

ABSTRACT

Exploring a Flipped Classroom Approach in a Japanese Language Classroom: a Mixed Methods Study

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A flipped classroom approach promotes active learning and increases teacher-student interactions by maximizing face-to-face class time (Hamdan, McKnight, Mcknight, Arfstrom, & Arfstrom, 2013). In this study, “flipped classroom” is combined with the use of technology and is described as an instructional approach that provides lectures outside of class and student-centered, in-class active learning (Bergmann & Sams, 2013). When applied to a foreign language classroom, it allows instructors to incorporate both the explicit instruction (Sanz & Morgan-Short, 2005; Norris & Ortega, 2000) and interaction approaches (Swain, 2000; Ellis, 2012), which may facilitate the understanding of grammar and lead to language proficiency.

The present study explored the effect of a flipped classroom approach in a Japanese language classroom to assess its effectiveness and feasibility. A concurrent embedded strategy of mixed methods was utilized to study two sections of the introductory Japanese language courses at a private university in Texas. One section was the experimental group (EG) with 19 students. The other section was the control group

(CG) with 20 students. In order to establish a baseline of the students' language skills, both sections were taught using a traditional lecture approach during the first half of the semester. A flipped classroom approach was implemented in the EG during the second half of the semester. Six types of instruments were utilized: (1) questionnaires, (2) measures of learning outcomes, (3) class observation, (4) oral production rating scale, (5) Blackboard statistics tracking, and (6) instructor's daily journal.

The present study found that a flipped classroom initially requires a significant time commitment to create lecture videos and prepare lessons; however, delivering instruction outside of class with lecture videos increased active classroom learning time, which in turn increased the number of classroom interactions. While quantitative statistics found no statistical difference between the EG and the CG in the students' learning outcomes, descriptive analysis showed learning gains in the EG. In addition, qualitative data revealed that students expressed favorable attitudes towards the flipped classroom approach.

Exploring a Flipped Classroom Approach
in a Japanese Language Classroom:
A Mixed Methods Study

by

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A Dissertation

Approved by the Department of Curriculum and Instruction

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Submitted to the Graduate Faculty of
Baylor University in Partial Fulfillment of the
Requirements for the Degree
of
Doctor of Education

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December 2015

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ACKNOWLEDGMENTS

So many people have helped and encouraged me along the way to the finish line. This dissertation could not have been completed without each one of you. First and foremost, I would like to thank to my husband, Tim, and children, Yuki, Timmy, Raymond, and Lisa, and my extended family members for your unconditional support as I dedicated myself to this process these past several years. To my grandchildren, Patrick, Carson, Brock, and Tristan, who became part of our family before I finished this work, I can now be there for you guys.

I would like to express my sincere appreciation to my dissertation committee members. Each of you has been an inspiration to me to be who I am as an educator today. To my dissertation advisor, Dr. Trena Wilkerson: Thank you for encouraging me and pushing me to the end. So many times, I was reassured by your kind words. To Dr. Tony Talbert, Dr. Betty Conaway, and Dr. Larry Browning: Thank you for believing in me as I reached this goal. To Dr. Michael Long: Thank you for your genuine encouragement.

I would also like to thank my colleague, Peggy Hardt, for being inspired by my project and becoming my partner in producing the videos. These videos were a vital part of my study. Additionally I thank my colleague, Yoshiko Fujii Gaines, in the Department of Modern Languages and Cultures at Baylor University, for her unconditional support, filling in for me while I was in the final stretch, and just being my friend. I must acknowledge my department Chair, Dr. Heidi Bostic and my colleagues in

the Department of Modern Languages and Cultures at Baylor University, who were so encouraging throughout this process. To all my friends in Japan and the United States: Even though I do not have space to mention every one of your names, I truly thank you for your friendship and your continuous support.

Last, but certainly not least, to all my current and former students of Japanese language here in the United States and Japan: Thank you for cheering me on. I honestly could not have made it through without your support. You motivated me to work hard and be a better teacher.

Although I could not have achieved this goal without each and every one of you, I hope I was able to set an example that everyone can reach their goals if they set their mind to it.

DEDICATION

To my mother, Sumiko Hasegawa Enomoto

and to the memory of my father

Ryunosuke Enomoto

Both of whom instilled in me the value of diligence and hard work.

With all my love,

Yuko

CHAPTER ONE

Introduction

Through my experience teaching Japanese language over the years, I have amassed a large and diverse collection of instructional materials and plans. I initially used these materials in a traditional classroom instructional setting, which began with a lecture followed by student participation and activities. However, regardless of the materials I used or how I organized it, I often found myself unable to complete a daily lesson plan due to the density and complexity of the content and insufficient instructional time. I also believe that an essential component of foreign language learning is practice through engagement, dialogue, and repetition, and I was searching for ways to put more emphasis on these components. As a result, I began researching alternative instructional techniques to find more efficient ways to utilize time in the classroom in order to allow students maximum opportunity to engage in dialogue and activity. In recent years, I came across an instructional approach called “flipped classroom teaching.” Although this approach to teaching is less common in the foreign language setting, I developed a curriculum utilizing this approach and combined it with the use of technology. Through my experience teaching and researching various instructional techniques, I believe that the flipped classroom approach combined with the use of technology can provide students with the greatest opportunity to achieve a higher level of Japanese language proficiency. The foundation of the present study is an action research, which is based on

the curriculum I have developed, in my efforts to improve Japanese language teaching and learning in order to determine its effectiveness.

In this chapter, I will provide an overview of the instructional theories that form the basis of this study, the interaction hypothesis and explicit learning. I will identify certain challenges related to foreign language teaching and learning, and how those issues can be addressed using a flipped classroom approach combined with the use of technology, specifically grammar instructional videos. Finally, I will discuss the purpose and significance of the present study, which has assessed the effectiveness and feasibility of a flipped classroom approach on foreign language teaching and learning.

Background

Foreign Language Expectations

Twenty-first century college graduates are expected to be able to function in an increasingly global environment (Bollag, 2007). Learning foreign languages can prepare graduates for the global environment by helping students gain different perspectives in the world. At the same time, many students are coming to realize that “being able to speak a language besides English opens the door to a range of professional opportunities in an era whose watchword is globalization” (Howard, 2007, p.1).

The philosophy statement of the *World-Readiness Standards for Learning Language by the American Council on Teaching of Foreign Languages (ACTFL)* states “[l]anguage and communication are at the heart of the human experience. The United States must educate students who are linguistically and culturally equipped to communicate successfully in a pluralistic American society and abroad” (“World-

Readiness," 2015). Consequently, the goal of college foreign language (FL) education is to offer instruction that develops students who are successful communicators and who are able to effectively communicate in the target language.

Language Proficiency

Schulz (1998) defines a successful communicator as someone who knows how to convey his needs and knows how to form mutual understanding with others. An effective communicator in the target language is someone who is proficient in that language. A minimum goal of oral proficiency is the “ability to produce language that is comprehensible with syntax and vocabulary appropriate to the task, is grammatically accurate, and is pronounced in a manner that approximates the speech of a native speaker” (Payne & Whitney, 2002). Language proficiency at a more advanced level “refers to the ability to function effectively in a second language” (Nuessel, 1991, p. 3). Heilenman & Kaplan (1985) define proficient as being able to perform by retrieving and transferring knowledge to authentic situations. Thus, advanced language proficiency is not about merely being able to recite factual knowledge, but it is also “the ability to use language appropriately in different contexts and the ability to organize one’s thoughts through language” (Harley, Cummins, Swain, & Allen, 1990, p. 7).

The relative difficulty of foreign languages varies (See Figure 1.1). Thus, the amount of time required to reach certain level of proficiency also varies. Based on the *Language Difficulty Ranking* created by the Foreign Service Institute (FSI), the Japanese language belongs to category III, which is the most difficult language to learn for a native English speaker (“Language Learning”, 2007).

Category I: Languages closely related to English 23-24 weeks (575-600 class hours)	
Afrikaans Danish Dutch French Italian	Norwegian Portuguese Romanian Spanish Swedish
Category II: Languages with significant linguistic and/or cultural differences from English 44 weeks (1100 class hours)	
Albanian Amharic Armenian Azerbaijani Bengali Bosnian Bulgarian Burmese Croatian Czech *Estonian *Finnish *Georgian Greek Hebrew Hindi *Hungarian Icelandic Khmer Lao Latvian	Lithuanian Macedonian *Mongolian Nepali Pashto Persian (Dari, Farsi, Tajik) Polish Russian Serbian Sinhalese Slovak Slovenian Tagalog *Thai Turkish Ukrainian Urdu Uzbek *Vietnamese Xhosa Zulu
Category III: Languages which are exceptionally difficult for native English speakers 88 weeks (second year of study in-country) (2200 class hours)	
Arabic Cantonese Mandarin	*Japanese Korean
Other languages	
German	30 weeks (750 class hours)
Indonesian, Malaysian, Swahili	36 weeks (900 class hours)

* Languages preceded by asterisks are typically somewhat more difficult for native English speakers to learn than other languages in the same category. (“Language Learning,” 2007)

Figure 1.1 The Foreign Service Institute Language Difficulty Ranking

This study focused on first-semester introductory Japanese courses; however, students would neither reach the advanced proficiency level to communicate effectively in the target language nor was going to become “[e]ducated L2 learners with extended professional and/or educational experience in the target language environment” (Swender, 2003, p.525). As a result, this study applied the less rigorous Payne and Whitney (2002) definition of oral proficiency to the first semester Japanese course. In their study of the effect of synchronous computer-mediated communication (CMC) on developing L2 oral proficiency with the third semester Spanish course students, Payne and Whitney (2002) simplified the definition of oral proficiency as they determined that the widely recognized ACTFL Oral Proficiency (OPI) guidelines were not appropriate for their study as the OPI would not be practical to measure oral proficiency that develops in one semester:

Oral Proficiency in this context refers to an individual’s ability to produce language that is comprehensible with syntax and vocabulary appropriate to the task, is grammatically accurate, and is pronounced in a manner that approximates the speech of a native speaker (p.16).

This definition was more relevant to the assessment goals of oral proficiency in the first-semester introductory Japanese language course to be used in the present study to measure the achievement.

Interaction Hypothesis

Interactions refer to “conversation between learners and others” (VanPatten, 2010, p. 99). It is the process of being exposed to language, or “inputs,” and producing language, or “outputs” (VanPatten, 2010). Previous studies on *Interaction Hypothesis* were building blocks for this present study. These studies have revealed that

communicative exercises and tasks that involve interactions promote higher proficiency in second language acquisition (SLA) (Gass & Mackey, 2006; Matsuoka & Ikhsan, 2013). While individual differences such as levels of motivation, learning strategies, working memory, language aptitude, cognitive styles, and social context affect language learning, the *Interaction Hypothesis* proposes the effectiveness of the interaction and learning relationship (Gass & Mackey, 2006). Although a number of empirical studies have demonstrated positive effects of interactions on second language (L2) acquisition (Lightbown & Spada, 1990; Lyster & Ranta, 1997; Pica, Lincoln-Porter, Paninos, & Linnell, 1996), extensive practices are necessary to reach appropriate proficiency goals (Hadley, 2001a).

The *Interaction Hypothesis* combines output hypothesis and input hypothesis. Output hypothesis (Swain, 2007) has three functions: “1) the noticing/triggering function, 2) the hypothesis-testing function, 3) the metalinguistic (reflective) function” (p. 6). According to output hypothesis, both small group or pair work and group oral practices allow students to notice the problem with the language, to negotiate the meaning, and to engage in metalinguistic activity. For some output to occur, input is necessary (VanPatten, 2013; Krashen, 1992). Krashen (1992) claims that input hypothesis explains the condition in which people acquire second language; that is when people receive comprehensible input, a little beyond the current level of input. VanPatten (2013) goes further to state that manipulated input (called structured-input) is more functional in SLA because the processor is forced to internalize it and produce output.

Explicit Instruction

While the significance of communicative activities involving interactions to achieve foreign language proficiency is recognized, equally important is explicit grammar instruction. Norris and Ortega's (2000) meta-analysis of 77 studies finds that explicit grammar instruction is more effective than implicit instruction. Explicit grammar instruction is metalinguistic information, which explains how the language works (Sanz & Morgan-Short, 2005). Sanz & Morgan-Short also support the effectiveness of explicit grammar instruction stating, "[e]xposure to explicit evidence seems to speed up the process of language acquisition and to further the level of ultimate attainment" (p.248). Furthermore, as a result of their study on the effectiveness of explicit form-focused instruction, Rahimpour and Salimi (2010) posit explicit grammar instruction does facilitate greater attention to forms and planning of language production which will lead to greater language proficiency.

Challenge in Foreign Language Instruction

Various instructional theories and practices are available for teaching a foreign language, including the *Interaction Hypothesis* and explicit grammar instruction discussed above. The challenge for foreign language instructors is to determine the appropriate instructional activities and pedagogies to use in their particular classrooms to help students acquire both knowledge and understanding of language. Furthermore, the ultimate goal of foreign language instruction is to help students achieve language proficiency, including functional language skills, and communication skills, which can be applied to real-life situations. How can this be accomplished? How should students be

guided to gain maximum language proficiency? What is involved in effective foreign language instruction that helps students develop proficiency?

Defining effective foreign language instruction is complex because it involves combining theory and reality. Instructors have to consider other elements that are not directly related to SLA such as time and volume of content to be covered in a single course. According to Bell (2005), trends in FL teaching practices have shifted from traditional grammar-based to more communicative and interactive approaches over the last several decades; however, there is no single definition of effective FL teaching that is commonly accepted. Although it is important to keep updated on current research and practices related to FL teaching and learning, individual instructors have the responsibility for evaluating the various practices to make sound pedagogical decisions.

The present study has recognized the benefits of both learner-centered active learning and teacher-centered grammar instruction (Lightbown, 1990), which combines concepts from the *Interaction Hypothesis* and explicit grammar instruction approaches. A learner-centered classroom maximizes students' opportunities for communicative practice as they interact with others, actively engage in negotiation of meaning, and express themselves (Antón, 1999). On the other hand, a teacher-centered teaching refers to the traditional approach in which teachers' knowledge is transmitted to students passively (Antón, 1999). Although a traditional teacher-centered teaching provides only minimum classroom interactions (Antón, 1999), such an approach combined with the idea of explicit grammar instruction can also facilitate the attainment of language proficiency quickly and accurately (Friedman, 2007; Schulz, 1996). The challenge for

instructors is to effectively incorporate these two approaches in a daily fifty-minute lesson, which is typical in college foreign language classrooms.

Another challenge for foreign language instructors is navigating the gap between students' and teachers' attitudes and perceptions towards teaching and learning the language. To explore teachers' beliefs on effective FL teaching and learning, Bell (2005) conducted a study using a questionnaire. The study found that, in terms of the relationship between teaching and learning practices, there was a strong consensus on the communicative theories, importance of small group work, and negotiation of meaning among the four hundred fifty-seven post-secondary teachers (Bell, 2005). More recently, in a study comparing college students' and teachers' perceptions on effective FL teaching, Brown (2009) reported that teachers seemed to value communicative approaches to L2 pedagogy over distinct grammar practice while students mostly appeared to prefer formal grammar instruction over communicative exchanges in the classroom.

The results from Bell's (2005) and Brown's (2009) studies concerning teachers' attitude and perception certainly correspond with the current trend in FL teaching; however, these teachers' perceptions and teaching trends are not consistent with students' expectations. If teachers are to seek effective approaches to teaching and learning while trying to understand students' perspectives, a balanced approach should be considered. At the same time, if teachers are to implement a pedagogy that may be contrary to students' expectations, it is necessary to explain beforehand in order "to help students understand some empirically proven principles of L2 learning (e.g., the importance of output, interaction, and negotiation of meaning) to justify exercises" (Brown, 2009, p. 54).

Consequently, individual instructors must determine which approach to follow in their own classrooms and gauge its effectiveness.

Language Acquisition and Technology

Computer technology has been used in FL teaching since the 1960s (Blake, 2008; Warschauer & Healey, 1998). Behaviorist perspective was prevalent in FL teaching during the era of main frame computers (Warschauer & Healey, 1998). After the behavioristic approach utilizing repetitive language drills was rejected in the late 1970s and early 1980s, personal computers made it possible to shift to individual work that focused on activities using the language. By the late 1980s and early 1990s, language teaching theories again moved to a socio-cognitive view in which language learning incorporated the use of various skills such as listening, speaking, reading, and writing in authentic environment, which resulted in having students use a variety of technological tools, instead of visiting the computer lab once a week (Warschauer & Healey, 1998).

With the rapid technological advances over the years, a variety of technology options for teaching have now become available, “from multimedia computers to the Internet, from videotapes to online chat rooms, from web pages to interactive audio conferencing” (Zhao, 2003, p. 8). According to Zhao (2003), each function of technology is different depending on their capacity, interface, and accessibility. While a specific technology may possess great potential in language learning, it may be ineffective unless it is used properly (Bax, 2003; Staley, 2004; Zhao, 2003). According, to Ferdig (2006), “it is difficult to judge the ‘goodness’ of a technology outside of the purpose for which it was created. In other words, a screwdriver is a good innovation in some cases and potentially bad at times when a wrench is needed” (p. 749). Blake (2008)

also claims that there is no single technology suited for language study, and technology is merely a tool that can be utilized in L2 learning.

The above claims are not to disregard the effective use of technology in teaching and learning, but rather to emphasize the importance of having a pedagogical purpose for its use. For example, Wiske, Fran, and Breit (2005) assert that technology can play an important role in facilitating a learning environment that fosters development of deeper understanding when guided by the Teaching for Understanding framework. *Teaching for Understanding* is a pedagogical framework that highlights acquisition of *understanding*, which is defined as being able to think and perform flexibly by applying what you know. Therefore, “how technological tools are used should largely be guided by a particular theoretical model and by those who practice it” (Blake, 2008, p. 3). Modern technological advances have made it possible for students to have outside access to information that was traditionally delivered inside a classroom (Berrett, 2012; Davies, Dean, & Ball, 2013). Combined with a sound pedagogical approach, the use of technology can address the instructional challenges such as insufficient time to conduct face-to-face engaging activities.

Blended Learning

Although technology is a beneficial teaching tool, face-to-face instruction still continues to be an effective way to deliver information to students and serves an important role in classroom instruction. Thus, a classroom incorporating face-to-face instruction in conjunction with technology would enjoy the benefits of both approaches. Blended learning is an instructional approach that combines face-to-face and computer assisted learning in the most effective and efficient way (Neumeier, 2005). Figure 1.2

illustrates “the continuum of models used in schools throughout the country” (“Blended Learning,” 2009, p. 3). On one end of the scale, classes are conducted entirely online with optional face-to-face instruction, while in the middle, some of the class sessions are replaced with online learning activities, and on the other end, the digital materials are utilized to supplement face-to-face instruction (“Blended Learning,” 2009). Although there is no consensus regarding the allocation of online and face-to-face instructional time, (Garrison & Vaughan, 2007), Garrison and Kanuka (2004) claim that the blended learning approach seems to deliver maximum benefit when teachers arrive at the most desirable way to integrate these two instructional components to meet the needs of a particular course.

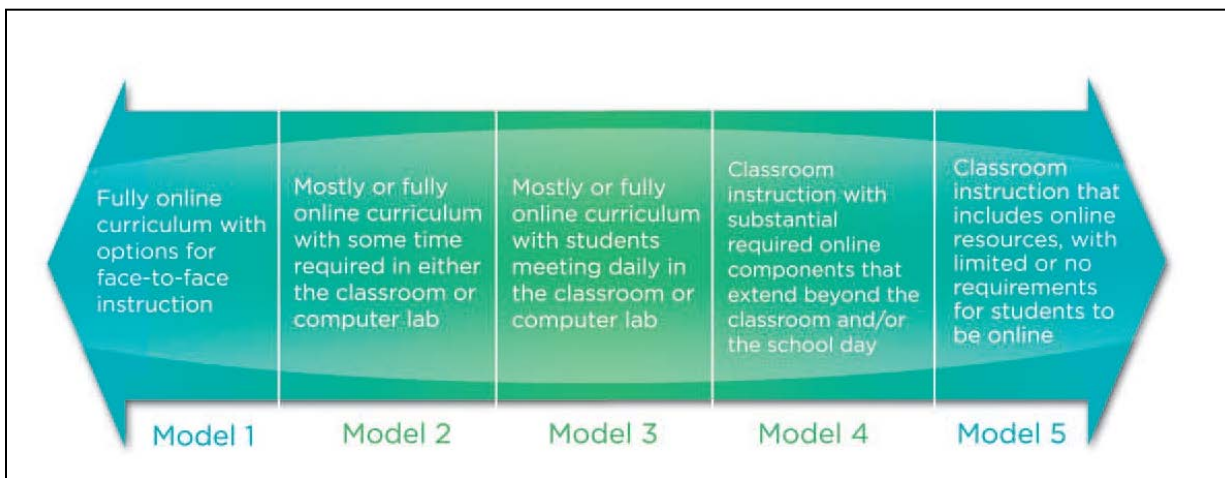


Figure 1.2 “Blended Learning Continuum” (“Blended Learning,” 2009, p. 3)

Flipped Classroom Approach

Bergmann and Sams (2013) advocate a form of blended learning that combines a “flipped classroom approach” with technology. A flipped classroom approach promotes active learning and increases teacher-student interactions by maximizing the face-to-face

class time (Hamdan, McKnight, Mcknight, Arfstrom, & Arfstrom, 2013). The “flipped classroom” or “‘flipped’ approach to teaching” (Herreid & Schiller, p. 62, 2013) refers to the reversal of the traditional lecture-based instructional approach. Rather than spending the class time in lectures, student centered active learning takes place during the face-to-face class time (Bergmann & Sams, 2013). The flipped classroom approach combined with the use of technology takes lectures out of the classroom and has students watch the video lectures on their own time, resulting in more class time allocated to engaged learning.

Bergmann and Sams (2013) claim that a flipped classroom approach accompanied by technology focuses on effective ways to use the face-to-face class time with students. When it is applied to a foreign language classroom, it allows students to learn grammar in direct instruction through the use of video lectures outside of the classroom, which results in freeing up time to engage in more student-centered active learning in class (Bergmann & Sams, 2013). The increase in active learning time enables students to have more opportunities to engage in input, output, and interaction practices. Accordingly, a flipped classroom approach in foreign language instruction allows instructors to incorporate both the explicit instruction and interaction approaches, which may facilitate the understanding of grammar and lead to language proficiency.

Purpose of Study

The purpose of this study was to explore the effect of a flipped classroom approach in a Japanese language classroom to assess its effectiveness and feasibility. The study examined the effects of a flipped classroom approach on students’ learning outcomes and learning experiences and examined students’ perceptions of the flipped

classroom approach in a foreign language classroom. While some studies affirm the benefit of flipped classrooms, critics claim that it demands more of professors and that some students will simply reject non-traditional approaches of instruction (Berrett, 2012). Moreover, there are no identical modes of flipped implementation (Bergmann & Sams, 2013; 2012; Bergmann, Overmyer, & Willie, 2012; Berrett, 2012), and initial preparation for the flipped classroom approach requires significant time and effort on the part of the instructor (Enfield, 2013; Findlay-Thompson & Mombourquette, 2014). Furthermore, one of the important factors that affect a successful flipped learning environment is whether students “buy-in” (Findlay-Thompson & Mombourquette, 2014, p.69) to this untraditional approach toward instruction. According to Enfield (2013), a flipped classroom approach will be most effective when students accept responsibility for independent learning outside of the classroom along with well-planned in-class activities.

Significance of Study

Studies on the effect of flipped classrooms are scarce (Findlay-Thompson & Mombourquette, 2014), especially in the field of foreign language education at post-secondary levels. Enfield (2013) further indicates that most published studies are anecdotal reports. Literature reviews have yielded a limited number of studies, most of which involved pretest posttest quasi-experimental designs in the area of STEM (Davies et al., 2013; Day & Foley, 2006; Mason, Shuman, & Cook, 2013) education. Although the majority of those studies discuss the benefit of flipped classroom and academic gains in contrast to a traditional classroom (Davies et al., 2013; Mason et al., 2013; Talley & Scherer, 2013), there are some skeptics who emphasize drawbacks associated with the likelihood of resistance from both students and professors (Berrett, 2012; Hamdan et al.,

2013; Strayer, 2012). The present study offers a new perspective on the use of a flipped classroom approach and how it was studied in the Japanese language setting.

Furthermore, I contend that the present study will help improve my own Japanese language teaching and learning; at the same time, it will encourage others to investigate the effectiveness of a flipped classroom approach with empirical research in order to improve their own foreign language teaching practices.

Research Questions

To assess the effectiveness and feasibility of a flipped classroom approach in a Japanese language classroom, I explored three primary questions, which were then divided into eleven sub-questions:

1. What are the differences in students' learning outcomes between a flipped classroom approach (experimental) and the traditional instructional approach (control)?
 - 1-1. What are the differences in students' oral production skills?
 - 1-2. What are the differences in students' learning gains in terms of oral production skills?
 - 1-3. What are the differences in students' achievement?
2. What are the differences in the classroom communication patterns between a flipped instructional approach (experimental) and the traditional instructional approach (control)?
 - 2-1. What are the differences in the number of teacher-to-students whole-class questions?
 - 2-2. What are the differences in the number of teacher-to-student individual questions?
 - 2-3. What are the differences in the number of whole-class output?
 - 2-4. What are the differences in the number of individual output?

- 2-5. What are the differences in the number of output with errors?
3. What are the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach?
- 3-1. What are the students' perceptions on receiving grammar instruction in the form of video?
- 3-2. What are the students' perceptions towards the flipped classroom approach?
- 3-3. What is the students' level of participation in video instruction outside of the classroom setting?

Definitions of Terms

The following terms are defined operationally for the purpose of this study.

1. *face-to-face classroom* – A commonly used traditional educational environment in which students and instructors physically meet regularly at a specified time and place (Bonakdarian, Whittaker, & Yang, 2010).
2. *student-centered classroom/learning* – A learning environment which “seeks to engage students actively in learning in ways that are appropriate for and relevant to them in their lives outside the classroom (Peyton, Moore, & Young, 2010, p. 2).
3. *traditional approach of teaching* – emphasizes passive transfer of knowledge from a teacher to students (Warschauer & Healey, 1998).
4. *second language versus foreign language* – Whereas students learning a second language are in an environment surrounded by the target language both in and outside of the classroom, foreign language students rarely have opportunities to encounter the target language other than in the classroom (Bilash, 2009). Most second language acquisition theories apply to foreign language learning. Therefore, they are sometimes used interchangeably.

Summary

While a flipped classroom approach is not a new concept (Berrett, 2012), it has recently gained popularity with video technologies becoming easily available. However, a flipped classroom approach utilizing technology is not only about watching videos outside of class (Bergmann et al., 2012). A successful implementation of a flipped

classroom approach involves application of SLA theories and perspectives as well as well-organized execution and student participation.

The fundamental tenet is simple. The flipped classroom approach is an instructional approach that best utilizes face-to-face classroom time by providing an active and meaningful learning environment. Yet, as most advocates suggest, flipped classrooms are not a “one size fits all” approach (Bergmann & Sams, 2012; Berrett, 2012; Hamdan et al., 2013). Available studies are also limited, especially in the field of foreign language acquisition. Therefore, by exploring the effect of a flipped classroom approach utilizing technology in one foreign language classroom to assess its effectiveness and feasibility, the present study helps improve the researcher/instructor’s own instructional practices. More importantly, the study offers one example of the implementation of a flipped classroom approach utilizing technology so interested educators can draw upon this study as a resource for their own instructional practices and for designing future studies.

CHAPTER TWO

Literature Review

Introduction

In this chapter, a review of the literature and discussion of the relevance of a flipped classroom approach in foreign language teaching and learning is presented. The chapter begins with a discussion of *language proficiency* and its significance in foreign language acquisition. Next, it examines the role of technology in foreign language teaching and learning. The discussion of the role of technology is necessary because the flipped classroom approach in this study utilizes technology. VanPatten (2013) claims the importance of understanding the elements of language development before studying the impact of instruction on second language acquisition (SLA): “(1) the development of mental representation of L2 and (2) the ability to use language in real time (i.e., skill)” (p.23). As a result, the relevance of a flipped classroom approach for proficiency oriented foreign language teaching and learning will be explained in this chapter by discussing and applying applicable SLA perspectives. Next, the cognitive theory of multimedia learning will be discussed in order to explain the development of the lecture videos used in the present study. Finally, the chapter will conclude with the rationale for the current study and the pedagogical implication of a flipped classroom approach in foreign language teaching and learning.

Language Proficiency

Language proficiency can be understood as an individual's ability to communicate adequately through the various modes of language skills. The American Council on Teaching Foreign Languages (ACTFL) Proficiency Guidelines refers to "functional language ability" (ACTFL, 2012, p. 3), which is "what individuals can do with language in terms of speaking, writing, listening, and reading in real-world situations in a spontaneous and non-rehearsed context" (ACTFL, 2012, p. 3). Similarly, Bragger (1986) introduces the notion of *function*, which "refers to the task that an individual is able to accomplish linguistically (asking questions, giving information, describing, narrating, stating and supporting opinion, etc.)" (p.80) in the context of foreign language education.

The use of the communicative language method of teaching for attaining foreign language proficiency began during the 1970s (Hadley, 2001a). Prior to that period, foreign language proficiency had been mainly measured by one's structural accuracy (Hadley, 2001b) or knowing the implicit conceptions of grammar and lexis (Harley, Cummins, Swain, & Allen, 1990) in a foreign language. However, the release of the ACTFL Oral Proficiency Guidelines in 1986 (Stansfield, 1992) along with the President's Commission on foreign language international studies in the 1980s were the catalyst for the proliferation of the proficiency movement in foreign language instruction. As a result, teachers began to understand that measuring language proficiency involved a whole range of abilities that needed to be described gradually in order to be meaningful, rather than being a massively vague concept that was difficult to attain (Hadley, 2001b).

The importance of proficiency in foreign language acquisition is highlighted in the philosophy statement of the *World-Readiness Standards for Learning Languages* by the ACTFL ("World-Readiness," 2015). The philosophy statement states that it is crucial for the United States to educate students who can communicate linguistically and culturally in a pluralistic American society and beyond. The importance of proficiency is further supported by Rosemary G. Feal, the executive director of the *Modern Language Association* (MLA) (Howard, 2007). Commenting on the findings of the MLA survey that reported increases in foreign language enrollment in American colleges and universities, Feal stated that more college students were realizing the benefits of being able to speak a language other than English because it opened the door to a variety of professional opportunities in an era of global society (Howard, 2007). As a result, Bollag (2007) claims that it is inevitable for higher education in the United States to develop more graduates who can better function in a rapidly growing global environment.

Communicative Competence

The nature of proficiency is, according to, Harley et al, (1990) not only having grammar knowledge, but also knowing how and when to use the discourse appropriately. This notion of proficiency was originally coined “communicative competence” by Dell Hymes in the mid-1960s (Cazden, 2011). Canale and Swain (1980) further “distinguished grammatical competence, sociolinguistic competence, and strategic competence” (Harley et al., 1990, p. 9). Swain then developed a framework of curriculum and assessment in second language teaching aimed at communicative competence. In order to make the concept of communicative competence relevant to classroom teaching and learning, Savignon (1997) outlined four components of

communicative competence: (1) grammatical competence - the ability to form words and sentences by manipulating grammar rules, not stating a rule, (2) sociolinguistic competence - having the understanding of the social context and the language use within it, (3) discourse competence - the ability to understand and interpret the whole text in a coherent manner within a given context, and (4) strategic competence - the ability to cope with lack of knowledge in the target language by using communicative strategies.

These communicative components are linked to the actual usage of the language, or proficiency, which is concerned with what students can do in “the *real world*” (Savignon, 1997, p. 222). Thus, communicative competence posits that proficiency requires more than the sum of disconnected knowledge and skills, but demands grammar knowledge and language skills balanced with the opportunity to use the language (Heilenman & Kaplan, 1985). Consequently, a proficiency oriented instructional curriculum should incorporate methods for both practicing the language as well as learning the rules about the language.

Proficiency-Oriented Classroom

Classes that utilize instructional approaches that are focused on fostering language proficiency are described as proficiency-oriented classrooms. Hadley (2001b) outlines five characteristics inherent in a proficiency-oriented classroom. First, there should be enough opportunities to practice using the language in a range of contexts simulating the target culture. Rather than teacher-centered practices that mainly focus on language forms and prescribed answers, small-group and paired communicative activities are recommended. Second, opportunities should be provided for students to practice various tasks, which are likely to be encountered in dealing with others in the target culture.

These tasks include expressing and exchanging opinions as well as conveying one's needs in survival situations. While some of the functional practices are directed at advanced level learners, well-planned methodologies can also help novice students develop skills to cope with real-world communication needs. Third, form-focused grammar instruction as well as both direct and indirect corrective feedback will lead to the progression of the language skills toward accurate and coherent language use. Fourth, classroom activities should be planned to address the individual needs and preferences of students in language learning. Hadley (2001b) suggests considering affective factors such as motivation and anxiety as well as using technology with the intention of offering a study environment that is accepting, relaxed, and supportive. Finally, cultural aspects are essential in a proficiency-oriented classroom as it promotes cross-cultural understanding.

In summary, the ideal proficiency-oriented classroom requires both student-centered and context-driven learning activities, as well as formal grammar instruction. The former promotes active engagement in real-world-like experiences, while the latter helps develop language accuracy. These factors enable students to develop proficiency in a friendly and motivating environment.

Technology and Foreign Language Teaching and Learning

The pedagogical use of technology in L2/FL teaching and learning has a long history. Articles related to this topic were already appearing in the *Modern Language Journals* (MLJ) since its first edition in 1916 (Salaberry, 2001). According to Salaberry, the early use of technology involved audio-visual media such as phonograph and radios, which mainly served to teach pronunciation and intonation. Radios were also used to

deliver information through distance learning. As a natural extension, television, films, and videos became widely utilized in classroom instruction as the technology became available. For instance, pre-recorded television lectures were used in a German classroom (Gottschalk, 1965) while Herron, Hanley, and Cole (1995) introduced videos to improve comprehension and retention of written texts in French courses. Furthermore, with the advent of computer technology, computer assisted language learning (CALL) gradually became prevalent.

CALL has evolved since the 1960s from behavioristic CALL, to communicative CALL, and finally to integrative CALL (Warschauer & Healey, 1998). CALL was initially linked to behaviorism and used main-frame computers to practice grammar translation and drill exercises, which were derived from previously used audiolingual methods. The late 1970s and 1980s was marked by communicative CALL, which made individual work possible through new personal computers and emphasized using forms to teach grammar implicitly, encouraging students to generate original utterances. Finally, in the late 1980s and early 1990s, emerging multimedia network computer and Internet promoted an integrative CALL perspective, which sought to integrate learners in a more social or sociocultural context using various language skills. Furthermore, in the 21st century, Web 2.0, network applications that connect people online (e.g., Google, Amazon, Wikipedia, eBay, craigslist, YouTube, Facebook), began generating collective intelligence which is built on people's individual contributions (O'Reilly & Battelle, 2009). The constant progress of technology offers endless options to incorporate into foreign language teaching and learning; at the same time, the technological progress imposes a challenge to language instructors trying to select appropriate technology and to

understand how to use and how to connect new and evolving technology with learning content and process (Morehead & LaBeau, 2005).

Blended Learning

The array of available technology offers a variety of tools to enhance L2 instruction for specific learning purposes. Thus, an emergence of blended learning models in L2 teaching and learning is a natural consequence of technological advances. While there is no single accepted definition of blended learning, in a broad sense, it can be defined “as structured opportunities to learn, which use more than one learning or training method, inside or outside the classroom” (Pankin, Roberts, & Savio, 2012, p. 1). “[B]lended learning is the thoughtful fusion of face-to-face and online learning experience” (Neumeier, 2005, p. 164), combining face-to-face and CALL in the most effective and efficient combination for the single learning subject and objectives. Some proponents of blended learning claim that “blended” refers to incorporating online components that actually replace face-to-face class time resulting in less classroom time (Inoue, 2009; Garrison & Vaughan, 2007; McGee & Reis, 2012). Other implementations of blended learning take the approach that “face-to-face classroom instruction is integrated with online components that extend learning beyond the classroom or school day” (“Blended Learning,” 2009, p. 1).

In an ideal proficiency oriented foreign language classroom, a normal fifty-minute class time, in reality, is not sufficient to cover both grammar instruction and active learning activities (Schulz, 2006). In his book, *Brave New Digital Classroom*, Blake (2008) claims that increasing contact with the target language is essential to second language acquisition, making the process of learning a foreign language intensive and

time-consuming. As a result, most instructional hours required at the university level are insufficient to reach high proficiency. One way to deal with this issue of insufficient teaching and learning time is through the use of technology. Technology in foreign language learning involves “a wide range of tools, artifacts, and practices, from multimedia computers to the Internet, from videotapes to online chat rooms, from web pages to interactive audio conferencing” (Zhao, 2003, p. 8). Given the vast array of available modern technology, Zhao (2003) notes that technology can have a positive effect on language learning if and when used properly.

On the other hand, Salaberry (2001) cautions the use of technology on L2 teaching and learning. He presents retrospective accounts of technology use for foreign language teaching and learning since the early 1900s. Salaberry lists a range of technologies used in L2 teaching and learning such as audio/visual media and teaching devices involving computer assisted language instruction or learning (CAI/CALL), and claims that his previous synthesis of research in CAI and CALL found studies only on technologically-driven instruction. For example, according to Salaberry, studies such as those performed by Crooks (1994), Levy (1997), and Salaberry (1999) only focus on capabilities of tools instead of a principle-oriented approach that explores the pedagogical purpose of technology use.

Correspondingly, Bax (2003) uses a case to describe teacher perceptions towards the use of technology. At a university seminar that introduced new vocabulary software, most teachers were concerned with what the software could not do instead of addressing how it could be utilized in the wider classroom context, not recognizing other factors affecting successful implementation of the technology. The teachers held unrealistic

expectations “which (a) place CALL on a pedestal and (b) assume that the technology alone will solve the problem” (p.26). However, when choosing an appropriate tool for teaching and learning, it is necessary to have sound pedagogical objectives (Salaberry, 2001). Without clear goals for use of a particular technology, teachers will often become frustrated and disappointed with the technology.

Through proper use and setting clear goals, technology is a pedagogically neutral tool that can support teaching and learning (Blake, 2008). “The potential pedagogical effect of the technological tools used in L2 instruction (e.g., VCRs, audio tape recorders, satellite TV, etc.) is inherently dependent on the particular theoretical or methodological approach that guides its application” (Salaberry, 1996, p. 7). Thus, a pedagogically sound practice of using technology requires linking the innovation to learning theory (Ferdig, 2006). Without a theoretical framework, technology as a neutral tool has no meaning in foreign language teaching and learning.

The fundamental learning theory of foreign language instruction is second language acquisition (SLA). SLA is “the process of learning another language other than your mother tongue” (i.e., your first language, or L1) (Blake, 2008, p.1). SLA researchers believe that how L2 learners acquire language is predictable (Sanz, 2005). Prior to the early 1990s, SLA theory was linked to a psycholinguistics view which focused mainly on studying individual mental behavior, whereas recent SLA studies have expanded to socio-cultural perspectives which recognize that L2 learning is affected by one’s social environment (Swain & Deters, 2007). Accordingly, contemporary SLA theory should be the guiding principle in establishing a blended learning environment.

Flipped Classroom

The present study explores the “Flipped Classroom” instructional approach and its effectiveness in foreign language teaching and learning. The flipped classroom model is a form of blended learning and refers to the reversal of the traditional instructional approach. The main feature of the flipped classroom model is engaging active rather than passive learning during class time, while providing instructional lectures outside of class time (Berrett, 2012). The goal of the flipped classroom model is not about having students watch content videos at home, but rather focusing on effective ways to use face-to-face class time to engage in active learning with students (Bergmann & Sams, 2013). According to Bergmann & Sams (2012), “flipping allows teachers to leverage technology to increase interaction with students” (p. 25). With the increased interaction, a flipped classroom approach can utilize classroom time more effectively to help students improve language proficiency (Witten, 2013).

The flipped classroom model of teaching and learning has gained a lot of attention or “media buzz” in recent years (Aronson & Arfstrom, 2013; Muldrow, 2013), including blogs, websites, and online news. Online articles discuss the pros and cons in regard to the implementation of a flipped classroom. Advocates of flipped classroom claim that students can watch the lectures at their own pace and apply the learned concepts in the classroom. In the *Wall Street Journal*, one of the early creators of the flipped classroom, Khan (2011), described how he helped his cousin who was struggling in a mathematics class using the video lectures. Advocates such as Jawahrial (2015) also offer advice to those who are considering implementing the flipped classroom. He suggests that the flipped classroom is worthwhile, although it initially requires a lot of work for preparing

productive and engaging face-to-face activities and to search or create engaging and appropriate video for the specific content. On the other hand, some researchers are skeptical of the effectiveness of the teaching approach. An article in the *USA TODAY* ("Teachers flip", 2013) reported on the results of a pilot study of the three-year research (funded by the National Science Foundation) of the effects of the flipped classroom in STEM classrooms at a college in California (Lape, Levy, & Yong, 2014). Although it only concerned the preliminary results, the professors did not find any differences between the flipped classroom and the traditional class; thus, they felt it might not be worth implementing.

The concept of flipping is not new. For example, students are usually expected to read a novel before class so the class time can be dedicated to discussion on themes and symbolism, etc., in humanities courses, and students in law schools are often engaged in the Socratic method in which the norm is to learn the materials before class and face their professor's rigorous questions in class. A more specific example is the mathematics department at the University of Michigan at Ann Arbor, which has implemented flipped teaching and learning since the mid-1990s. Students are expected to do their reading before class and spend time solving questions together or in groups in class (Berrett, 2012). In their introductory calculus courses at the University of Michigan at Ann Arbor, instructors guide students through the exercises and help clear up misconceptions. Additionally, students present their answers to their peers or work in small groups in class (Aronson & Arfstrom, 2013).

Published studies of the flipped classroom model in peer-reviewed journals are mostly limited to the area of science, technology, engineering, and mathematics (STEM)

education (Davies et al., 2013; Day & Foley, 2006; Mason et al., 2013), and the majority of those studies have found academic gains for students as a result of the use of the flipped classroom model in STEM education (Davies et al., 2013; Mason et al., 2013; Talley & Scherer, 2013).

For instance, Davies and colleagues (2013) conducted a case study of a college-level information system spreadsheet course to explore the benefits of flipped classroom and how technology was used. This study utilized a pretest-posttest quasi-experimental research design. The data was collected through surveys and assessments from three groups: a traditional classroom, a flipped classroom, and a simulation classroom. All three groups were asked to read the textbook materials before completing the homework assignments. In the traditional group, students received the teacher's instruction in the classroom. In the flipped classroom, the students were encouraged to watch videos that demonstrated how to accomplish a task and included motivation segments as well as additional instruction on how to solve the problem. The students in the flipped classroom also had an option to attend class for extra assistance and instruction. In the simulation group, students attempted to complete the assignments without attending the class. The students were also able to watch videos that show how to accomplish tasks. There were 301 students originally invited to participate, of which "207 completed at least some elements of the data collection" (p.569). A cross-case comparative data analysis revealed that the students in the flipped classroom had higher academic gains than those in the traditional classroom based on the scores of the post tests and course satisfaction surveys.

Another study was conducted in an undergraduate hybrid flipped Physiological Psychology course at a Mid-Atlantic historically black college and university (Talley &

Scherer, 2013). “The purpose of this study was to encourage the use of more effective learning techniques in the course” (p.343). The students in the hybrid flipped Physiological Psychology course were instructed to watch the online video lectures and to participate in several practice test sessions, and then were asked to record a video of themselves demonstrating teaching the material they had learned from the lectures. Using a two-tailed *t*-test, students’ final course grades in the flipped course were compared to the grades in the non-flipped course from the previous semester. The results of the study found that the students in the flipped classroom performed significantly higher than the previously offered traditional classroom. A questionnaire provided to students also requested feedback regarding the effectiveness of the video lectures. Most of the students indicated that the flipped classroom approach helped increase the understanding of the content, whereas only 4.4% of the students responded that the flipped classroom approach was not beneficial.

Others such as Lape et al. (2014; 2015), who are currently engaged in a multi-year study of flipped classrooms within three disciplines (chemistry, engineering, and mathematics) at a small undergraduate residential college, claimed that they have not found significant differences in student performance compared to the traditional courses. Their study used a variety of outcome measures such as pre- and post-assessments of student surveys, content assessments, homework, and course grades to assess the impact of “the inverted classroom model” (i.e. flipped classroom) in the area of “Academic Learning Gains”, “Transfer of Knowledge”, and “Metacognitive Gains” (para. 5). Thus far, they have reported the first-year and the second-year results from the study of the engineering and mathematics courses. The study employed a quasi-experimental design,

which compared “students from inverted sections with those in control sections (i.e., traditional course model)” (para. 6). The sample size of the first year was 230 (117 treatment and 113 control), and the second year was 186 (87 treatment and 99 control). Lape et al. (2014; 2015) found that there was hardly any difference in students’ learning outcomes or gains. Furthermore, students in the inverted classroom design expressed mixed opinions concerning the overall satisfaction of the courses.

While the study by Lape et al. (2014) has not found significant benefits from the flipped classroom model, they caution not to generalize their findings as each school had different learning environments that could impact results. For instance, the success of flipped classrooms at non-residential colleges could be affected by a learning environment in which most of the students have full-time jobs, live far from campus, and have less time to engage in group activities outside of class. Furthermore, some studies have indicated issues with implementation of flipped learning, such as resistance from both students and professors who are more familiar with traditional lecture oriented courses (Berrett, 2012; Findlay-Thompson & Mombourquette, 2014; Hamdan et al., 2013).

In a mixed-methods study that compared the learning environment of an inverted introductory-level college statistics class with a traditional introductory-level college statistics class, Strayer (2012) found that flipped classroom might not work in introductory courses in which students had neither enough interest nor motivation. In addition, the focus group interviews revealed that more students gave positive feedback in the traditional classroom for having a set pattern to class activity, which made it possible “to better tolerate slight changes in the way in which the class was conducted” (p.

184), whereas the students in the inverted classroom “expressed frustration with an environment full of varied and unexpected activities” (p. 183). The case study by Findlay-Thompson & Mombourquette (2014) interviewed seven students in Introduction to Business Administration courses. Three of the students, although they commented on some positive aspects of flipped classroom, expressed apprehension regarding more course work without having much impact on their grades. One student responded that he would not take another flipped class, preferring a traditional class experience. Regardless of the support towards the idea of the flipped classroom approach, many who practice it would agree that the flipped classroom approach initially requires additional time and effort from teachers (Bergmann & Sams, 2012; Kellogg, 2013). Bergman and Sams (2012) suggest teachers allow 30 minutes to create a 10-minute video. Furthermore, it takes time to develop such a program:

We didn’t do it in a year, and we refined things along the way. A simple way to begin is to record all your live direct instruction lessons for one year. All you need is a video camera. By the end of the year, you’ll have a library of videos to make available to students. You could also consider flipping one lesson –or one unit of study–each term. As you add on the videos, you can begin exploring new ways to use them as instructional tools, or you may reconsider how you record your lectures, perhaps deciding like we did that screen casts are the better option (Para. 17).

According to Witten (2013), a high school Spanish language teacher, it initially took three times longer to plan a thematic unit with the flipped class model. Witten created her own videos for teaching grammar basics, introducing some culture, and practicing vocabulary. She also looked for quality, authentic resources, all of which were “challenging and time-consuming” (p.269). The time required for producing the grammar lecture videos for the present study was also time consuming. It took over 40

hours to create the lecture videos. More details of the lecture video production will be discussed in Chapter Three.

Additionally, successful implementation of a flipped classroom depends upon each individual teacher's commitment and ability to "flip" a classroom since there is neither a single way to flip a classroom, nor a particular methodology which can be replicated, nor a checklist that guarantees results (Bergmann & Sams, 2012). However, in the book, *Flip Your Classroom: Reach Every Student in Every Class Every Day*, Bergmann and Sams (2012) list examples of successful flipped classroom models in various subject areas. Table 2.1 is a summary of various types of flipped classroom models.

Table 2.1 Flipped Classroom in Various Subject Areas

Class Subject	Out-of-Class Assignment	In-Class Activity
Foreign Language	Watch recorded grammar lessons	More time for conversation, reading literature, and writing stories in the target language
Mathematics	*Not mentioned	More time for math manipulative and deep analysis of math concepts; connecting with other STEM areas
Science	POGIL (Process Oriented Guided Inquiry Learning) activity www.pogil.org	More time for inquiry-based activities and in-depth experiments
Social Science/ Language Arts/ Humanities	Watch instructional videos	More time to discuss, debate, give speeches, conduct <i>pro se</i> court, write, and peer review
Physical Education	Watch videos on rules of games and some of the techniques	More time to move and engage in physical education activities

(Bergmann & Sams, 2012, p.48-49)

Flipped Classroom and Foreign Language Learning

Despite mixed reviews presented by published literature on the flipped classroom approach, a flipped classroom approach is worth exploring in a foreign language classroom if it is grounded in a sound pedagogical rationale (Salaberry, 2001). The flipped classroom approach enables students to learn grammar through lecture videos outside of class and to engage in face-to-face active interaction and participation in class. As has been discussed earlier in this chapter, a proficiency-oriented classroom is effective when it involves active student learning as well as lecture instruction. Nevertheless, the confinement of a traditional classroom setting with limited instructional time restricts the ability to include both components. However, according to Witten (2013), a flipped classroom enabled her to move grammar lectures out of regular class time utilizing grammar videos she created, allowing her to spend the time in class to practice new skills and to increase the opportunity for both she and her students to use the target language. Witten states, “[s]ince I flipped my class, I am able to better model my expectation of communicating in Spanish throughout class, and my students are focused on tasks that help them communicate in Spanish more often without my constant reminding” (p.265).

Similarly, in a traditional Japanese language class when a grammar lecture occupies the first part of class time, the time runs out before planned student-centered activities are completed, often resulting in a failure to meet lesson objectives. Japanese language is considered to be one of the most difficult languages to learn for English-speaking students (“Language Learning”, 2007). As a result, it is difficult to reach the same proficiency levels as may be achieved in other languages when limited to a fixed length of instructional time in the classroom. If Japanese language requires more

instructional time than other languages, but the instructional time is fixed, it is difficult to cover the content and activities necessary to reach the same expected language level.

This issue can be addressed by using technology in teaching and learning because technology can “leverage time, restructure learning activities, and provide opportunities for rigorous instruction” (Gullen & Zimmerman, 2013, p. 64). Although there are a number of ways to utilize technology in foreign language teaching and learning, using technology in a flipped classroom setting can accommodate foreign language acquisition goals. Instructional lectures outside of the classroom can be provided through technology, such as lecture videos, allowing classroom time to be focused on active and meaningful learning.

The subsequent paragraphs will discuss how the flipped classroom approach in conjunction with technology can fit within the framework of explicit instruction in L2 acquisition, as well as how interaction hypothesis functions in a proficiency-oriented classroom.

Flipped Classroom and Grammar Instruction

Many scholars agree that grammar instruction is beneficial in SLA (R. Ellis, 2006; Friedman, 2007; P. Lightbown M., 1990; Norris & Ortega, 2000b; Schulz, 1996; Scott, Randall, & Hall, 1992). For example, in support of the idea that grammar knowledge correlates to language proficiency, Friedman (2007) explains that, in a study he conducted in the 1970s, the score of the Russian language proficiency tests were comparable to the Russian grammar-oriented tests. Friedman first hypothesized that “knowledge of grammar is correlated with proficiency” (p. 1). Presenting Russian morphology as an example, Friedman explained that an individual needed to acquire a

high level of linguistic competence to produce “unusual or unpredictable grammatical forms” (p. 1). After administering two types of tests, grammar oriented and oral proficiency oriented, the study revealed that “the numerical scores for those students who took both tests were almost identical in all cases with a variation of five points or less” (p. 2). In addition, he reinforces his assertion by identifying similar results from a study by Brecht, Davidson, and Ginsburg (1995) in which they collected data from 658 Russian language students who studied a semester in Russia between the spring of 1984 and the spring of 1990. The longitudinal study found that the grammar and reading achievement scores significantly correlated to the level of *Oral Proficiency Interview* (OPI). The study revealed empirical evidence that explicit grammar instruction in the early years was an important element in developing oral proficiency (Brecht et al., 1995).

Similarly, Ellis (2006) discusses the significance of basic grammar knowledge in language development by addressing competing techniques for grammar instruction such as explicit versus implicit knowledge, deductive teaching versus inductive teaching, and intensive versus extensive teaching. He claims that explicit knowledge which is linked to metalinguistic explanation eventually leads to implicit knowledge; implicit knowledge, unconscious knowledge is necessary for L2 competence; and deductive teaching focuses on a grammatical structure first and practices it whereas inductive teaching introduces an example using the grammatical structure and guides students to analyze it. Intensive grammar instruction covers a minimum number of grammar structures over a period of time. In contrast, extensive grammar instruction studies a whole range of structures in a short time. He concludes that despite the controversy over the best approach to teaching grammar in L2, basic knowledge of grammar helps language development.

Acknowledging that grammar knowledge is essential for attaining language proficiency, foreign language instructors must then identify the appropriate method of grammar instruction for their classrooms. Ellis (2006) defines grammar teaching as “any instructional technique that draws learners’ attention to some specific grammatical form in such a way that it helps them either to understand it metalingustically and/or process it in comprehension and/or production so that they can internalize it (p. 84). According to Ellis, “what is important is to recognize what options are available, what the theoretical rationales for these options are, and what the problems are with these rationales” (p.103). Ellis suggests that grammar instruction should be taught in separate lessons and also be integrated into communicative activities.

Explicit Grammar Instruction

Pedagogical approaches to grammar teaching have various classifications (Burgess & Etherington, 2002). However, as Norris and Ortega (2000) claim in their meta-analysis on the effectiveness of L2 instruction, primary researchers neither agree on the exact features of the different categories of L2 instructional treatments nor use the same terminologies to describe instructional treatments. Consequently, Norris and Ortega decided on “generic categorical definitions” (p. 436) of grammatical instruction which were adopted from Long’s (2000) classifications: focus on forms (FonFs), which is the traditional approach in which grammar is taught by direct explanation of the language rules; focus on form (FonF), in which specific grammar rules are intended to be taught within the context of communication, rather than directly; or focus on meaning (FonM), which is communicative in nature and grammar is expected to be learned incidentally and implicitly.

According to Long (2000), FonFs refers to explicit grammar instruction, FonM refers to implicit grammar instruction, and FonF refers to a middle approach between explicit and implicit instruction. “Instructional delivery [of explicit instruction] is characterized by clear descriptions and demonstration of a skill, followed by supported practice and timely feedback” (Archer & Hughes, p. 3, 2011). On the other hand, implicit instruction/learning is considered to occur “when two or more people are speaking they create their own linguistic resource” (Ellis, 2012). In other words, learning takes place at a subconscious level.

Explicit instruction was applied in the current study because, as supported by Nazari (2013) and Zaferanieh and Behrooznia (2011), it more efficiently conveys the grammar lessons than implicit instruction, given the time constraints of a college course. While implicit grammar instruction is believed to aid in the learning and retention of grammar lessons (Andrews, 2007), explicit grammar instruction that is reinforced through practice and exercise also has been found to be effective (Archer & Hughes, 2011; Nazari, 2013).

Culman, Henry, and VanPatten (2009) conducted a seminal study that exemplifies the effectiveness of explicit grammar instruction. In their experimental study of the efficacy of explicit information on the knowledge and performance of college-level learners of the German language, they compared four groups of two different levels of language abilities consisting of two first semester classes and two third semester classes. The study asked whether the learners with explicit grammar instruction treatment correctly processed the target structure sooner than the group without the treatment, and also whether the level of learners had any effect. All four groups received the structured-

input activities on computer software, which involved exercises to identify correct answers. For each level, one of the groups received explicit information whereas the other one did not. The structured-input activity consisted of thirty questions and was created for students to learn one particular target structure in the German language by eventually recognizing the target sentence pattern. In order to isolate the effects of explicit instruction, they removed variables such as non-grammatical clues (e.g., intonation, word orders, etc.). The results revealed that the students in the treatment group started choosing correct responses immediately and scored consistently better compared to the control groups, while few people in the control group “‘got it’ at all” (Culman et al., p. 28, 2009). The study concluded that explicit information did have a positive impact on processing the information, leading to the acquisition of the grammar.

The value of explicit grammar instruction is summarized by Ellis (2006): “A case exists for teaching explicit grammatical knowledge as a means of assisting subsequent acquisition of implicit knowledge” (p.102). Scott, Randall, and Hall (1992) believed that explicit grammar instruction was useful for language learning. They inquired whether students were actually capable of applying grammar rules after studying on their own from the textbook. They tested 22 students in a first semester French course. Once a week for 3 weeks, students were given written grammar lessons at the beginning of each class followed by the test exercises. After 4 weeks of each test, students were given the same exercises. Their study revealed mixed results, in which both positive and negative test gains were found from the first test to the second test. They found that students performed well on content words (nouns, verbs, adjectives, and adverbs), while approximately half of the students failed to learn function words (prepositions, pronouns,

conjunctions, and auxiliary verbs) (Scott et al., 1992). They concluded that students could learn some linguistic structures, and explicit grammar instruction did in fact have a place in foreign language learning. Most significantly, the study found that:

[S]ince proficiency-oriented instruction is based primarily on devoting class time to meaningful and communicative activities, teachers can designate the linguistic structures which can be learned outside of class so that class time is not wasted on needless explicit grammar rule presentations (p.361).

Accordingly, the flipped classroom approach effectively meets these needs because it delivers the explicit instruction outside of class and devotes the face-to-face time to active learning activities.

Classroom Interactions

As was discussed earlier in this chapter, the goal of foreign language instruction is for students to acquire language proficiency, which is best approached through both traditional lecture instruction and student-centered active learning. Traditional lecture instruction delivers explicit grammar information, often involving a teacher-centered approach; in contrast, student-centered approach actively involves students in meaningful learning which is relevant to their own experience outside the classroom, being facilitated through students' classroom interactions (Peyton et al., 2010). In a foreign language classroom, interactions are carried out "between the teacher and learners, and amongst the learners" (Tsui, 2001, p. 120). The classroom interactions which facilitate oral language proficiency entail various types of tasks and exercises.

Drills. One way to conduct interactions between a teacher and a student or students is in the form of drill exercises. The origin of drill practices is the U.S. Army's language programs in the 1940s, which stem from the behaviorist approach of the Audio

Lingual Method (Matsuoka & Ikhsan, 2013). Matsuoka and Ikhsan have excerpted three types of drill exercises from classroom practices, which were originally identified by Paulston (1974): (1) mechanical, (2) meaningful, and (3) communicative. The whole process of mechanical drills is controlled by the instructor, and there is only one way to respond to the stimulus which is produced by the instructor, whereas meaningful and communicative drills give more choices of answers to the students. Wong (2013) maintains that drill exercises do not foster development of communicative ability because they only focus on oral production by the students and ignore input, resulting in students not having the chance to engage in expressing and negotiating meaning, which are necessary skills for communicative development.

Although Wong (2013) does not support the use of drills, Matsuoka and Ikhsan (2013) concluded otherwise in their study. Matsuoka and Ikhsan (2013) studied 21 first-year Japanese students in an English language class at a vocational college in Japan to evaluate the effectiveness of meaningful drill exercises, rather than mechanical and communicative drills, in improving the students' language proficiency. After having six sessions of drill practices, they compared the mean scores of pre- and post-tests that involved three sections of a yes-no quiz or listening test, vocabulary test, and dictation or writing test "to measure the subjects' overall language proficiency" (p. 97). The result of the comparison of mean scores using a *t*-test were significantly different, indicating students made large gains in the proficiency tests. As a result, they concluded that classroom interactions involving drill exercises helped students improve their proficiency.

Group and pair work. Another type of classroom interaction in a foreign language classroom is small group work or pair work in which the communication

exchange takes place among or between students. Based on a survey of studies conducted by various scholars in the field of second language learning, Long & Porter (1985) identified six effective results of implementing interactional activities: (1) group work increases quantity of individual practices that supplements short instructional time; (2) group work offers a greater variety of functional practices (e.g., rhetorical, pedagogic, and interpersonal) than a teacher-centered approach; (3) group work enables students to produce output with similar grammatical accuracy regardless of the interlocutor's language backgrounds under a non-supervised situation, thus gaining more opportunity to practice; (4) students tend to correct each other and complete classroom activities more than a teacher-directed instruction; (5) group work facilitates students in the negotiation for meaning, contributing to improve performance and understanding of the language structure; and (6) a group work increases the amount of talk, negotiation, and input opportunities, which are believed to promote language proficiency.

Interaction Hypothesis

Interaction hypothesis is the foundational theory for classroom interactions such as drill practices and group/pair works. Interaction hypothesis posits that “*negotiation for meaning*” through interaction facilitates L2 acquisition, especially when it involves “utterance by a competent speaker, such as repetitions, extensions, reformulations, rephrasings, expansions and recasts” (Long, 1996, p.451-452). The critical components of this interaction are input and output.

Input. The word ‘input’ refers to everything the learner is exposed to in the target language, either aurally or orally (Rast, 2008; Selinker & Gass, 2008). Gass & Mackey

(2006) state that SLA studies recognize the salience of input because the SLA process begins with the input, or the “raw data” (p. 5), which is used by a learner to process cognitively before they produce the language.

The lack of studies systematically testing the effect of time exposed to the target language (TL) on the performance of adult language learners led Rast (2008) to conduct the first exposure study which collected data from the very beginning of contact with TL through a subsequent time period within a controlled TL input environment. A total of 127 students participated in this study and were placed in three different groups: French learners of Polish who were studying Polish as part of their course study but with no prior Polish knowledge, native French speakers who do not take a Polish course and without any Polish knowledge, and Polish native speakers as a control group. The study lasted for six class sessions in which each class met for two and a half hours, once a week. The students were instructed not to refer to any grammar books, dictionaries, or outside input. Each group received a total of eight hours in Polish instruction using a communicative approach without using metalanguage. The 8 hours of Polish instruction included controlled input that was delivered in oral and written modes.

Data was collected from a series of tests given to each group. The first test was given prior to receiving any instruction, and subsequent tests were given at various intervals during the 8 hours of instruction: after 1.5 hours, 3.5 hours, 4 hours, 7 hours, and 8 hours. The methodology of Rast’s (2008) study involves specific linguistic features such as lexicon and syntax, and is beyond the scope of the present study. However, relevant to the present study is Rast’s (2008) conclusion, affirming that “the more time learners spent with the L2, the better they repeated the Polish words, even over

such a short time span” (p. 161). While the input in this study was the Polish language, this assumption may be applied to other foreign languages.

Output. Although input studies indicate positive implications, Wong (2013) argues that if L2 acquisition refers to acquiring accurate and fluent communication skills, input alone is not sufficient in foreign language acquisition, and output may be needed to develop these skills. Indeed, in the context of SLA, output possibly plays several roles in L2 learning (Swain, 2000). According to Swain’s output hypothesis (2000), output forces learners to use deeper mental efforts to process language than does input; in other words, learners discover what they can and cannot do while trying to create linguistic forms and meanings in their minds.

To address the role of output in SLA, Toth (2006) compared processing instruction (PI) to communicative output (CO) tasks involving 80 English-speaking university students from beginning L2 Spanish courses. “PI is essentially about structured input practice and excludes the production of target forms” (Toth, p. 320, 2006). During a 7-day span, the students in two experimental groups (PI and CO) received instruction on the anticausative clitic *se*, which is a grammatical element in Spanish that is often problematic for English-speaking learners (p.329). The study included two control groups, one of which did not receive purposeful instruction on the target grammar topic, *se*, and the other which consisted of native Spanish speakers who did not have any significant knowledge in pedagogical rules for *se*. Data collection involved pre, post- and delayed post-tests (immediately before, immediately after the 7 days, and 24 days following instruction), as well as video transcriptions of one lesson from each treatment group.

Both PI and CO groups received whole-class, teacher-led activities. The PI approach was conducted so that students received immediate error correction and were led to respond in a certain way, while in the CO approach, “the sequence of activities progressed from guided, less demanding production to more demanding, open-ended tasks” (Toth, 2006, p. 340). Toth found that both PI and CO groups scored significantly higher on the post-tests compared to the control groups, with the CO group slightly outperforming the PI group. Furthermore, “that metalinguistic knowledge ‘pushed’ learners in the CO groups to reformulate utterances suggests at the very least the existence of mental processes other than input processing as factors that affected the results” (p.361). In other words, during the classroom activities, CO engaged in both processing input and production while PI only needed processing.

As illustrated by Toth’s (2006) findings, a meaningful acquisition occurs when the production as output is followed after learners receive input. This result supports Swain’s (2000) output hypothesis which explains the importance of having students produce language in SLA:

[O]utput pushes learners to process language more deeply-with more mental effort-than does input. With output, the learner is in control. In speaking or writing, learners can ‘stretch’ their interlanguage to meet communicative goals. To produce, learners need to do something. They need to create linguistic form and meaning, and in so doing, discover what they can and cannot do. Output may stimulate learners to move from the semantic, open-ended, strategic processing prevalent in comprehension to the complete grammatical processing needed for accurate production. Students’ meaningful production of language-output-would thus seem to have a potentially significant role in language development. (p. 99)

Furthermore, a number of studies support a link between output and L2 development such as Nobuyoshi and Ellis (1993), MacKey (1999), McDonough (2005), and others also have reported positive outcomes supporting output hypothesis. For

example, although the sample size was very small (three each in the experimental and control groups), in a study of low-level proficiency L2 English adult learners, Nobuyoshi and Ellis (1993) reported that methodically focused communication tasks appeared to force speakers to push utterances resulting in improving the accuracy of their oral productions both immediately and over time. Mackey's (1999) empirical study that investigated the link between interaction and L2 development with English as Second Language (ESL) learners also has indicated that active participation in an interaction had positive effects on oral productions. Mackey divided a group of ESL learners into five groups including one control and different treatments to the other four groups by assigning native speaker (NS)-learner pair tasks that involved interactions and non-interactions. The result of this study indicated that learners who actively participated in conversational interaction gained a positive effect on producing developmentally more advanced structures than those who did not engage in active interaction, only watching interaction or without negotiations. Similarly, McDonough (2005) investigated the impact of negative feedback and modified output produced in response to the negative feedback on L2 development, specifically on ESL question formations. Using three experimental groups with various levels of NS feedback and one control group without any treatment, this pretest-post design study revealed that it was not necessarily the interlocutor's feedback but rather the learner's own modified output that had a significant role in development of advanced question forms.

Although the above studies focus on particular structural formations of L2 development, the connection between output and L2 development is well summarized by Mackey and Abbuhl (2005):

[O]utput has a number of functions, including promoting automatization, pushing learners to notice gaps in their L2 knowledge, encouraging them to process syntactically rather than just semantically, and providing opportunities for them to test hypotheses they have constructed about the target language. (p.218)

Interaction. “The term classroom interaction refers to the interaction between the teacher and learners, and amongst the learners, in the classroom” (Tsui, 2001, p. 120).

Swain (2000) claims that interactions generate language use and language learning concurrently, which she calls a “knowledge-building dialogue” (p. 98). Interaction activities, such as drill practices or collaborative learning, require negotiations and feedback. When a pair engages in a dialogue, two-way tasks occur. These tasks involve both input and output that pushes the learners to notice and hypothesize their interlanguage, each of which has effects (Egi, 2010, p. 4) on L2 learners’ language development.

Current SLA studies have expanded to diverse paradigms of interaction to understand language learning. Ellis (2012) conducted a meta-analysis of studies that investigated the effects of interactions in a foreign language or L2 classroom from two contrasting theoretical perspectives: Sociocultural theory and Interactionist-Cognitive theories. In his description, the two perspectives are distinct as the former views language learning as a process, while the latter regards it as an acquisition.

Under sociocultural theories, “language acquisition is realized through a collaborative process whereby learners appropriate the language of the interaction as their own, for their own purposes, building grammatical, expressive, and cultural competence through this process” (Ohta, p. 51, 2000). Ohta’s (2000) study, which examined the impact of peer interaction on the acquisition of a grammatical structure, exemplifies this

perspective. The study focused on two learners, one of whom is more capable than another, using a transcription of the audio and video recordings of a second year university-level Japanese language class. The main objective for the students was to learn the use of desiderative construction, which refers to a person desiring someone to perform an action, employing three language learning tasks, a role-play, a translation, and communicative interview.

Table 2.2. Transition from Intermental to Intramental Functioning

Level of Function	Description of Functions
Level 1	the learner not being able to correct errors even with intervention
Level 2	the learner being able to notice the error but cannot correct it, requiring explicit help
Level 3	the learner being able to notice and correct errors with assistance; being able to incorporate feedback
Level 4	the learner being able to notice and correct errors with minimal or no obvious feedback
Level 5	the learner fully being able to notice and correct errors and without intervention

(Aljaafreh & Lantolf, 1994)

Ohta (2000) analyzed the interaction of the two learners specifically focusing on one of them as her “progress was most dynamic” (p.61). Based on the five levels of L2 development provided by Aljaafreh and Lantolf (1994) (Table 2.2), Ohta identified that the learner participant progressed to Level 4, with the learner engaging in error correction with the least feedback from the partner, who provided help first explicitly and continued implicitly.

Interactionist-Cognitive theories view “interaction as providing the learner with ‘input’ which is then processed internally by means of the cognitive mechanisms responsible for attention, rehearsal and restructuring of existing knowledge systems”

(Ellis, p.238, 2012). Ellis extensively investigated a series of classroom interaction studies, involving descriptive/exploratory, quasi-experimental, and metacognitive, within the paradigm of the interactionist-cognitive perspective. One of the explorative studies involved Havranek's (2002) study of the impact of oral corrective feedback in the English as a foreign language classrooms. The study involved 207 learners (most of whom were native German speakers) of English from different age groups and proficiency levels, ranging from ten-year-old beginners to university students specializing in English.

The audio transcriptions provided 1,700 instances of corrective feedback, while cases of spontaneous self-correction by learners without teacher or peer intervention were not counted since the main objective of the study was to investigate the aspect of classroom interaction involving corrective feedback. Every corrective feedback episode was “classified with reference to the class, the lesson, the item and the learner who had produced the deviant utterance” (Havranek, p. 260, 2002). Additionally, as illustrated in Table 2.3, ten correction types were generated based on the sequence of interaction.

Table 2.3. Frequency of Correction Types

Type	Description	Cases
C1	Recast	328
C2	Recast, learner repeats	464
C3	Successfully elicited self-correction	200
C4	Unsuccessful elicitation, teacher (or peer) corrects	102
C5	Unsuccessful elicitation, teacher (or peer) corrects, learner repeats	110
C6	Explicit rejection, teacher (or peer) corrects	175
C7	Explicit rejection, teacher (or peer) corrects, learner repeats	64
CE	C1–C7, additional explanation or expansion	118
CB	C1–C7, plus visual support	67
CC	C1–C7, additional explanation or expansion and visual support	72

(Havranek, 2002, p. 260)

In order to obtain the effect of corrective feedback, class-specific language tests included many of the corrected items consisting of grammatical and lexical items in written and oral tasks. The statistical analysis of all of the variables revealed several key findings: (1) corrective feedback is most likely to be successful if the learner is able to provide the correct form when he is alerted to the error; (2) if the correction is provided by the teacher or a peer, the success rate is likely to increase if the learner repeats the correct version; (3) mere recasts without learner contribution are least effective for all learners; and (4) learners who witness a correction as auditors profit more from it if they have time and opportunity to formulate a silent response similar to the one being corrected to match it with the correction (Havranek, 2002, p. 269).

Another study analyzed in the Ellis (2012) survey was conducted by Ellis and He (1999), who studied the effect of modified input and modified output on L2 learners' incidental acquisition of word meaning, or comprehension, and vocabulary acquisition (recognition as well as production). The study involved 50 students from six intermediate-level intensive English programs at a university. Approximately three-fourths of the students were Asian and the rest were from other parts of the world. The six classes were assigned to three separate groups: the premodified group, the interactionally modified group, and output group, although there was no control group. Premodified input refers to "input that has been simplified by making it more redundant and less grammatically complex," (p.287), whereas interactionally modified input refers to "input that has been modified as a result of meaning negotiation" (p. 287). A pretest, the treatment, and five posttests which spanned for four weeks, were administered to each group.

The study found three main outcomes as a result of the treatment: (1) the group with the opportunity for modified output performed better than the other two groups that received premodified or interactionally modified input, (2) while all three groups demonstrated a high level of acquisition of retention of words, over time the modified output group outperformed more than the other groups, (3) the modified output group scored better on the production test than the other groups, although the average scores of the production test were lower than the test of recognitions (Ellis & He, 1999). In summary, “producing new words in modified output not only helps learners to process them more deeply, but also affords the learners to have a qualitatively different discourse experience whether for comprehension or for acquisition, than simply hearing them” (p. 297).

Regardless of the type of interaction theory applied, in the context of SLA, Ellis (2012) espouses the role of classroom interaction in fostering foreign language proficiency based on the analysis of his metacognitive research, finding that interaction facilitates language acquisition regardless of teacher-student or student-student settings.

Cognitive Theory of Multimedia Learning

The present study utilized video as the mode of lecture delivery to provide concurrent access to a PowerPoint presentation along with an oral explanation. Although creating one’s own lecture videos is time-consuming (Enfield, 2013), the vast majority of the time and effort is expended in the initial creation of the lecture videos, which can then be efficiently utilized across multiple classes. In addition, according to Bergmann and Sams (2012), lecture videos are highly effective teaching tools, as teachers have control over its content and can emphasize key points during the lecture. The lecture videos

created for the Japanese course in the present study utilized PowerPoint slideshows with voice-over narrations to describe grammar topics and inserted annotations to highlight important information.

The design of these videos was 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 because meaningful learning requires a significant amount of cognitive processing while the learner's information processing system is limited (Mayer & Moreno, 2003). The PowerPoint slideshows used for the lecture videos for the current study have been 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, a recent empirical study by Guo, Kim, and Rubin (2014) surveying the effects of different video production styles on students' engagement revealed 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 speaking; (5) show enthusiasm; and (6) add support for re-watching and skimming. Guo et al. claim that their study is the very first of its kind, analyzing millions of video viewing sessions, more precisely using data from 6.9 million video watching sessions from Massive Open Online Course (MOOC), to identify effective video production styles. They used both

quantitative and qualitative data to measure students' engagement with instructional videos, or "the length of time students spend on a video" (p. 3).

Although the Guo, et al. (2014) study had not been published at the time the lecture videos for the present study were created, many of the recommendations from their study are reflected in the present study's lecture videos. Rather, the present study considered various formats suggested in *Flip Your Classroom: Reach Every Student in Every Class* by Bergmann and Sams (2012), many of which complement or correspond with the six suggestions from the Guo et al. (2014) study. Table 2.4 illustrates certain features of the lecture video that reflect the recommendations from the two studies to improve the lecture video quality. For example, in order to keep students' attention, each video was short, segmented by the grammar topic presented in each chapter. The length of the videos, for example, in Lesson 4 ranges between 2 to about 8 minutes, only one of which exceeded 6 minutes, which was the recommended maximum video length by Guo et al. (2014).

The lecture videos also incorporated a casual conversation style between two teachers. Bergmann and Sams (2012) states, "[t]here is something powerful about watching two people having a conversation instead of watching one teacher talk at the viewer" (p. 45). Using a radio show as an example, Bergmann and Sams claim that listeners engage two people's conversations far more than a single person talking. Furthermore, their students also supported the conversation style presentation. When one of the teachers takes on the role of an expert and another takes on the role of a learner, this dialogue helps students' comprehension of the material.

Table 2.4. Summary of Recommendations and Corresponding Lecture Video Components

Recommendations for Effective Video Production (Guo, Kim, & Rubin, 2014)	Recommendations by Bergmann and Sams (2012)	Corresponding Lecture Video Component	Sample Screen-shot
(1) use segmented videos, shorter than 6 minutes	“1. Keep it short” (p. 44) “5. Don’t waste your students’ time” (p. 46)	Lesson 4: Grammar 1 (8.28), G2 (5.38), G3 (2.41), G4 (2.07) G5 (4.34), G6 (4.02), G7 (2.47), G8 (3.29) *length of time in parentheses (minutes, seconds) Displays anime-like faces of the instructors	b.) d.)
(2) display the instructor’s head on the screen occasionally			
(3) film in an informal setting	“2. Animate your voice” (p. 44)	Having an informal conversation with another teacher	
(4) use motion and continuous visual flow along with unrehearsed speaking	“2. Animate your voice” (p. 44) “3. Cerate the video with another teacher” (p. 45) “6. Add annotations” (p. 46)	Having an informal conversation with another teacher Using annotation to highlight and label key points and sentence structures Using both texts and visual animation functions	a.) b.) c.) d.)
(5) show enthusiasm	“4. Add humor” (p. 46)	Making efforts to sound enthusiastic	
(6) add support for re-watching and skimming (tutorials, how-to knowledge)		Adding tutorial type of dialogue (designed to make listeners produce a response)	b.) c.)
	“7. Add callouts” (p. 46)	Adding callouts	a.) b.) c.) d.)

In addition, as in Figure 2.1, numerous PowerPoint features, such as custom animations to make texts and images emerge and move, and callouts with dialogues, were also used to enhance the presentation and help capture students’ attention to the key elements in a video as proposed by Bergmann and Sams (2012).



Figure 2.1. Sample Screenshots from a Grammar Lecture Video

“A callout is a text box, a shape, or some other object that will appear for a while in the video and then disappear” (p. 46). Guo et al. (2014) also recommends creating a video that supports re-watching and skimming. Accordingly, some parts of each video include tutorials and prompts designed for students to participate orally that encourages the skimming and re-watching.

Pedagogical Implications

While not all researchers will agree on the specific instructional theories or techniques for teaching language proficiency, the pedagogical benefits of instructional activities that focus on input, output, and interactions are evident. It has been well demonstrated empirically that second language development is facilitated through interactions between learners and other speakers (Mackey & Abbuhl, 2005). This interaction hypothesis is derived from input, feedback, and output (Gass & Mackey,

2006). Applying the interaction hypothesis, increasing the number of classroom interactions should lead to higher learning outcomes. In the current study, this interaction hypothesis has been applied to the flipped classroom approach in foreign language teaching and learning.

As previously discussed, a flipped classroom refers to the reversal of the traditional instructional approach. In a traditional daily 50-minute class period, a grammar lecture normally takes up part of the class time. In a flipped classroom, the use of instructional videos outside of class to teach grammar concepts increases the frequency of interactive learning activities in class, by providing more opportunities for students to practice what they learned and apply it in different situations (Bergmann & Sams, 2012; Enfield, 2013). The increased interactive learning can focus on active learning that involves input, output, and interaction.

While some critics argue that instructional videos are replacing teachers (Hamdan et al., 2013), the present study approaches the use of technology in a way that supports L2 development. By removing traditional lectures from face-to-face class time, a flipped classroom approach demands that teachers learn new and additional teaching strategies to manage the increased time for student-teacher interaction in the classroom. However, this should not be an issue since most teachers already do feel responsible for preparing high quality effective lessons and constantly improving teaching (Lauermann, 2014).

“[T]he effectiveness of technology on language learning is dependent on how it is used” (Zhao, p. 22, 2003). Because grammar instruction and input/output fluency exercises are required in order to develop communicative competence (Elghannam, 2010),

grammar instruction is necessary. Consequently, instructional videos are an effective use of technology to aid language learning.

Ultimately, the responsibility rests with individual teachers to seek and implement effective instruction and classroom activities by synthesizing available theories and methods conducive to L2 teaching and learning. Figure 2.2 illustrates the process of a flipped classroom approach using lecture videos for the acquisition of foreign language proficiency. As discussed in this chapter, the research supports the theory that a flipped classroom approach incorporating video technology is an effective approach for developing language proficiency.

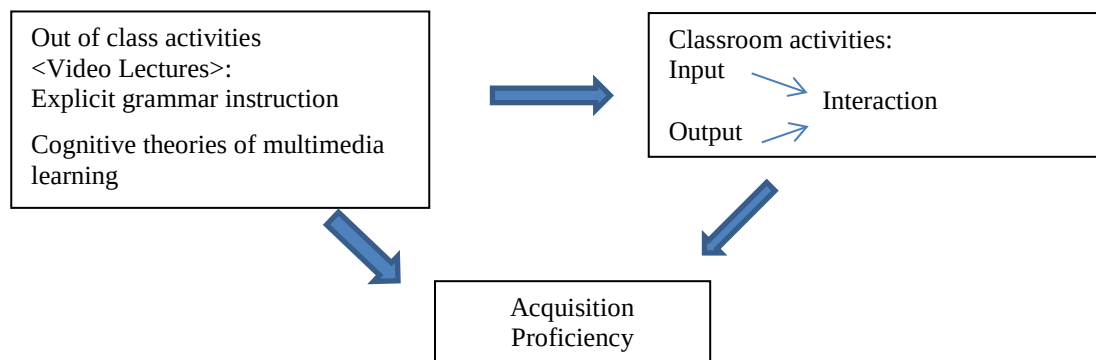


Figure 2.2. Flipped Classroom Approach in a Foreign Language Classroom

Summary

The preceding discussion on SLA theories ultimately concludes that both explicit instruction and classroom interaction involving input and output are essential components of a successful proficiency-oriented foreign language instruction.

The flipped classroom approach accompanied by the use of instructional video has the potential to create a proficiency-oriented classroom that fosters language proficiency when guided by appropriate instructional purposes and theories. Therefore

the proposed study exploring the effect of a flipped classroom approach in Japanese teaching and learning will guide my own instructional practices and will provide a framework for others to consider in enhancing their foreign language teaching.

CHAPTER THREE

Methodology

Introduction

A mixed methods study was planned to explore the effects of a flipped classroom approach on students' learning outcomes and their learning experiences in a first-semester university Japanese language class. In studying the effects of a flipped classroom approach, it was necessary to investigate both students' achievements and their perceptions as students' motivations might be related to their belief or preference toward a specific instructional approach (Brown, 2009). In fact, a number of studies have found a relative link between students' attitudes and learning outcomes (Falout, Elwood, & Hood, 2009; Ushida, 2005).

This chapter will present research questions, research design, sampling strategy, instruments, data collection procedure, and data analysis for the present study. It will also include a detailed account of the process of creating lecture videos for use in the course, as this study was intended to serve as a guide for instructors seeking to design and implement a flipped classroom approach in their classrooms.

Research Questions

The purpose of the present study was to explore the effect of a flipped classroom approach in a Japanese language classroom to assess its effectiveness and feasibility. Three primary questions were generated and then divided into eleven sub-questions to direct this study.

1. What are the differences in students' learning outcomes between a flipped classroom approach (experimental) and the traditional instructional approach (control)?
 - 1-1. What are the differences in students' oral production skills?
 - 1-2. What are the differences in students' learning gains in terms of oral production skills?
 - 1-3. What are the differences in students' achievement?
2. What are the differences in the classroom communication patterns between a flipped instructional approach (experimental) and the traditional instructional approach (control)?
 - 2-1. What are the differences in the number of teacher-to-students whole-class questions?
 - 2-2. What are the differences in the number of teacher-to-student individual questions?
 - 2-3. What are the differences in the number of whole-class output?
 - 2-4. What are the differences in the number of individual output?
 - 2-5. What are the differences in the number of output with errors?
3. What are the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach?
 - 3-1. What are the students' perceptions on receiving grammar instruction in the form of video?
 - 3-2. What are the students' perceptions towards the flipped classroom approach?
 - 3-3. What is the students' level of participation in video instruction outside of the classroom setting?

Mixed Methods Design

According to Creswell and Plano Clark (2011), mixed methods research is chosen when one of the methods, quantitative or qualitative alone, is not sufficient to answer research questions. The present study was intended to quantitatively compare the means

of students' learning outcomes between an experimental group and a control group; however, the small sample size of the present study was vulnerable. Creswell (2005) suggests that "[t]he larger the sample, the less the potential error that the sample will be different from the population" (p. 149). The issue of sample sizes in the present study was supplemented by qualitative method. By choosing mixed methods, the weakness of the quantitative method was offset by the qualitative method (Creswell & Plano Clark, 2011).

The present study employed a concurrent embedded strategy, one of the six types of mixed methods approaches introduced by Creswell (2008). As seen in Figure 3.1, the concurrent embedded strategy has "a primary method that guides the project and a secondary database that provides a support" (p. 214). The secondary method (qualitative in this study) was embedded in the primary method (quantitative), addressing different questions.

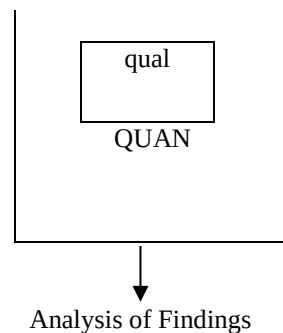


Figure 3.1. Concurrent Embedded Design (c) (Creswell, 2008, p. 210)

The quantitative component of the study utilized a quasi-experimental design. According to McMillan (2006), a quasi-experimental design "manipulates treatments but does not use randomly assigned treatment groups" (p. 4). The present study used a

criterion-based purposive sampling consisting of the students from two sections in a first-semester introductory Japanese language course at a private university in Texas. A criterion-based purposive sampling refers to “choosing settings, groups, and/or individuals because they represent one or more criteria (Collins, Onwuegbuzie, & Jiao, 2007, p. 272). One of the sections was a control group (CG) in which a traditional classroom structure was utilized, and another section was an experimental group (EG) in which a flipped classroom approach was implemented as a treatment. A quasi-experimental design was most feasible for this study since the underlying implication of this study was an action research. An action research is defined as an inquiry into classroom instruction and learning for improvement in one’s own class (Stringer, 2007).

In order to investigate any differences in students’ learning outcomes and learning gains in grammar knowledge and oral productions skills, the course test scores of both written tests and oral interviews were compared. Additionally, this study examined the flow of verbal interaction in both classrooms, such as the amount of time spent in dialogue by the instructor and the students and the number of times a student responds in class (Acheson & Gall, 1997). These communication patterns were compared to assess the benefit of flipped classroom interaction in second language (L2) development (Gass & Mackey, 2006).

The qualitative component of the study explored students’ learning experiences by assessing their perceptions and attitudes towards the flipped classroom approach. Qualitative data were compiled through an online questionnaire administered at the end of the semester seeking feedback on the students’ learning experience. This qualitative data complemented the quantitative data. According to Creswell (2005), collecting and

converging different kinds of data on the same phenomenon refers to *Triangulation*, which could improve the investigation.

Sampling Strategy

Participants

The participants in this study were the students in two sections of JPN1401, the Introductory Japanese language course, during the fall semester of 2014 at a private university in Texas. JPN1401 is a beginning level course, which is offered every fall semester. A criterion-based purposive sampling was determined to be appropriate for the present study because of the action research nature of the study. According to Collins, Onwuegbuzie, and Jiao (2007), a criterion-based purposive sample refers to “choosing settings, groups, and/or individuals because they represent one or more criteria” (p. 272). Two groups of samples were chosen in this study based on the criteria of students enrolled in the introductory Japanese language course to be studied. In addition, action research inquires into a topic directly related to classroom instruction and learning (Enfield, 2013; Mettetal, 2001), and the present study sought to understand the implementation of a flipped classroom approach and to improve instructional practices.

The maximum enrollment limit for each section of the first-semester Japanese language course is 19; however, this cap is often exceeded, generally having a few more than the limit. In the present study, 39 students participated. One of the sections was the experimental group (EG) consisting of 19 students. The other section was the control group (CG) consisting of 20 students. The CG originally started the class with 21 students at the beginning of the semester; however, one student dropped the course before

the mid-term. Therefore, the data relating to this particular student was discarded, keeping the sample size for the CG 20.

In the typical first-semester Japanese course, students' demographic background varies (e.g., gender, age, class, major, native/non-native English speaker, required number of credits, prior Japanese experience, Japanese minor seeking). Although most students begin JPN1401 with no previous Japanese language experience, some students have taken one or more years of high school Japanese, or a few of them may be familiar with the language from studying independently. As a result, language skills among the students would not be necessarily to be equal, as was true in this study and will be discussed in Chapter Four. In order to assess the students' backgrounds, a demographic survey, *General Background Questionnaire* (GBQ) (APPENDIX A) was administered in both classes before the semester ended. The detailed components and purpose of GBQ will be discussed in the instrument section of this chapter. In addition, students were asked to sign an informed consent during the semester consenting to be included in this study.

The informed consent was in an electronic format created using Qualtrics, a web-based survey software (Version N/A). A third party with no access to student participants' grades administered the consent form in the language acquisition center (LAC). The information obtained from this form was accessed by me, the instructor/researcher, only after the final grade was turned in. Every student in both courses consented to participate in the study.

Role of the Researcher

As the researcher in the present study, I had two principle roles: a primary investigator and an instructor who taught the courses under study. I have been teaching beginning, intermediate, and advanced-level Japanese language courses at the current research site since 2006. I also have been studying ways to effectively utilize technology in a foreign language instruction and have consistently made presentations at various local, state-level and national-level foreign language conferences (Prefume & Abe, 2009; Prefume & Gaines 2011, Prefume & Gaines, 2010; Prefume & Gaines, 2008; Prefume & Hardt, 2007; Prefume & Pierce, 2010; Prefume, 2012), on which the presentation topics were derived from the instructional practices and materials implemented in my own classroom. In designing this study, I identified the issue of reliability stemming from the potential of bias since I was going to be involved in both data collection and data analysis in this study. “Reliability refers to the degree of error that exists when obtaining a measure of a variable” (McMillan, 2006, p.9). Particular measures were taken to minimize the influence of the researcher, which will be discussed in the *Measure of Learning Outcomes* section in this chapter.

As an action research-oriented study, the results of this study will be used in developing an effective flipped classroom model for use in my Japanese language courses. Stringer (2007) states that action research inquires into classroom instruction and learning with the practical purpose of having a direct application to an instructor’s classroom instruction. Accordingly, during the last two semesters prior to this study, I introduced video lectures in elementary and introductory Japanese courses and collected feedback from the students about the video quality and flipped experiences. Using the students’

feedback, the lecture videos and lesson plans were modified for this study. The results of this study will be used to further refine the flipped classroom model in my Japanese language courses, and I intend to continue evaluating this model of instruction to further improve my courses even after the completion of this study.

Instrumentation

Instruments or measures “are devices that are used to gather information from subjects. Instruments can take a wide variety of forms, including tests, oral or written surveys, ratings, observation, and various archival and unobtrusive measures” (McMillan, 2006, p.9). The present study used six types of instruments: (1) questionnaires, (2) measures of learning outcomes, (3) class observation, (4) oral production rating scale, (5) Blackboard statistics tracking, and (6) instructor’s daily journal.

Questionnaires

Two kinds of questionnaires were administered. The first one was the *General Background Questionnaires* (GBQ) (APPENDIX A). The GBQ was based on Chenoweth and Murday’s (2003) questionnaire, which was modified from a questionnaire originally developed by Tucker for his students in a course on *Social and Cognitive Aspects of Bilingualism* (Ushida, 2003). Chenoweth and Murday’s (2003) questionnaire was used to gather students’ background information including antecedent factors such as prior experiences in French language learning. The results from the questionnaire were used to examine the effect of students’ varying backgrounds on their achievement, satisfaction, and the time spent on online and conventional courses. Chenoweth and Murday’s (2003) original questionnaire was modified for this study to be

applicable to a Japanese language course. For example, Question 8 in the Chenoweth and Murday's questionnaire was course-specific asking the reason for taking the French online course at Carnegie Mellon University. Therefore, Question 8 was omitted in the GBQ for the present study because it did not concern this study. Additionally, the word "CMU" in Question 5 was changed to "this current university," and the word "French" in Question 7 was changed to "Japanese".

The second questionnaire for this study was the *Learning Experience Questionnaire* (LEQ) (APPENDIX B). The LEQ was a modified version of a questionnaire developed by Enfield (2013). Enfield's original questionnaire compiled information on students' perspectives of the flipped classroom approach in his undergraduate multimedia course. The results were used to investigate the effectiveness of the flipped classroom model on an undergraduate multimedia course. The results of Enfield's questionnaire revealed that the students in the multimedia class favored the flipped classroom approach stating that the videos helped their learning and the in-class activities were engaging.

Enfield's (2013) original questionnaire was divided into three sections addressing different aspects of the students' learning experiences: "(a) instructional videos assigned for out-of-class preparation, (b) in-class instructional activities, and (c) a more general impact the course had on students" (p. 17). The LEQ maintains the same format as the Enfield's, which included both multiple-choice questions and open-ended questions. According to Fink (2009), the multiple-choice questions have been proven to be more efficient because of their uncomplicated method of scoring and entering data; furthermore, it offers enhanced reliability since all the respondents are given the same

options, so they can provide uniform data. Open-ended questions provide insight into people's belief and perceptions (Fink, 2009).

Enfield's questionnaire was modified for this study for use in a Japanese language course. For example, the words *HTML* and *CSS* in Question 1 were changed to *grammar topics*. Also the numbers appearing in Questions 2, 3, and 7, which involve the number of videos and the durations of each video, were replaced with the ones pertinent to the Japanese lecture videos. Three additional questions were added to ask students' viewing patterns in the instructional video section. In addition, Question 8 in Enfield's (2013) original questionnaire relating to work-along videos was eliminated because the videos for the Japanese courses were lecture videos, which provided explicit grammar explanations rather than work-along instruction. Moreover, three questions asking students' video viewing patterns were added as Question 8, 9, and 10. Due to the differences in the classroom activities between multimedia courses and Japanese courses, the in-class activities section had the most modifications. For example, in-class activities in multimedia courses were task-based activities whereas Japanese courses involved small and large group communicative activities. As a result, all of the questions in the in-class activities section were modified significantly as indicated in APPENDIX C to reflect Japanese in-class instructional activities. In the end, the total number of questions in the LEQ (APPENDIX B) had been increased to 30 from the 22 questions in Enfield's original questionnaire.

Measures of Learning Outcomes

Learning outcomes for both sections of JPN1401 were measured using chapter quizzes, the final written examination, and mid-term and final oral interviews. JPN1401

is a performance-based course which aims to comprehensively develop the four language skills of reading, speaking, listening, and writing based on the Novice-High or –Mid level of the *ACTFL Proficiency Guidelines* ("American Council", 2012). APPENDIX D includes the course descriptions and objectives taken from the JPN1401 syllabus.

JPN1401 covers six chapters in the course textbook. Each chapter introduces several new grammar topics, a list of vocabulary, and new *kanji* characters, a form of Japanese writing. At the end of each chapter, students took a chapter quiz which employed both pencil-and-paper format and audio format. Chapter quizzes assessed overall language skills that included grammar knowledge and its application, listening, reading, writing, and speaking, which is a typical first-semester Japanese pencil-and-paper test, which mainly consists of word conjugations, fill-in-the-blank, sentence completion, sentence translation, and sentence production (APPENDIX E).

The audio section of the chapter quiz involves students' recording their own oral production of a self-prepared speech and oral reading. A speech assessment asked students to create a short passage in four minutes based on the given instruction and record a speech in two minutes. A reading fluency assessment asked students to read a short passage in two minutes.

APPENDIX F displays written final examination sample questions. A written final was a comprehensive examination of the six chapters which was administered at the end of the semester. The final examination consisted of grammar, *kanji*, reading, listening, and writing sections.

At mid-term and at the end of the semester, an oral interview was administered to each student. Each oral interview session took approximately ten minutes and assessed

oral production and communication skills. APPENDIX G is the oral production interview scale used for both mid-term and the final oral interviews. The oral interview consisted of two parts: question and answer tasks in which the instructor/researcher asked certain questions to elicit learned sentence structure, and conversation tasks in which a pair of students were asked to converse based on the given context.

Issue of Validity in Classroom-based Assessments

While there is no absolute measure of validity, content validity in classroom assessment can be achieved (Brown, 2010). According to Brown (2010), all the discourse and grammatical elements in that chapter should be included in written examination as well as in listening and speaking performance assessments. All chapter quizzes, the final written examination, and mid-term and final oral interview examinations are course content specific and were originally prepared by the instructor/researcher. These assessment tools evolved into the current forms after going through a series of modifications based on the chapter and course objectives over several semesters with a Japanese instructor who has taught another section of JPN1401 at the same institution. Most teacher-designed tests meet a criterion-related validity if the test measures specified classroom objectives (Brown, 2010). Therefore, both grammar and performance objectives of JP1401 are incorporated into the tests to be used in this study in order to establish validity.

Observations

According to Gass and Mackay (2006), interaction derived from input (Krashen 1982, 1992) and output hypothesis (Swain 1985) has a positive effect on language

learning. Furthermore, studies have shown that the increase in output opportunities facilitates L2 development (Mackey & Abbuhl, 2005). A flipped classroom approach maximizes the use of face-to-face classroom time and makes it possible to increase classroom interaction allowing more active in-class activities (Hamdan et al., 2013; Mason et al., 2013). In order to compare the number of differences in classroom interactions between the control group (CG) and the experimental group (EG), six 50-minute face-to-face instructional times in both sections of the Japanese course, totaling 12 sessions, were videotaped for an observation during weeks 9 through 13. Two camcorders were placed at the front of the classroom from opposite angles. Additionally, three pocket digital audio recorders were placed randomly at three separate desks to capture voices during pair works and small group works. Several technical issues arose during the video and audio recording sessions due to the course instructor having sole responsibility for operating the research devices, while continuing to carry out the class instruction. A few times, the instructor began the class failing to remember to turn on or failing to properly turn on the devices. Other times, the battery charges depleted during the recording. Although 12 video files and 18 audio files from the EG and 11 video files and 14 audio files from the CG were collected, only three of the sessions matched by having an hour-length complete video file and audible audio files between the two groups on the same day. The recorded videos were replayed by the instructor/researcher after the course final grades are submitted. From the three pairs of complete video files, the classroom interactions were recorded using a technique called *Seating Chart Observation Record* (SCORE) (Acheson & Gall, 1997).

SCORE is an instrument used to record classroom communication patterns (Farrell, 2011). While there are several techniques for observing teacher and student behavior using seating charts, the verbal flow technique (Acheson & Gall, 1997) was 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” (p. 96). While there are several ways to draw this chart (Acheson & Gall, 1997; Farrell, 2011; Widodo, 2009), this study is modeled after the one in Figure 3.2 presented by Richard’s (1994) in *Reflective Teaching in Second Language Classrooms*.

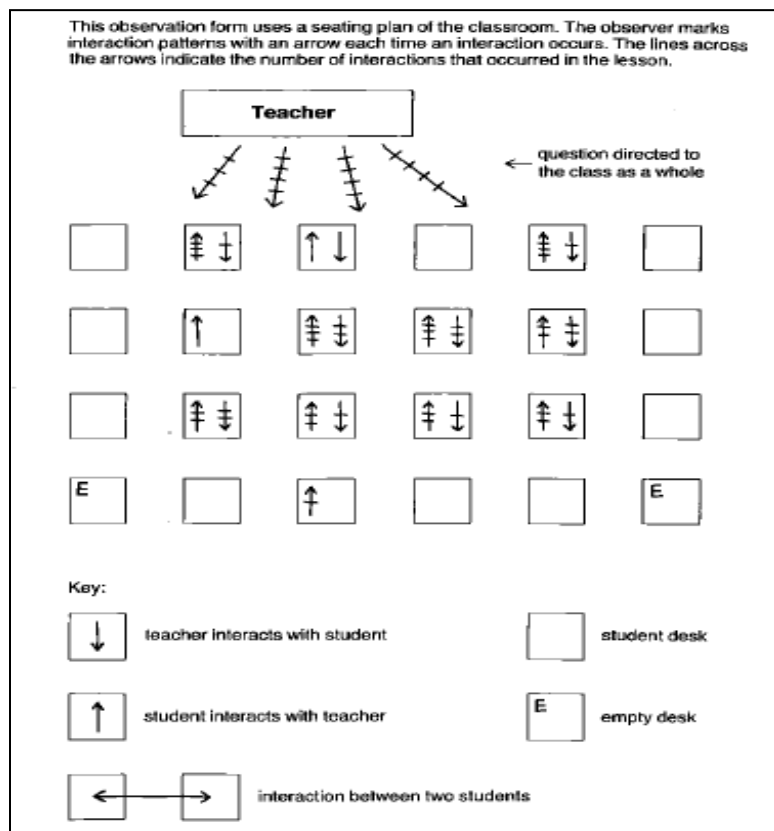


Figure 3.2. “The teacher’s interaction with students during a class”

(Richards & Lockhart, 1994, p. 140)

This observational instrument includes a classroom seating chart and arrows that indicate the flow of verbal interaction (Acheson & Gall, 1997). “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” (Acheson & Gall, 1997, p. 97). To keep the chart simple, notches in an arrow 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 following: (a) frequency of the questions that the instructor asks to the whole class, (b) frequency of the questions the instructor asks to individuals, (c) frequency of students’ responses to these questions, (d) frequency of the output with errors, and (e) frequency of student-to-student interactions. Acheson and Gall caution the limitation of SCORE because it simplifies the process of teaching. For example, nonverbal behaviors such as eye movements, facial expressions, and body language are important aspect of Japanese communication (McDaniel, 1993) which need to be included in classroom instruction. These behaviors are difficult to record.

Nevertheless, nonverbal behaviors can be omitted from this recording, since the purpose of the observation is to identify explicit classroom interactions, which may be related to the development of language skills. On the other hand, one of the main advantages of SCORE is that it “condense[s] a large amount of information about classroom behavior on a single sheet of paper...[]...They are easy to use and interpret” (Acheson & Gall, 1997, p. 89). “Moreover, they record important aspects of classroom behavior, such as students’ level of attentiveness and how teachers distribute their time among students in the class” (p. 89).

Following the suggestion by Acheson and Gall (1997), the chart for this study included additional categories as follows:

- W? teacher to whole class question
- I? teacher to an individual student question
- @ student volunteered a relevant or correct response
- * student volunteered an irrelevant or incorrect response
- ? student question
- } student comment directed to the class as a whole (p. 98)

Oral Production Rating Scale

Course specific oral examinations were utilized to assess students' oral proficiency for this study. The students in the first year Japanese courses are required to take mid-term and final oral interview examinations. Students met with me, the instructor, in pairs. Each session was allotted 12 minutes although some pairs took less than 12 minutes to complete the task. First, the instructor/researcher asked questions intending to draw out target structures. Part of the oral interview was a role-play activity in which students had to perform a dialogue based on the given instructions. Just as with the chapter quizzes and the final written examination, the oral interview questions and the rating scales had been created and modified through collaboration by the instructor/researcher and the other Japanese instructor at the same institution. The rationale for using the course specific instructor-generated instruments for the present study was supported by the Payne and Whitney's (2002) claim. Although ACTFL Oral Proficiency Interview (OPI) ("American Council", 2012), is the most widely recognized oral proficiency measuring instrument, Payne and Whitney used their own rating scale in

their study on the development of L2 oral proficiency through synchronous Computer Mediated Communication (CMC).

This scale was not appropriate for use in this study for two reasons: (a) the OPI is not sensitive enough to measure changes in oral proficiency that may occur in a single semester in a course meeting only four hours per week and (b) a significant proportion of the OPI score consists of competencies that are not addressed by this study's research questions (i.e., sociolinguistic competence). It is important to note that the term oral proficiency in this article is a more simplified construct than that used by ACTFL. (p. 16)

In the Introductory Japanese course, the oral production skills were assessed based on the following criteria: (1) the task completion and complexity, (2) comprehension, (3) comprehensibility/pronunciation, (4) Accuracy-grammar, word order, vocabulary, and (5) fluency/delivery (Appendix G). Although the flipped classroom approach, an instructional approach evaluated in the present study, differed from that of Payne and Whitney's (2002) CMC, both studies measured the progress of students' oral proficiency within a specific course context. According to Brown (2010), if a student reaches the test criterion set by the teacher based on the classroom objectives, the assessment is considered to meet "criterion-related validity" (p.32).

Blackboard Statistics Tracking

Students in the experimental group were instructed to watch the lecture videos that were uploaded on Blackboard (Version 9.1), a web-based course management system via Echo 360 (Version 5.4) screen capture software. One way to keep track of the students' video access patterns was through the statistics offered by the Blackboard statistics tracking system (BST). BST enabled the instructor/researcher to record the number and the time of access to the content. Because the Japanese courses have daily reading assignments, which require students to read a section of the grammar topics prior

to coming to class, some students might have simply chosen not to watch the lecture videos. Since the purpose of this present study was to investigate the effect of the flipped classroom approach, part of which involved viewing of the lecture videos outside of class time, tracking their video access patterns was crucial. However, the number of video access might not always reflect the actual number of video viewing time. The BST recorded every time a student accessed a lecture video whether they actually viewed it or not. Therefore, the statistics record obtained from Blackboard did not become a primary data, but rather it complimented the data collected from a self-report which asked students' perceptions on the instructional videos and their video viewing pattern in the instructional video section Questions 1 through 15 in the LEQ questionnaire.

Instructor's Daily Journal

The instructor/researcher kept a journal of daily class proceedings on both the CG and the EG classes during the period of flipped implementation. The journal focused on tracking the completion of class activities, students' attitudes and behaviors in class, and the time instructor spent on direct instructions. The daily journal served as "descriptive and reflective fieldnotes" (Creswell, 2005, p. 214). "Descriptive fieldnotes record a description of the events, activities, and people (e.g., what happened). Reflective fieldnotes record personal thoughts that researcher have that relate to their insights" (Creswell, 2005, p. 214). The journal entries were used during the data analysis stage to complement and substantiate the findings based on the SCORE sheet.

Table 3.1. Timeline, Research Questions, and Data Source Matrix

Timeline	Primary Research Questions	Data Source
Week 1 through Week 7 Traditional instruction	1. What are the differences in the students' learning outcomes between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	CQ 1~3 DJ
Week 8 Consent form		MOE (AR) GBQ
Week 9 Orientation (EG) Flipped classroom approach begins (EG)	2. What are the differences in the classroom communication patterns between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	VO AR (SCORE) BST DJ
Week 10	1. What are the differences in the students' learning outcomes between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	CQ4
	2. What are the differences in the classroom communication patterns between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	VO AR (SCORE) BST DJ
Week 11	2. What are the differences in the classroom communication patterns between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	VO AR (SCORE) BST DJ
Week 12 & 13	1. What are the differences in the students' learning outcomes between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	CQ 5
	2. What are the differences in the classroom communication patterns between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	VO AR (SCORE) BST DJ
Week 15	1. What are the differences in the students' learning outcomes between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	CQ 6 FOE (AR)
	3. What are the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach?	LEQ
Final Week	1. What are the differences in the students' learning outcomes between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	FE
Quantitative Data: CQ#: Chapter quiz MOE: Mid-term oral examination FOE: Final oral examination FE: Final Examination		Qualitative Data: AR: Audio recording; VO: Video observation SCORE: Seating chart observation record BST: Blackboard statistical tracking System LEQ: Learning experience questionnaire GBQ: General background questionnaire DJ: Instructor daily journals

Data Collection Procedures

The timeline of the proposed study as well as the link between the research questions and the data sources is presented in Table 3.1. The data collection involved triangulation to improve the present investigation by collecting and blending multiple data (Creswell, 2005).

Both sections of JPN1401 use the textbook called, *Genki I: An Integrated Course in Elementary Japanese* (Banno, Ikeda, & Ohno, 2011). Both sections began with a traditional teaching approach. The first three chapters in the *Genki I* textbook were covered through week 7. In order to establish a baseline to compare the learning outcomes of the students in the CG and the EG, both groups received the same teacher-centered traditional instruction through week 7. During week 8, mid-term oral interview examinations were administered. After the mid-term oral examinations, students in both sections of JPN1401 were asked to sign consent forms to participate in the study. Upon obtaining an approval from the university's Institutional Review Board (IRB), a third party with no access to student participants' grades recruited students for participation in the study.

Starting of week 9, the EG received an orientation on a flipped classroom approach. Findlay-Thompson and Mombourquette (2014) suggests that in order for the flipped classroom to be effective, students must be informed of its purpose and process thoroughly. Therefore, the students in the EG received an orientation session, which explained the purpose of the flipped classroom approach and instructions on the effective use of lecture videos. The orientation generally explained that the purpose of the flipped classroom approach was to engage students in more active interactions during the face-to-

face class time by taking direct instruction outside of the classroom (Bergmann & Sams, 2012) to facilitate language proficiency development. Students were also instructed to watch the lecture videos and take notes before coming to class. The videos were always accessible on the Blackboard course management system, so students could play and replay any time of the day, before and after class using computers, computer tablets, and smart phones. Following the orientation, I began a flipped classroom approach in the EG. The CG continued receiving the traditional instructional approach. Both the EG and the CG completed the next three chapters in *Genki I* (Banno, Ikeda, & Ohno, 2011).

According to Stringer (2007), “permission is not required when teachers engage in research directly related to their ongoing work in the classroom” (p. 45). I had access to all the data from course quizzes and examinations during the data collection stage due to the fact that course grades had to be submitted. However, the proposed study involved analysis of students’ achievement scores as well as publication of findings. Therefore, in order “to ensure the ethical conduct of research engaged in by students and faculty” (Stringer, 2007, p. 45), I did not access the result of the consent forms that indicated which students agreed to participate in this study and which students declined until after the final course-grades were submitted at the end of the semester. All the students consented to participate in the study.

As a result of the purposive research sampling, every effort was made to match as many factors as possible as suggested by Day & Foley (2006): same instructor, topics covered, the contents of the lecture slide used in class or web lectures, homework, quizzes, semester project, midterm and final oral interviews, final written examination, and same assistant grader.

Chapter Lesson Cycle

Table 3.2 exhibits how each chapter was paced to be completed in nine sessions for this study.

Table 3.2. Chapter Lesson Cycle

Day of Lesson	Daily Quiz	Daily Lessons (<i>Genki I: Integrated Course in Elementary Japanese</i>)	Daily Assignment Reading Workbook pgs	Grammar video (EG only, starts 9 th week)
Day 0	BBGQ		Read G1, G2; PI	Watch G1, G2
Day 1	VQ1 nouns	G1, G2; PI	G3, G4 ; PII	Watch G3, G4
Day 2	VQ2 Verbs	G3, G4 ; PII	G5, G6 ; PIII 27, 28	Watch G5, G6
Day 3	VQ3 ALL Vocabs	G5, G6 ; PIII	G7, G8 ; PIV, PV 29, 30	Watch G7, G8
Day 4		G7, G8 ; PIV, PV	Audio Drill 31, 32	
Day 5	PG I	RWI; kanji	33, 34	
Day 6	PG II	RWII Culture Note Kanji	129,130	
Day 7	KQ	RWIII	35	
Day 8	CQ Written			
Day 9	CQ Reading and Speech	LAC Activity		

BBGQ: Blackboard grammar check quiz

VQ#: Vocabulary quiz

PG#: Performance grade

KQ: *Kanji* quiz

CQ: Chapter quiz

G#: Grammar topic

P#: Practice

RW#: Reading & Writing section

LAC: Language Acquisition Center

Audio Drill: Assignment drill recording

JPN1401 teaches six chapters in *Genki I* (Banno et al., 2011). There are 12 chapters in this textbook, and each chapter consists of two sections: Grammar and Conversation; and Writing and Reading. In the traditional scheduling, each chapter is covered in a nine-day cycle. The first four days are spent on mastering newly introduced

grammar with class lecture and interactive oral exercises. The next three days focus on improving reading and writing skills. The chapter quiz is administered on the final two days of the nine-day cycle, with the eighth day being a written quiz and the ninth day being a reading and speech assessment.

Before the first day of instruction for each chapter (Day 0), the students were required to take a short grammar check quiz on Blackboard (BBGQ). The grammar check quiz was a 10-question open book quiz, which enabled students to get familiarized with the chapter content. On Days 1 through 3, I administered a daily five-minute vocabulary quiz (VQ#). On Days 5 and 6, I administered a performance grade (PG I and PG II), a quiz that assesses students' oral production skills. Day 7 contained a kanji quiz (KQ) and Days 8 and 9 consisted of the chapter quizzes. The Daily Lessons column in Table 3.2 indicates the grammar topics (G#) and the practices (P#) which were covered on a particular day. As a daily assignment, students were required to read the grammar section and to go over the practice section as indicated in the Daily Assignment column in Table 3.2 before coming to class.

Starting with the 9th week, students in the EG were assigned to watch grammar videos as indicated in the Grammar Video column of Table 3.2 in addition to the daily reading and workbook assignment before coming to class. The CG continued to follow the same lesson schedule.

Daily Lesson

Table 3.3 below describes the comparisons of JPN1401 daily lessons in the CG and the EG beginning from the 9th week. The columns on the left half are the planned traditional daily lesson outline. The traditional approach was carried out in both CG and

EG for Chapters One through Three during the first eight weeks. Starting from Chapter One in week 9, a flipped classroom approach was implemented in the EG while the CG continued with a traditional approach.

Daily lesson for CG. The CG spent the first 10 minutes taking a daily quiz and reviewing grammar topics from the prior lesson, followed by a teacher-centered grammar lecture for 10 minutes. The remaining time was split between interactive large group and small group activities.

Table 3.3. Daily Lesson Comparisons

50 min Total	Traditional (CG)	Flipped Classroom (EG)	50 min Total
10 min	Daily Quiz Review	Daily Quiz Review & Grammar Check	10 min
10 min	Grammar Lecture	large group oral activities	15~20 min
15 min	large group oral activities -guided practices -communicative activities	-guided practices -communicative activities	
10 min	small group/pair -communicative Tasks	small group/pair -communicative tasks	15~20 min
5 min	Recap Closing	Recap Closing	5 min

Large group activities included but were not limited to teacher-directed oral drills, question-response exercises, and learning games. Small group activities were a pair or three to four-student oral interaction activities, which involved tasks that require two-way conversations and information exchanges. Five minutes were allotted for recap and closing announcement time. Depending on the students' understanding, some face-to-

face lecture time exceeded the fixed time. This resulted in less interactive oral practice time.

Daily lesson for EG. On the other hand, in the flipped classroom approach, students were required to watch the lecture videos and take notes before coming to class. Out of the 50-minute class period, the first 8 to 10 minutes were spent on a daily quiz and a question and answer session to check for grammar understanding. In the flipped classroom, since there was no scheduled grammar lecture, the class was able to spend more time on oral interaction activities than the traditional instruction group. Recent studies support the idea that the increase in oral exercises facilitate improving oral proficiency (Hadley, 2001a; Matsuoka & Ikhsan, 2013). The EG also ended the class with a recap and closing announcement.

The present study established a baseline of the students' language skills in order to compare the test scores and learning experience between the CG and the EG. Chapters One through Three were taught in a traditional approach in both sections during the first half of the semester up to week 8. A flipped classroom approach was implemented in the EG starting in week 9 after the mid-term oral interview was completed. The CG continued to receive regular instruction.

Quantitative Data

At the end of each chapter, students took a chapter quiz. Every written examination for this study utilized a blind grading system in which all the students' names were covered up during the grading process. The mean scores of both CG and EG were compared to assess the differences in their learning outcomes. During week 8,

halfway through the semester, a mid-term oral proficiency interview was conducted to assess the students' oral production skills in both sections using the course specific oral production rating scale as previously discussed in the *Instrumentation* section of this chapter. The first semester students are generally not accustomed to taking oral interview examinations, which may have affected their performance. Studies have shown that students' anxiety could have a negative effect on their performances in oral examinations (Hewitt & Stephenson, 2012). Therefore, in order to ease the students' anxiety, the instructor/researcher was the primary interviewer rather than having an outside interviewer.

All the interviews were recorded using an audio recording device and later graded by the instructor/researcher and a second rater, an instructor of Japanese who taught the third class of introductory Japanese. She has been teaching JPN1401 for several years at the institution under present study and is also a collaborator of the course examinations and the oral proficiency rating scale which was used for this study as discussed previously in the *Instrumentation* section of this chapter. The oral proficiency scores were finalized after the two grades were compared and discussed. The final oral interviews were also conducted in the same format. An independent sample *t*-test was utilized to compare group means of the chapter quiz scores as well as mid- and final oral proficiency interview scores to examine whether there was a significant difference between the CG and the EG. "The *t*-test is [often] used to decide whether the average scores of two groups are significantly different or if the difference could be due merely to random coincidence" (Siegel, 1990, p.773).

Between week 9 and 13, six each class session of both the CG and the EG were videotaped for observation, and three of each was later analyzed using SCORE. Extra class sessions were videotaped in order to help students become accustomed to getting videotaped and to minimize a possible *Hawthorn Effect* (Chiappone, 2009). The *Hawthorne Effect* 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, 2009). The instructor/researcher counted the number of interactions and the quality of students' responses from those recorded videos. Then, these numbers were recorded onto a SCORE sheet. The raw numbers of the data from the SCORE between the CG and the EG were compared to study the differences in the number of interactions.

In addition, the number of each student's video access in the EG were documented from the Blackboard statistics tracking. LEQ were administered in week 15 to collect the data on the students' learning experiences. In addition to comparing the mean scores between each group, students' learning gains were evaluated. As the present study examined and explored the effects of a flipped classroom approach on students' learning outcomes, the data collected from GBQ, SCORE, LEQ, and BST were considered as possible affective variables that relate to students' learning outcomes.

Qualitative Data

Qualitative data were collected from the Learning Experience Questionnaire (LEQ), which included both close-ended and open-ended questions. LEQ was administered to the EG and the CG in week 15 in the language acquisition center (LAC) at the current study site. The EG's questionnaire consisted of thirty questions, and the

CG's questions consisted of 12 questions. The data regarding grammar lecture videos was summarized into seven categories, in-class activities were summarized into one category, and overall course reflection was summarized into two categories.

The LAC is equipped with a number of personal computers with a microphone headset and is divided into individual work stations. LEQ was entered into Qualtrics, a web-based survey software. A link to the questionnaire was created on the Blackboard course management system and was only available during one class session in which all the students were present. A third party with no access to student participants' grades was present at the time of survey administration. The introduction section included the description and the purpose of the survey. The survey results were in the form of electronic files and all data stored in Qualtrics were kept on an encrypted computer and only the instructor/researcher had access to the data.

Qualitative data was also collected from a journal that the instructor/researcher kept of daily class proceedings on both the CG and the EG classes during the period of flipped implementation, as previously discussed in the *Instrumentation* section of this chapter. In the present study, the instructor/researcher entered fieldnotes after each lesson. The entries included the tracking of the time spent on and completion of class activities, the type and content of activities such as whole-class, small group, and pair work, specific topics for each chapter, as well as students' attitudes and behaviors. The journal entries were referenced during the data analysis of the SCORE sheet and provided further insight into the performance of each class session and supported the results of the classroom communication patterns.

Data Analysis

The present study analyzed both quantitative and qualitative data to explore the effect of a flipped classroom approach in a Japanese language classroom to assess its effectiveness and feasibility. According to Palinkas et al. (2015) innovative practices are complex and require mixed method designs because a single methodology is insufficient to gain better understanding of research issues. Similarly, Creswell and Plano Clark (2011) affirms that a mixed methods research enables researchers “to use all of the tools of data collection available rather than being restricted to the types of data collection typically associated with quantitative research or qualitative research” (p. 12).

Table 3.4 illustrates the research questions and data analysis strategies.

Table 3.4. Research Questions and Data Analysis Methods

Research Question	Instrument	Data Analysis
RQ1 What are the differences in the students' learning outcomes between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	Test Scores (chapter quiz, oral interviews, final examination)	Independent sample <i>t</i> -test Means
RQ2 What are the differences in the classroom communication patterns between a flipped classroom approach (EG) and the traditional instructional approach (CG)?	SCORE Journals	Descriptive (frequency, percentages)
RQ3 What are the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach?	LEQ (close-ended, open-ended) Journals	Descriptive (category)

Furthermore, Fraenkel (2006) states that triangulation, using a variety of instruments to collect data improves the quality of data and the accuracy of data

interpretation. Since a successful implementation of a flipped classroom approach requires good planning and students' perceptions of the unconventional instructional approach, the present study utilized various data involving questionnaires, measures of learning outcomes, class observation, and an oral production rating scale, a Blackboard statistics tracking, and instructor's daily journals.

Quantitative

Quantitative data were analyzed for Research Question #1, which addressed the differences in the students' learning outcomes between a flipped classroom approach (EG) and the traditional instructional approach (CG). The students in JPN1401 took six chapter quizzes, two oral interview examinations, and a final examination during the semester. An independent sample *t*-test using the statistical software SPSS 21 (Version 21.0) was employed to analyze this quantitative data in order to determine possible significant differences in learning outcomes between the CG and the EG. According to Park (2009), "[i]f two samples are taken from different populations and their elements are not paired, the independent sample *t*-test compares the means of two samples" (p. 4). The independent sample *t*-test was chosen because the participants in this study were from two different classes with a criterion-based purposive sampling in which the sample populations met the criterion (Collins et al., 2007). The mean score of each chapter quiz, each oral examination, and the final examination were compared between the two classes. The comparisons of the means of the first three chapters and the mid-term oral interview scores established a baseline for each group. The baseline enabled a review of possible learning gains after implementing a flipped classroom approach in the EG after the mid-term.

Next, Research Question #2 addressed the differences in the classroom communication patterns using the SCORE (Richards & Lockhart, 1994) chart. The number of whole class questions and individual questions by the instructor, the number of students' output as a whole-class and as an individual, and the number of output with errors were recorded for each classroom and counted on the SCORE chart. The frequencies of these communication patterns and the percentages of each type of communication flow within the total number of interactions were compared between the CG and the EG looking for any differences. The comparison of classroom interactions was an essential part of this study as, according to Ellis (2012), the classroom interaction facilitates language acquisition.

Additionally, the results of the GBQ provided quantitative data of the students' demographic information. Demographic information was collected using frequencies or frequency distributions (numbers and percentages) (Fink, 2009). The demographic data were collected for descriptive purpose and did not directly address the research questions, but it provided the overall profile of the participants in each research group.

Qualitative

Research Question #3 addressed students' perceptions of the flipped classroom experience. Qualitative data were collected from the LEQ and the instructor/researcher's daily journals. The LEQ consisted of both closed-ended questions and open-ended questions. Both closed-ended and open-ended question responses were summarized into categories and analyzed (Creswell, 2008). The Qualtrics survey software generated descriptive statistics (mode, median, and mean) from the responses to the closed-ended questions. This quantitative data was linked to qualitative data from the LEQ to describe

students' perceptions. For example, the instructional video section consists of 15 questions, one open-ended and 14 closed-ended questions. The descriptive statistics from the closed-ended questions revealed students' perceptions on the flipped classroom approach and on receiving grammar video instruction. The quantitative data also informed students' lecture video access patterns.

Creswell (2008) describes the systematical textual analysis of the qualitative data as follows: (1) organize the raw data and prepare for analysis, (2) read the texts thoroughly, (3) begin detailed analysis with coding, (4) identify the themes, (5) advance how to present the description and themes, and (6) make an interpretation of the data. The present study utilized hand analysis since the raw data only involved approximately 2,000 words. According to Creswell (2008), when the database is small (e.g., less than 500 pages of transcripts) and is easily trackable, hand analysis is feasible. Creswell's suggestions were applied to the present study. However, the coding strategy was specific to this present study, rather than guided by Creswell's suggested coding strategy. First, all the open-ended responses in the LEQ were transcribed into a separate document. Next, the responses were read thoroughly. Instead of identifying themes from the transcripts in accordance with Creswell's coding strategy, the coding in the present study was conducted by identifying and applying three major categories of questions on the LEQ. As was discussed earlier in this chapter, there were three sections in Enfield's (2013) original LEQ: "(a) instructional videos assigned for out-of-class preparation, (b) in-class instructional activities, and (c) a more general impact the course had on students" (p.17). As Enfield's questionnaire was the template used for the LEQ in the present study, three main categories of questions similar to Enfield's categories were utilized:

(1) grammar lecture videos, (2) in-class activities, and (3) overall course impressions.

These three categories were further divided into ten sub-categories of questions. The ten sub-categories, shown in Table 3.5 below, were used to identify specific matters to be analyzed from the data.

Table 3.5. Categories of LEQ

Major categories	Question #	Sub-categories
Grammar Lecture Videos (EG)	1. 22.	Overall impression
	2. 3. 4. 7.	Length
	5. 6.	Strategies
	8. 9. 10.	Participation
	11.	Motivation to watch
	12.13. 18. 19.	Content/activities
	14.	Technical Issues
In-class Activities (EG, CG)	16-1. 16-2. 16-3. 16-4.	Instructor-led, small group, pair activities/ tasks
	17-1. 17-2. 17-3. 17-4.	
Overall Course (EG, CG)	21.	Independent learning
	23.	Course preparedness

Each closed-ended and open-ended LEQ question was identified with the most relevant sub-category. Finally, the qualitative data was interpreted. The results of the qualitative data analysis from the LEQ that address students' perceptions will be presented in Chapter Four. Implications of the results of the qualitative analysis will be discussed in Chapter Five. Additionally, the instructor/researcher's daily journal entries were used to explain and support the quantitative results.

The action research nature of this present study would cast concern over the validity of the results and ethical issues. Because qualitative research is dependent on the researcher, as Fraenkel (2008) points out that a researcher bias in both collecting and interpreting information will always be a concern. However, establishing clear goals in the beginning of the study, which were to improve my own classroom instruction and to make a contribution to the foreign language community, lessened such concerns about potential bias.

Lecture Videos

As has been discussed in earlier chapters, through my research of more effective and efficient language instruction methods, I identified a flipped classroom approach using video technology and decided to introduce it in my first year Japanese course. The lecture videos for JPN1401 were created in the summer of 2013 and first used in the fall 2013 semester. JPN1401 studies one or two grammar topics a day; thus, separate videos for each grammar topic were created. Initially, I planned to complete the video project alone. However, the script writing became collaborative after a Japanese language professor from another institution expressed interest in the project. Both the collaborator and I took turns explaining grammar topics. A part of each video was in a dialogue format between the collaborator and me.

Bergmann and Sams (2012) suggests the benefit of creating the video with another teacher, documenting that his students favored the dialogue between teachers because it helped their comprehension of the material. The process and the tools used for the video production are described in the flow chart in Figure 3.3.

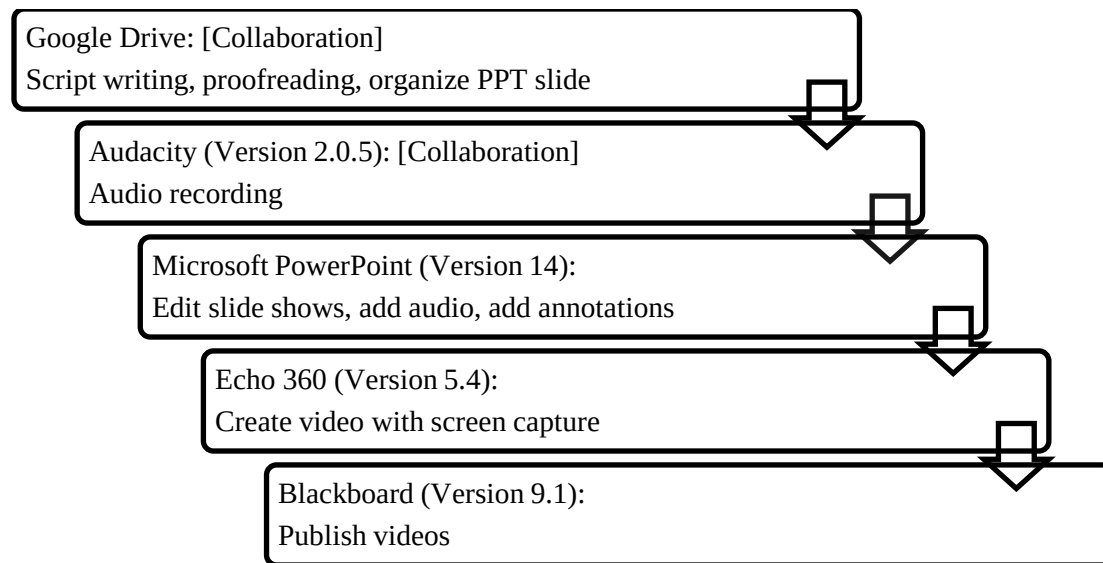


Figure 3.3. Video Production Process and Tools

Since the script collaborator and I do not live near one another, it was difficult to meet in person. As a result, Google Drive, a cloud-based file storage and sharing platform, was utilized for script writing. After writing a script and organizing a PowerPoint slide show on each grammar topic, I uploaded them on Google Drive. The collaborator and I then met on one weekend and worked on editing and recording the script. We used Audacity (Version 2.0.5), freeware for audio recording. An audio file for each slide was created and converted into a MP3 file. For example, Chapter Five has four grammar topics: (1) Adjectives; (2) 好き(な) *suki(na)*, and 嫌い(な) *kirai(na)*; (3) ~ましよう/~ましようか *mashoo/mashoo ka*; (4) Counting objects. As an example, it required 21 slides to explain four grammar topics. At the same time, 21 corresponding audio files were created. Creating separate audio files was time consuming; however, it makes it easier to modify the slide shows when necessary. It took approximately three to four hours to create audio files for each chapter and another five to six hours to create the Chapter One through Six lecture videos by inserting audio files and recording the

computer screen to capture the PowerPoint slide shows with annotations. In the end, it took over 40 hours to finalize the lecture videos for six chapters.

Summary of the Methodology

This study employed a quasi-experimental mixed-methods design to explore the effects of a flipped classroom approach on Japanese language learning through the evaluation of students' learning outcomes and learning experiences. In order to address the research questions, both quantitative and qualitative data were collected. When the data is mixed (triangulation), investigators could improve their inquiries through comparison and integration (Creswell, 2005). "This improvement would come from blending the strengths of one type of method and neutralizing the weaknesses of the other" (p. 511).

CHAPTER FOUR

Results

Introduction

Developing functional second language proficiency is necessary for twenty-first century college graduates in the global society (Bollag, 2007). The flipped classroom approach can provide opportunities to attain knowledge and to increase active learning. Combining knowledge and active learning is an effective approach to achieving language proficiency. The purpose of this study was to explore the effectiveness of the flipped classroom approach in a Japanese language classroom and its feasibility. Both qualitative and quantitative data were collected concurrently from two first-semester Japanese language courses taught by the instructor/researcher, one of which implemented a flipped classroom approach, and the other which was taught in a traditional instructional approach in which no specific instructional changes were made from previous semesters. In order to supplement the small sample size, a concurrent embedded design of mixed methods (Creswell, 2008) was adapted to the present study. The quantitative data was used to assess the effectiveness of a flipped classroom by comparing the learning outcomes of the experimental group (EG) and the control group (CG), and the qualitative data was used to support the quantitative findings. This chapter will first describe the background of the student participants' based on general background questionnaires (GBQ) (Appendix A) and will proceed to report the findings of data analysis.

Participants

As described in Chapter Three, the participants in this study were 39 students in the two sections of the first-year Introductory Japanese language course, JPN1401, during the fall semester of 2014 at a private university located in Texas. The demographics of each group are reported in Table 4.1.

Table 4.1. Gender, Age, and Academic Year

Demographics		EG (N = 19)		CG (N = 20)	
Gender	Male	10	52.6%	12	60%
	Female	9	47.4%	8	40%
	Total	19		20	
Age	18	4	21.1%	7	35%
	19	6	31.6%	6	30%
	20	8	42.1%	2	10%
	21	1	5.3%	2	10%
	22	0	0%	2	10%
	over 25	0	0%	1	5%
	Total	19	100%	20	100%
Academic Year	Freshman	4	21.1%	8	40%
	Sophomore	7	36.8%	6	30%
	Junior	6	31.6%	2	10%
	Senior	2	10.5%	3	15%
	Other	0	0%	1	5%
	Total	19	100%	20	100%

The experimental group (EG) consisted of 19 students and the control group (CG) consisted of 20 students. The CG originally started the class with 21 students at the beginning of the semester; however, one student dropped the course before the mid-term. Therefore, the data relating to this particular student was discarded, keeping the sample size for the CG to 20. A criterion-based purposive sampling (Collins et al., 2007) was chosen for the present study because of its action research nature, in which educators aim to improve their students' learning and their own instructional practices by studying

issues or problems in their own classrooms (Creswell, 2005). In criterion-based purposive sampling, the researcher selects participants because they fit into certain criteria (Collins et al., 2007). In the present study, the criteria of the sampling were students enrolled in the introductory Japanese language course to be studied. All students consented to participate in this study. Each student completed a general background questionnaire.

Male and female distributions are relatively consistent between the two groups with 52.6 % male and 47.4% female in the EG and 60% male and 40% female in the CG. Both groups had slightly more male students than female students. However the ages of students were not comparable between the two groups, as the CG had more young students than the EG. In the CG, there were seven 18-year olds, six 19-year olds, two 20-year olds, two 21-year olds, and two 22-year olds. One student was over 25-years old. In the EG, there were four 18-year olds, six 19-year olds, nine 20-year olds, and one 21-year old. Consistent with the age differences, the students' academic years did not equal as the CG had more freshman (40%) than the EG (21.1%). Overall, the EG had more upperclassmen than the CG.

Data displayed in APPENDIX H indicates students' majors varied significantly. While more students in the EG were Humanity and Social Science majors than the CG, no specific majors favored by the Japanese language students were identified. Only 12 students had minors, and the half of them minored in Japanese: two in the EG and four in the CG. Other minors included Mathematics, Pre-law, Chemistry, Chinese, Computer Science, and Business.

To the question asking the place of birth, of the 19 students in the EG, 16 students responded that they were born in the United States, and three students said they were born in China. Of the 20 students in the CG, all but two students were born in the United States. Those two did not specify the countries. Figure 4.1 and 4.2 show that majority of students in both groups considered English as their native language and the primary language spoken at home.

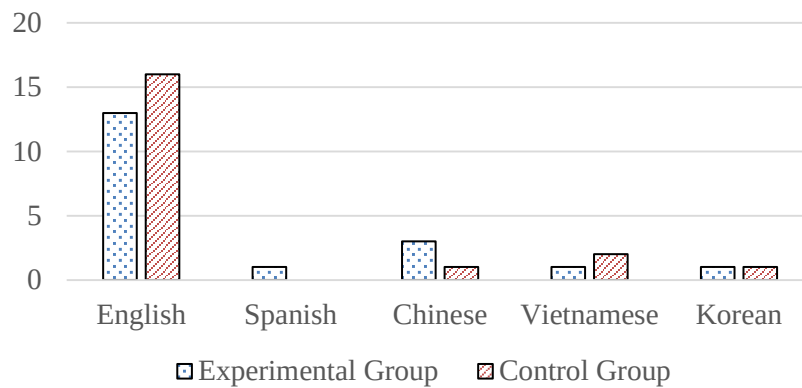


Figure 4.1. Students' Native Language

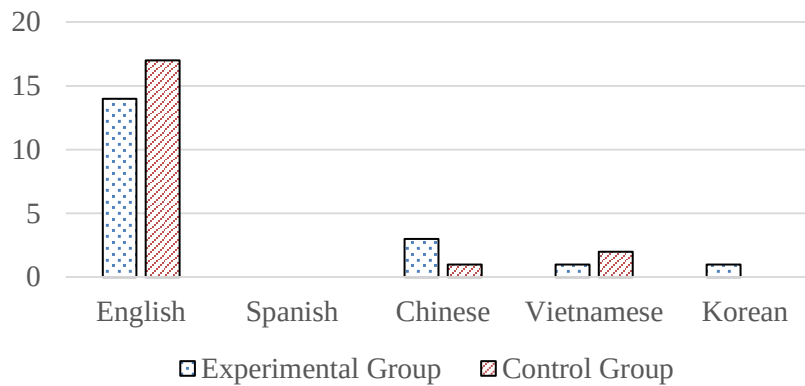


Figure 4.2. Language Spoken during Childhood

Additionally, Figure 4.3 illustrates the language(s) spoken to the students by people close to them during their childhood. Twelve out of 19 in the EG reported

English, three reported Chinese, one reported Vietnamese, and two reported Korean language. The CG reported a greater variety of languages that were spoken to them during their childhood: eight students reported English, two reported Spanish, two reported Chinese, two reported Vietnamese, one reported Korean, one reported English and Japanese, one reported English, Spanish, and Chinese, one reported English, Spanish, and Arabic, and one reported English, Irish, and Gaelic.

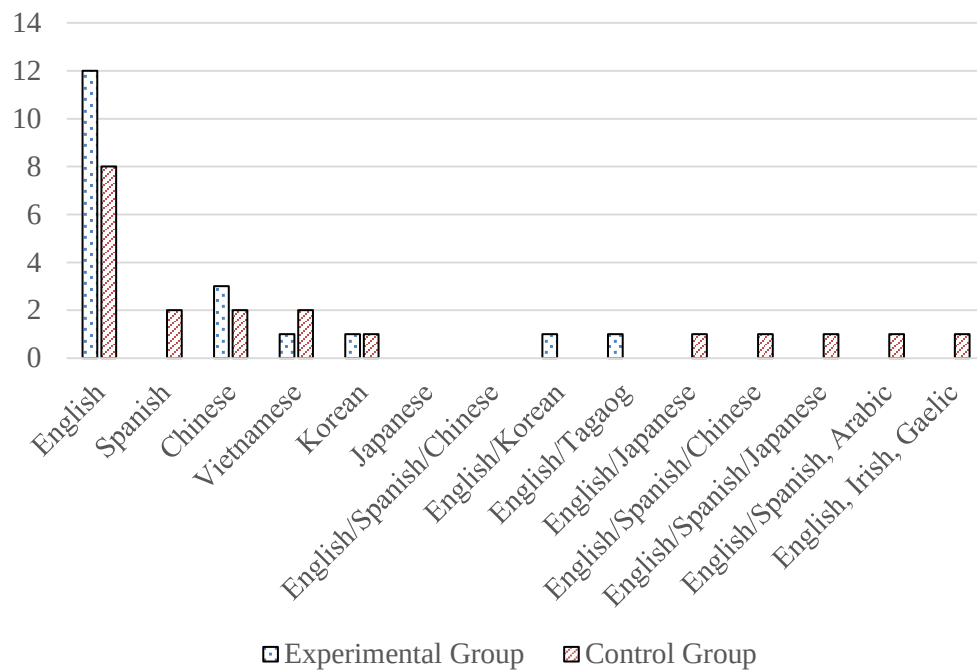


Figure 4.3. Language Spoken by People Close to the Student while Growing up

Table 4.2 illustrates the students who reported having extensive Japanese language experience before entering college. None were reported in the EG, and five were reported in the CG. Out of those five in the CG, two took Japanese in high school for 4 years, one has a Japanese parent and lived in Japan for 4 years, one took Japanese in high school for 3 years and passed the N2 level of the Japanese Language Proficiency

Test 4 years ago, and one student studied Japanese independently for 3 years using a commercial Japanese language program before entering college. One student in the EG has a Japanese parent, but he did not learn to speak the language. Thus, his background was determined not to be extensive Japanese language experience, and he was excluded from Table 4.2. As a result, one fourth of the students in the CG had extensive knowledge of Japanese language.

Table 4.2. Extensive Japanese Language Experience

Japanese Language Learning Experience Prior to Entering College	EG (<i>N</i> = 19)	CG (<i>N</i> = 20)
Took 4 years of Japanese in High School	0	2
Took 3 years of Japanese in High School and Passed JLPT	0	1
Have a Japanese Parent and Lived in Japan for 4 years Prior to Entering College	0	1
Studied Japanese Independently for 3 years	0	1
Total	0	5

Additionally, the GBQ asked the students to describe any prior second language learning experiences prior to entering college. In the EG, six reported not having any prior second language learning experiences; one vacationed in Japan; one vacationed in Italy and Greece and had exposure to spoken Italian and Greek and written Latin; one vacationed in China; one visited Germany, Holland, Czech Republic, France, Belize, and Italy; one spent three weeks with a French family in France and visited Japan; one lived in a non-English speaking country; and one visited relatives in Vietnam. In the CG, five students responded not having any prior language learning experiences; two students took Spanish courses in high school; one student had been to South America on a mission trip;

one student had been to Mexico and Japan; one vacationed in Italy and lived in an area in the U.S. where Spanish language was predominantly spoken; one student had lived in Saudi Arabia for 2 years; one student took French in high school, took 1 semester in college, and visited France and China on vacation; and one student visited Japan for about a week right before entering college. A second language learning experience is considered to be either formal in a classroom context or informal which is in natural environment outside of classroom (Jakonen, 2014). While many students in both groups had exposure to various L2 languages mainly through traveling, nothing was significant enough to qualify as a L2 language learning experience except those five students who had extensive Japanese language experience as reflected in Table 4.2.

The GBQ also asked the students which language courses were taken at the current university. In the EG, one student had taken Arabic, and another student had taken 3 semesters of Korean and was enrolled in Japanese, Chinese and Korean courses concurrently at the time of completing the GBQ. In the CG, one student had taken Spanish, one student had taken 4 semesters of Latin and 1 semester of German, one student had taken 1 semester of Spanish, and another student had taken 1 semester of Latin.

The students had various reasons for learning Japanese and registering for a specific section. Table 4.3 presents the students' reasons for choosing to learn Japanese in a university. More students in the CG took the course with reasons related to the purpose of using the language in the future (i.e., for career, to go abroad) whereas the majority of the students in the EG simply took it to fulfill their language requirements. The same reason was chosen by less than half of the CG (40%). In terms of the factors

related to personal pleasure such as enjoying learning languages and being able to read literature in Japanese, both groups had similar response rates.

Furthermore, students reported that they chose their particular section because it fit their scheduling (eleven in the EG and four in the CG) or they simply preferred the time being offered (8 in the EG and 14 in the CG). In the EG, three students reported knowing someone in that section as one of their reasons, whereas no one in the CG chose this as a reason. Also both courses had students who reported that they chose the particular section “(b)ecause of the instructor” (nine in the EG and eight in the CG) indicating that they already had a favorable attitude toward the instructor when the course started.

Table 4.3. Reasons for Taking Japanese

Factors relating to the reasons	Reasons	EG (N = 19)		CG (N = 20)	
Necessity	To fulfill a major requirement	15	79%	8	40%
Practical	For my career	5	26%	9	45%
	To go abroad	9	47%	13	65%
Personal pleasure	Because I like learning languages	12	63%	14	70%
	To be able to read literature in Japanese	13	68%	14	70%
Family related	Because my family speaks it	1	5%	2	10%
	Because of my family history	1	5%	3	15%
Other	To sound sophisticated	3	16%	6	30%
	Other	6	32%	5	25%

In the open question asking the students' expectations from the introductory Japanese course, a majority of the students in both groups stated that they wanted to gain "basic" skills, understanding, and knowledge on Japanese language and culture. As reported by one student: "Expectation – Learn basic Japanese reading, writing, and speaking. I want to be able to become efficient in reading and writing Kanji and understanding the meanings behind it. I'd love to be able to go to Japan some day and survive the culture." Only a few students in both groups indicated very high expectations for the introductory Japanese course (e.g., "I expect to have a greater degree of fluency in Japanese, with improved skills in reading, writing, speech, and listening to the language").

In summary, the EG had more upperclassman who took the section to fulfill their degree requirement than the CG, and 25% of the students in the CG had previous extensive exposure to the Japanese language before taking the course. Other demographic factors did not show significant differences between two groups.

Analysis of Research Questions

Three primary questions and eleven sub-questions were used to guide this study.

Research Question #1: What are the differences in students' learning outcomes between a flipped classroom approach (experimental) and the traditional instructional approach (control)?

The students' learning outcomes were measured by comparing the mean scores of six chapter quizzes, a mid- and final oral interview examinations, and a final written examination, between the EG and the CG. The treatment, implementation of the flipped classroom approach, began with Chapter Four in the EG. The mean scores of the EG and the CG from Chapter One through Chapter Three and the mid-term oral examination

provided baselines. The mean scores of the Chapter One through Chapter Three quiz scores as well as mid-term oral interview examinations between the EG and the CG were compared to examine whether there were any significant differences before the treatment for their oral productions skills and the course content achievement. The comparison of the mean scores of the oral examinations addressed Research Question #1-1, the difference in students' oral production skills. Research Question #1-2, students' learning gains in oral production skills, were addressed by comparing the numbers calculated from subtracting mean scores of students' mid-term oral examinations from mean scores of students' final examinations. The comparison of the mean of the Chapter Four through Chapter Six quiz scores and the mean of the final written examination scores addressed Research Question #1-3, which evaluated differences in learning achievement after the treatment.

1-1. What are the differences in students' oral production skills? In comparing the means of oral production skills, an independent sample *t*-test was conducted. Table 4.4 shows sample sizes (*N*), mean scores (*M*), standard deviations (*SD*), mean differences between the EG and the CG, and learning gains after the treatment for each group.

Table 4.4. Comparison of Oral Production Skills before and after the Treatment and Learning Gains after the Treatment

Sample Group	Mid Oral Exam (50 max) before the Treatment			Final Oral Exam (50 max) after the Treatment			Learning gains from Mid to Final	
	<i>M</i>	%	<i>SD</i>	<i>M</i>	%	<i>SD</i>	Pts.	%
EG (<i>N</i> = 19)	38.68	77.36	9.18	39.63	79.26	8.92	+0.95	+1.90
CG (<i>N</i> = 20)	41.55	83.00	7.38	40.15	80.3	8.42	-1.40	-2.70
Differences	2.87	5.64%		0.52	0.04%			
<i>P value</i>			0.33			0.84		

The maximum possible score on each of the mid-term and final oral examinations was 50. An independent sample *t*-test showed that the difference in both the mid-term and final oral examination scores between the EG and the CG were not statistically significant. While no statistical significance was observed between the EG and the CG, the difference in the means is larger in the mid-term oral examination by 5.64% more for the CG and that the difference became smaller in the final oral examination by 0.04% more for the CG.

1-2. What are the differences in students' learning gains in terms of oral production skills? Students' learning gains in oral production skills in each class was calculated by subtracting the mid-term oral examination mean score from the final oral examination mean score. Both the EG and the CG received traditional instruction until mid-semester to establish the average baseline levels of oral production skills for each group. Table 4.4 presents the learning gains of each group. While the percentages are minor in both groups, the EG had a positive learning gain by 1.9% whereas the CG reflected a negative learning gain by -2.7%.

1-3. What are the differences in students' achievement? In comparing the differences in students' achievement, an independent sample *t*-test was conducted. Table 4.5 shows the mean scores of chapter quiz 1, 2, and 3, as well as the mid-term oral examination which was the baseline in order to compare the scores between the EG and the CG after the treatment. The maximum possible score of each chapter quiz was 40. Before the treatment, the statistical analysis did not yield any significant differences in the mean scores for the EG and the CG. The comparison of the mean scores of each

chapter quiz and the mid-term oral examination did not yield a statistical difference between the two groups. However, a comparison of the raw average of each chapter quiz and the mid-term oral examination found that the CG had a higher average than the EG before the treatment.

Table 4.5. Mean Scores before the Treatment

Test (Possible Max Score)	EG (N = 19)			CG (N = 20)			<i>P value</i>
	<i>M</i>	%	<i>SD</i>	<i>M</i>	%	<i>SD</i>	
CQ1 (40)	34.76	86.9%	5.16	35.85	89.63%	4.02	0.47
CQ2 (40)	34.08	85.2%	5.10	35.25	88.13%	5.03	0.48
CQ3 (40)	34.32	85.8%	4.18	36.4	91%	4.14	1.56
Mid-term Oral Exam(50)	38.68	77.36%	9.18	41.55	83%	8.92	0.33

Table 4.6 shows the means and standard deviations of the chapter quizzes, the final oral examination, and the final written examination for each of the EG and the CG after the flipped classroom approach was implemented in the EG after the mid-term oral examination.

Table 4.6. Mean Scores after the Treatment

Test (Max Possible Score)	EG (N = 19)			CG (N = 20)			<i>P value</i>
	<i>M</i>	%	<i>SD</i>	<i>M</i>	%	<i>SD</i>	
CQ4 (40)	30.82	77.05 %	6.00	31.9	79.75 %	6.25	0.58
CQ5 (40)	32.34	80.85 %	6.49	32.05	80.13 %	6.83	0.89
CQ6 (40)	29.58	73.95 %	5.46	28.5	71.5 %	7.78	0.62
Final Oral Exam (50)	39.63	79.26 %	7.38	40.15	80.3 %	8.42	0.84
Final Written Exam (170)	147.08	86.25 %	19.82	145.03	85.31 %	22.17	0.76

The maximum possible score on each chapter quiz was 40, on the final oral examination 50, and on the final written examination 170. The results of the independent sample *t*-tests for each of the chapter quizzes, the final oral examination, and the final written examination found no statistical differences as with the baseline (Chapter One through Chapter Three and mid-term examination). However, unlike the results from the baseline, the EG had slightly higher average scores for each of Chapter Five, Chapter Six, and the written final examination than those of the CG.

By comparing the mean scores of both groups using independent sample *t*-tests, no statistical significance was found after the implementation of the flipped classroom approach. However, descriptive statistics revealed that the mean scores of each of the Chapter Four and Chapter Five quizzes between the EG and the CG were almost identical, and the mean scores of the Chapter Six quiz and final written examination in the EG were slightly higher than the CG.

Analysis as Controlled for the Five Learners with Extensive Japanese Experience

The GBQ revealed that five students, or one fourth of the CG, reported that they had extensive Japanese language experience. Given that a significant portion of the students in the CG had extensive Japanese language experience, a further analysis was conducted to control for those five students. Tables 4.7 and 4.8 illustrate the results of the EG and the CG after controlling for the five students (CG2). The independent sample *t*-test did not find any statistical differences between the EG and the CG2. However, a comparison of mean scores revealed gains in the EG, as compared to the CG2, after implementation of the flipped classroom treatment. While the mean scores of each of the Chapter quiz 1, 2, 3, and the mid-term oral examinations, which were before the

treatment, were comparable between the two groups, the EG's mean scores were 2.6% to 9% higher than the CG2 in each of the Chapter quiz 4, 5, 6, final oral examination, and final written examination after the flipped classroom approach was implemented. Prior to controlling for the five students, the EG had no appreciable gains over the CG.

Table 4.7. Mean Scores with Control for Extensive Japanese Experience

Assessment (Max Score)	EG (<i>N</i> = 19)	CG (<i>N</i> = 20)	CG2 (<i>N</i> = 15)	(EGN-CGN) /test score	(EGN-CG2N) /test score
	<i>M</i>	<i>M</i>	<i>M</i>	% difference between EG (<i>N</i> = 19) and CG (<i>N</i> = 20)	% difference between EG (<i>N</i> = 19) and CG2 (<i>N</i> = 15)
CQ1 (40)	34.76	35.85	34.50	-2.7%	0.6%
CQ2 (40)	34.08	35.25	34.07	-2.9%	0.0%
CQ3 (40)	34.32	36.40	35.07	-5.2%	-1.9%
Mid_Oral (50)	38.68	41.55	38.93	-5.7%	-0.5%
CQ4 (40)	30.82	31.90	29.77	-2.7%	2.6%
CQ5 (40)	32.34	32.05	30.17	0.7%	5.4%
CQ6 (40)	29.58	28.50	26.0	2.7%	9.0%
Final_Oral (50)	39.63	40.15	37.60	-1.0%	4.1%
Final_Exam (170)	147.08	145.03	138.53	1.2%	5.0%

Table 4.8. Independent Samples Test After Control for Extensive Japanese Experience(EG N = 19, CG2 N = 15)

Quizzes/Exams	Equality of Variance	Levene's Test for Equality of Variances			t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	Lower	Upper
CQ1	Equal variances assumed	.508	.481	.166	32	.869	.2632	1.5824	-2.9601	3.4865	
	Equal variances not assumed			.173	31.763	.864	.2632	1.5221	-2.8382	3.3645	
CQ2	Equal variances assumed	.000	.996	.007	32	.995	.0123	1.7906	-3.6351	3.6597	
	Equal variances not assumed			.007	29.658	.995	.0123	1.7987	-3.6628	3.6874	
CQ3	Equal variances assumed	.318	.577	-.535	32	.597	-.7509	1.4044	-3.6115	2.1098	
	Equal variances not assumed			-.539	31.011	.594	-.7509	1.3932	-3.5923	2.0905	
CQ4	Equal variances assumed	.000	.995	.516	32	.609	1.0491	2.0329	-3.0918	5.1900	
	Equal variances not assumed			.519	30.777	.608	1.0491	2.0218	-3.0755	5.1738	
CQ5	Equal variances assumed	.072	.791	.955	32	.347	2.1754	2.2783	-2.4654	6.8163	
	Equal variances not assumed			.951	29.684	.349	2.1754	2.2881	-2.4995	6.8504	
CQ6	Equal variances assumed	.521	.475	1.658	32	.107	3.5789	2.1588	-8.185	7.9764	
	Equal variances not assumed			1.606	25.660	.121	3.5789	2.2286	-1.0050	8.1629	
Mid_Oral	Equal variances assumed	.128	.723	-.080	32	.937	-.2491	3.1223	-6.6091	6.1109	
	Equal variances not assumed			-.080	30.675	.937	-.2491	3.1084	-6.5916	6.0933	
Final_Oral	Equal variances assumed	.000	.999	.758	32	.454	2.0316	2.6810	-3.4295	7.4926	
	Equal variances not assumed			.748	28.494	.461	2.0316	2.7165	-3.5285	7.5916	
Final_Ex	Equal variances assumed	.366	.550	1.191	32	.243	8.5456	7.1769	-6.0733	23.1645	
	Equal variances not assumed			1.176	28.600	.249	8.5456	7.2664	-6.3249	23.4161	

Figure 4.4 illustrates the comparisons of the chapter quiz mean scores of the EG ($N = 19$), the CG ($N = 20$), and the CG2 ($N = 15$). The implications of the differences in the results of the analysis of the EG as compared to the CG and CG2 is discussed in detail in the next chapter.

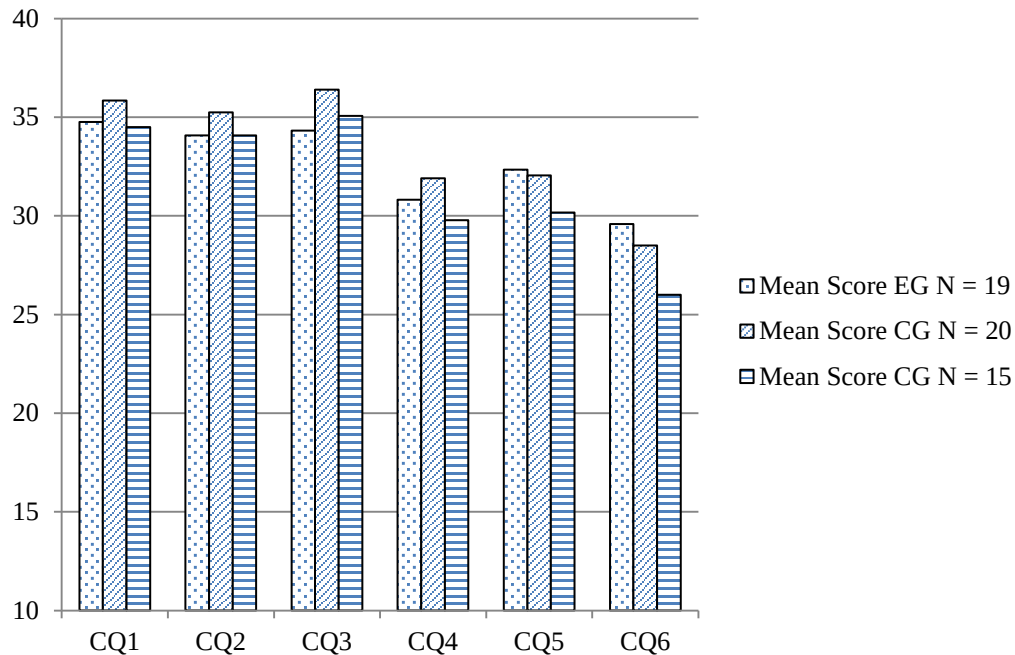


Figure 4.4. Mean Scores of Three Groups

Research Question #2: What are the differences in the classroom communication patterns between a flipped instructional approach (experimental) and the traditional instructional approach (control)?

Between weeks 9 and 13, six class sessions from each of the EG and the CG, totaling 12 sessions, were videotaped for observation. The videos and audios from those three sessions were used to count the number of outputs and recorded onto SCORE sheets.

Each oral production was recorded as an output on the SCORE sheets. For purposes of this study, the utterances that were produced by either the instructor or the students were divided into two types: vocabulary level and other output, which includes

phrases and sentence length. An utterance that was completed and fit in one of the types was deemed an oral production and recorded as an output. For example, the following exchange in which the student attempted to say, “There will be a Japanese test on Monday,” was counted as one complete utterance with errors by student, and one individual question by the instructor.

Student A: 月曜日に日本語テストの...No, が...います...か。
getsuyoobi ni nihongo tesuto no “no,” ga...imasu...ka
On Monday, Japan test...no, is ...there?

Instructor: もう一度言ってください。
moo ichido itte kudasai
Please say it again.

Student A: 月曜日に日本語テスト...
getsuyoobi ni nihongo tesuto
On Monday, Japan test...

Instructor: Particle. (suggesting the error in the use of particles)

Student A: が、テストが
ga tesuto ga...
is test is...

Instructor: 日本語.... (attempting to solicit a correct particle)
nihongo...
Japanese...

Student A: の... テストの...
no...tesuto no...
of... test's ...

Instructor: 日本語...
nihongo...
Japanese...

Student A: を...
o... (particle that marks an object)

Instructor: 日本語
nihongo...
Japanese...

Student A: のテストがいますか。 (incorrect use of “to be verb”)
no tesuto ga imasu ka.
is there test?

In order to compare the communication patterns, five sub-questions were addressed.

Table 4.9 presents the output count for both the instructor and the students.

Table 4.9. Comparisons of the Frequency of Oral Output

Sub question#	2-1	2-2	2-3	2-3	2-4	2-4	2-5	2-4	2-5	Output Input Total
	T-W	T-I	WOV	WOS	I-T	IO	IOE	PW	PWE	
Session1										
EG	19	6	19	59	0	53	8	59	4	227
CG	17	13	9	40	0	39	5	33	19	175
Differences	10.5	-116.7	52.6	32.2		26.4	37.5	44.1	-375.0	22.9
%	%	%	%	%		%	%	%	%	%
Session2										
EG	41	9	7	41	46	28	1	49	6	228
CG	17	3	0	38	28	24	0	42	8	160
Differences	58.5	66.7	100.0	7.3	39.1	14.3	100.0	14.3	-33.3	29.8
%	%	%	%	%	%	%	%	%	%	%
Session3										
EG	7	0	0	19	0	45	6	0	0	77
CG	0	0	0	5	0	16	2	0	0	23
Differences	100			58.33		47.54	50			54
%	%			%		%	%			%

Differences% = (EG-CG)/EG*100

T-W: Teacher to whole class

T-I: Teacher to Individual

WOV: Whole Class Output (word)

WOS: Whole Class Output (phrase & Complete sentences)

I-T: Individual Turn (Output in Pair demonstrations)

IO: Individual Output

IOE: Individual Output with error

PW: Pair Work (3 pairs total output)

PWE: Pair Work Error Output

2-1. What are the differences in the number of teacher-to-students whole-class questions? The data shows that the number of teacher-to-students whole-class questions was higher in the EG than that of the CG in all three sessions. Session 2 was most noticeable, with EG's 41 times versus CG's 17 times, which is 58.5% greater in the EG. These numbers suggest that the students in the EG received more oral input, or opportunities to hear the target language.

2-2. What are the differences in the number of teacher-to-student individual questions? First, the video observation revealed that the instructor addressed questions to individuals much less than to the whole class in each session. In Session 3, the instructor did not ask any questions to individual students in either class. When comparing the number of teacher-to-individual questions in Session 1 and Session 2, the CG had a higher occurrence than the EG, 13 times versus 6 times in Session 1, while the EG had a higher occurrence than the CG in Session 2, 9 times versus 3 times. The instructor/researcher's journal entry revealed a possible explanation for having more teacher-to-individual questions in the CG than the EG in Session 1. On that particular day, the instructor observed that the students in the CG were less attentive than the students in the EG, which resulted in the instructor addressing students individually to elicit participation and to confirm students' understanding. Excerpts from the instructor's daily journal on that particular day describe the EG as "[e]veryone present was alert when talked about the existence verbs. Was able to go right into oral practices. Got almost everything done." As for the CG, "[n]oticed several students not paying attention, doodling, etc." These differences indicate that the overall classroom learning atmosphere was more engaging in the EG than in the CG on that day.

2-3. What are the differences in the number of whole-class output? By far the whole-class output occurred more frequently than other types of output. Within the whole-class output, both word-level utterances (WOV) and longer phrases and sentence-length utterances (WOS) were identified. The numbers in Table 4.9 clearly exhibit that the students in the EG had more output opportunities than the students in the CG. In Session 1, $19 \text{ WOV} + 59 \text{ WOS} = 75$ total outputs for the EG, and $9 \text{ WOV} + 40 \text{ WOS} = 49$ total outputs for the CG were counted. In Session 2, $7 \text{ WOV} + 41 \text{ WOS} = 48$ total outputs for the EG, and $0 \text{ WOV} + 38 \text{ WOS} = 38$ total outputs for the CG were counted. In Session 3, although there were no word-level utterances, 19 WOS for the EG and 5 WOS for the CG were counted.

2-4. What are the differences in the number of individual output? As indicated in Table 4.9, the students in the EG had much higher output than the students in the CG, with 26.4% more in Session 1, 14.3% more in Session 2, and 47.5% more in Session 3. Additionally, the audio recordings of pair-work of three groups in each session also revealed that the students in the EG had higher individual output than the students in the CG, with 44.1% more in Session 1 and 14.3% more in Session 2. No pair work activities took place in Session 3. However, in Session 2, students in pairs had to demonstrate oral exchanges in front of the class (I-T). Again, the students in the EG had more output than the students in the CG, with 39.1% more.

2-5. What are the differences in the number of output with errors? The number of individual output with errors is relative to the number of individual output occurrences. The students in the EG made more errors (8 times in Session 1, 1 time in Session 2, and 6

times in Session 3) than the students in the CG (5 times in Session 1, 0 times in Session 2, and 2 times in Session 3) during whole class activities. On the other hand, during pair activities, the students in the CG made more errors (19 times in Session 1 and 8 times in Session 2) than the students in the EG (4 times in Session 1 and 6 times in Session 2).

Summary of research question #2. The comparison of the frequency of oral output in the classroom between the EG and the CG revealed that the EG had higher frequency of output opportunity than the CG overall. Among the types of output, the sentence-length whole-class output and the pair-work output were more frequent than other types in both classes. While the EG had more individual output errors than the CG during the whole-class activities, the opposite result was found for the pair activities. Individuals made more errors in the CG than the EG during the pair activities. The only time in which the CG had more output counts was the teacher to individual output during session 1. The implications of Research Question #2 will be discussed in Chapter Five.

Research Question #3: What are the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach?

Research Question #3 addressed the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach. Data collected from the EG from 26 closed-ended multiple-choice items and four open-ended items from the Learning Experience Questionnaire (LEQ) addressed this question. Data from 10 of the multiple-choice items and two of the open-ended items on the LEQ were also collected from the CG since those data were also pertinent to the CG.

Table 4.10. Results of Qualitative Findings Based on Sub-Categories

Research questions	Sub-categories	Descriptive findings
3. What are the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach?	Independent learning	Both groups yielded similar responses with half of the class gaining confidence in independently learning grammar without formal lecture.
3. What are the students' perceptions of their learning experience with a flipped classroom approach versus a traditional approach?	Course preparedness	Both groups yielded similar responses; the majority felt they were ready for the next level.
3-1. What are the students' perceptions on receiving grammar instruction in the form of video?	Overall impression	The majority thought that the grammar videos were helpful and will most likely use instructional videos in the future.
3-1. What are the students' perceptions on receiving grammar instruction in the form of video?	Length	The majority thought that the video lengths used in this course were appropriate; some needed a longer time to learn the content.
3-1. What are the students' perceptions on receiving grammar instruction in the form of video?	Content/activities	The majority thought the content/activities were appropriately challenging and either very or somewhat effective.
3-2. What are the students' perceptions towards the flipped classroom approach?	Instructor-led, small group, pair activities/tasks	The impression towards in-class activities was similar in both groups. Students preferred teacher-led and pair over small group activities.
3-3. What is the students' level of participation in video instruction outside of the classroom setting?	Strategies	The strategies discussed in the pre-treatment orientation were not fully practiced.
3-3. What is the students' level of participation in video instruction outside of the classroom setting?	Participation	The majority watched the video before the assigned grammar lessons; however, only a few utilized fully.
3-3. What is the students' level of participation in video instruction outside of the classroom setting?	Motivation to watch	Quizzes are effective to motivate students to watch the video.
3-3. What is the students' level of participation in video instruction outside of the classroom setting?	Technical Issues	It could be annoying, but did not impact learning.

Three additional questions which were not in the LEQ originally developed by Enfield (2013) were included in the questionnaire used for the current study in order to investigate the students' perceptions of receiving the video grammar instruction outside of class, the students' perception towards the flipped classroom approach, and the students' level of participation in video instruction outside of the classroom setting. On the day the LEQ was administered, all 19 students in the EG were present, and 18 of 20 students were present in the CG. The results of the LEQ are provided in Appendix I. In addition, each sub-category of the LEQ was matched with Research Question #3 or a sub-question, as applicable. Qualitative findings were then derived from the sub-categories of the LEQ and are summarized in Table 4.10. The following section will address the sub-questions for Research Question #3.

3-1. What are the students' perceptions of receiving grammar instruction in the form of video? Out of the 19 respondents, data from LEQ question 1 revealed that most of the students in the EG found that the lecture videos they watched outside of class were helpful in learning grammar topics, with 11 students (58%) responding "very helpful" and six students (32%) responding "somewhat helpful". Only two students (11%) found that they were "not helpful". Questions 2, 3, and 4 pertain to the length of the lecture videos. Question 2 asked the appropriateness of the duration of each video which ranged from 5 to 8 minutes. All 19 (100%) students responded that the video lengths were appropriate. When asked if the long video that exceeded 10 minutes was detrimental to understanding the content, four students (21%) answered "yes", five students (26%) answered "not sure", and 10 students (53%) answered "no". On the question asking the appropriateness of 15 minutes for the total amount of video lectures for the content

covered between each class, three students (16%) answered “too much,” 15 students (79%) answered “about right,” and only one student (5%) answered too little.

Questions 5 and 6 asked about strategies used to watch lecture videos. In response to the question asking the helpfulness of taking notes in learning the content while watching the video, eight students (42%) responded “never attempted,” three students (16%) responded “very helpful,” eight students (42%) responded somewhat helpful, and none responded “not helpful.” On the question asking about the helpfulness in learning the content of answering the questions from the video while watching the video, none answered “never attempted,” 15 students (79%) answered “very helpful,” four students (21%) answered “somewhat helpful,” and none answered “not helpful.” The qualitative findings indicate that students did not fully utilize the strategies discussed in the orientation prior to the implementation of a flipped classroom.

Question 7 asked about approximate time needed to fully learn the content from watching a 10-minute video. In response to Question 7, two students (11%) responded “10 minutes” (same amount of time as video), seven students (37%) responded “20 minutes” (twice as long as video), seven students (37%) responded “30 minutes” (3 times as long as video), one student (5%) responded “40 minutes” (4 times as long as video), and two students (11%) responded “more than 40 minutes.” The majority responded that the video lengths used in this course were appropriate although some students expressed that they needed a longer time to learn the content.

Questions 18 and 19 asked about the effectiveness of communicative activities in the lecture videos, rather than free responses. The communicative activities in the lecture videos were structured with target responses. Eleven students (58%) thought they were

very effective in helping them understand the grammar concept, seven students (37%) thought somewhat effective, and one student (5%) thought not effective. Of the students responding, ten (53%) thought they were very effective in helping to improve their oral production skills, nine (47%) thought sometimes necessary, and none thought they were not necessary. The qualitative findings indicate that a majority of the students thought the content and activities were appropriately challenging and either very or somewhat effective.

On the question asking the students about their likelihood of using instructional videos after taking the course compared to the time before taking this course, 16 (84%) students responded, “I am more likely to use instructional videos than I was before taking this course,” and two (11%) students responded, “I am equally likely to use instructional videos than I was before taking this course.” Only one (5%) student responded, “I am less likely to use instructional videos than I was before taking this course.”

In addition, ten students responded to the open-ended question requesting comments on the use of instructional videos. After reading through their comments within sub-categories, two opposite themes emerged. Students thought the lecture videos were either helpful and effective or not really helpful. Out of the ten students, six students provided positive feedback. Their common impression was that the instructional videos helped them understand the grammar better. One of the positive comments stated, “I think they were very effective in learning the material for the chapter. Being able to fast-forward and re-wind helped me understand the material at my own pace.” This comment signifies the very essence of the use of lecture videos in a flipped classroom

approach in which students can view the lectures at their own pace, as many times as preferred, at anytime and anywhere (Enfield, 2013; Mason et al., 2013).

One student's comment was neutral stating, "[I] did not find much change in the pace of class instruction with the addition of the grammar and lecture videos." Another student's comment expressed skepticism about completely replacing in-class lectures despite enjoying the videos.

3-2. What are the students' perceptions towards the flipped classroom approach?

Out of the 19 students, six students commented on the in-class activities in the EG. Four of the students commenting were clearly in favor of group work or practice with others. One student wrote "[t]he more we engaged with each other and with the professor, the more I learned and the more I enjoyed the course. Each day was fun, and I learned a lot." Another student wrote "I liked having more time to apply what we learned in the chapter during class rather than learning in class and having less time to apply the chapter lessons." However, one student stated that "[w]hen we would immediately hop into groups right at the beginning of a lesson was not effective for me" even after watching the lecture video before coming to class.

Nine students in the EG entered comments reflecting their experiences in the course. Four students' provided positive comments and stated that they enjoyed the course. Of the four positive comments, one student specifically described how the instructional approach in this class was effective:

I think that with taking notes for every video and doing practice questions in the video and book would provide me with the best set of skills to be prepared for exams in this course, and learning the language better as a whole as well.

Three students' comments expressed how the course was demanding and how they struggled. It is unclear whether the comment was motivated by the flipped classroom approach specifically or the subject matter itself.

3-3. What is the students' level of participation in video instruction outside of the classroom setting? The LEQ asked students about the frequency and pattern of their video access. Table 4.11 shows the results from the students' self-report in the LEQ, and Table 4.12 is the report retrieved from the Blackboard course management system.

Table 4.11. Level of Participation in Video Instruction Outside of the Classroom Setting

<i>N</i> = 19	Every time	Most of the time	Occasionally	Seldom	Never
I watched the lecture videos before each chapter began	1 (5%)	6 (32%)	6 (32%)	2 (11%)	4 (21%)
I watched the lecture videos before the assigned grammar topic	5 (26%)	11 (58%)	3 (16%)	0 (0%)	0 (0%)
I watched the lecture videos before the chapter quiz	5 (26%)	5 (26%)	6 (32%)	2 (11%)	1 (5%)

According to the self-report, a majority of the students reported that they watched the lecture videos. Most students accessed the videos before the assigned grammar topics. A total of 16 students (84%) reported that they watched the videos before the assigned grammar topic either every time or most of the time, five (26%) every time and 11 (58%) most of the time. Only three students (16%) reported that they watched occasionally before the assigned grammar topic. The number of students who watched the video before each chapter was seven (37%) total, with one (5%) every time and six (32%) most

of the time, and another six (32%) “occasionally” watched the video before each chapter. Thus, more than two-third of the students at least occasionally watched the video before each chapter began.

Table 4.12. Lecture Video Number of Hits

Chapter	Total Hits	Average p/Student (N=19)	Max# Hit by Student	Min# Hit by Student	Before Chapter Quiz	Before Final
4	88	4.6	10 (1)	1 (1)	10 (6)	3(3)
5	39	2	4 (2)	0 (3)	7 (5)	1(1)
6	63	3.3	10 (1)	0 (2)	6 (2)	N/A

Additionally, ten students (52%), which is a little more than half of the class, reported that they watched the videos before the chapter quiz either every time or most of the time. Another six students (32%) “occasionally” watched the videos before the chapter quiz. Overall, more than 80% of the students reported that they at least occasionally watched the video before chapter quizzes. The qualitative results support the conclusion that a majority of the students watched the video before the assigned grammar lessons; however, only a few students utilized the videos fully as suggested during orientation.

The Blackboard statistical report also revealed that the majority of students accessed the lecture videos (or “hits”), although one student only had 1 hit in Chapter Four, three students had 0 hits in Chapter Five, and two students had 0 hits in Chapter Six. The total number of hits in each chapter was 88 for Chapter Four, 39 for Chapter Five, and 63 for Chapter Six. While Chapter Five shows a much smaller number of hits than Chapter Four and Six, the average number of hits per student is 4.6 times for Chapter Four, 2 times for Chapter Five, and 3.3 times for Chapter Six. In each of Chapter Four

and Chapter Six, one student accessed 10 times. One limitation of the Blackboard statistics is that it reports as one hit if the student accesses the video even if the student does not watch the whole video. However, the data from the Blackboard statistics supplements the self-report from LEQ.

Summary of research question # 3. Most students responded rather positively toward the flipped classroom approach. Their comments reflected favorable attitudes towards the grammar lecture videos and in-class activities. While not everyone utilized the strategies that were recommended to maximize the effectiveness of the lecture videos, the majority of the students watched the videos more than occasionally, and the Blackboard statistical report supported their responses. However, three students did not feel that the flipped classroom instruction and the use of lecture videos were effective. Notably, approximately the same number of students was reported by the Blackboard statistical report to have hardly watched the lecture videos.

Comparison of the EG and the CG

APPENDIX I.3 shows students' insights at the end of the course. On the question asking about gaining confidence in independent learning, the EG and the CG both had similar responses.

In the EG, nine students (47%) responded they were more confident in their ability to learn a new grammar concept without a formal in-class lecture, eight (42%) responded that there was no change in their confidence before taking this course, and two (11%) responded that they were less confident. The CG also had nine (50%) responding that they gained confidence, eight (4%) responded no changes, and one (6 %) responded

less confident. Finally, to the question asking if the content/skills learned in this class prepared them to take the next Japanese course, nine students (47%) in the EG said “strongly agree,” seven (37%) said “agree,” three (16%) said “somewhat agree,” and none said “do not agree at all.” In the CG, eleven (61%) said they “strongly agree,” seven (39%) said agree, and no one responded to “somewhat agree” or “do not agree at all.” According to the qualitative results, both groups provided similar responses with approximately half of the class gaining confidence in independently learning grammar without formal lecture. In both groups, a majority of the students felt they were ready for the next level as a result of taking the first semester Japanese course.

Summary

A summary of the demographics and characteristics of the student participants based on the GBQ was provided at the beginning of the chapter. The mean scores of the content specific chapter quizzes, oral examinations, and written final examination were utilized to compare the learning outcomes between the EG and the CG. The baseline of average language levels of each group were established at the end of Chapter Three after the mid-term oral examination before the implementation of flipped classroom approach. An independent sample *t*-test did not find a statistical difference in the baseline mean scores. However, raw data revealed that the average scores of each of the quizzes and examinations of the CG were slightly higher than the EG’s average scores. The comparison after the treatment, implementation of a flipped classroom, also did not find any statistically significant differences in mean scores between the two groups. However, raw data revealed that the difference in mean scores between the two groups decreased compared to the mean scores before the treatment. In fact, the mean score of the EG was

higher than the CG for each of the Chapter Five and Chapter Six quizzes and the written final examination, whereas the CG mean scores were higher than the EG mean scores prior to Chapter Five. In the following chapter, the results of these findings and their implications will be discussed by applying the framework of triangulation.

The classroom communication pattern was observed employing video-recorded and audio-recorded lessons. Using SCORE, the number of input, output, and interaction was counted. The SCORE showed that the students in the EG experienced higher numbers of input, output, and interactions than the students in the CG.

At the end of the semester, qualitative data utilizing LEQ was collected from both groups. The EG's LEQ included questions concerning the flipped classroom experience. LEQ revealed that a majority of the students in the EG had a favorable view towards the flipped classroom approach which combined watching grammar lecture videos outside of class and increased time in active classroom activities, although a few students were wary about the course because it was demanding, which may or may not have been impacted by the flipped classroom approach. These positive results are supported by the self-report and the Blackboard Statistical Tracking data on the frequency of watching the lecture videos. Finally, LEQ also revealed that most of the students in the CG who received the traditional instructional approach also had positive learning experiences.

CHAPTER FIVE

Discussion of Results and Conclusion

Introduction

Implementation of the flipped classroom approach in Japanese language classes was initially considered in the instructor/researcher's effort to improve proficiency oriented instruction in her classroom and to offer other interested teachers a reference for their instructional practices. Thus, the purpose of this study was to explore the effect of a flipped classroom approach in a Japanese language classroom to assess its effectiveness and feasibility.

Drawing from Creswell (2008) and as presented in Chapter Three, the present study employed a concurrent embedded design in which the primary method (quantitative) guided the study supported by the secondary method (qualitative). This chapter provides the discussion of the results and conclusion of the present study. A quasi-experimental design (McMillan, 2006) was utilized to address the quantitative questions that were seeking the differences in the students' learning outcomes and classroom communication patterns between the experimental group (EG) and the control group (CG). The General Background Questionnaire (GBQ) revealed that one fourth, or five out of the twenty students in the CG, had extensive Japanese language background, as compared to none in the EG, which likely misrepresented the baseline scores of the CG higher than the baseline scores of the EG. As a result, this study analyzed comparisons of the mean scores of the EG and the CG, as well as comparisons of the EG

and the CG2, which was the CG as controlled for the five students with extensive Japanese language background. The quantitative data analysis comparing the means using an independent sample *t*-test showed that there were no statistically significant differences in students' learning outcomes between the EG and the CG or the CG2, neither before nor after the implementation of the flipped classroom approach of instruction. However, the comparison of descriptive data showed some gains in the EG's outcomes compared to that of the CG as well as the CG2.

The qualitative data was collected from the Learning Experience Questionnaire (LEQ) to address students' perceptions of their learning experience with a flipped classroom approach versus traditional approach. The students' overall perceptions toward the flipped classroom approach were mainly positive, while a few students indicated unfavorable views. Additionally, the GBQ and the instructor/researcher's daily journal were used to supplement the analysis of data.

Findings and Interpretations

Evaluation of the Learning Outcomes

Comparisons with the CG. No statistically significant differences were found between the EG and the CG in learning outcomes from chapter quizzes, oral examinations, and the final examination. However, the results obtained from the mean comparisons revealed that the CG started with higher mean scores than the EG before the treatment, implementation of the flipped classroom approach. In fact, the CG's mean scores of Chapter Three quiz and the mid-term oral examination were more than 5% higher than that of the EG's mean scores. The possible cause of the differences in the

baseline mean scores may have been that the CG had more students with prior exposure to Japanese language.

The mean score of Chapter Four quiz, which was the first quiz after the treatment, remained higher in the CG than the EG. However, as the semester progressed, the results reversed. The EG's mean scores gradually gained on the CG's mean scores. Whereas the difference in the mean score of Chapter One quiz was 2.7% higher for the CG, the EG's mean score was 2.7% higher in Chapter Six quiz, the last chapter quiz. With respect to the oral examinations, although the CG's mean score was 5.7% higher than that of the EG on the mid-term oral examination before the treatment, that difference decreased to only 1% in the final oral examination. The comparison of the means of the oral examinations also indicates that the EG had more gains in oral assessments than the CG.

The CG's higher mean scores were not surprising given the fact that one fourth of the students in the CG had extensive Japanese language experience, as compared to none in the EG. However, one might expect that the difference in mean scores of the CG compared to the EG would be much higher on all of the assessments than as reflected in the results in this study, at least until the midterm when the baselines were established. One likely reason that the CG's mean score was not as high as expected was that the assessment tools used in this study were content specific and were used to measure content achievement rather than general proficiency. The content covered in the first-year Japanese course, especially in the early chapters, was basic enough that the majority of the students reached the expected outcomes. If general proficiency examinations similar to the ACTFL Oral Proficiency Interview (OPI) and the National Japanese Exam

(NJE) or the Japanese-Language Proficiency Test (JLPT) were administered, those experienced students in the CG might have scored much higher than the other students, resulting in more distinct differences in the mean scores between the EG and the CG.

Comparison with the CG2. After controlling for the five students with extensive Japanese experience, the mean scores of the EG and the CG2 were almost identical before the treatment. Having almost equal mean scores suggests that the baseline levels of the language abilities between the EG and the CG2 were matched, which helped better evaluate the effectiveness of a flipped classroom approach by comparing the mean scores after the treatment. The differences in the learning outcomes were more distinct when comparing the EG and the CG2. After the flipped classroom implementation, the EG's mean scores became higher than the CG2. The comprehensive final examination also resulted in a higher mean score for the EG than the CG2. In addition, the EG's mean scores on the final oral examinations were higher than the CG2. By controlling for the five students with extensive Japanese background, the differences in the learning outcomes became clear. While no statistical differences were found, the class that experienced the flipped classroom experienced greater learning gains than the other classroom.

The differences between the mean scores of the EG and the CG2 gradually increased from a 2.6% difference up to a 9% difference in favor of the EG. The lower differences in the early stages of the implementation was likely caused by the time needed for students to adjust to the new instructional approach as well as the time needed for the flipped classroom approach to take effect.

Examination of the Classroom Communication Patterns

It has been well documented that input, output, interaction facilitates language learning (Egi, 2010; Ellis, 2012; Mackey, 1999; McDonough, 2005; Nobuyoshi & Ellis, 1993; Swain, 2000). Thus, one of the main classroom goals of implementing the flipped classroom approach in the present study was to facilitate active learning by providing more opportunities for students to engage in input, output, and interaction. Based on an analysis of the classroom observations, this goal was achieved.

The comparison of the number of frequency between the EG and the CG revealed that the EG noticeably had greater opportunities for input and output. The input included both from the instructor and from other students. Whether the input was directly addressed to individual students or to the whole class, the students in the EG received more input in Japanese than the students in the CG. Moreover, while it was not counted separately, each student received other students' output as input; thus, the more output that was counted, students also received additional input. As previously discussed in Chapter Two, input in the target language is crucial since the second language acquisition process begins with the input (Gass & Mackey, 2006). Additionally, the students in the EG also produced more output than the students in the CG. Output is equally important because, as Wong (2013) asserts, output is necessary to develop accuracy and fluency. Furthermore, these input and output exchanges generated simple interactions, which foster foreign language proficiency (Ellis, 2012). Having higher occurrences of interactions may explain the higher mean scores of the EG.

While the frequency of output errors was higher in the EG than the CG in large classroom activities, the actual number of the output errors was very small compared to

the total number of output. Therefore, output errors were deemed to be less significant in the context of this study. Additionally, the high frequency of teacher output was deemed insignificant to this study. Although one of the goals of a proficiency-oriented class is for students to have higher frequency of output and interaction opportunities, the instructor spoke more in the introductory Japanese courses with teacher-led activities because a first semester course assumes that most of the students “lack the necessary knowledge of the L2 to perform tasks” (Ellis, 2006, p. 90).

SLA researchers have studied the link between SLA and input, output, and interaction (Egi, 2010; Ellis, 2012; Mackey, 1999; McDonough, 2005; Nobuyoshi & Ellis, 1993; Swain, 2000). They claim that input, output, and interaction facilitate language acquisition. The flipped classroom approach in the present study was implemented in the first-semester Japanese language course under the hypothesis that eliminating traditional lectures and replacing it with lecture videos outside of class would increase active learning time and have more opportunities for input, output, and interaction. Based on an analysis of the class observations, the EG did have more opportunities to engage in input, output, and interaction than the CG. These results suggest that the flipped classroom approach would be effective in promoting greater language proficiency.

Students’ Perceptions of their Learning Experiences and Implications

On flipped classroom approach. Similar to the results from Enfield (2013) questionnaire, the LEQ reported that the majority of the students in the EG responded favorably towards the flipped classroom approach except for a few students who commented negatively regarding their experience with the new approach. Although

watching the video outside of the class adds more study time to the students' daily assignments, no students commented on the issue of increased assignments. The majority of the students thought that the grammar videos were helpful in learning grammar and would most likely use instructional videos in the future. In addition, the majority felt that the duration of most of the videos used in this course, between five and eight minutes, was appropriate. The responses regarding to the length of videos correspond to the findings in the study by Guo et al. (2014). Two of the videos were over 10 minutes long, but most students did not seem to mind, with only a few students reporting that it was too long. Also, most students did not seem to mind spending about 15 total minutes per day watching videos to learn the grammar, although one thought that it was too little. These results suggest that the ideal length of lecture videos is less than 8 minutes. However, three students reported that they needed 40 minutes or more to fully learn the content from watching a 10-minute video. Therefore, teachers implementing a flipped classroom should try to identify those students who require more time to learn the content from the video and provide them with extra assistance or support.

A brief orientation on how to better utilize the lecture videos was provided prior to the implementation of the flipped classroom approach. One of the strategies was taking notes (Bergmann & Sams, 2012) while watching the video; however, only half of the class attempted this strategy. Another strategy was to respond orally to the prompts in the video, in which the majority of the students reportedly practiced and found helpful. The students were also advised to watch the video whenever possible at the beginning of each chapter, before the introduction of specific grammar topics, as well as before quizzes and examinations. They were also informed during orientation that the flipped

classroom approach would introduce a couple of grammar questions included in the short daily quizzes. The present study found that even a very few questions in a daily quiz are enough to motivate students to watch the videos. In short, a pre-flipped-classroom orientation may be effective to promote students to fully engage in watching and learning grammar from the lecture video. The idea of having an orientation to explain strategies and to use grammar questions resulted from lessons learned from an earlier attempt to implement the flipped classroom approach a year before this present study. The orientations used in the present study can be improved to better communicate the strategies. For example, in addition to explaining the strategies orally, an actual video should be used to demonstrate the strategies. Students should also be informed of the rationale for implementing a flipped classroom approach.

On the lecture videos. The students' responses to the LEQ questions suggest that the contents of the videos were appropriately challenging, even with some technical difficulties, while the videos could be improved to be more interesting and engaging to the students. The majority of the students thought that the communicative activities in the videos were effective in helping them understand the grammar concepts and in improving oral production skills. As was discussed in Chapter Two, several factors associated with effective video presentations were considered in creating the lecture videos, such as the use of segmented videos, using motions and visual flows, showing enthusiasm in informal settings, and adding support for re-watching and skimming (Guo et al., 2014).

Several themes emerged from the qualitative data of the students' comments. Some students expressed the need to improve the quality of the video, which included

audio quality and the introduction section of each video, while no students expressed dissatisfaction with the content of the videos. Most students appeared to be receptive to the lecture videos. They thought the videos were helpful in understanding the grammar concept, especially when they were used in conjunction with the textbook. One student wrote “they were a helpful way to review the textbook lessons and actually hear what each thing would sound like before coming to class.” Another wrote “[b]eing able to fast-forward and re-wind helped me understand the material at my own pace.” As supported by the discussions among world-language education professionals, these comments reflect the very essence of the flipped classroom approach in a foreign language classroom which aims to facilitate individualized learning of grammar concepts, so that the classroom time is effectively utilized for active learning (“‘Flipping’ the World,” 2012). The notion of learning the grammar individually and increasing face-to-face learning is the premise of implementing a flipped classroom in the Japanese language courses. Based on the student responses, the content and activities in the videos are appropriate for future application of the flipped classroom; however, the videos could be modified to better appeal to students in order to increase the number of access times, which will most likely facilitate the understanding of grammar.

Comparison of the EG and the CG. The questions on the LEQ that did not directly address lecture videos were directed at both the EG and the CG. In terms of in-class activities and students’ overall impression at the end of the course, the data analysis revealed unexpected results in which both groups had similar responses. No particular themes distinguishing between the traditional course and the flipped class were found. Both groups favored teacher-led and pair activities over small group activities. This may

be explained as both groups having opportunities for active oral activities although there were differences in the frequency of practices. The themes derived from the students' comments support these results. Students confirmed the helpfulness of having opportunities to apply the concepts learned in class, especially through pair and/or whole-class activities. The preference for teacher-led or pair activities may be explained by Schulz's (2006) theory that students need more structured practices when they are at the early stages of learning the language. The preference for pair works over small group activities may be due to more constant and mutually supportive engagement in pair activities, as was stated in LEQ, "I enjoy either working in a pair with close friend or getting to know a stranger while working through the activity with them," whereas some students in a small group may feel less inclined or able to participate and not be as fully engaged.

Moreover, one student in the EG voiced that he/she needed more time for in-class explanations by the instructor. Another student in the CG expressed that he/she often felt rushed through the activities without fully grasping the concept due to a lack of time to complete in-class activities. Although these comments were made by a minority of students, they can be instructive for teachers implementing a flipped classroom. Perhaps, when planning a flipped classroom, various learning styles should be considered, and teachers should be prepared to assist students by one on one instruction if necessary. At the same time, concerns about the lack of time spent in class activities may be alleviated through implementation of the flipped classroom approach.

Furthermore, about half of the students in both groups reflected that they gained confidence in independently learning grammar without a formal in-class lecture, and the

majority felt they were ready to take the next level of Japanese language course. The confidence levels of about half of the students in the EG to learn grammar independently were unchanged even after the independent learning opportunities were made available through the lecture videos in the EG. Similarly, the confidence levels of about half of the students in the CG to learn grammar independently did not change. These findings suggest that students are generally comfortable receiving in-class formal lectures, and changing students' perceptions about the traditional instructional approach may be complex and is likely not to happen during the course of one semester. Although the majority of the students in both groups thought they were ready to take the next level, three students in the EG were less confident in moving up to the next level. These three students could have been less confident either because they did not benefit from the flipped classroom learning or simply because they were not able to keep up with the subject matter. The LEQ's did not provide conclusive rationales.

Finally, uniformed themes surfaced from the reflections from the course experiences in both groups. The overall views were positive. The students thought the introductory Japanese course definitely demanded hard work, but the class was engaging and enjoyable. However, three students in the EG left discouraging comments, stating that the course content and pace were overwhelming and it was not worth sacrificing other courses. A possible explanation for those students who felt that the class was too demanding in the EG may be that the course was not only fast paced but that students were also required to watch videos outside of class in addition to having regular grammar and vocabulary quizzes. More students in the CG than the EG indicated clear purposeful reasons for choosing to study Japanese, whereas 15 out of 19 students in the EG chose to

take Japanese to fulfill a foreign language requirement. Rather than choosing to study Japanese for specific use in the future, choosing to just fulfill a major requirement may not be enough motivation for students to obtain higher proficiency. The correlation between motivation and high achievement of second language is well documented in the meta-analysis study by Gardner and Masgoret (2003), which underscores the importance of having goals, desires, and aspirations.

Level of Participations in Lecture Videos and Implications

In the flipped orientation, it was suggested that the videos should be watched whenever possible, at least before each chapter began, before the assigned grammar topics, and before the chapter quiz. The self-report concerning the access pattern of lecture videos showed that most students watched the videos. However, the results of the self-report did not reflect ideal video viewing patterns. Although most students had higher access patterns, three students had very limited access patterns. Furthermore, according to the Blackboard statistics report, three students did not watch videos for Chapter Five, and two students did not watch the Chapter Six videos. The three students who reported not having confidence to take the next level of Japanese could be the same three students who only watched the lecture videos on limited occasions, or the same two or three students who did not watch certain chapter videos; nevertheless, there is not enough data to be conclusive. However, such evidence suggests a possible link between the frequency of the video viewing patterns and the success rates for the course, which also correlates to students' confidence levels in taking the next level of Japanese.

Limitations of the Study

The present study was an action research-based quasi-experimental mixed methods inquiry described by Creswell (2005, 2008), McMillan (2006), and Stringer (2007) on a post-secondary introductory Japanese course. Several limitations must be considered. Creswell (2005) defines limitations as “potential weaknesses or problems with the study identified by the researcher” (p. 198). They “often relate to inadequate measures of variables, loss or lack of participants, small sample sizes, errors in measurement, and other factors typically related to data collection and analysis” (p.198).

Five limitations related to the present study are discussed in this section. First, learning a foreign language involves complex variables such as attitude and motivation (Dörnyei, 2003), many of which could not be controlled within the scope of this study. Second, convenient sampling employed in this study prevented the generalization of the results. However, the principal purpose of this study was not to generalize from the results since this study was grounded in action research which is practical in nature seeking to improve one’s own classroom instruction (Creswell, 2005). Rather, this study may provide a reference for those who are interested in implementing the flipped classroom approach in their own foreign language classroom. In addition, the small sample size in this study is not generally ideal “in order to obtain statistical significance” (Calfee & Sperling, 2010, p. 61). Indeed, the quantitative analysis of this study did not generate any statistical significance as a result of the small sample sizes.

Third, while flipped classrooms are gaining momentum in the field of education, the majority of research is concentrated in STEM subjects. This study focused on the effect of the flipped classroom approach, specifically on language performance of oral

production and grammar knowledge; it did not include writing and reading skills. Fourth, the participants were students in the first semester of Japanese language courses, in which most of them were at the novice or beginning level; thus, the outcomes might not apply to students at the higher levels. Fifth, some of the study instruments, specifically assessment tools such as chapter quiz, oral interview questions, and final examinations were self-created, course-content specific. Therefore, the students' performance results would not apply to other courses that offer different content.

Another limitation was the duration of the treatment. Since the study was done with the first semester Japanese course, there was no baseline level of language skills that could be compared at the beginning of the study. Therefore, before the treatment began, the baseline scores needed to be established. As a result, a traditional instructional approach was employed in both groups during the first half of the semester. The treatment began halfway into the semester and lasted approximately six weeks, covering three chapters. In fact, the first comparison of the means of the chapter quiz scores between the EG and the CG after the treatment showed the lowest difference. Although the comparison between the EG and the CG2 resulted in a greater difference, the difference between the EG and the CG/CG2 mean scores began to gradually increase as the second half of the semester progressed.

In summary, it may be difficult to draw generalizations from this study to other foreign language classrooms; however, the present study can potentially contribute to filling in the literature gap in the study of a flipped classroom approach in foreign language teaching and learning. At the same time, I intend to apply the results from this study to my own teaching practices by evaluating which model is a better fit for use in

my classroom, and to learn ways in which to improve such a model as it was applied in my classroom.

Recommendations for Future Improvement

At the conclusion of this study, some modification plans for improving the flipped classroom instructional approach were developed based on the study findings. The following section lists those improvement plans:

1. Improve pre-flipped classroom orientation to students: Before the implementation of the flipped classroom approach, students should be well informed about the rationale of watching videos outside of class and implications of the increased in-class activities. The orientation should include a discussion of strategies to make the best use of the lecture videos such as taking notes while watching the video, orally responding to prompts, using the rewind and fast-forward functions which enable them to study at their own pace, and downloading the video to smart phone or portable devices to make the video available all the time.
2. Give a quick daily grammar check quiz: A few questions, two or three, at the beginning of class can be an effective motivator to get students to watch the lecture video regularly and consistently.
3. Spend a few minutes at the beginning of class for Q & A: Taking questions and checking for understanding of grammar from the video ensures all students learn the material and accommodates those students who need extra in-person explanations.
4. Regularly remind students to watch the videos: Even after having an orientation, students sometimes need a regular reminder to watch the video, particularly during the initial implementation phase, until it becomes a routine activity.

Recommendations for Further Research

First, because the quantitative data analysis did not find any statistically significant differences possibly caused by the small sample size, other studies comparing the EG and the CG with larger sample sizes are recommended.

Next, while this study focused on the effect of the flipped classroom approach on students' learning outcomes in grammar knowledge and oral proficiency within the context of an introductory Japanese language 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, especially at beginning levels. For future research, the use of general proficiency examinations such as JLE and JLPT, or OPI and OWI, will be recommended in order to evaluate general language proficiency.

Finally, in future studies on the flipped classroom approach, the instructional approach itself may not be the determinant of outcome measures. Indeed, as Creswell (2005) suggests, during any research, independent variables should be controlled to determine their effect on the outcome. During the data analysis in this study, five students in the CG were controlled for having extensive Japanese language experience as compared to the other students in the introductory courses. When those five students were excluded from the data analysis, the baseline mean scores of the EG and CG2 were almost identical, suggesting that extensive Japanese language experience was a variable

that affected the dependent variables, or outcomes (Creswell, 2005). Researchers such as Dörnyei (2003), Gardner & Masgoret (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.

Feasibility of Flipped Classroom Approach

Published research of the flipped classroom approach in foreign language classrooms is limited. One of the purposes of the present study was to explore the feasibility of the flipped classroom approach in a foreign language classroom.

A flipped classroom requires a significant initial time commitment to create lecture videos in preparation for flipping the classroom. As discussed in Chapter Three, creating a series of grammar lecture videos for the first semester introductory Japanese language course in the present study was time intensive and involved writing a script, audio recording, editing PowerPoint slide shows, recording videos with a screen capture program, and publishing the videos on the course management system. To create an 8-minute lecture video, it took approximately 1-1.5 hours per video, which totaled 7 to 8 hours per chapter and over 40 hours for all of the videos for one semester of the introductory Japanese course. In contrast, Bergman and Sams (2012), who were high school science teachers when they first started implementing a flipped classroom, recommend that teachers spend about 30 minutes to create a 10-minute video. This recommendation is based on their suggested approach of using live recordings of direct instruction lessons and screen casts to create lecture videos. Although it took longer to create the lecture videos using PowerPoint slideshows with the pre-recorded narrations

for the present study, this was the preferred format for this study because it was easier for both collaborators to work alone since the collaborators lived in different cities which limited the time to record videos together. Perhaps, the process to create videos for this study was rather unconventional; yet, it may be considered as one option. Consequently, the lecture video content, and the associated time to prepare the videos, is up to individual instructor preferences.

In terms of time required to prepare for a lesson, Witten (2013) describes taking three times longer than a traditional, non-flipped class to plan a unit for her Spanish class utilizing the flipped class model. Similarly, Enfield (2013) claims that it takes a lot of time to prepare videos and in-class activities as well as planning and organizing lessons in his undergraduate multimedia courses. In contrast, while the present study required planning each lesson for the CG and then re-planning the lesson for the EG, preparing each lesson did not demand a lot of time since many of the existing in-class activities were utilized. Although initial preparation to flip the class involves extensive time, the time commitment to prepare for future flipped class courses is about the same time as required to prepare for traditional courses because lecture videos and lessons can be re-used in future courses just like traditional course lessons are re-used for future courses.

In short, the time required to flip a classroom will vary depending on each teacher's preference of the types of videos to be produced, knowledge of technology, the lesson content as well as circumstances. In addition to these factors, instructors evaluating the feasibility of a flipped classroom in a non-higher education course may need to consider additional variables. A university setting is generally a more flexible environment than non-higher education settings in which to experiment with new

instructional approaches. Teachers in non-higher education settings often have the additional challenge of dealing with pressures from uncertain parents and administrators when preparing their courses (Bergmann & Sams, 2012).

Although advocates of the flipped classroom such as Bergmann (2012) and Hamdan et al. (2013) state that not everyone is going to succeed in the implementation of a flipped classroom, as discussed in Chapter Two, the likelihood of successful implementation can be increased by having a clear purpose and focused objectives, pedagogical rationales based on educational theories, and engaging, interesting videos.

Summary and Conclusion

This study's motivation originates from an action research seeking to improve the instructor/researcher's own classroom instruction in order to facilitate students' language proficiency. Flipped classroom approach with the use of lecture videos was identified as a possible option to foster such goals. Rooted in the concurrent embedded strategy of mixed methods (Creswell, 2008), this study first identified that the EG, based on the means of chapter quizzes, final examination, and oral examinations, outperformed the CG2 evidently and the CG slightly. The present study provided some evidence that delivering instruction outside of class with lecture videos increased active classroom learning time, which in turn increased learning outcomes. The literature reviewed, such as Norris and Ortega (2000) and Rahimpour and Salimi (2010), indicated that explicit instruction could be used to deliver basic grammar knowledge, which is essential in developing language proficiency. The lecture videos provided the explicit instruction, thus making it possible to allocate additional time for active classroom learning involving

input, output, and interactions, which were the basis of the flipped classroom approach in the Japanese course.

Although this study did not find statistically significant differences between the EG and the CG in comparing their learning outcomes, descriptive statistics did show learning gains in the EG, which is a positive indicator of the effectiveness of a flipped classroom approach in a Japanese language course. Furthermore, the qualitative findings, which were intended to support the quantitative results (Creswell, 2008), revealed that students expressed favorable attitudes towards the flipped classroom approach. Such results encourage continued implementation of a flipped classroom approach of instruction with the use of video lectures in the instructor/researcher' classroom. Furthermore, possible implementation and further exploration of the flipped classroom approach of instruction in other foreign languages as well as other contexts may be considered.

APPENDICES

APPENDIX A

General Background Questionnaire (GBQ)

Full name: _____ Email: _____

Sex _____ Age _____ Country of birth _____

Academic Year: FR SO JR SR 5th-yr SR Other _____

Major (s) _____ Minor (s) _____

1. What do you consider to be your native language(s)?
2. What language did you speak while you were growing up?
3. What other language(s) can you use? Please list and comment on your fluency in each (for speaking, listening, reading, and writing). How many years or experience have you had with each language?
4. What language courses have you taken at this current university? Begin with the one(s) you are currently enrolled in.
5. What other second language learning experiences have you had? (residence in a non-English speaking country, study abroad, vacations, etc.)
6. Why are you taking Introductory Japanese? Please check all that apply.

☐ To fill a requirement	☐ Because of my family history
☐ Because I like learning languages	☐ To be able to read literature in Japanese
☐ To go abroad	☐ To sound sophisticated
☐ For my career	☐ Other (please specify)
☐ Because my family speaks it	_____
7. Why did you choose to take the section of the course? Please check all that apply.

☐ Because of conflicts with my other courses
☐ Because I prefer the time that this section is offered
☐ Because I know someone in this section
☐ Because of the instructor
8. What do you expect to get out of this course? What are your goals? Be as specific as possible.

APPENDIX B

Learning Experience Questionnaire (LEQ)

Full name: _____

Instructional Videos

1. How effective did you find the lecture videos in helping you learn grammar topics?
☐ Very helpful
☐ Somewhat helpful
☐ Not helpful
2. The average duration of each video was 5~8 minutes. How appropriate did you find the length of these videos?
☐ Too long for the given content
☐ Appropriate duration for the given content
☐ Too short for the given content
3. Some of the videos were over 10 minutes. Was this length of video detrimental to you understanding the content?
☐ Yes
☐ Not sure
☐ No
4. Typically, you were asked to watch about fifteen minutes of instructional videos between each class session. For this content, was amount of video appropriate?
☐ The amount of video to watch was too much
☐ The amount of video to watch was about right
☐ The amount of video to watch was too little
5. Did you find taking notes while watching the videos helpful in learning the content?
☐ I never attempted this strategy
☐ Very helpful in learning the content
☐ Somewhat helpful in learning the content
☐ Not helpful in learning the content
6. Did you find answering the questions provided while watching the videos helpful in learning the content?
☐ I never attempted this strategy
☐ Very helpful in learning the content
☐ Somewhat helpful in learning the content
☐ Not helpful in learning the content

7. For a 10-minute video from the Genki Lecture video series, approximately how much time would you need to fully learn the content (including time to watch the video, take notes, or any other strategies that you would use)?
- ☐ 10 minutes (same amount of time as video)
 - ☐ 20 minutes (twice as long as video)
 - ☐ 30 minutes (three times as long as video)
 - ☐ 40 minutes (four times as long as video)
 - ☐ More than 40 minutes
8. I watched the lecture videos before each chapter began.
- ☐ every time
 - ☐ most of the time
 - ☐ occasionally
 - ☐ seldom
 - ☐ never
9. I watched the lecture videos before the assigned grammar topics.
- ☐ every time
 - ☐ most of the time
 - ☐ occasionally
 - ☐ seldom
 - ☐ never
10. I watched the lecture videos before the chapter quiz.
- ☐ every time
 - ☐ most of the time
 - ☐ occasionally
 - ☐ seldom
 - ☐ never
11. How did the use of quizzes impact your motivation to watch the videos?
- ☐ I was more likely to watch the videos because there were quizzes
 - ☐ I was equally likely to watch the videos whether there were quizzes or not
 - ☐ I was less likely to watch the videos because there were quizzes
12. In general, I found the content of the videos to be:
- ☐ Too difficult
 - ☐ Appropriately challenging
 - ☐ Too easy
13. In general, I found the content of the videos to be:
- ☐ Very engaging/interesting
 - ☐ Somewhat engaging/interesting
 - ☐ Not interesting
14. How did technical issues (streaming, downloading, accessing from various devices, etc..) of watching the videos affect your learning?
- ☐ Technical issues of watching the videos negatively impacted my learning.
 - ☐ Technical issues of watching the videos were annoying at times but did not impact my learning.
 - ☐ Technical issues of watching the videos were not annoying and did not impact my learning.
15. Please provide any additional comments related to the instructional videos used for this course

In-class activities

16. Using a scale of 1 to 4, where 1 is most engaging and 4 is least engaging, rank the following in-class activities:

- ☐ Instructor led oral interaction activities/drills of new grammar topic
- ☐ Small group (3~4people) activities/tasks to practice concepts/skills previously learned
- ☐ Pair activities/tasks to practice concepts/skills previously learned
- ☐ Individual time to work on an assignment while instructor helps individually

17. Using a scale of 1 to 4, where 1 is most helpful and 4 is least helpful, rank the following in-class activities:

- ☐ Instructor led oral interaction activities/drills of new grammar topic
- ☐ Small group (3~4people) activities/tasks to practice concepts/skills previously learned
- ☐ Pair activities/tasks to practice concepts/skills previously learned
- ☐ Individual time to work on assigned projects while instructor helped students individually

18. The communicative activities to practice grammar topics that were introduced in the video was

- ☐ Very effective in helping me understand the grammar concept
- ☐ Somewhat effective in helping me understand the grammar concept
- ☐ Not effective in helping me understand the grammar concept

19. The communicative activities to practice grammar topics that were introduced in the video was

- ☐ Very effective in helping me improve my oral production skills
- ☐ Sometimes necessary in helping me improve my oral production skills
- ☐ Never necessary in helping me improve my oral production skills

20. Please provide any additional comments related to the in-class activities used for this course

Reflection on how you were affected by the Course

21. Independent learning

- ☐ I am more confident in my ability to learn a new grammar concept without a formal in-class lecture.
- ☐ My confidence in my ability to learn a new grammar concept without a formal in-class lecture has not changed since before taking this course.
- ☐ I am less confident in my ability to learn a new grammar concept without a formal in-class lecture

22. Instructional videos for learning

- ☐ I am more likely to use instructional videos than I was before taking this course.
- ☐ I am equally likely to use instructional videos than I was before taking this course.
- ☐ I am less likely to use instructional videos than I was before taking this course.

23. I feel the content/skills I learned in this class prepared me to take the next Japanese course:

- ☐ Strongly agree
- ☐ Agree
- ☐ Somewhat agree
- ☐ Do not agree at all

24. Please provide any additional reflections about your experience in this course.

APPENDIX C

Questionnaire Modifications

Original Questions (Chenoweth & Murday, 2003)	Modified Questions
General Back Ground Questionnaires (GBQ)	
5. What language courses have you taken at CMU? Begin with the one(s) you are currently enrolled in. 7. Why are you taking Elementary French? Please check all that apply. 8. Why did you choose to take this section of the course? Please check all that apply?	5. What language courses have you taken at this current university? Begin with the one(s) you are currently enrolled in. 7. Why are you taking Introductory Japanese? Please check all that apply. The question 8 and the answer choices were deleted.
Learning Experience Questionnaires (LEQ)	
Questionnaire (Enfield, 2013)	LEQ (Prefume, 2014)
Instructional videos 1. How effective did you find the instructional videos in helping you learn HTML and CSS? 2. The average duration of the videos was 20 minutes. How appropriate did you find the length of these videos? 3. Three of the 37 videos were over 30 minutes. Was this length of video detrimental to you understanding the content? 7. Did you find working along with the videos helpful in learning the content? 8. For a 30-minute video from the All Things Web video series, approximately how much time would you need to fully learn the content (including time to watch the video, work along with the video, take notes, or any other strategies that you would use)? _____ 30 minutes (same amount of time as video) _____ 1 hour (twice as long as video) _____ 1.5 hours (three times as long as video) _____ 2 hours (four times as long as video) _____ More than 2 hours	Instructional videos 1. How effective did you find the lecture videos in helping you learn grammar topics? 2. The average duration of each video was 5~8 minutes. How appropriate did you find the length of these videos? 3. Some of the videos were over 10 minutes. Was this length of video detrimental to you understanding the content? * The question 7 and response choices in the Enfield's have been omitted. 7. For a 10-minute video from the Genki Lecture video series, approximately how much time would you need to fully learn the content (including time to watch the video, take notes, or any other strategies that you would use)? _____ 10 minutes (same amount of time as video) _____ 20 minutes (twice as long as video) _____ 30 minutes (three times as long as video) _____ 40 minutes (four times as long as video) _____ More than 40 minutes

	Video viewing patterns (new questions added) This section asks what your video-viewing patterns are, whether you followed regular schedules or had no set patterns. 8. I watched the lecture videos before each chapter began. _____ every time _____ most of the time _____ occasionally _____ seldom _____ never 9. I watched the lecture videos before the assigned grammar topics. _____ every time _____ most of the time _____ occasionally _____ seldom _____ never 10. I watched the lecture videos before the chapter quiz. _____ every time _____ most of the time _____ occasionally _____ seldom _____ never In-class activities 14. Using a scale of 1 to 4, where 1 is most engaging and 4 is least engaging, rank the following in-class activities: _____ Instructor led demonstration of new concepts _____ Instructor led demonstration of concepts previously introduced in videos (practice) _____ Group activities/tasks to practice concepts/skills previously learned _____ Lab time to work on assigned projects while instructor helped students individually 15. Using a scale of 1 to 4, where 1 is most helpful and 4 is least helpful, rank the following in-class activities: _____ Instructor led demonstration of new concepts _____ Instructor led demonstration of concepts previously introduced in videos (practice) _____ Group activities/tasks to practice concepts/skills previously learned _____ Lab time to work on assigned projects while instructor helped students individually 16. The practice of calling on students to perform
	In-class activities 16. Using a scale of 1 to 4, where 1 is most engaging and 4 is least engaging, rank the following in-class activities: _____ Instructor led oral interaction activities drills of new grammar topic _____ Small group (3~4people) activities/tasks to practice concepts/skills previously learned _____ Pair activities/tasks to practice concepts/skills previously learned _____ Individual time to work on an assignment while instructor helps individually 17. Using a scale of 1 to 4, where 1 is most helpful and 4 is least helpful, rank the following in-class activities: _____ Instructor led oral interaction activities/drills of new grammar topic _____ Small group (3~4people) activities/tasks to practice concepts/skills previously learned _____ Pair activities/tasks to practice concepts/skills previously learned _____ Individual time to work on assigned projects while instructor helped students individually 18. The communicative activities to practice

tasks that were introduced in the video was _____ Very effective in helping me learn the content _____ Somewhat effective in helping me learn the content _____ Not effective in helping me learn the content	grammar topics that were introduced in the video was _____ Very effective in helping me understand the grammar concept _____ Somewhat effective in helping me understand the grammar concept _____ Not effective in helping me understand the grammar concept
17. The practice of calling on students to perform tasks that were introduced in the video was _____ Always necessary in maintaining my engagement during in-class demonstrations _____ Sometimes necessary in maintaining my engagement during in-class demonstrations _____ Never necessary in maintaining my engagement during in-class demonstrations	19. The communicative activities to practice grammar topics that were introduced in the video was _____ Very effective in helping me improve my oral production skills _____ Sometimes necessary in helping me improve my oral production skills _____ Never necessary in helping me improve my oral production skills

APPENDIX D

JPN1401 Course Descriptions and Objectives

Course Descriptions

1401 Introductory Japanese

Introduction to the Japanese language and culture: pronunciation, grammar, reading of simple texts and conversation.

Course Objectives

This course aims to comprehensively develop the four basic language skills (listening, speaking, reading, and writing) in Elementary Japanese. Students will be introduced Japanese characters of hiragana and katakana in the first four weeks, and 58 kanji characters starting from Lesson 3. It is a *performance-based class*. At the end of the semester, students will be able to do as follows:

Listening: Understand short, learned utterances and some sentence-length utterances that are clearly audible about topics in the basic personal information or the immediate physical setting.

Speaking: Make simple statements and to demonstrate basic communicative exchanges by relying heavily on learned utterances. (greetings, time, shopping, request, etc.)

Reading: Interpret written language in areas of practical need such as instructions, directions, short messages, or expressions (menus, schedules, timetables, maps, and signs) where vocabulary has been learned.

Writing: Write simple, fixed expressions and limited memorized material such as names, numbers, dates, own nationality, and other simple autobiographical information, as well as some short phrases and simple lists.

APPENDIX E

Chapter Quiz Sample Questions

Word Conjugations: Fill in the conjugation table

present affirmative	past affirmative	present negative	past negative
きれいです <i>kireidesu</i> (It) is clean.			
おおきいです <i>ookiidesu</i> (It) is big.			
いいです <i>iidesu</i> (It) is good.			

Fill-in-the-blank:

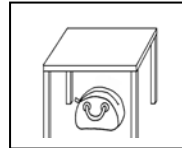
日曜日に ともだちのうち ()パーティー()あります。
nichiyoobi ni tomodachi no uchi () paatii () arimasu
 There will be a party at my friend's house this Sunday.

Sentence Translation: Translate the following sentences into Japanese.

I eat lunch with Mary and Takeshi.
 メアリーさんとたけしさんとひるごはんをたべます。
mearii san to takeshi san to hirugohan o tabemasu

Sentence Completion/Production:

かばんは ()()()です。
kaban wa ()()() desu.
 The bag is _____.



Answer the following questions in Japanese.

子どもの時、よくなにをしましたか。
kodomo no toki yoku nani wo shimashita ka
 What did you do often when you were a child?

What would you say in the following situations?

Your friend just came from running. He looks very thirsty. Offer to bring him a glass of water.
 みずをもってきましょうか。
mizu wo motte kimasyoo ka

APPENDIX F

JPN 1401 Final Examination Sample Grammar Questions

Conjugations and grammar:

1. Conjugate the verb ねる *neru* and fill in the blanks.

せんしゅうはぜんぜんいそがしくなかったです。たくさん_____。

senshu wa zenzen ishogashiku nakatta desu. takusan _____.

(I) was not busy at all last week. (I) _____ a lot.

でも、今週^{こんしゅう}はいそがしいです。きのうはあまり_____。

demo konshu wa isogashii desu. kinoo wa amari _____.

But I am busy this week. (I) _____ very much.

2. Conjugate the adjective やさしい *yasahii* and fill in the blanks.

こどもの時、たけしさんはぜんぜん_____。

kodomo no toki Takeshi san wa zenzen _____.

When he was a child, Takeshi _____ at all.

3. Conjugate the adjective きれい and fill in the blanks.

子どもの時、メアリーさんのおねえさんはとても_____。

Kodomo no toki, Mearii san no oneesan wa totemo _____.

When Mary was a child, she was very _____.

4. おねえさんは今もとても_____。

oneesan wa ima totemo _____.

(Her) sister is very _____ now.

APPENDIX G

Oral Proficiency Interview Scale

Student Name: _____	
ID#: _____	
Completion & complexity	
10-9:	Speaker completes the task as given; content of response consistent with the task; with complexity.
8-6:	Content of response appropriate; usually consistent with the task; may miss some details; mostly with complexity.
5-3:	Content of response somewhat appropriate; but misses much details; may not be fully pertinent; with some complexity.
2-1:	Does not complete most of the task given and/or response not pertinent to task; lacks complexity.
Comprehension	
10-9:	Speaker understands all of what is said to him or her.
8-6:	Speaker understands most of what is said to him or her.
5-3:	Speaker understands some of what is said to him or her.
2-1:	Speaker understands little of what is said to him or her.
Comprehensibility/Pronunciation	
10-9:	Listener understands all of what the speaker is trying to communicate.
8-6:	Listener understands most of what the speaker is trying to communicate.
5-3:	Listener understands less than half of what the speaker is trying to communicate.
2-1:	Listener understands little of what the speaker is trying to communicate.
Accuracy-grammar, word order, vocabulary	
10-9:	Speaker uses language correctly including grammar and word order; more than 90 %
8-6:	Speaker usually uses language correctly including grammar and word order. 75%
5-3:	Speaker has some problems with language usage. 50%
2-1:	Speaker makes many errors in language usage. 25% & less
Fluency/Delivery	
10-9:	Speaker speaks clearly without hesitation and pauses; natural responses.
8-6:	Speaker has few problems with hesitation and pauses; mostly natural responses.
5-3:	Speaker has some problems with hesitation and pauses; some unnatural responses.
2-1:	Speaker hesitates and pauses frequently and struggles to deliver responses.

APPENDIX H

Distribution of Majors

Category of Majors	Major	EG (N = 19)	EG Total	CG (N = 20)	CG Total	EG + CG Total
Sciences	Biology	1		1		2
	Biochemistry	1		0		1
	Chemistry	0		1		1
	Psychology	0		1		1
	Statistics	1		0		1
			3		3	6
Humanities and Social Science	Asian Studies	1		1		2
	Communication	0		1		1
	Film & Digital Media	0		2		2
	Graphic Design	0		1		1
	History	0		1		1
	International Studies	0		1		1
	Journalism	1		0		1
	Linguistics	0		1		1
	Political Science	1		1		2
			3		8	10
Engineering and Computer Science	Computer Science					
	Engineering	0		1		1
		2		0		2
			2		1	3
Business	Accounting	1		0		1
	Business	1		0		1
	Finance	1		0		1
	Information Management System	3		0		3
	Pre-Business	0		2		2
			6		4	9
Others	Music	2		2		4
	Nursing	3		0		3
	Social Work	0		1		1
	University Scholar	0		1		1
			5		4	9
Not Reported		0		1		1
			0		1	1

APPENDIX I

Results of LEQ

I.1. LEQ Questions related to Lecture Videos

Questions	Choice#	Answer	Response	%
1. How effective did you find the lecture videos in helping you learn grammar topics?	1	Very helpful	11	58%
	2	Somewhat helpful	6	32%
	3	Not helpful	2	11%
2. The average duration of each video was 5~8 minutes. How appropriate did you find the length of these videos?	1	Too long for the given content	0	0
	2	Appropriate duration for the given content	19	100%
	3	Too short for the given content	0	0
3. Some of the videos were over 10 minutes. Was this length of video detrimental to you understanding the content?	1	Yes	4	21%
	2	Not sure	5	26%
	3	No	10	53%
4. Typically, you were asked to watch about fifteen minutes of instructional videos between each class session. For this content, was amount of video appropriate?	1	The amount of video to watch was too much	3	16%
	2	The amount of video to watch was about right	15	79%
	3	The amount of video to watch was too little	1	5%
5. Did you find taking notes while watching the videos helpful in learning the content?	1	I never attempted this strategy	8	42%
	2	Very helpful in learning the content	3	16%
	3	Somewhat helpful in learning the content	8	42%
	4	Not helpful in learning the content	0	0
6. Did you find answering the questions provided while watching the videos helpful in learning the content?	1	I never attempted this strategy	0	0%
	2	Very helpful in learning the content	15	79%
	3	Somewhat helpful in learning the content	4	21%
	4	Not helpful in learning the content	0	0%
7. For a 10-minute video from the Genki Lecture video series, approximately how much time would you need to fully learn the content (including time to watch the video,	1	10 minutes (same amount of time as video)	2	11%
	2	20 minutes (twice as long as video)	7	37%

take notes, or any other strategies that you would use)?	3	30 minutes (three times as long as video)	7	37%
	4	40 minutes (four times as long as video)	1	5%
	5	More than 40 minutes	2	11%
8. I watched the lecture videos before each chapter began.	1	every time	1	5%
	2	most of the time	6	32%
	3	occasionally	6	32%
	4	seldom	2	11%
	5	never	4	21%
9. I watched the lecture videos before the assigned grammar topics.	1	every time	5	26%
	2	most of the time	11	58%
	3	occasionally	3	16%
	4	seldom	0	0%
	5	never	0	0%
10. I watched the lecture videos before the chapter quiz.	1	every time	5	26%
	2	most of the time	5	26%
	3	occasionally	6	32%
	4	seldom	2	11%
	5	never	1	5%
11. How did the use of quizzes impact your motivation to watch the videos?	1	I was more likely to watch the videos because there were quizzes	13	68%
	2	I was equally likely to watch the videos whether there were quizzes or not	6	32%
	3	I was less likely to watch the videos because there were quizzes	0	0%
12. In general, I found the content of the videos to be:	1	Too difficult	1	5%
	2	Appropriately challenging	18	95%
	3	Too easy	0	0%
13. In general, I found the content of the videos to be:	1	Very engaging/interesting	5	26%
	2	Somewhat engaging/interesting	13	68%
	3	Not interesting	1	5%
14. How did technical issues (streaming, downloading, accessing from various devices, etc..) of watching the videos affect your learning?	1	Technical issues of watching the videos negatively impacted my learning.	0	0%
	2	Technical issues of watching the videos were annoying at times but did not impact my learning.	7	37%
	3	Technical issues of watching the videos were not annoying and did not impact my learning.	12	63%

18. The communicative activities to practice grammar topics that were introduced in the video was	1	Very effective in helping me understand the grammar concept	11	58%
	2	Somewhat effective in helping me understand the grammar concept	7	37%
	3	Not effective in helping me understand the grammar concept	1	5%
19. The communicative activities to practice grammar topics that were introduced in the video was	1	Very effective in helping me improve my oral production skills	10	53%
	2	Sometimes necessary in helping me improve my oral production skills	9	47%
	3	Never necessary in helping me improve my oral production skills	0	0%
22. Instructional videos for learning	1	I am more likely to use instructional videos than I was before taking this course.	16	84%
	2	I am equally likely to use instructional videos than I was before taking this course.	2	11%
	3	I am less likely to use instructional videos than I was before taking this course.	1	5%

I.2. LEQ Related to In-class Activities

In-class activities	Choice#	EG (N = 19) Response	%	CG (N = 18) Response	%
16-1. Using a scale of 1 to 4, where 1 is most engaging and 4 is least engaging, rank the following in-class activities: Instructor led oral interaction activities/drills of new grammar topic	1	8	42%	12	67%
	2	5	26%	4	22%
	3	4	21%	0	0%
	4	2	11%	2	11%
16-2. Using a scale of 1 to 4, where 1 is most engaging and 4 is least engaging, rank the following in-class activities: Small group (3~4people) activities/tasks to practice concepts/skills previously learned	1	2	11%	5	28%
	2	10	53%	7	39%
	3	6	32%	2	11%
	4	1	5%	4	22%
16-3. Using a scale of 1 to 4, where 1 is most engaging and 4 is least engaging, rank the following in-class activities: Pair activities/tasks to practice concepts/skills previously learned	1	8	42%	8	44%
	2	4	21%	5	28%
	3	7	37%	3	17%
	4	0	0%	2	11%
16-4. Using a scale of 1 to 4, where 1 is most engaging and 4 is least engaging, rank the following in-class activities: Individual time to work on an assignment while instructor helps individually	1	8	42%	7	39%
	2	4	21%	6	33%
	3	4	21%	3	17%
	4	3	16%	2	11%
17-1. Using a scale of 1 to 4, where 1 is most helpful and 4 is least helpful, rank the following in-class activities: Instructor led oral interaction activities/drills of new grammar topic	1	11	58%	12	67%
	2	3	16%	3	17%
	3	3	16%	1	6%
	4	2	11%	2	11%
17-2. Using a scale of 1 to 4, where 1 is most helpful and 4 is least helpful, rank the following in-class activities: Small group (3~4people) activities/tasks to practice concepts/skills previously learned	1	3	16%	5	28%
	2	6	32%	8	44%
	3	7	37%	3	17%
	4	3	16%	2	11%
17-3. Using a scale of 1 to 4, where 1 is most helpful and 4 is least helpful, rank the following in-class activities: Pair activities/tasks to practice concepts/skills previously learned	1	4	21%	6	33%
	2	11	58%	7	39%
	3	4	21%	3	17%
	4	0	0%	2	11%
17-4. Using a scale of 1 to 4, where 1 is most helpful and 4 is least helpful, rank the following in-class activities: Individual time to work on assigned projects while instructor helped students individually	1	8	42%	4	22%
	2	5	26%	9	50%
	3	6	32%	2	11%
	4	0	0%	3	17%

I.3. Students' Insights at the End of the Course

Questions	#	Answer	EG (N = 19) Response	%	CG (N = 18) Response	%
21. Independent Learning	1	I am more confident in my ability to learn a new grammar concept without a formal in-class lecture.	9	47%	9	50%
	2	My confidence in my ability to learn a new grammar concept without a formal in-class lecture has not changed since before taking this course.	8	42%	8	44%
	3	I am less confident in my ability to learn a new grammar concept without a formal in-class lecture.	2	11%	1	6%
23. I feel the content/skills I learned in this class prepared me to take the next Japanese course:	1	Strongly agree	9	47%	11	61%
	2	Agree	7	37%	7	39%
	3	Somewhat agree	3	16%	0	0%
	4	Do not agree at all	0	0%	0	0%

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