( $p < .05$ ).

- 2) Students in EG1 agreed more strongly that they could review lectures as many times as they needed than did students in CG ( $p = .052$ ).
- 3) Students in EG2 felt they were more able to communicate with teachers than did students in EG1 ( $p = .069$ ); also, students in EG2 agreed more strongly that they could communicate with teachers than did students in CG ( $p = .085$ ).

The difference between EG2 and CG on whether *EFL I* facilitated their personalized learning is significant. Students in EG2 had access to pre-class lecture videos and were able to preview assignments from their teacher, while students in CG were not able to preview materials. This difference might explain students' differing perceptions: video lectures and assignments supplemented textbook materials and facilitated personalized learning. Moreover, lack of pre-class lecture videos might explain why students in CG agreed least that they were able to review the lectures as many times as they wished.

However, it is interesting to note that students in EG2 mostly agreed that their course facilitated teacher-to-individual communication. Observation notes indicate that, among four observation sessions, the number of teacher-to-whole-class questions were the least in EG2 for three sessions, and there were also very few student-to-whole-class comments. As few students responded to the teacher's whole-class questions with whole-class comments, the teacher had to instead ask individual student questions. That might be the reason why the teacher in EG2 asked more teacher-to-individual-student questions to check students' understanding, and that might also explain why students in EG2 thought they had more teacher-to-individual-student communication. Another possible explanation might be that the student-teacher interactions that occurred in flipped classrooms were not balanced; capable students usually got more chances to talk than struggling students, and students' fear of being wrong further limited their class

interactions (Van Sickle, 2016). Further research must consider methods for encouraging intellectual engagement when designing flipped instructional materials.

Data gathered from the cognitive presence scale were used to examine students' perceptions of cognitive development. This study found that students in EG1 were more likely than were students in CG to utilize a variety of information sources to explore challenges posed in this class ( $p = .05$ ). This result cohered with the findings in previous studies that the availability and accessibility of varied e-learning materials and online resources positively influenced students' attitudes (Ishikawa et al., 2015; Obari & Lambacher, 2015), and students were excited to use a variety of emerging new technologies, which enabled them to effectively learn English by accessing learning materials on mobile devices (Obari & Lambacher, 2015). In this study, students in EG1 were encouraged to use more resources to gain knowledge and were exposed to more online tools and materials. For example, they watched pre-class lectures, MOOCs, and videos for self-learning out of classroom; they used translation APPs, online dictionaries, and the Vocabulary Wiki as learning routines; and they had to gather information to do presentations and other projects. This suggests that flipped instruction encouraged students to use many different information sources to explore problems.

### **Evaluation of Classroom Observations and Semi-Structured Interviews**

Evaluation of students' classroom interactions and learning experiences provides affordances of the fully flipped model. One affordance of the fully flipped model is to increase classroom interactions. First, classroom observations showed that EG1 had a higher overall frequency of interactions than did EG2 and CG. The instructor of EG1 asked more questions to individual students, and, in most cases, students in EG1 responded more frequently to the instructor's questions than did students in the other two groups. Then, it is noteworthy that half

of the interviewees mentioned they felt frustrated when unable to do as they wanted in class, such as failing to answer teachers' questions and unable to articulate their ideas or feelings. To reduce students' anxiety, previous studies found that flipped classroom strategy increased students' self-confidence and classroom participation since coming to class prepared (Basal, 2015; Chen Hsieh et al., 2016; Kang, 2015), and utilizing online communication tools reduced students' anxiety since it freed them from the pressure of an immediate reply (Wu et al., 2017). In line with previous studies, interview data from this study showed that students in the fully flipped group had positive attitudes toward multimedia materials and well-designed presentation tasks that facilitated their self-learning after class and motivated them in class. Moreover, participants asked for more in-class discussions that prepared them before interacting to the teacher or to the whole class, which could reduce their pressure.

Another affordance of the fully flipped model is to improve autonomous learning by providing exercises and feedback. Previous studies found that it was useful to assign a short online quiz or ask students to complete a worksheet after reviewing out-of-class materials to keep track of students' progress (Kang, 2015; Kostka & Brinks Lockwood, 2015); therefore, students reported that flipping English classes made learning more productive, fruitful, and engaging (Kostka & Brinks Lockwood, 2015). In this study, two students in the traditional group asked for exercises to practice the words they had learned so that they might more efficiently memorize new words and feel more comfortable. Another interesting finding revealed that students from EG1 and students from the other two groups differed in their opinions on supplemental materials. Students of EG1 wanted more interactive multimedia materials and group discussions, while students in the other two groups asked for extra reading materials and mandatory exercises to push self-learning and explanations for confusing tasks in class. These

suggest that the fully flipped model might have potential to facilitate self-learning and self-assessing.

## **Implications**

The results and findings of this mixed methods study have multiple implications for the future of flipped language instruction.

### **Implications for Teachers**

The findings, while not generalizable to all situations, do provide college EFL teachers and other subject teachers a window into what needs to be considered when deciding whether or not to flip their classrooms. First, Hung (2015) suggested that implementing the flipped classroom model in English classes improved students' academic performance in general. This study yielded encouraging results involving the fully flipped model of instruction and improved student learning outcomes regarding reading comprehension.

Moreover, students in the fully flipped group tended to be more capable to utilize various recourses. Han (2015) noted that students independently devoted time and effort to finding the technological learning tools and resources they needed to expose themselves to English for an ungraded project, showing motivation and interest in English learning. Survey results of the student participants in EG1 show that they were more able to review the lectures when they wished to do so and were more likely to utilize a variety of information sources to explore problems posed in the class than were students in CG.

Furthermore, the student participants in this study's fully flipped group mentioned how they experienced an increase in classroom participation and a more systematic organization of their course when compared to traditional lecture-based, teacher-centered classrooms. As shown

by classroom observations, EG1 had a higher frequency of interactions overall than did EG2 and CG. The instructor of EG1 asked more questions to individual students, and students in EG1 responded more frequently to the instructor's questions than did, in most cases, the students of the other two groups. Moreover, data shows that the number of student-to-whole-class comments was higher in EG1 than in EG2 and CG in all four sessions.

Finally, observation and interview data provided insights for teachers who intend to implement a flipped model. Teachers may increase the frequency of teacher-to-whole-class interactions by asking questions such as "Do you understand?" and "Shall we move on?" to check students' comprehension. Further, teachers can ask individual students questions more frequently if there are very few student-to-whole-class comments. Also, it might be helpful if teachers 1) enrich classroom tasks and activities by adding presentations, organizing group discussions, and playing games to make the classroom more vivid and interesting, 2) provide students with multiple ways to ask questions, 3) give more detailed learning guidance before, during, and after class, 4) assign homework or quizzes that push students to review and learn by themselves, and 5) provide supplemental learning materials such as videos, readings, and exercises that facilitate self-learning and encourage students to practice learned knowledge.

### **Implications for Instructional Designers**

Findings of this study indicated that the application of the fully flipped model led to perceptions of improved engagement and performance. As encouraged by the Ministry of Education of China (MOE, 2015), a student-centered environment in which the students are actively engaged in all aspects of the classroom is supported by a fully flipped instruction. The results of this study also imply the benefits of TBI-based learning tasks in terms of student engagement and performance. When no time is dedicated to lectures, the students experience

improved use of class time and are able to complete various hands-on tasks and task-based learning structures with real-world scenarios that further enhance their understanding and comprehension of the content. With better use of class time and improved instructional practices, the fully flipped model of instruction has potential to provide students the opportunity to demonstrate their understanding and knowledge through various tasks that are not commonly utilized or observed in the traditional classroom.

However, some issues that will arise and things that need to be considered are accessibility to needed technology, how to hold students accountable for the flipped portion of the class, the technical issues that must be considered when creating instructional videos, what methods work best in aiding student comprehension of the particular content, and overall pedagogy of the model. In addition, student attitudes and responses to surveys and interviews will give an instructor insight into what beliefs and thoughts students hold with regard to the flipped model.

### **Implications for Other Researchers**

First, this study focused on the effect of the fully flipped model on students' learning outcomes in English vocabulary, reading and writing within the context of a first-year college EFL course, additional studies with other foreign language courses as well as upper level courses are recommended. Furthermore, the study can explore the effect on more specific skills such as reading, writing, listening, and speaking. In addition, since the present study only examined the short-term effects of one semester, longer studies involving two semesters or more will be beneficial in evaluating the long-term effect of the flipped classroom approach, as well as the time required to experience the full benefits of the approach.

The types of assessments should also be reexamined for future studies. The assessment tools used in this study were course content specific. The students' course grades may not necessarily correlate to their actual proficiency. For future research, the use of general proficiency examinations such as TOFEL and IELTS, could be considered in order to evaluate general language proficiency.

Finally, in future studies on the fully flipped model, the instructional approach itself may not be the determinant of outcome measures. Interview data of this study suggested that extensive English learning experience or positive feedback from tests and teachers might motivate students. Researchers such as Dörnyei (2003), Masgoret and Gardner (2003), Ushida (2005), suggest that affective factors such as attitudes and motivation can also affect L2 achievement. Therefore, adding one or more variables, such as student attitudes or motivation, may be considered for future research.

## **Limitations**

Generalizability may have been a limitation for this study (Rovai et al., 2013). The results of this study are not generalizable to other populations or content areas in language learning. For this study, only Chinese students participated, as opposed to other underrepresented EFL learners. Also, the study was undertaken in a comprehensive university in China that may not be indicative of similar student populations in China or around the world. Additional studies would need to be conducted to determine generalizability.

Also, the data have been collected during one academic semester; a longitudinal study might generate more in-depth data. There is a need to replicate this study at a more extensive level with a longer time frame in order to confirm the positive results and findings. The lack of

significant findings on students' cognitive development in this study may be due to the fact that the fully flipped model was implemented in a single classroom with a single instructor. Thus, there is a need to examine how the students respond to a longer duration of the flipped model of instruction.

Subjectivity could be considered another limitation in this study. The researcher, who designed the fully flipped model, taught the fully flipped class and followed data collection. To minimize the influence, survey data was collected anonymously, and semi-structured interviews began when the course was totally finished. Although measures have been put in place to maximize credibility and dependability, it is possible that another researcher who has not been involved in teaching might have different findings. Being interviewed by their instructor, interviewees may be hesitant to reveal their perceptions on a particular topic or subject (Alshenqeeti, 2014; Tashakkori & Teddlie, 1998). They may be untruthful or give socially acceptable responses. Another possible limitation due to the fact that there are two instructors (one for EG1, one for EG2 and CG), naturally like to have different in-class activities. While those different in-class activities were the intentions of this research, the researchers recognize that there might be some possible impacts coming from the teachers rather than activities.

Furthermore, as interviewees reported the course focused more on expanding vocabulary rather than improving other language skills. This unbalanced course focus might affect students' learning strategies and outcomes. On the one hand, the participants were students in the first semester of College English courses, in which most of them were not experienced; thus, the outcomes might not apply to students at the higher levels. On the other hand, students at higher English proficiency levels might spend less time on learning words and might have a different point of view. Therefore, further studies applying the fully flipped model to courses that include

different language skills or to learners at different proficiency levels could provide additional evidence in the future.

## **Conclusion**

The goal of this mixed methods study was to examine the impact of implementing a flipped classroom model, constructed using Bloom's taxonomy, TBI and Gagne's nine events, on student learning, perceptions of learning, and student interactions in Chinese EFL courses. The flipped classroom approach with the use of task based language instruction was expected to be a possible option to facilitate students' language proficiency.

Rooted in the concurrent embedded strategy of mixed methods (Creswell, 2008), this study first identified that EG1, based on the statistical analysis of midterm and final examination scores, outperformed CG significantly on reading comprehension. The present study also provided some evidence that delivering instruction outside of class via lecture videos enabled students to review the lectures whenever they desired. Although no significant differences have been found between the three groups on students' perceptions towards learning experiences and cognitive development, survey results suggested that the fully flipped instruction encouraged students to use a variety of information sources to explore problems. More interactions were observed in the fully flipped class.

The qualitative findings, which were intended to support the quantitative results (Creswell, 2008), revealed that students expressed favorable attitudes toward the flipped classroom approach. In addition, the qualitative results yielded some suggestions for teachers who intend to implement the fully flipped model in language classrooms. Teachers could increase teacher-to-individual-student interactions, such as questioning individual students more

frequently, as a strategy to increase students' engagement. Interviewees suggested that teachers could improve instruction by making the classroom activities more vivid and interesting, providing students with multiple ways to ask questions, giving more detailed learning guidance, and facilitating self-learning.

When I developed the fully flipped model, I was hoping that if a task met the four criteria proposed by Ellis and Shintani (2013), and tasks were arranged following Gagne's 9 events, the instruction would then satisfy students' higher-level learning needs on Bloom's revised taxonomy. Overall, findings of this study provided some evidences that employing TBI and Gagne's nine events may lead to some positive learning outcomes, more interactions in class, and positive attitudes towards multimedia materials and presentation activities. Unfortunately, I did not find any significant differences regarding students' perceptions of higher order knowledge acquisition and application. However, as a person who involved in the design and teaching of this study, I observed how actively students participated in these tasks and the progress they made throughout the semester. They were more comfortable talking in English in class and made more complex speech production. Based on my anecdotal observation, I believe the fully flipped model has a potential to meet students' higher-level learning needs. To investigate the full potential of the model, further studies needs to be continued. There might be other ways to measure and document students' higher-level learning acquisition and application. For example, it might be valuable to examine students' discussions and discourses in class. Another example is to use other scales to assess students' higher order thinking skills.

In conclusion, this study looked at the impact of implementing a fully flipped model of classroom instruction that might improve China's college students' academic achievement in English learning, might provide a better learning experience, and might better develop students'

higher order knowledge acquisition and application. Results showed that 1) the fully flipped instruction did significantly improve students' reading comprehension, 2) implementing student-centered, task-based language instruction improved in-class interactions, and 3) students in the fully flipped classroom had positive attitude towards using multimedia materials and finding information sources to explore problems, which might benefit for promoting self-learning.

## APPENDIX A. QUESTIONNAIRE

**Directions:** To what extent do you agree with the following items? The following items ask about your attitudes toward learning experiences and cognitive development. Remember there is no right or wrong answers; just answer as accurately as possible. Please read the statements below carefully and tick the appropriate choices that reflect your attitudes and perceptions towards English language. Use the scale below to answer the questionnaire items.

说明：请标注你对以下陈述的赞同程度。这些陈述描述了你对英语课的学习体验和你对认知发展的态度。你的回答没有对错，希望你能尽量准确客观。请仔细阅读以下每一个陈述，并选择最贴近你真实感受的选项。

**1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), 5 (Strongly Agree)**

1（极为反对），2（反对），3（一般），4（同意），5（极为赞同）

**Note:** Circle only one option for each item in the questionnaire.

注意：对于问卷中的每个陈述圈选一个选项。

Section one: satisfaction scale

第一部分：满意度量表

No.	Items	极为反对	反对	一般	同意	极为赞同
1	I was able to review the lectures as many times as I need to. 我能够按照自己的需求多次复习上课内容。	1	2	3	4	5
2	I was able to have rich learning experiences. 我能够有丰富的学习体验。	1	2	3	4	5
3	I was able to connect theory with practice in real life. 我能够在现实生活中将理论与实践联系起来。	1	2	3	4	5
4	I was able to manage my learning activities. 我能够管理我的学习活动。	1	2	3	4	5
5	This class helps me to use various learning resources. 这节课帮助我使用各类学习资源。	1	2	3	4	5
6	This class helps me to develop my problem-solving skills. 这节课帮助我提高解决问题的能力。	1	2	3	4	5
7	This class facilitates my personalized learning. 本课程有助于我的个性化学习。	1	2	3	4	5
8	This class helps me to effectively cooperate with my classmates. 这节课帮助我有效地与同学合作。	1	2	3	4	5
9	This class facilitates more communication between me and my teacher. 这节课促使我与老师有了更多的交流。	1	2	3	4	5
10	This class facilitates more communication between me and my classmates. 这节课促使我与同学有了更多的交流。	1	2	3	4	5

No.	Items	极为反对	反对	一般	同意	极为赞同
11	This class helps me to effectively participate in the learning activities. 这节课帮助我有效地参与学习活动。	1	2	3	4	5
12	Overall, I am satisfied with my learning experience in this class. 总的来说，我对本课程的学习经历感到满意。	1	2	3	4	5

## Section two: cognitive presence scale

### 第二部分：认知度量表

No.	Items	极为反对	反对	一般	同意	极为赞同
1	Problems posed increased my interest in course issues. 在课程学习过程中提出的问题增加了我对课程的兴趣。	1	2	3	4	5
2	Class activities piqued my curiosity. 课堂活动激起了我的好奇心。	1	2	3	4	5
3	I felt motivated to explore content related questions. 我觉得很有动力去探索与课程内容相关的问题。	1	2	3	4	5
4	I utilized a variety of information sources to explore problems posed in this class. 我会去搜索各类信息来解决这个课程中出现的问题。	1	2	3	4	5
5	Brainstorming and finding relevant information helped me resolve content related questions. 头脑风暴和查找相关信息帮助我解决课程内容相关的问题。	1	2	3	4	5
6	Discussions were valuable in helping me appreciate different perspectives. 讨论对于我了解各种观点很有帮助。	1	2	3	4	5
7	Combining new information helped me answer questions raised in course activities. 结合新信息帮助我解决在课程活动中产生的问题。	1	2	3	4	5
8	Learning activities helped me construct explanations and solutions. 学习活动帮助我构建问题的解决方案。	1	2	3	4	5
9	Reflection on course content and discussions helped me understand fundamental concepts in this class. 对课程内容和讨论的反思帮助我理解了本课程的基本概念。	1	2	3	4	5
10	I can describe ways to test and apply the knowledge created in this class. 我能说出如何测验自己在本课程中学到的知识，也能说出怎么将这些知识应用到实践中去。	1	2	3	4	5
11	I have developed solutions to course problems that can be applied in practice. 我在课堂中解决问题的方法也能够用于实践当中。	1	2	3	4	5

No.	Items	极为 反对	反对	一般	同意	极为 赞同
12	I can apply the knowledge created in this class to my work or other non-class related activities. 我可以将在本课程中学到的知识应用于我的工作或课外的活动中去。	1	2	3	4	5

# APPENDIX B. AUTHOR PERMISSION LETTER

## Dr. Al-Zahrani's Permission Letter

 **ABDULRAHMAN AL-ZAHRANI** <ammz2@hotmail.com> Dec 1, 2018, 1:00 AM ☆ ↶ ⋮  
to me ▾  
Dear Bing Zhou,

Good luck with your thesis. My permission to use the instrument as listed in your email is granted. Go ahead and if you need further information, Please feel free to contact me.  
Cheers

\*\*\*

Abdulrahman Al-Zahrani  
Associate professor of edu. tech

----- Original message -----

From: Bing Zhou <[bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu)>  
Date: 28/11/2018 7:08 am (GMT+03:00)  
To: [ammz2@hotmail.com](mailto:ammz2@hotmail.com)  
Subject: Seeking Permission to Use Survey Tool

Dear Dr. Al-Zahrani:

My name is Bing Zhou and I am a doctoral student at the University of Hawaii in Learning Design and Technology. I am writing my dissertation titled *A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China* under the direction of my dissertation committee chaired by Dr. Seungoh Paek who can be reached at [spaek@hawaii.edu](mailto:spaek@hawaii.edu). The University of Hawaii IRB Committee can be contacted at (808) 956-5007 or by mail at 2425 Campus Road, Sinclair 1, Honolulu, HI, 96822.

I would like your permission to use the survey instrument you developed and used to assess students' general views about the flipped classroom (Al-Zahrani, 2015) in my research study. In addition to using the instrument, I also ask your permission to reproduce it in my dissertation appendix. The dissertation will be deposited in the ProQuest Dissertations & Theses database.

I would like to use and print your survey under the following conditions:

- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If you do not control the copyright for these materials, I would appreciate any information you can provide concerning the proper person or organization I should contact.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu). Thank you for your consideration and inspiration in the field.

Sincerely,  
Bing Zhou

References:

Al-Zahrani, A. M. (2015). From passive to active: The Impact of the flipped classroom through social learning platforms on higher education students' creative thinking. *British Journal of Educational Technology*, 46(6), 1133-1148. doi:10.1111/bjet.12553.

## APPENDIX C. INTERVIEW PROTOCOL

### Script prior to interview:

#### 访问前:

Hello, my name is Bing Zhou. I am a doctoral student from the department of Learning Design and Technology at the University of Hawaii at Manoa. I'd like to thank you once again for being willing to participate in the interview aspect of our study. Our study seeks to understand your learning experience in classes in the fall 2019 semester. Our interview today will last approximately one hour.

您好，我是来自夏威夷大学马诺阿分校教育技术与教育设计的博士研究生周冰。非常感谢您参与我们的研究，本次采访意在了解您对于 2019 学年秋季学期大学英语课的学习体验。我们的采访大约持续一小时左右。

There are no desirable or undesirable answers in today's interview. I would like you to feel comfortable saying what you really think and how you really feel. I will be recording our conversation today if that's okay with you. I will make a transcript of the audio recording to be used for analysis. No identifying information will be included in the transcript. Only my committee chair and myself will have access to the transcript data.

我们今日的采访没有所谓正确答案。我希望您能够自如地说出您的想法以及您的真实感受。如果您同意的话，我会为我们今天的谈话录音。录音材料将被转录为文字用于分析。文件中不会包含任何能够识别您身份的信息。只有我的委员会主席和我本人才能获取采访数据。

[review aspects of consent form]

讲解并签署采访同意书

Before we begin the interview, do you have any questions?

在开始访问以前，您有任何问题吗？

### Interview Questions:

#### 访问问题:

Warming up: how long have you been learning English?

预热问题：您学习英语多长时间了？

(1) Can you describe what you do in a typical week in terms of preparing for the *EFL I*? Or can you tell me an interesting story about an experience you have in class or preparing for class?

您能描述一下您一星期的生活吗；在一周里，您是怎么学习大学英语 I 的呢？或者您能给我讲一件有关于您的，发生在大学英语 I 课堂上或者课下的趣事吗？

(2) What were the average effort you put into *EFL I* each week?

您每周花多长时间或精力学习大学英语 I?

(3) How is learning in *EFL I* class similar to or different from learning in other English classes?  
学习大学英语 I 和学习其他英语课程有什么相似之处或者不同之处吗?

(4) What characteristics do you think are important to be an effective learner in *EFL I*?  
您认为哪些特征对于学好大学英语 I 这门课非常重要?

(5) What learning strategies have you found to be effective or ineffective?  
您认为哪些学习方法能帮助您学好大学英语 I? 哪些学习方法没有什么明显的作用?

(6) What was something specific that you enjoyed about this learning experience?  
对于这两节课您有什么特别喜欢的部分吗?

(7) What were some specific concerns or difficulties that you had during this learning experience?  
在您的学习体验中, 您有没有遇到什么问题或者有没有让您特别关注的事情?

(8) Did you observe any changes in your or others' attitudes toward this learning experience? What are some specific examples? How did they happen, and why?  
您或者您同学在这两节课的学习中有任何改变吗? 比如态度的改变, 学习方法的改变等等。您可以举出具体的例子吗? 这些改变是怎么发生的? 为什么?

(9) In what areas do you think this instructional design could be improved: learning materials, teaching method, video contents, communication tool, and activities?  
您认为现在的教学设计能够怎么样提升变得更好? 是改变学习材料呢。还是教学方式, 还是视频内容, 还是交流工具还是课堂活动呢?

(10) What do you wish you had known before taking the *EFL I*? If you have an opportunity to take another EFL course in the future, what might you do differently?  
有没有什么东西您希望在您选这节大学英语 I 课之前就能知道的? 如果您以后还要选择大学英语课程, 您会有什么不同的做法吗?

### **Closing:**

#### **结尾:**

And that was my final question. Once again, thank you so much for helping me with my study. Are there any thoughts, comments, or questions you'd like to share before we end?  
以上就是我所有的问题了, 再一次感谢您的参与。在我们结束之前, 您有任何想法, 评论或者问题吗?

# APPENDIX D. IRB APPROVAL



UNIVERSITY  
of HAWAII®  
MĀNOA

Office of Research Compliance  
Human Studies Program

**DATE:** July 30, 2019  
**TO:** Paek, Seungoh, University of Hawaii at Manoa, Department of Learning Design and Technology  
Zhou, Bing, University of Hawaii at Manoa, Department of Learning Design and Technology  
**FROM:** Rivera, Victoria, Dir, Ofc of Rsch Compliance, Social&Behav Exempt  
**PROTOCOL TITLE:** A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China  
**FUNDING SOURCE:**  
**PROTOCOL NUMBER:** 2019-00330  
**APPROVAL DATE:** July 30, 2019

## NOTICE OF APPROVAL FOR HUMAN RESEARCH

This letter is your record of the Human Studies Program approval of this study as exempt.

On July 30, 2019, the University of Hawaii (UH) Human Studies Program approved this study as exempt from federal regulations pertaining to the protection of human research participants. The authority for the exemption applicable to your study is documented in the Code of Federal Regulations at 45 CFR 46.101(b) 1.

Exempt studies are subject to the ethical principles articulated in The Belmont Report, found at the OHRP Website [www.hhs.gov/ohrp/humansubjects/guidance/belmont.html](http://www.hhs.gov/ohrp/humansubjects/guidance/belmont.html).

Exempt studies do not require regular continuing review by the Human Studies Program. However, if you propose to modify your study, you must receive approval from the Human Studies Program prior to implementing any changes. You can submit your proposed changes via the UH eProtocol application. The Human Studies Program may review the exempt status at that time and request an application for approval as non-exempt research.

In order to protect the confidentiality of research participants, we encourage you to destroy private information which can be linked to the identities of individuals as soon as it is reasonable to do so. Signed consent forms, as applicable to your study, should be maintained for at least the duration of your project.

This approval does not expire. However, please notify the Human Studies Program when your study is complete. Upon notification, we will close our files pertaining to your study.

If you have any questions relating to the protection of human research participants, please contact the Human Studies Program by phone at 956-5007 or email [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu). We wish you success in carrying out your research project.

UH Human Studies Program, Office of Research Compliance  
Office of the Vice President for Research and Innovation, University of Hawai'i, System  
2425 Campus Road, Sinclair 10, Honolulu HI 96822  
Phone: 808.956.5007 • Email: [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu)  
<https://www.hawaii.edu/researchcompliance/human-studies>  
An Equal Opportunity & Affirmative Action Institution



## APPENDIX E. CONSENT FORMS

### Intervention Consent: Fully Flipped Instruction

University of Hawai'i  
Consent to Participate in a Research Project

Bing Zhou, Principal Investigator

*Project title: A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*

Aloha! My name is Bing Zhou and you are invited to take part in a research study. I am a doctoral student at the University of Hawai'i at Mānoa in the Department of Learning Design and Technology.

#### ***What am I being asked to do?***

If you participate in this project, you will be asked to watch lecture videos and participate in discussion before class, complete learning tasks in class, and finish assignments after class.

#### ***Taking part in this study is your choice.***

You can choose to take part or you can choose not to take part in this study. You also can change your mind at any time. If you stop being in the study, there will be no penalty or loss to you.

#### ***Why is this study being done?***

The purpose of this project is to examine how flipped classroom model, which is mainly constructed by task-based instruction and Gagne's nine events, works for teaching Chinese college students EFL courses. I am asking you to participate because you are enrolled in *College EFL Course I* in East China Normal University, currently learning English as a foreign language in Chinese context. And you are at least 18 years old.

#### ***What will happen if I decide to take part in this study?***

If you decide to participate in this study in the fall 2019 semester, you will be given access to the course learning management system Moodle ([www.reading.moodlecloud.com](http://www.reading.moodlecloud.com)). Pre-class Lecture videos and other materials for self-studying and previewing will be uploaded to Moodle one week prior to that class. Also, weekly assignments and discussion topics will be posted on Moodle one week prior to each class. During each week of instruction, you will be asked to do the following:

1. You will be asked to watch pre-class lecture videos of that week, complete assignments and engage in discussion before class. It will take approximately one hour.

2. You will be asked to attend the class session of that week. You will complete learning tasks in class. It will take approximately 90 minutes. The class will be videotaped and audiotaped.
3. You will be asked to complete homework if assigned.

***What are the risks and benefits of taking part in this study?***

I believe there is little risk to you for participating in this research project. You may become stressed or uncomfortable speaking, discussing or doing activities under camera. If you do become stressed or uncomfortable, you can take a break. You can also stop or withdraw from the project.

There will be no direct benefit to you for participating in this project. The results of this project may help contribute and provide reference to the instructional design for English as foreign language teaching and learning in flipped classroom format in China's tertiary education.

***Results of Research:***

It is anticipated that the results of this study will be shared with others in the following ways: instructor review for college English course, published journals, presentation at conference.

***Privacy and Confidentiality:***

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. We will keep all study data encrypted on a password protected computer. Only the Dissertation Committee Chair, Seungoh Paek, and Principal Investigator, Bing Zhou will have access to the information. Video and audio recordings from this study will be only used for analyzing classroom interactions and will be erased from personal computer after we complete classroom observation notes.

Other agencies that have legal permission have the right to review research records. The University of Hawaii Human Studies Program has the right to review research records for this study. We will not use your name. We will not use any other personal identifying information that can identify you. We will use pseudonyms (fake names) and report our findings in a way that protects your privacy and confidentiality to the extent allowed by law.

***Future Research Studies:***

Identifiers will be removed from your identifiable private information and even after removing identifiers, the data from this study will not be used or distributed for future research studies.

***Questions:*** If you have any questions about this study, please call or email Bing Zhou, the principal investigator, by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu) or by phone (+1)808.721.7598/ (+86)18758026180.

You may contact the UH Human Studies Program at 808.956.5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu). to discuss problems, concerns and questions; obtain information; or offer input with an informed

individual who is unaffiliated with the specific research protocol. Please visit <http://go.hawaii.edu/jRd> for more information on your rights as a research participant.

If you agree to participate in this project, please sign and date the following signature page and return it to: Bing Zhou in person or by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu).

Keep a copy of the informed consent for your records and reference.

**Signature(s) for Consent:**

I give permission to join the research project entitled, "*A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*".

Please initial next to either "Yes" or "No" to the following:

\_\_\_\_\_ Yes      \_\_\_\_\_ No      I consent to be video-recorded and audio recorded in  
classes in the fall 2019 semester.

**Name of Participant (Print):** \_\_\_\_\_

**Participant's Signature:** \_\_\_\_\_

**Signature of the Person Obtaining Consent:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Mahalo!

## **Intervention Consent: Semi-Flipped Instruction**

### **University of Hawai'i Consent to Participate in a Research Project**

Bing Zhou, Principal Investigator

*Project title: A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*

Aloha! My name is Bing Zhou and you are invited to take part in a research study. I am a doctoral student at the University of Hawai'i at Mānoa in the Department of Learning Design and Technology.

#### ***What am I being asked to do?***

If you participate in this project, you will be asked to watch lecture videos before class, complete learning activities in class, and finish assignments after class.

#### ***Taking part in this study is your choice.***

You can choose to take part or you can choose not to take part in this study. You also can change your mind at any time. If you stop being in the study, there will be no penalty or loss to you.

#### ***Why is this study being done?***

The purpose of this project is to examine how flipped classroom model, which is mainly constructed by task-based instruction and Gagne's nine events, works for teaching Chinese college students EFL courses. I am asking you to participate because you are enrolled in *College EFL Course I* in East China Normal University, currently learning English as a foreign language in Chinese context. And you are at least 18 years old.

#### ***What will happen if I decide to take part in this study?***

If you decide to participate in this study in the fall 2019 semester, you will be given access to the course learning management system Moodle ([www.reading.moodlecloud.com](http://www.reading.moodlecloud.com)). Pre-class lecture videos and other materials for self-studying and previewing will be uploaded to Moodle one week prior to that class.

During each week of instruction, you will be asked to do the following:

1. You will be asked to watch pre-class lecture videos of that week before class. Lecture videos are usually 6 minutes long. And there will be three or four lecture videos every week.
2. You will be asked to attend the class session of that week. You will complete learning tasks in class. It will take approximately 90 minutes. The class will be videotaped and audiotaped.
3. You will be asked to complete homework if assigned.

***What are the risks and benefits of taking part in this study?***

I believe there is little risk to you for participating in this research project. You may become stressed or uncomfortable speaking, discussing or doing activities under camera. If you do become stressed or uncomfortable, you can take a break. You can also stop or withdraw from the project.

There will be no direct benefit to you for participating in this project. The results of this project may help contribute and provide reference to the instructional design for English as foreign language teaching and learning in flipped classroom format in China's tertiary education.

***Results of Research:***

It is anticipated that the results of this study will be shared with others in the following ways: instructor review for college English course, published journals, presentation at conference.

***Privacy and Confidentiality:***

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. We will keep all study data encrypted on a password protected computer. Only the Dissertation Committee Chair, Seungoh Paek, and Principal Investigator, Bing Zhou will have access to the information. Video and audio recordings from this study will be only used for analyzing classroom interactions and will be erased from personal computer after we complete classroom observation notes.

Other agencies that have legal permission have the right to review research records. The University of Hawaii Human Studies Program has the right to review research records for this study. We will not use your name. We will not use any other personal identifying information that can identify you. We will use pseudonyms (fake names) and report our findings in a way that protects your privacy and confidentiality to the extent allowed by law.

***Future Research Studies:***

Identifiers will be removed from your identifiable private information and even after removing identifiers, the data from this study will not be used or distributed for future research studies.

***Questions:*** If you have any questions about this study, please call or email Bing Zhou, the principal investigator, by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu) or by phone (+1)808.721.7598/ (+86)18758026180.

You may contact the UH Human Studies Program at 808.956.5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu). to discuss problems, concerns and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit <http://go.hawaii.edu/jRd> for more information on your rights as a research participant.

If you agree to participate in this project, please sign and date the following signature page and return it to: Bing Zhou in person or by email: bingzhou@hawaii.edu.

Keep a copy of the informed consent for your records and reference.

**Signature(s) for Consent:**

I give permission to join the research project entitled, "*A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*".

Please initial next to either "Yes" or "No" to the following:

\_\_\_\_\_ Yes      \_\_\_\_\_ No      I consent to be video-recorded and audio recorded in classes in the fall 2019 semester.

**Name of Participant (Print):** \_\_\_\_\_

**Participant's Signature:** \_\_\_\_\_

**Signature of the Person Obtaining Consent:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Mahalo!

## **Intervention Consent: Traditional Instruction**

### **University of Hawai'i Consent to Participate in a Research Project**

Bing Zhou, Principal Investigator

*Project title: A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*

Aloha! My name is Bing Zhou and you are invited to take part in a research study. I am a doctoral student at the University of Hawai'i at Mānoa in the Department of Learning Design and Technology.

#### ***What am I being asked to do?***

If you participate in this project, you will be asked to watch lecture videos before class, complete learning activities in class, and finish assignments after class.

#### ***Taking part in this study is your choice.***

You can choose to take part or you can choose not to take part in this study. You also can change your mind at any time. If you stop being in the study, there will be no penalty or loss to you.

#### ***Why is this study being done?***

The purpose of this project is to examine how flipped classroom model, which is mainly constructed by task-based instruction and Gagne's nine events, works for teaching Chinese college students EFL courses. I am asking you to participate because you are enrolled in *College EFL Course I* in East China Normal University, currently learning English as a foreign language in Chinese context. And you are at least 18 years old.

#### ***What will happen if I decide to take part in this study?***

If you decide to participate in this study in the fall 2019 semester, during each week of instruction, you will be asked to do the following:

1. You will be asked to preview the course content of that week before class.
2. You will be asked to attend the class session of that week. You will complete learning tasks in class. It will take approximately 90 minutes. The class will be videotaped and audiotaped.
3. You will be asked to complete homework if assigned.

#### ***What are the risks and benefits of taking part in this study?***

I believe there is little risk to you for participating in this research project. You may become stressed or uncomfortable speaking, discussing or doing activities under camera. If you do become stressed or uncomfortable, you can take a break. You can also stop or withdraw from the project.

There will be no direct benefit to you for participating in this project. The results of this project may help contribute and provide reference to the instructional design for English as foreign language teaching and learning in flipped classroom format in China's tertiary education.

***Results of Research:***

It is anticipated that the results of this study will be shared with others in the following ways: instructor review for college English course, published journals, presentation at conference.

***Privacy and Confidentiality:***

Any information that is obtained in connection with this study and that can be identified with you will remain confidential and will be disclosed only with your permission or as required by law. We will keep all study data encrypted on a password protected computer. Only the Dissertation Committee Chair, Seungoh Paek, and Principal Investigator, Bing Zhou will have access to the information. Video and audio recordings from this study will be only used for analyzing classroom interactions and will be erased from personal computer after we complete classroom observation notes.

Other agencies that have legal permission have the right to review research records. The University of Hawaii Human Studies Program has the right to review research records for this study. We will not use your name. We will not use any other personal identifying information that can identify you. We will use pseudonyms (fake names) and report our findings in a way that protects your privacy and confidentiality to the extent allowed by law.

***Future Research Studies:***

Identifiers will be removed from your identifiable private information and even after removing identifiers, the data from this study will not be used or distributed for future research studies.

***Questions:*** If you have any questions about this study, please call or email Bing Zhou, the principal investigator, by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu) or by phone (+1)808.721.7598/ (+86)18758026180.

You may contact the UH Human Studies Program at 808.956.5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu). to discuss problems, concerns and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit <http://go.hawaii.edu/jRd> for more information on your rights as a research participant.

If you agree to participate in this project, please sign and date the following signature page and return it to: Bing Zhou in person or by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu).

Keep a copy of the informed consent for your records and reference.

**Signature(s) for Consent:**

I give permission to join the research project entitled, "*A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*".

Please initial next to either "Yes" or "No" to the following:

\_\_\_\_\_ Yes      \_\_\_\_\_ No      I consent to be video-recorded and audio recorded in  
classes in the fall 2019 semester.

**Name of Participant (Print):** \_\_\_\_\_

**Participant's Signature:** \_\_\_\_\_

**Signature of the Person Obtaining Consent:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Mahalo!

## Direct Survey Consent

**University of Hawai'i**  
**Consent to Participate in a Research Project**

Bing Zhou, Principal Investigator

*Project title: A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*

Aloha! My name is Bing Zhou and you are invited to take part in a research study. I am a doctoral student at the University of Hawai'i at Mānoa in the Department of Learning Design and Technology.

### ***What am I being asked to do?***

If you participate in this project, you will be asked to fill out a questionnaire.

### ***Taking part in this study is your choice.***

Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you. If you do withdraw from the study your data will be removed from database.

### ***Why is this study being done?***

The purpose of this project is to evaluate your perceptions of learning experience in College EFL I Classes in the fall 2019 semester, and your perceptions of cognitive development after taking this course. We are asking you to participate because you enrolled in this course and attended class sessions. And you are at least 18 years old.

### ***What will happen if I decide to take part in this study?***

The questionnaire will consist of 24 statements. You rate each statement via a 5-points Likert scale. Survey questions will include statements like, "I had more communication with my teacher in this class". You can rate among "1-strongly disagree", "2-disagree", "3-neutral", "4-agree", and "5-strongly agree". The questionnaire has been printed out on paper and been provided under this consent form. Completing the questionnaire will take approximately 10-15 minutes.

### ***What are the risks and benefits of taking part in this study?***

We believe there is little risk to you for participating in this research project. You may become stressed or uncomfortable answering any of the survey questions. If you do become stressed or uncomfortable, you can skip the question or take a break.

There will be no direct benefit to you for participating in this survey. The results of this project may help improve the learning experience of college English courses to benefit future students.

***Privacy and Confidentiality:***

We will not ask you for any personal information, such as your name or address. Please do not include any personal information in your survey responses. We will keep all study data encrypted on a password protected computer. Only the Dissertation Committee Chair, Seungoh Paek, and the Principal Investigator, Bing Zhou will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawai'i Human Studies Program has the right to review research records for this study.

***Future Research Studies:***

Identifiers will be removed from your identifiable private and even after removing identifiers, the data from this study will not be used or distributed for future research studies.

***Questions:***

If you have any questions about this study, please call or email Bing Zhou, the principal investigator, by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu) or by phone (+1)808.721.7598/ (+86)18758026180. You may contact the UH Human Studies Program at 808.956.5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu) to discuss problems, concerns and questions, obtain information, or offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit <http://go.hawaii.edu/jRd> for more information on your rights as a research participant.

Filling out the survey will be considered your consent to participate in this study.

Please keep a copy of the consent form for your records.

Mahalo!

## **Interview Consent**

**University of Hawai'i**  
**Consent to Participate in a Research Project**

Bing Zhou, Principal Investigator

*Project title: A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*

Aloha! My name is Bing Zhou and you are invited to take part in a research study. I am a doctoral student at the University of Hawai'i at Mānoa in the Department of Learning Design and Technology.

### ***What am I being asked to do?***

If you participate in this project, the principal investigator Bing Zhou will meet with you for an interview at a location and time convenient for you.

### ***Taking part in this study is your choice.***

Your participation in this project is completely voluntary. You may stop participating at any time. If you stop being in the study, there will be no penalty or loss to you. If you do withdraw from the study your data will be removed from database.

### ***Why is this study being done?***

The purpose of this study is to evaluate your learning experience in College EFL I classes in the fall 2019 semester. We are asking you to participate because you enrolled in this course and attended class sessions. And you are at least 18 years old.

### ***What will happen if I decide to take part in this study?***

The interview will consist of 10 open ended questions. It will take approximately an hour. The interview questions will include questions like, "What was something specific that you enjoyed about this learning experience?"

Only you and Bing Zhou will be present during the interview. With your permission, we will audio-record the interview so that we can later transcribe the interview and analyze the responses. You will be one of about 18 people we will interview for this study.

### ***What are the risks and benefits of taking part in this study?***

We believe there is little risk to you for participating in this research project. You may become stressed or uncomfortable answering any of the interview questions or discussing topics with me during the interview. If you do become stressed or uncomfortable, you can skip the question or take a break. You can also stop the interview or you can withdraw from the project.

There will be no direct benefit to you for participating in this interview. The results of this project may help improve the learning experience of college English courses to benefit future students.

***Privacy and Confidentiality:***

We will keep all study data encrypted on a password protected computer. Only the Dissertation Committee Chair, Seungoh Paek, and the Principal Investigator, Bing Zhou will have access to the information. Other agencies that have legal permission have the right to review research records. The University of Hawai'i Human Studies Program has the right to review research records for this study.

After we write a copy of the interviews, we will erase or destroy the audio-recordings. We will not use your name or use any other personal identifying information that can identify you. We will use pseudonyms (fake names) and report our findings in a way that protects your privacy and confidentiality to the extent allowed by law.

***Future Research Studies:***

Identifiers will be removed from your identifiable private information and even after removing identifiers, the data from this study will not be used or distributed for future research studies.

***Questions:***

If you have any questions about this study, please call or email Bing Zhou, the student investigator, by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu) or by phone (+1)808.721.7598/ (+86)18758026180. You may contact the UH Human Studies Program at 808.956.5007 or [uhirb@hawaii.edu](mailto:uhirb@hawaii.edu). to discuss problems, concerns and questions; obtain information; or offer input with an informed individual who is unaffiliated with the specific research protocol. Please visit <http://go.hawaii.edu/jRd> for more information on your rights as a research participant.

If you agree to participate in this project, please sign and date the following signature page and return it to: Bing Zhou in person or by email: [bingzhou@hawaii.edu](mailto:bingzhou@hawaii.edu).

Keep a copy of the informed consent for your records and reference.

**Signature(s) for Consent:**

I give permission to join the research project entitled, "*A Study of Task-Based Language Instruction in Flipped English as Foreign Language Classrooms in China*".

Please initial next to either "Yes" or "No" to the following:

\_\_\_\_\_ Yes      \_\_\_\_\_ No      I consent to be audio-recorded for the interview portion of this research.

**Name of Participant (Print):** \_\_\_\_\_

**Participant's Signature:** \_\_\_\_\_

**Signature of the Person Obtaining Consent:** \_\_\_\_\_

**Date:** \_\_\_\_\_

Mahalo!

## APPENDIX F. TRANSLATION REVIEW FORM

**E-VISA**  
上海易维萨投资咨询有限公司  
Shanghai E-Visa Investment Consulting Co.,Ltd.

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I, Ji Fengjiao, have reviewed the translation of the following documents from Chinese to English, and certify that the translation is true and accurate.

- 1) Translation of interview transcripts
- 2) Translation of the questionnaire
- 3) Translation of the interview protocol

By: Ji Fengjiao



DATED: June 10, 2020

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