Japanese Language Learners’ Out-Of-Class Study: Form-Focus and Meaning-Focus in a Program that Uses the Performed Culture Approach

Dissertation

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Abstract

Previous research has found that among language students who study under the performed culture approach (PCA), the amount of time spent studying outside of class is negatively correlated with in-class performance (Curtin 2012, Luft, 2007). The current study investigates whether or not it is because lower performing students are overemphasizing form and neglect focusing on meaning during their out-of-class study that they were found to spend more time studying than higher performing students.

Data were collected primarily by means of stimulated recall. 20 1st year Japanese language students were video recorded preparing for class. Following this video recording the students described to the researcher what they had been thinking during their study as they watched the video. These data were then analyzed to identify instances of form-focus and meaning-focus. Pearson product-moment correlations were used to assess the relationship between in-class performance scores on the one hand and instances of form-focus and meaning-focus on the other hand.

This study fails to find a positive relationship between instances of meaning-focus and in-class performance. On the contrary, the data manifested a slight trend in the opposite direction (r=−0.097). This study does find a very strong correlation between instances of form-focus and meaning-focus (r=0.714). This latter finding is interpreted as suggesting that 1st year PCA students in general were not neglecting meaning-focus in
favor of form-focus in their out-of-class study. Recommendations for future research include investigating the extent to which prior language study, language aptitude, language strategy use, degree of focus, and error in measurement of time spent studying are able to explain why a negative relationship has been found between self-reported time spent studying and in-class performance in PCA.
Dedication

Dedicated to my wife Jeneal, without whose constant encouragement and support this dissertation would not have been possible.
I would like to first and foremost thank Dr. Mari Noda, whose guidance, support, and encouragement have been invaluable. Working with her has been a privilege for which I am indeed grateful. I would also like to thank the other members of my dissertation committee, Drs. Charles Quinn, Xiaobin Jian, and Leslie Moore, for their insightful suggestions and comments. This dissertation is better for their kind support.

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# Table of Contents

Abstract .............................................................................................................................. ii

Dedication .......................................................................................................................... iv

Acknowledgements .............................................................................................................. v

Vita ...................................................................................................................................... vi

List of Tables ...................................................................................................................... x

List of Figures ................................................................................................................... xi

Chapter 1: Introduction ...................................................................................................... 1

1.1. The performed culture approach .................................................................................. 2
1.2. The performed culture approach and out-of-class study behaviors .............................. 9
1.3. Research objectives ...................................................................................................... 15

Chapter 2: Literature Review ............................................................................................ 20

2.1. Out-of-class foreign language study .............................................................................. 20
2.2. Theoretical framework ................................................................................................. 36

Chapter 3: Methods ........................................................................................................... 54

3.1. Definition of terms ....................................................................................................... 54
3.2. Participant characteristics ........................................................................................... 56
3.3. Sampling procedures .................................................................................................. 64
3.4. Research procedures .................................................................................................. 66
3.5. Validity and reliability ................................................................................................. 83
3.6. Analysis of verbalizations ............................................................................................ 87
3.7. Data analysis ............................................................................................................... 98
3.8. Conclusions ................................................................................................................. 100
Chapter 4: Findings ........................................................................................................................................... 101
4.1. Time and environment of Japanese language study ............................................................................. 101
4.2. Form-focus, meaning-focus, and in-class performance ........................................................................... 111
4.3. The relationship between the variables of form-focus and meaning-focus and in-class performance ................................................................................................................... 115
4.4. Conclusion .................................................................................................................................................... 118

Chapter 5: Discussion and Conclusion ........................................................................................................ 120
5.1. Form-focus, meaning-focus, and in-class performance ............................................................................ 120
5.2. Limitations .................................................................................................................................................... 129
5.3. Conclusions .................................................................................................................................................... 132

References ......................................................................................................................................................... 135

Appendix A: The Performed Culture Approach Out-of-Class Study Behavior Survey .................................. 148
Appendix B: Sample Coded Transcript Excerpts ............................................................................................. 155
List of Tables

Table 3.1. Research objectives, methods, and analyses .......................................................... 67
Table 3.2. Timeline for data collection .................................................................................... 82
Table 3.3. Total amount of data collected ................................................................................ 83
List of Figures

Figure 1.1. Cycle of compilation ......................................................................................... 4
Figure 2.1. Conceptual framework of the relationship between types of activities performed by learners in preparation for class and success in language learning............. 53
Figure 3.1. Frequency distribution of ages of participants who participated in the questionnaire portion of the study .............................................................................................. 58
Figure 3.2. Frequency distribution of formal Japanese language education prior to enrollment in the current program of those who participated in the questionnaire portion of the study .............................................................................................. 59
Figure 3.3. Frequency distribution of types of informal Japanese language study engaged in by those who participated in the questionnaire portion of the study ......................... 60
Figure 3.4. Frequency distribution of how often participants watch TV or movies in Japanese, including movies with subtitles, for those who participated in the questionnaire portion of the study .............................................................................................. 61
Figure 3.5. Frequency distribution of length of time of previous foreign language study of participants in the questionnaire portion of the study ................................................................. 63
Figure 4.1. Frequency distribution of times at which participants reported studying Japanese (n=36) .................................................................................................................................................. 102
Figure 4.2. Frequency distribution of locations at which participants reported studying Japanese for which the frequency was at least 2 (n=36) ........................................... 104

Figure 4.3. Frequency distribution of the lighting conditions experienced by participants in the locations at which they typically study (n=36) ......................................................... 105

Figure 4.4. Frequency distribution of the noise level experience by participants in the locations in which they typically study (n=36) ................................................................. 106

Figure 4.5. Frequency distribution of the social environment experienced by participants as they study (n=36) .................................................................................................. 107

Figure 4.6. Frequency distribution of the body positions that participants study in, according to questionnaire data (n=22) .................................................................................. 109

Figure 4.7. Frequency distribution of materials used by participants during study, according to questionnaire data (n=36) .................................................................................. 110

Figure 4.8. Frequency distribution of in-class performance scores among participants in the SR portion of the study (n=20) .................................................................................. 112

Figure 4.9. Scatterplot of in-class performance and self-reported time spent preparing for class ............................................................................................................................... 113

Figure 4.10. Scatterplot of in-class performance and number of occurrences of meaning-focus ................................................................................................................................. 116

Figure 4.11. Scatterplot of in-class performance and number of occurrences of form-focus ................................................................................................................................. 117
Figure 4.12. Scatterplot of number of occurrences of form-focus and number of occurrences of meaning-focus.
Chapter 1: Introduction

While the field of education continues to emphasize learning as well as teaching, few studies have addressed what foreign language students do outside of class to learn a foreign language. Considering that students typically spend more time studying and learning out of class than in class, research on how students prepare for class and on the relationship between their preparation and their subsequent success as language learners seems to have great potential for improving the language learning of foreign language students (see section 2.3.1).

The issue of how students prepare for class is particularly relevant to language learning with the performed culture approach (PCA), an approach currently used primarily for the teaching of East Asian languages (Christensen & Warnick, 2006; Walker, 2010; Walker & Noda, 2010). Because of PCA’s emphasis on culture, and in particular the performance of cultural behaviors, students are required to rehearse not only linguistic forms in their preparation for class, but also cultural forms. Thus, students’ out-of-class study may be realized differently than in programs that use other approaches. Furthermore, the pedagogical procedures employed in PCA may affect students’ out-of-class study in unique ways.

In this chapter, I first give a brief overview of the approach, or basic assumptions and beliefs about the nature of language and language learning, and the design and
procedures\textsuperscript{1} of PCA. Then I discuss aspects of PCA that are particularly relevant to the issue of how students prepare for class. Lastly, I describe the purpose of this study.

1.1 The performed culture approach (PCA)

The theory of language that underpins the design and procedures employed in PCA is that the meaning of language is dependent on the setting and culture in which the language is used (Walker, 2010; Walker & Noda, 2010). In other words, one will not communicate successfully simply by taking what one wants to communicate in the base language and changing the words and grammar to target language equivalents. In order to communicate successfully, one must communicate in the way that native speakers would communicate in the same context.

A number of theories about language learning underpin PCA, all of which relate to the theory of language. First, the language that learners experience should be culturally authentic. Authenticity in this sense refers to language that is culturally feasible from the perspective of native speakers. This definition of authenticity is different than a more commonly used definition that states that that which is produced by natives for native consumption is authentic. The idea of cultural feasibility is preferred in PCA because this latter definition of authenticity leads to difficulties when it is applied to the context of foreign language teaching and learning. Thus, learners experience utterances such as “your Japanese is very good”, which is quite natural from a native perspective if said to a

\textsuperscript{1}I am using the same terms Richards and Rodgers (2001) use in their review of approaches and methods in foreign language teaching.
foreigner, but would be strange if said by one native to another native. However, learners would not experience communication between friends in a speech style that indexes politeness and distance in the relationship. Such communication would be strange from a native perspective, whether or not foreigners were involved.

Second, the language learner’s experience should be contextualized. As learners experience language in context, their experiences with language are compiled and categorized based on contextual information (Walker & Noda, 2010). The cycle through which these experiences are compiled is illustrated in figure 1.1. The cycle consists of seven elements, which are divided into agent, activity, and memory. As learners experience language in context, the develop memories of these experiences, or “stories”. These memories are compiled based on functions or tasks (cases), the roles of those involved or setting in which the experience occurs (sagas), or culture-specific concepts that relate to a wide range of behaviors (themes²). These compiled memories then inform learners’ future behavior in target culture contexts.

² In a later iteration of the compilation cycle, “themes” was added to cases and sagas (Noda, 2007).
Figure 1.1. Cycle of compilation, reported from “Remembering the Future,” by G. Walker and M. Noda, 2010, in G. Walker (Ed.) The pedagogy of performing another culture, p. 32. Copyright 2010 by the National East Asian Languages Resource Center.

Third, the ability to communicate in the target culture is best learned and demonstrated through performance. Performance here is used in the same sense as an actor giving a performance on a stage. The quality of a performance is not limited to the
words spoken, but also includes such elements as inflection, gesture, and facial
expression. Furthermore, just as actors learn to play their parts, learners develop a target
culture persona through performance. The concept of performance suggests that learners
are not being asked to change who they are in learning to communicate in the target
culture. Rather, they are being asked to develop a new way of expressing who they are
that will be received in the target culture as they intend.

Christensen and Warnick (2006) provide a thorough description of the design and
procedures of PCA. In PCA students participate in two types of classes, referred to as
ACT classes and FACT classes. ACT classes are conducted entirely in the target
language. In ACT class, the teacher presents students with contexts that they are likely to
encounter in the target culture. The teacher uses visual aids, props, priming behavior (e.g.,
coughing to indicate the teacher has a cold; smiling broadly to indicate the teacher is
happy about something) and the target language to establish these contexts. The teacher
makes explicit such aspects of the context as the time, the place, the roles of the
participants, and the nature of the audience. The contextual audience does not refer to the
other individuals in the classroom per se, but rather to any individuals that would be
present (at least in the mind of the performer(s)) during a target-culture interaction. For
example, the language one uses would be different if one was describing one’s research
to a room of fifty people at an academic conference than if one was describing one’s
research to a colleague in a private office. To the extent that the nature of the audience
would affect one’s target-culture performance, the nature of the audience is made explicit.
Once the context is established, the teacher then invites students to give performances that would be considered appropriate to the context from the perspective of a native speaker. The action that is feasible in the given cultural context, whether verbal or kinesic, is referred to as the performance script. In contrast to the dialogues that students studying under the Communicative Approach may study or perform, these scripts must always be culturally feasible. In other words, students are expected to speak, write, and act in ways that natives of the target language and culture would be comfortable with in that context, i.e., come up with a usable script.

The rehearsal of dialogues that students have practiced outside of class is typically a part of ACT class. The teacher uses contexts to elicit from students the performance of scripts that they have learned through rehearsal of these dialogues. By altering the context, the teacher elicits from students scripts that deviate from the practiced dialogue in culturally acceptable ways. The teacher also uses contexts to elicit performances from students beyond what is contained in the practiced dialogues. In this way, in a well-executed class with well-prepared students, students spend the majority of class time giving improvised performances.

Typically, 2 or 3 students perform while the rest of the class observes. The activity of observing the performances of others is not necessarily a passive one. Particularly for students who have come to class prepared to perform, observation can be an activity in which students compare the performances of others to their own scripts, and learn from others’ successes and failures. Research by Hirata (2002; 2003) suggests that many students do engage in this kind of learning when a class is conducted in this fashion.
For each performance, the teacher gives the performers feedback. The teacher typically conveys positive feedback by allowing target language interactions to continue. Corrective feedback is done in a variety of ways, including inviting self-correction, eliciting correction from peers, and modeling. In addition to providing feedback, following each performance the teacher often asks the observing students questions about the performance to assess comprehension and encourage active listening. At the end of class, each student is assigned a daily grade. This grade represents how a native speaker who is unaccustomed to interactions with foreigners would have responded to the students’ performances.

FACT classes provide students with the opportunity to discuss the target language and culture. Typically, the base language is allowed in FACT classes. FACT classes are considered to provide support for ACT classes. Christensen and Warnick (2006) recommend at least 4 ACT classes to 1 FACT class, with fewer FACT classes to ACT classes as students’ language ability increases.

The distinction between FACT and ACT classes reflects the distinction between declarative knowledge and procedural knowledge. Procedural knowledge refers to knowledge of how to perform a skill, while declarative knowledge refers to factual knowledge that one can describe to another. In ACT classes, students gain procedural knowledge as memories of experiences communicating in the second culture are compiled. The process through which these memories are compiled is described in Walker and Noda’s (2010) cycle for compiling cultural knowledge (see figure 1). So that students are provided with the kind of memories that will lead to native-like procedural

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3 See section 3.2 for the rubric used in assigning daily grades to students.
knowledge, all performances are contextualized, and instructors provide students with feedback on their performances. In other words, performances that would lead to some degree of failure in the target culture will result in some degree of failure in the classroom, and performances that would lead to success in the target culture will meet with similar success in the classroom.

In FACT classes, students primarily gain factual declarative knowledge. For many researchers in cognitive psychology, declarative knowledge holds a privileged place in their accounts of procedural skill development, to the extent that some go so far as to suggest that all procedural knowledge originates as declarative knowledge (e.g., Anderson, 1993; however, see also Berry & Broadbent, 1984; Cohen & Squire, 1989; Willingham, Bullemer, & Nissen, 1989). Some empirical evidence in favor of holding a FACT class in which students gain declarative knowledge comes from Berry and Broadbent (1984). They found that declarative knowledge can facilitate the acquisition of procedural knowledge under certain circumstances.

The declarative knowledge that students gain in FACT classes, and during out-of-class study, serves to fine-tune the process of acquiring the skill of communicating in a second language. Factual declarative knowledge can be expected to influence the development of skill in communicating in the second language both through affecting how students perform, and through affecting what students attend to, and consequently the kind of memories they develop, during the performances of themselves and others.\(^\text{4}\)

\(^\text{4}\)Ellis and Larsen-Freeman (2006) state that learner attention to language is tuned by their native language experience. They also state that “social recruitment” can have a positive effect on what learners attend to and are conscious of in second language learning (p. 568).
1.2 The performed culture approach and students’ out-of-class study behaviors

Several aspects of PCA encourage effective out-of-class language study. Specifically, the use of daily grading of in-class performance; the expectation that students give culturally acceptable performances; the way in which students are invited to perform; and the avoidance of pair and group work, each of which are commonly found in PCA, encourage students to prepare well outside of class for each class session. In this section, I discuss the relationship between each of these aspects of PCA and students’ out-of-class study behaviors.

Daily grading of in-class performance shapes students’ out-of-class language study in a variety of ways. First, daily grading of in-class performance encourages students to take responsibility for their own learning. In PCA, students are expected to come to class able to perform the assigned dialogue, vary the dialogue script according to variations in context, and apply the various words, phrases, grammar patterns, and behavioral forms that appear in the dialogue to new situations. Class instruction, which takes the form of coaching students’ performances and presenting students with new situations that they may encounter in the target culture, builds on the performances that students have prepared, rather than taking the teaching of altogether new material as the starting point. Since the expectation is that students come to class thoroughly prepared to perform, students who come to class having prepared none or part of the material, expecting the teacher to help them with the rest, will not receive high scores in their daily grades. Having daily grades typically constitute the highest portion of students’ final
grades (Christensen & Warnick, 2006) certainly contributes to placing responsibility on
the students for preparing well outside of class.

While there is a high standard regarding what students are expected to come to
ACT class able to do, students are not expected to meet this standard entirely on their
own. FACT classes, which resemble a typical teaching paradigm more closely than ACT
classes, provide necessary support for students’ learning. In FACT classes, student
receive explicit instruction regarding both how to communicate effectively in the target
culture and how to prepare for ACT class effectively. This latter instruction often
includes memorization strategies (e.g., backwards build-up\(^5\)) and encouragement to rely
on audio and video rather than written materials. Instruction on how to prepare for ACT
class may address form-focused concerns (e.g., what kinds of activities will effectively
improve one’s pronunciation) and meaning-focused concerns (e.g., the importance of
attending to context).

Students typically do not receive daily grades as a reflection of the quality of their
performances in FACT classes. These classes therefore do not presuppose the same type
or degree of preparation that ACT classes do. However, while the preparation expected of
students for FACT classes is perhaps less rigorous than that expected for ACT classes,
because of the low ratio of FACT classes to ACT classes the overall experience of PCA
students is one in which they must do a significant amount of learning on their own
before interacting with an instructor.

\(^5\) In backwards build-up one starts at the end of an utterance and gradually commits more and more of the
utterance to memory, moving from the end of the utterance towards the beginning, until the entire utterance
is remembered.
Second, when students are graded daily on the quality of their in-class performances, they consequently experience considerable freedom regarding how they study outside of class. In programs in which students are held accountable for their out-of-class study primarily through the submission of written homework assignments, part of what students have done outside of class is assessed directly. Students must follow the directions given for a specific assignment if they are to receive a good grade. However, in PCA it is primarily through assessment of their in-class performances that students are held accountable for their out-of-class study. What students actually do outside of class is only assessed indirectly through the quality of students’ in-class performances. Students are told which target language material will be the focus of their in-class performances, but they are free to prepare for these performances in the manner that they feel is most effective. While students are often given direction regarding what is considered effective study practice, as long as students perform well in-class, choosing not to follow teachers’ directions regarding how to study outside of class will have no negative impact on students’ grades.

Third, students also receive a large amount of feedback in regard to how they prepare for class when a system of daily assessment of in-class performance is used. Since students are given freedom in how they prepare for class, the students must decide upon the method of preparation that they feel is most effective. The daily grades students receive on their in-class performances can inform their decisions regarding the way in which they prepare for those performances. A good performance can be considered a sign of adequate preparation, and any inadequacy in students’ performance ability can be
considered a sign of inadequacy in students’ preparation. The daily grading rubric found in Christensen and Warnick’s (2006) book *Performed Culture* makes this connection between performance and preparation explicit. At each level of performance, the daily grade is not only a reflection of performance but also of preparation. For example, a 4, the highest score, is given to students whose performance is “fully culturally coherent” and for whom “solid preparation is evident” (p. 68). Thus, in addition to being a measure of students’ performances, daily grades can also be a source of feedback each day on how well students have prepared for class.

The feedback students receive in regard to their preparation out-of-class is not limited to the daily grades themselves, however. Since students are expected to come to class having sufficiently mastered the material to give a culturally acceptable performance, and they are evaluated on how well they perform throughout the entire class period, any feedback the teacher gives students during class regarding aspects of their performance that they could improve also can be interpreted as indicating that there are aspects of their preparation that could be improved. While it is unlikely that all students interpret the feedback they receive in this way (e.g., students may feel that their preparation was adequate, but because of nervousness in class their performance was poor), the in-class feedback on their performances provides another potential source of feedback on their preparation.

In addition to the feedback students receive during class, comments from teachers often accompany the daily grades students are given after class. It is common practice with daily grading to provide some commentary to accompany the grades that are given
each day. These comments provide students with specific direction regarding how to prepare for class. The direction may be regarding specific aspects of a performance that students ought to focus on more outside of class, similar to the kind of feedback students would receive during class. The direction may be more general, and more explicit, in regard to how students prepare for class. For example, a teacher may encourage students to use audio materials more in their preparation for class. In this way, students receive daily direction regarding their out-of-class preparation when they are daily graded.

Besides daily grading, other aspects of PCA encourage students to prepare well for class. PCA’s focus on contextualized culturally coherent performance sets a high standard for what students must accomplish outside of class. For a performance to be considered appropriate to the context, students must speak, listen, write, read, and act in ways that natives of the target language and culture would be comfortable with in that context. To give the kind of performance that is expected learners must consider both the message they need to communicate and the culture through which that message will be received as they select the linguistic and behavioral forms that they will perform. Furthermore, they must be able to choose the right forms and perform those forms with a high level of automaticity (i.e., fluency). Preparing for such a performance requires learning accurate forms, both linguistic (including phonology if the medium is the spoken language, or orthography if the medium is the written language) and behavioral; learning the meanings\(^6\) that these forms convey in particular target-culture contexts; and developing a high level of automaticity in comprehending and producing the forms in appropriate contexts. Thus, to be successful students must go beyond simple rote

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\(^6\) See section 2.2.1.2 for a discussion of meaning and what learning the meaning of a form entails.
memorization of forms. They must also analyze those forms and apply those forms to other situations.

Another aspect of PCA that encourages thorough out-of-class preparation is the way students are invited to perform. In ACT classes teachers typically call on students to perform rather than asking for volunteers, and teachers attempt to ensure that each student is given equal opportunity to perform. Thus, students who have not prepared well do not have the option of hiding the fact that they are poorly prepared.

Lastly, pair and group work is often absent from ACT classes. Usually a few students perform at a time, interacting with each other or with the teacher, and the rest of the students watch and listen to the performances and the teacher’s feedback. In ACT classes where pair and group work is absent, students who have prepared poorly do not have the option of practicing with fellow students before demonstrating their performance to the whole class and the teacher. Since students are given little opportunity during class to practice before they must demonstrate their ability, it is outside of class that students must make the necessary improvements.

The audience that students anticipate will observe their performance may also influence their out-of-class study behavior. While students may expect that only a few classmates will observe their performance when pair or group work is utilized, when pair or group work is absent it is the teacher and all classmates that will observe students’

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7 While PCA classes that do not use pair and group work are typical, some PCA classes do use pair and group work (M. Noda, personal communication, 2012).
8 See Hirata (2002, 2003) for a discussion of the pros and cons of pair work as well as some empirical evidence in favor of avoiding pair work in the language classroom.
performances. The understanding that their performance will be observed by such an audience is likely to influence how students rehearse for that performance outside of class.

Through daily grading of in-class performances, requiring students to give culturally acceptable performances, inviting specific students perform rather than asking for volunteers, and avoiding pair or group work, students in PCA are encouraged to prepare well for class and are held accountable for that preparation. Because it is students’ in-class performances that are evaluated on a daily basis, students also experience considerable freedom in how they prepare for class. The out-of-class study behaviors of students in PCA would therefore be expected to be different from students studying in programs that differ in regard to these traits.

1.3 Research objectives

The extent to which PCA encourages students to prepare for class consistently and effectively through self-managed work is certainly one of its strengths, particularly considering that the amount of time college students spend studying outside of class continues to diminish (Babcock & Marks, 2011). However, there is room for concern regarding students who fail to study the target language effectively outside of class. Despite instructors’ efforts to inform students of best practices, such directions may be inadequate, or students may not understand the directions they are given, or they may choose not to follow the directions (e.g., because they are more comfortable relying on familiar study methods that have been effective in studying other subjects in the past). Thus, there may be some students who consistently invest time in preparing for class, but
fail to achieve good results in improving their language ability. Luft (2007) and Curtin (2012) both found significant negative correlations between time spent preparing for class and grades among certain groups of PCA students. These findings suggest that students investing time in preparation but failing to make effective use of that time is a real possibility.

Informal discussions with lower-performing students in PCA have suggested that some of these students fail to engage in meaning-focused activities in preparing for class. These discussions with lower-performing students have typically centered around how they prepare for class. During these discussions students have described to me preparation for class in which they attempt to rehearse a dialogue before having made any attempt to comprehend what the dialogue means. Additionally, I have often asked these students to demonstrate for me how they typically prepare for class, and I have observed similar behavior in students’ demonstrations.

Scholars have argued that a combination of form-focused and meaning-focused instruction will lead to better language learning than neglecting one or the other (e.g., Long, 1991; Nation, 2007), and it may be that the same holds true for form-focused and meaning-focused activities in students’ out-of-class language learning. Furthermore, research on processing instruction, a form of comprehension-based language instruction, has generally found that when instruction requires students to attend to the meaning of language forms, gains in language ability are greater than when instruction only requires students to attend to the forms themselves (Keating & Farley, 2008; Morgan-Short &
Bowden, 2006). In PCA-based language learning, engaging in form-focused activities while neglecting meaning-focused activities in preparation for class may lead to similar results.

In light of these considerations, the following hypothesis was formulated: There is a positive relationship among students in PCA between the degree to which they focus on meaning during their preparation for class and their in-class performance. Given that the current study seeks not to change students’ behavior, but to describe that behavior, the specific objectives that guide the study are mostly descriptive. Those objectives consist of the following:

1. Describe the demographic characteristics of the target population.
2. Describe the number of occurrences of form-focus in learners’ preparation for class.
3. Describe the number of occurrences of meaning-focus in learners’ preparation for class.
4. Compare the number of occurrences of form-focus with the number of occurrences of meaning-focus in learners’ preparation for class.
5. Describe the relationship between the number of occurrences of meaning-focus and the variable in-class language performance, as measured by the assessment scores students received from their ACT teachers.

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9 See Chapter 2 for further discussion of this research.
6. Describe the relationship between the number of occurrences of form-focus and the variable in-class language performance, as measured by the assessment scores students received from their ACT teachers.

The purpose of objective 1 is twofold: (a) to provide data by which other language teachers can assess the extent to which the population this study was concerned with resembles the populations that they teach, and (b) to assess the extent to which participants’ self-reported study situations were similar to the situation they experienced during video-recording. The purpose of objectives 2, 3, and 4 is to assess whether any difference exists in the extent to which all participants, regardless of achievement ability, focus on form and meaning. The purpose of objective 5 is to assess whether or not a relationship exists between meaning-focus and in-class performance. The purpose of objective 6 is to assess whether a relationship exists between form-focus and in-class performance. Given that poorer performing students may over-emphasize form-focus and neglect meaning-focus, the same kind of positive relationship hypothesized between meaning-focus and in-class performance is not expected for form-focus and in-class performance.

The results of this study will better inform language teachers regarding what Japanese language students in PCA do to study the language outside of class. Primarily, the results will provide information regarding whether or not Japanese language students in PCA whose performance is relatively poor neglect focusing on meaning during their preparation for class. It is anticipated that this information will be used to create interventions to help struggling students learn more effectively outside of class, and
through doing so perform better in-class and become more able communicators in the target language. It is hoped that results of this study will also lead to implications regarding how to help not only struggling students, but PCA language students in general to learn the language more effectively outside of class, and be more successful language learners.

The study will also provide an operationalization of form-focus and meaning-focus that may be beneficial to future research. R. Ellis (2001) has stated that a general weakness of research on form-focused instruction is that retrospective self-report data is needed to ascertain whether learners are focusing on form or meaning during various types of instruction, but such data has rarely been collected. The operationalizations of form-focus and meaning-focus developed in this study may provide a useful framework for future research.
Chapter 2: Literature Review

I first review previous research on what foreign language students do outside of class to learn the foreign language. In conjunction with this review I argue that additional research in this area could greatly benefit students’ foreign language learning. I then review research that supports the theoretical underpinning of the current study.

2.1 Out-of-class foreign language study

2.1.1 General out-of-class study behaviors and foreign language learning

Some studies have investigated how foreign language students study the foreign language outside of class in a general sense. Bailey, Onwuegbuzie, and Daley (2000), in a study investigating the relationship between study habits and anxiety, administered the Foreign Language Anxiety Scale (Horwitz, Horwitz, & Cope, 1986) and the Study Habits Inventory (SHI; as cited in Bailey et al., 2000) to college students enrolled in a variety of different foreign language courses. They found several study habits to be related to foreign language anxiety, including not getting enough sleep and spending inordinate time on some subjects at the expense of others. In a similar study, Bailey and Onwuegbuzie (2002) investigated the relationship between students’ final course...
averages in their foreign language courses and self-report data from the SHI. They found that lower-performing students were more likely to engage in behaviors such as including irrelevant information in their notes and not seeking help from the instructor than higher-performing students.

Luft (2007) and Curtin (2012) both reported findings regarding the amount of time students in PCA spend studying outside of class. Luft, in a study of Japanese language students’ risk-taking behavior in PCA, incidentally found a significant negative correlation between the amount of time students self-reported they spent preparing for class and daily grades\textsuperscript{10} in spring quarter. Similarly, Curtin found a significant negative correlation between the number of days 3\textsuperscript{rd} year Japanese students in the Performed Culture Approach (PCA) studied for 1 to 2 hours\textsuperscript{11} and their grades. Luft suggested two possible interpretations of this data. One was that language learning aptitude may be an important factor in success in language learning in PCA. Thus, higher performing students may do well without much preparation, and lower performing students may struggle even with extensive amounts of preparation. Another possible interpretation suggested by Luft was that lower performing students do not make effective or efficient use of their time, while higher performing students do. Additionally, given that the data from both Luft and Curtin was collected by self-report, it is possible that participants did not report their study time accurately. Specifically, there may be a tendency for lower

\textsuperscript{10} Daily grades are scores intended to represent a student’s language performance ability over the course of a single class period (Christensen & Warnick, 2006, pp. 66-69). See section 1.1 and 1.2.

\textsuperscript{11} In Curtin’s (2012) study, participants were not given the option of reporting study that lasted more than 2 hours.
performing students to report their study time as longer than it actually is, and for higher performing students to report their study time as shorter than it actually is.

While these studies provide useful findings regarding what students do out-of-class to learn a foreign language in a general sense, they do not address behaviors specific to foreign language study. The factor of time, which Luft (2007) and Curtin (2012) reported on, could apply to the study of any subject. The SHI, used by Bailey and Onwuegbuzie (2002) and Bailey et al. (2000), was designed based on research on effective study habits of college students (Slate, Jones, & Harlan, 1998), and does not appear to have been designed with foreign language specific study habits in mind. Indeed, the items listed from the SHI in Bailey et al. (2000) and Bailey and Onwuegbuzie (2002) would apply equally well to the study of other subjects, such as history and science. Studies that address out-of-class study behaviors specific to foreign language learning are reviewed in the following section.

2.1.2 Foreign language specific out-of-class study behaviors

Some researchers examining language learning strategies have investigated what foreign language students do outside the classroom to learn the foreign language, and have reported on a number of behaviors specific to foreign language study. However, studies on language learning strategies that address students’ out-of-class learning behaviors specifically are few. While it is recognized that the strategies identified in foreign language learning strategy research are often used both in the classroom and out, the extent to which changes in the context of learning (i.e., in the classroom vs. outside
the classroom) affect students’ use of these strategies has not often been investigated. For example, the Strategy Inventory for Language Learning (SILL; Oxford, 1990), which is the instrument most frequently used to investigate students’ language learning strategies (Chamot, 2005), is a structured general strategy questionnaire (Oxford, 2011), and as such it does not specify the context about which students ought to report their language learning strategies.

Among those studies that address specifically what language learners do to learn the language outside the classroom, two general areas of investigation can be identified. One will be referred to as “individual study” and the other as “social interaction outside the classroom”, following a distinction made by Politzer and McGroarty (1985). Research in the latter category (Bialystok, 1981; Chamot & Kupper, 1989; O’Malley, Chamot, Stewner-Manzanares, Kupper, & Russo, 1985; Politzer & McGroarty, 1985) has investigated primarily how ESL learners use the language with native speakers of English outside the classroom, in a second language learning situation. Given that the current investigation is concerned with language learning in a foreign language learning situation, in which opportunities to interact with native speakers outside of the classroom are limited, a review of this research is beyond the scope of this study. Research pertaining to individual study, which applies to both second language and foreign language learning situations, is reviewed below.

Politzer and McGroarty (1985) administered a language learning behavior questionnaire and 4 tests of proficiency to 37 students who participated in an intensive ESL course as part of preparing for graduate school in the United States. All students had
already attained some proficiency in English prior to the course. The 4 tests of proficiency measured linguistic (i.e., grammatical) competence, auditory comprehension, oral proficiency, and communicative competence respectively. The questionnaire contained 51 items that were responded to with either “yes” or “no”. 3 separate contexts of learning were specified: (a) classroom study, (b) individual study, and (c) social interaction outside the classroom. Of the 15 items related to individual study, the learning context that the current study is concerned with, 3 items were based on previous research. The remaining 12 items were based on suggestions by colleagues and Politzer himself.

6 of the 15 items related to IS were found to have negative item-total biserial correlations, and were removed in analyses that used the construct “individual study”. This large number of items with negative item-total biserial correlations—40% of all the items related to individual study—may suggest that there is a great deal of variation in the study behaviors students engage in. It could also suggest that behaviors that are effective for some students are not effective for others. Politzer and McGloarty mention the item “Do you often look up words in a dictionary?” as an example of a behavior that may be effective for a student with lower proficiency, but not for a student with higher proficiency.

Politzer and McGroarty found that students reported engaging in good behaviors less in individual study than in classroom study or social interaction outside the classroom. For 4 of the 15 items related to individual study, over half of the students indicated that they did not engage in the good behavior. The percentage of items for which students indicated that they did not engage in the good behavior was higher for
individual study than for classroom study behaviors (2 out of 14 items) or social interaction outside the classroom behaviors (2 out of 22 items). Correlational analyses indicated that the construct individual study was not significantly correlated with any of the proficiency measures, although a positive relationship that was close to significance was found between individual study and communicative competence, and a negative relationship that was close to significance was found between individual study and gains in linguistic competence.

Politzer and McGroarty compared the mean gains of students who reported engaging in the good behavior with those of students who reported that they did not engage in the good behavior for each of the 51 items related to classroom study, individual study, and social interaction outside the classroom. The comparisons were made by conducting 204 t-tests at the alpha=.05 level. While conducting so many tests would lead to a high probability of statistically significant results occurring by chance, they only report on the 10 behaviors which “make a clear cut difference” (p. 115). 4 of the 10 behaviors came from the individual study portion of the questionnaire. The behavior “spending extra time practicing words or constructions missed in class”, which had been removed from analyses with the individual study construct due to a negative item-total biserial correlation, had a positive relationship with gains in linguistic competence, and a negative relationship with gains in aural comprehension and communicative competence. The behavior “avoiding direct association with the native language in the learning process”, which also had been removed previously, had a negative relationship with gains in linguistic competence, but a positive relationship with
gains in communicative competence. The behavior “keeping track of vocabulary learned by vocabulary cards or lists” had a positive relationship with gains in linguistic competence. The behavior “saying words or phrases aloud to oneself in the learning process” had a negative relationship with gains in communicative competence.

While Politzer and McGroarty make no conclusions specific to individual study, an important conclusion regarding out-of-class study can nonetheless be made based on their findings: Of the three contexts they investigated (i.e., classroom study, individual study, social interaction outside the classroom), individual study is most likely to benefit from further investigation. Individual study was the context for which students reported that they did not engage in good behaviors most. It also seems that individual study is the context for which the good behaviors are least well understood, for it was the context with the greatest percentage of items with negative item total correlations (6 out of 15 items). It may have been the students who did not understand how to study effectively; or it may have been the researchers, whose good items were not as effective as they had hypothesized. Suffice it to say that the findings of Politzer and McGroarty’s study suggest that further research in this area is warranted.

Bialystok (1981) investigated the use of four language learning strategies by language learners in Toronto, Canada. The four language learning strategies were formal practice, functional practice, monitoring, and inferencing. Formal practice was operationalized as “the specific exercise of the language code for the sake of mastering the rule system” (p. 25). Functional practice was operationalized as any attempt to increase one’s opportunity to use the language communicatively. Formal practice was
considered to be a primarily form-focused activity, while functional practice was considered to be a primarily meaning-focused activity. Both formal and functional practice were operationalized as attempts to increase one’s exposure to the language “beyond formal classroom requirements” (p. 25). Thus, while monitoring and inferencing could occur both inside and outside the classroom, functional and formal practice only occur outside of the classroom.

On the one hand, Bialystok’s strategies of functional and formal practice both involve using the language in the kind of natural settings that second language learners (as opposed to foreign language learners) encounter outside the classroom, and both only refer to language use not formally required for class. In this sense the strategies are related to social interaction outside the classroom. On the other hand, Bialystok includes watching movies, reading books, and listening to the radio in formal and functional practice. While foreign language learners typically have little opportunity to interact orally with native speakers of the target language outside of the classroom, the kinds of media Bialystok mentions are often available to these learners (and when not available, they are much more easily acquired than native speaking conversation partners). Learners could interact with these kinds of target-language media for the purpose of improving their in-class performance, even though such interaction is not a specific class requirement. In this sense formal and functional practice could qualify as individual study. Thus, in Bialystok’s strategies of functional and formal practice we find some overlap between Politzer and McGroarty’s categories of individual study and social interaction outside the classroom.
Bialystok collected data on language learners’ strategy use in oral and written communication by administering a 12-item questionnaire to 157 learners of French in 10th grade and 12th grade. She also administered 4 assessments to measure student achievement in the following 4 areas of language use: functional oral, functional written, formal oral, and formal written. Due to a high correlation between the strategies of formal and functional practice (r=0.73) these two strategies were combined into the single strategy of “practicing” in the analysis of the extent to which each type of strategy was used.

In a stepwise regression analysis, Bialystok found that functional practice was overall the strongest predictor of achievement. Formal practice had a positive relation with achievement in grade 10, but in grade 12 a significantly negative relationship was found. Rather than interpreting this finding as suggesting that more formal practice leads to worse performance, Bialystok suggested that “additional formal practice after a particular point no longer facilitates performance” (p. 33).

This last finding is similar to that of other studies. Luft (2007) found a significant negative correlation among Japanese language students (levels 1 through 4) between self-reported time spent studying and performance scores in spring semester, but not fall semester. Curtin (2012) found a significant negative correlation between the number of days 3rd year students of Japanese reported studying for 1-2 hours (the longest option available on her questionnaire) and performance scores. No negative correlations were found between the amount of time 1st year students reported that they spent studying and their performance scores. In all three of these studies (e.g., Bialystok, 1981; Curtin, 2012;
and Luft, 2007) significant negative correlations were found among students with more experience studying the language, but not among students with less experience. While Politzer and McGroarty (1985) made no distinction between beginning and more advanced students, they also found a negative relationship between individual study and gains in linguistic competence that was close to significance.

One possible explanation of these findings may be in language learning strategy use. It is possible that those who are better at using language learning strategies, may, over time, develop more and more efficient ways of studying, and become better at using the language even as their study time decreases. It is similarly possible that those who are less adept at using strategies may adopt a simple strategy like “study more” to improve their performance, which may lead to more and more studying over time, but not to significantly improved performance. Thus, language-learning strategies may provide a possible explanation of these findings.

Mori (2008) investigated language learning strategies used to study Japanese by high and low achievers in relation to four different tasks: learning kanji, vocabulary, dialogue, and grammar. Mori used email queries, interviews, and the SILL (Oxford, 1990) to collect data. While Mori considers the findings to apply specifically to out-of-class language learning, the SILL is a structured general strategy questionnaire (Oxford, 2011) and does not specify any context or task about which subjects are to report their strategy use. Thus, Mori’s SILL results are not likely to reflect students’ out-of-class strategy use specifically. Consequently, only her conclusions based on email queries and interviews will be reviewed here.
Mori interprets her findings from email queries and interviews as suggesting 5 strategies used by high but not by low achievers: (a) engaging in written and oral repetition activities after memorization in kanji and vocabulary learning tasks; (b) reading new words in a passage and creating sentences with new words in kanji and vocabulary learning tasks; (c) reviewing grammar exercises before and after class and creating new sentences with target grammars in grammar learning tasks; (d) producing novel sentences with target grammars during study with a classmate in grammar learning tasks; (e) monitoring and self-testing one’s ability to use the language in all learning tasks (2008, pp. 152-153). Additionally, Mori found that high achievers tended to use a variety of strategies while low achievers did not.

In regard to factors that influence Japanese language learners’ strategy use, Mori found learners’ primary motivation for performing out-of-class learning tasks to be a desire to do well on assessments, such as tests and quizzes, and concluded that “the classroom setting and the teacher-assigned tasks strongly impacted how learners chose to use strategies for learning Japanese” (p. 140). She did not find time to be a factor, for both high and low achievers studied for similar amounts of time. Given that the participants in Mori’s study were second year students, this finding is contrary to the findings of Luft (2007) and Curtin (2012). The difference between the findings of these studies may be accounted for when the degree of freedom that PCA students experience in their out-of-class study is considered. PCA students may be more free than students in other programs to study less and still obtain good grades, and thus more variation in the
amount of time spent studying between high and low achievers may be observed among PCA students than students in other programs.

In one of the few studies that has addressed out-of-class language learning in PCA, Curtin (2012) investigated the use of media materials by Japanese language students in their preparation for class. She found a positive correlation among first year Japanese language students between the number of days students used media materials before using the textbook in preparation for class and daily performance scores. However, she did not obtain similar results for third year students. In regard to this finding, Curtin concluded that first and third year students study the language differently.

While studies that address students’ out-of-class language learning are apparently few, research in this area seems to have great potential to improve the language learning of foreign language students. Luft (2007) interpreted his finding of a negative correlation between time spent studying outside of class and daily grades as suggestive of a discrepancy in the effectiveness of students’ study habits. As a possible explanation of his findings, he suggested that many foreign language students may not know how to study the foreign language effectively and consequently spend considerable time studying without much learning, while others are able to accomplish more in less time. Luft also suggested that aptitude for language learning might provide an explanation of the findings. However, O’Malley and Chamot have argued that students who appear to have high aptitude for learning foreign languages may be merely those students who use effective language learning strategies (1990, pp. 162-163). If high aptitude for learning foreign languages truly is merely the effective use of language learning strategies, then
those with low aptitude can be taught to develop high aptitude. Thus, the strong possibility exists that further research on what students do to study the language outside of class could be used to help students who perform poorly to improve their performance.

Data regarding the amount of time students typically spend studying out-of-class also suggests that further research on what students do to learn a foreign language outside of class could be beneficial. In order to determine how the amount of time students spend studying out-of-class compares to the amount of time students spend studying in-class, I analyzed American time use survey (ATUS) time diary data (U.S. Bureau of Labor Statistics, 2010a; 2010b) from 2010. Data from the 477 full-time college students who participated were used. Time-use data for the following activities were combined to determine total time spent in class: 1) taking class for degree, certification, or licensure; 2) taking class for personal interest; 3) taking class, not elsewhere classified. Time-use data for the following activities were combined to determine total time spent preparing for class: 1) research/homework for class for degree, certification, or licensure; 2) research/homework for class for personal interest; 3) research/homework not elsewhere classified. Since 50% of ATUS participants report on weekday activities and 50% report on weekend activities, separate means were calculated for those reporting on weekdays and weekends and weighted to determine average time use per week. Results indicate that full-time college students spent 35% more time preparing for class than they spent in class (7.1 hours per week in class and 9.6 hours per week preparing for class<sup>12</sup>). Given

<sup>12</sup> These seemingly low numbers are due in part to the fact that the day of collection for ATUS time diary data is randomized throughout the year. Data are collected during break and holiday times as well as when school is in session.

<sup>13</sup> See Babcock and Marks (2011) for further discussion of how college students use their time.
that students spend more time on learning activities out-of-class than in-class, improving the effectiveness of students’ out-of-class learning could have a great impact on how successful they are as learners.

According to information from the Foreign Service Institute (FSI) on the number of hours of training needed to reach a certain language proficiency level, to reach advanced level on the ACTFL (American Council on the Teaching of Foreign Languages) proficiency scale in a type 4 language such as Japanese it would take 8.8 years of instruction (Christensen & Warnick, 2010). However, this estimate would be valid only if instruction is limited to that which happens in the classroom. Presumably, if learners spend the same amount of time in effective training out-of-class as they do in-class, the number of years becomes 4.4. Given that learners spend more time studying out-of-class than in-class, if time spent learning the language outside of class is spent effectively then reaching advanced level proficiency on the ACTFL scale in Japanese in 4 years could become a reasonable goal.

Further evidence that more research on what students do out-of-class to learn a foreign language would be useful can be inferred from the studies reviewed above. Bailey and Onwuegbuzie (2002) found the item “I look up in a dictionary the meanings of words that I do not understand” to be positively correlated with final course averages in foreign language classes (p. 1154). While this item is likely to have been written to refer to looking up unfamiliar native language words, it is likely that this item was interpreted to refer to target language words by participants in Bailey and Onwuegbuzie’s study. In other words, this item was interpreted as referring to a study habit specific to foreign
language study, rather than referring to a study habit generally applicable to other subjects, as would have been the presumable original intention of the authors of the SHI. If this foreign-language specific study habit was found to be positively correlated with success in foreign language learning, there may be others as well.

Curtin (2013) and Luft (2007) both found negative correlations between self-reported time spent studying and proficiency among more advanced students. Bialystok (1981) similarly found a negative correlation between frequency of engagement in formal practice and proficiency among more advanced students. These findings suggest that some students are performing worse than others even though they are studying more than others. Further research on how to help these poor performers to be more effective language learners could lead to improvements in these learners’ performance.

Politzer and McGroarty (1985) found a negative correlation between effective individual study behaviors and gains in linguistic (i.e., grammatical) competence among students who were preparing for graduate study in the United States. It is possible that certain behaviors only address certain competencies, and Politzer and McGroarty’s behaviors did not include those that would have led to improvements in linguistic competence. Further research to investigate why these so-called effective behaviors were negatively correlated with gains in linguistic competence, but not competence gains in other areas, could be beneficial.

Politzer and McGroarty (1985) and Bialystok (1981) both found that learners engaged in behaviors considered to be effective in the context of out-of-class learning less than other effective learning behaviors. Politzer and McGroarty found that learners
engaged in effective individual study behaviors less than effective behaviors for classroom study or social interaction outside the classroom. Bialystok found that learners engaged in the strategy of practice less than the strategies of inferring or monitoring. At the same time, the out-of-class behaviors included those that were found to make the biggest difference in proficiency. 4 of the 10 items that Politzer and McGroarty found made a “clear-cut difference” were individual study behaviors. Bialystok found that the strategy of functional practice was the best predictor of proficiency among the 4 strategies she investigated. Given that these studies found that engaging in effective out-of-class study behaviors correlates with proficiency, and yet learners engage in these behaviors less than others, further research on which out-of-class study behaviors are most effective as well as how to effectively teach these behaviors to under-achieving students could contribute towards improving students’ language learning.

Christensen and Warnick state that “it is obvious that teachers have a responsibility to maximize the efficiency and the effectiveness of instruction to maximize learner progress in the limited time available in a university program” (2010, p. 146). With so little research available on what learners do outside of class, this area seems to have great potential for maximizing learner progress in language learning, and in particular for making the attainment of advanced level proficiency on the ACTFL scale feasible during the course of a 4-year university education for Japanese and other type 4 languages.

To summarize, while little research has addressed what foreign language students do outside of class to study the foreign language, it is not uncommon for studies that have
addressed this issue to report negative correlations between an aspect of participants’ out-of-class study and their performance. Additional research in this area could lead to significant gains in student performance. While the current study addresses form-focus and meaning-focus, language learning strategy use and aptitude are other possibilities that could explain the behavior of higher and lower achieving students.

2.2 Theoretical framework

2.2.1 Form-meaning connections and usage-based language learning theory

Usage-based language learning theory (e.g., Bybee, 2010; N. Ellis & Larsen-Freeman, 2006; Tomasello, 1999) describes how domain-general learning processes could bring about the acquisition of language. According to this theory, the form-meaning connections that comprise language emerge as language is experienced. These form-meaning connections are acquired through domain-general learning processes (i.e., categorization, chunking, rich memory storage, analogy, and cross-modal association; Bybee, 2010). Each time language is experienced a memory for that experience is created. As memories of language accumulate, elements of language that are perceived to have similar properties are mentally grouped together into categories, creating clusters of exemplars. It is these exemplar clusters that become the mental representations of form and meaning that are used in comprehension and production of language.

Usage-based language learning theory contrasts with universal grammar, which postulates that a language-specific learning process is responsible for humans’ ability to
learn and use language. I have two major reasons for preferring the usage-based theory to universal grammar. First, a usage-based theory coincides better with what is known about evolutionary processes than universal grammar. As Tomasello (1999) has argued, evolutionary processes take time, and there has only been enough time for one major evolutionary change to account for all that makes humans distinct from other animals. There has not been enough evolutionary time for the kind of specialized language acquisition device hypothesized by universal grammar to develop. Usage-based theory, which hypothesizes that languages are learned through domain-general learning processes, coincides with what a theory of evolution would predict.

Second, the phenomenon of language change is better explained by usage-based theory than by universal grammar (Bybee, 2010). According to universal grammar, a language acquisition device is responsible for humans’ ability to use language. The parameters of this language acquisition device are set as one is exposed to language. However, once the parameters of the language acquisition device are set, there is no reason for those parameters to change. Thus, one would not expect language change over time, particularly in adults. Usage-based theory, on the other hand, states that language consists of exemplar representations of one’s experience with language. These representations can gain and lose strength over time, depending on how frequently they are accessed. Also, forms associated with one context may become associated with other similar contexts through the process of generalization. Thus, usage-based theory provides an account of how language can change over time that is more compelling than that of universal grammar.
The claims of usage-based language learning theory are quite similar to those of Walker & Noda (2010) in their discussion of the compilation cycle. According to usage-based theory, language is learned as memories of language forms occurring in context are categorized and generalizations are made. Walker & Noda make the same claim in the compilation cycle, in which memories of communicating in the target culture are compiled into cases, sagas, and themes. Those categorized memories then inform one’s future performances. This congruence between the compilation cycle and usage-based theory is another reason for preferring this theory.

In regard to the current study, usage-based language learning theory is useful because it is able to account for the role that context plays in the acquisition and use of form-meaning connections. The role of context in the acquisition and use of form-meaning connections becomes quite apparent when the target language and culture are genetically far removed from the base culture of the learners. One encounters many instances where a form in the target language and a form in the base language are both connected to the same abstract meaning, but the contexts in which the forms are used in their respective cultures are different. For example, “have to” in English and the “nakereba naranai” ending in Japanese both have a similar abstract meaning. However, it is much more common to use “have to” in contexts in which one refuses an invitation in American culture than it is to use “nakereba naranai” in such contexts in Japanese culture. Since usage-based language learning theory is able to account for this

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14 A usage-based theory of language learning suggests a conceptualization of meaning that is fundamentally different from how meaning has typically been treated. See section 2.2.1.2 below.
phenomenon, it provides a useful theoretical framework for the current study. I describe those aspects of the theory that pertain to form and meaning below.

2.2.1.1 Form

In a discussion of form-focused instruction, R. Ellis (2001) described form as pertaining to phonological, lexical, grammatical, and pragmalinguistic aspects of language. In addition to these aspects, form also pertains to the written language, and differences in written and spoken forms are not restricted to orthography, as is evidenced by the existence of primarily written linguistic forms. Form also pertains to behavioral culture (Lado, 1986). Behaviors such as taking off one’s shoes when entering a home or bringing a gift when visiting someone as a guest can have meanings associated with them, depending on the culture in which the behavior occurs. Depending on the culture, performing (or failing to perform) these behaviors can communicate meaning to others.

According to Bybee (2010), forms are acquired as they are experienced. As memories of forms are categorized and grouped based on similar properties, an exemplar-based mental representation of the form emerges. Language users base their comprehension and production of language on these exemplar representations.

In the current study, form is considered to include phonological, lexical, grammatical, pragmalinguistic, written, and cultural (including kinesic) forms.

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15 See Makino & Tsutsui (2008) for some examples of words, phrases, and grammar patterns that are primarily used in the written language in Japanese.
16 Lado (1986) mentions form, meaning, and distribution in relation to cultural forms. I do not mention distribution in this discussion of form-meaning connections because I consider everything Lado describes as pertaining to a form’s distribution to be part of the exemplar cluster of the contexts in which the form has been used (see section 2.2.1.2, below).
2.2.1.2 Meaning

According to Bybee (2010), meaning emerges as memories of the contexts in which a form has been used are categorized. Through rich memory storage, these contexts, which consist of everything perceived by the senses at the time, are stored in memory. These memories are never completely lost, although they lose strength with time, and may become unavailable for conscious recall through the process of recall. Through the process of categorization, memories are grouped based on similar properties to form the exemplar clusters that fundamentally constitute a form’s meaning. Thus meaning is considered to be fundamentally an exemplar cluster consisting of the contexts in which a form has been used, and includes information regarding the time, location, and roles of those present when the form is used (Walker, 2010) as well as other information available from these contexts. Abstract meaning emerges from the categorization of the contexts in which a form is used, although the emergence of abstract meaning is not a necessary consequence of this categorization process. Through this process, the word “neko” becomes associated with felines, the act of bowing with respect, and speaking while another person is speaking with interest in what the person is saying in Japanese culture.

This conceptualization of meaning as an exemplar cluster of the contexts in which a form has been used is fundamentally different from a Platonic view of meaning, which states that meanings are not emergent categories, but abstract, universal entities. However, Anderson (1993) has similarly claimed that declarative memory structures are never completely lost, but lose strength with time, and can become unavailable for conscious recall.
the Platonic view does not adequately explain how or why a form’s meaning gradually changes over time, or the role that context plays in processing a form’s meaning. For these reasons, usage-based language learning theory is considered to provide a more adequate conceptualization of meaning than the Platonic view.

N. Ellis and Larsen-Freeman (2006) mention the role that attention plays in language learning. They describe consciousness (the realm in which attention operates) as a spotlight on a stage. This spotlight of consciousness is surrounded by other events which are perceived, but which one is only vaguely aware of. While one remembers best what is in the spotlight, the events outside of the spotlight are still recorded in memory. Thus, since forms are not remembered in isolation, but in association with the context in which they were encountered, any time a form is encountered, even if one’s primary attention is on the form itself, some information regarding the form’s meaning will also be recorded in memory. Likewise, anytime one is attending to the meaning one expresses or which another conveys, the forms used will also be recorded in memory, even though primary attention is elsewhere.

While information regarding the context in which a form appears is always recorded in memory, some contextual information is more useful than other contextual information for second language learners who are attempting to learn what these forms mean for native speakers of the target language. For example, a language form found in a mechanical drill (Paulston, 1970) may occur in the context of appearing in a language textbook when one is studying the target language, but without any information regarding the kind of situation in which native speakers use the form. Thus, while the learner is
likely to understand the intention of the writer of the textbook in using this form, the intention a typical native speaker would have when using the form would remain unclear.

In the current study, learners are considered to attend to meaning when they attend to (a) a form’s abstract meaning, or (b) the context in which a form is used.

2.2.1.3 Accuracy

Accuracy is considered to be a matter of degree. In the case of form, how accurate a certain form one produces is would consist of the degree to which the form would be consistent with adult native speakers’ exemplar representations of that form. A form could match the most prototypical members of a category, the most marginal members of a category, or could be composed in varying degrees of elements that are not congruent with any member of a category. The closer the form came to fitting native speakers’ most prototypical exemplar representations of the form, the more accurate the form would be.

In the case of meaning, accuracy would consist of the degree to which the context in which a form is used is consistent with native speakers’ exemplar representations of the context in which the form is used. As with form, for meaning to have high accuracy the context in which the form was used would need to match the most prototypical members in typical adult native speakers’ exemplar representations of contexts in which the form is used.

Any attempt to produce or perceive forms in a way that more closely resembles native-speakers’ exemplar representations of those forms is considered an attempt toward accuracy. This notion of accuracy applies to the physical production and perception of the
form itself, and to the meaning that the form is connected to. Given a certain context, any attempt to produce forms that more closely match the kinds of forms that native speakers would produce in that context is considered an attempt towards accuracy of meaning. Similarly, any attempt to associate a perceived form with a context that more closely matches the context that a native speaker would associate the form with is also considered an attempt towards accuracy of meaning.

2.2.2 Form-focused and meaning-focused instruction in second language learning

While research has not yet addressed how form-focused and meaning-focused activities differentially contribute to language learning outside of class, considerable attention has been given to form-focused instruction (FFI) and meaning-focused instruction (MFI) in class. Indeed, Seedhouse noted in 1997 that “one of the most controversial areas of L2 [second language] pedagogy concerns the extent to which classroom teaching should focus on form and accuracy, or meaning and fluency” (p. 336). He continues by noting that “the last 20 years have seen a protracted debate in language teaching concerning the relative merits of focusing on accuracy and form as opposed to focusing on fluency and meaning” (p. 336). Long, writing 6 years earlier, made a similar comment:

Many developments in foreign language syllabus design, materials writing, methodology and testing during the past 30 years reflect the tension between the desirability of communicative use of the FL [foreign language] in the classroom,
on the one hand, and the felt need for a linguistic focus in language learning, on the other. (1991, p. 41)

In this section, I describe FFI and MFI and the applicability of research in this area to the current study.

R. Ellis considers FFI to be “any planned or incidental instructional activity that is intended to induce language learners to pay attention to linguistic form”, and it includes “traditional approaches to teaching forms based on structural syllabi and more communicative approaches, where attention to form arises out of activities that are primarily meaning-focused” (2001, pp. 1-2). R. Ellis considers MFI to be “instruction that requires learners to attend only to the content of what they want to communicate” (p. 13). He goes on to recognize, as do others (e.g., Widdowson, 1998; Nation, 2007), that FFI is not instruction that focuses on form to the exclusion of meaning, since FFI has always required learners to attend to meaning as well as form; similarly, MFI requires some focus on form, for it is through forms that meaning is accessed. These terms are thus misnomers to a degree, for FFI typically involves focus on meaning, and MFI requires some focus on form. R. Ellis argues that the essential difference is that in FFI language is viewed as an object and the learner’s role is that of a student, whereas in MFI language is viewed as a tool and the learner’s role is that of a user.

Researchers have found that a combination of FFI and MFI is more effective than over-emphasizing one or the other. Allen, Swain, Harley, and Cummins (1990) used the communicative orientation of language teaching observation scheme to describe the
degree to which French classes were experiential (i.e., consisting of MFI) or analytic (i.e., consisting of FFI; see R. Ellis, 2001). Eight classes participated in the study. The results of a series of correlational analyses on individual observed classroom behaviors suggested that both experiential activities and analytic activities could be beneficial, leading the authors to conclude “that the analytic focus and the experiential focus may be complementary, and that they may provide essential support for one another in the classroom” (p. 62).

Others, while providing no new empirical evidence for or against a combination of FFI and MFI, have argued that the combination would be desirable. Long (1991) argued for such a combination based on previous findings in second language acquisition (SLA) research on the acquisition of grammar patterns in various settings. Long describes three types of instruction: “focus on forms”, “focus on form”, and “focus on communication”. Long describes focus on forms as follows: “The content of the syllabus and of lessons based on it is the linguistic items themselves (structures, notions, lexical items, etc.); a lesson is designed to teach ‘the past continuous’, ‘requesting’ and so on, nothing else” (p. 44). In focus on form, the syllabus and lesson content are based on non-linguistic topics, such as biology or the geography of a country where the target language is used. Attention is directed to forms as forms appear in lessons primarily focused on communication of non-linguistic content. While no overt description of focus on communication is given, it seems clear that the technique would involve a focus on meaning or communication but would be devoid of any attempts to draw attention to linguistic elements.
Long argued that focus on form, a combination of FFI (i.e., the portion of the lesson where linguistic form is attended to) and MFI (i.e., the portion of the lesson for which the focus is communication of content using the target language), would be the best option. In his own words: “SLA research findings … would seem to support two conclusions. (1) Instruction built around a focus on forms is counterproductive. (2) Instruction which encourages a systematic, non-interfering focus on form produces a faster rate of learning and (probably) higher levels of ultimate SL [second language] attainment than instruction with no focus on form” (p. 47).

Nation (2007) suggested, based on a review of second language learning and second language acquisition research, that language learners should experience 4 different types of activities, in roughly equal measure: The activities are (a) meaning-focused input, (b) meaning-focused output, (c) language-focused learning (i.e., form-focused instruction), and (d) fluency development. Nation considers fluency development to be a meaning-focused activity. Thus, Nation recommends a ratio of 3 to 1 for time spent on meaning-focused activities and form-focused activities. This time includes both in-class and out-of-class language learning activities.

As previously noted, the research reviewed above on form-focused and meaning-focused instruction has typically found that a combination of FFI and MFI is beneficial. These findings provide some support for one of the theories that underpins the current study, which states that a combination of form-focus and meaning-focus will be beneficial in out-of-class language learning. However, there are some essential differences between the current study and the studies reviewed on FFI and MFI. First,
FFI and MFI refer to types of instruction. These types of instruction may intend for learners to focus on form or meaning, but there is no guarantee that learners will actually do so during the instruction. As Long has noted, “it is likely that students will often focus on form when teachers or materials designers intend them not to, and ignore form when they are supposed to concentrate on it” (1991, p. 44). In contrast, the current study is concerned with what learners actually focus on rather than the nature of the tasks they are given, and in this regard differs from research on FFI and MFI.

Second, as R. Ellis (2001), Widdowson (1998), and others recognize, FFI typically involves focus on both form and meaning, and likewise for MFI. Ironically, of the many ways in which FFI and MFI appear to differ (e.g., feedback vs. no feedback, fluency practice vs. no fluency practice, etc.; Seedhouse, 1997; R. Ellis, 2001), focus on form and focus on meaning do not seem to be among the most pronounced differences. Thus, while FFI certainly involves more form-focus than MFI, and MFI is expected to involve more meaning-focus than FFI, there are many other ways in which FFI and MFI also differ. Because the current study seeks to investigate the extent to which learners actually focus on form and meaning, these differences limit the extent to which research on FFI and MFI can be applied to the current study.

2.2.3 Form-focus and meaning-focus in second language learning

A study that has investigated learners actually focusing on form and meaning is that of VanPatten (1990). VanPatten investigated the extent to which learners of Spanish were able to simultaneously attend to form and meaning. Participants in a control group
were asked to listen to a passage in the target language and comprehend its content. Participants in the three experimental groups were asked to listen to the same passage and comprehend its content while simultaneously noting a lexical item, an article, or a verb morpheme. Results indicated that when the target form was a morpheme whose meaning contributed little to comprehending the propositional content of the passage, subjects’ ability to comprehend content was negatively affected.

VanPatten’s results suggest that when learners are focused on comprehending the meaning of a message, they are unlikely to attend to all of the forms in that message, particularly those forms that contribute little to the message’s propositional content. While attending to meaning requires some attention to form, since it is through form that meaning is accessed, learners seem to neglect attending to forms that contribute little to the propositional content of a message when focusing on comprehending meaning. Consequently, if learners are to learn to accurately use forms that contribute little to the propositional content of a message, it seems likely that they will need to spend time attending primarily to language forms.

Research on a comprehension-based type of language instruction referred to as processing instruction (PI) provides evidence that learners will have difficulty acquiring the ability to use language meaningfully when learning activities do not require learners to attend to meaning. In the first study to investigate PI, VanPatten and Cadierno (1993a) compared a treatment group that received PI to a comparison group that received “traditional instruction” (TI) and a control group that received no instruction. As part of PI, the treatment group performed comprehension activities with structured input. The
control group’s instruction consisted of practice with mechanical, meaningful, and communicative drills (Paulston, 1970). Assessment was done through a production task, which was similar to activities that the TI group had completed during instruction, and a comprehension task, which was similar to activities that the PI group had completed. VanPatten and Cadierno found that the PI group outperformed the TI and control groups on the comprehension task, and the PI and TI groups outperformed the control group on the production task.

VanPatten and Cadierno concluded that since PI was found to be a superior treatment to TI, output activities ought to follow meaningful input activities, rather than precede them. However, other researchers have questioned this claim on the grounds that PI included more activities that required learners to access meaning than TI (e.g., DeKeyser & Sokalski, 1996; Salaberry, 1997). Subsequent research has addressed the possibility that the meaningful nature of PI accounts for its superiority over TI, rather than how it encourages learners to engage in effective input processing (Benati, 2005; Farley, 2001a; Farley, 2001b; Keating & Farley, 2008; Morgan-Short & Bowden, 2006; VanPatten, Farmer, & Clardy, 2009). In general, when the comparison group’s treatment is mostly mechanical, as with TI, PI groups perform as well as comparison groups on production tasks, and PI groups outperform comparison groups and no-instruction control groups on interpretation tasks (VanPatten & Cadierno, 1993a; VanPattern & Cadierno, 1993b; Cadierno, 1995). When the comparison group’s treatment is more meaningful, but still includes a mechanical component, comparison groups begin to outperform no-instruction control group on the interpretation task (Benati, 2001; Cheng, 2002;
Collentine, 1998; VanPatten & Wong, 2004\textsuperscript{18}). When the comparison group’s treatment is entirely meaningful, PI is no longer clearly the superior treatment (Farley, 2001a; Farley, 2001b; Benati, 2005; Morgan-Short & Bowden, 2006; Keating & Farley, 2008; VanPatten, Farmer, & Clardy, 2009). These findings suggest that when learning activities are not meaningful learners have more difficulty in using the language meaningfully, and provides evidence that if learners are not focusing on meaning in their language study they may have difficulties communicating in the language.

2.2.4 Fluency focus in second language learning

While being able to access forms and meanings accurately is essential for successful communication, this ability alone is insufficient. One must be able to do accurately access forms and meanings efficiently, or with a high degree of automaticity (Anderson, 1993; Nara, 2001). Indeed, Nation (2007) has argued that fluency-focused activities, for which building this kind of automaticity is the primary goal of the activity, ought to be included in a second language learning curricula.

Distinguishing fluency-focused activities from form-focused and meaning-focused activities may be beneficial as teachers plan and structure language learning courses, particularly as they consider whether or not an activity should contain new language material. However, distinguishing fluency-focused activities from form-focused

\textsuperscript{18}While VanPatten and Wong (2004) do not describe their treatment as being more meaningful than the treatments used by VanPatten and Cadierno (1993a; 1993b) and Cadierno (1995), their findings, which parallel those of studies with more meaningful treatments in the comparison group, suggest that their treatment was probably more meaningful.
and meaning-focused activities is less useful when one considers what the learners actually focus on in response to the activity. Since building fluency in accessing forms and their meanings requires learners to actually access forms and their meanings, it would be difficult to distinguish fluency-focus from form-focus or meaning-focus in terms of what learners actually do. Consequently, in the current theoretical framework fluency-focus is considered to be subsumed under form-focus and meaning-focus, depending on whether the learner is building automaticity in accessing form or meaning\textsuperscript{19}.

2.2.5 Language learning strategies

At times learners may not focus on target language forms or meanings in their out-of-class language learning (Luft, 2012). However, even when not focusing on form or meaning, learners may engage in activities that contribute to their language learning. Oxford (2011) mentions many language learning strategies and tactics, many of which do not involve the target language itself, but that nevertheless contribute to language learning. Luft (2012) found that monitoring, one of Oxford’s metacognitive strategies, was frequently engaged in by the 4 PCA students he studied.

2.2.6 Summary of theoretical framework

The theoretical framework that underpins the current study is represented in figure 2.1. When preparing for class learners are considered to engage in mental activity

\textsuperscript{19} Distinguishing form-focus from meaning-focus is not unproblematic, however. See section 2.2.1.2.
of the following 3 types: 1) form-focus (FF); 2) meaning-focus (MF); and 3) other activity that involves neither form-focus nor meaning-focus. Only FF and MF are considered to lead directly to improvement in language ability. Engaging in both FF and MF is considered to lead to greater gains in language ability than engaging predominately in one or the other. Any instance of fluency-focus is considered to be subsumed under either FF or MF.

While only FF and MF are considered to lead directly to improved language ability, in accordance with research on language learning strategies it is considered that some activities which involve neither FF nor MF (e.g., metacognitive strategies) can improve the efficacy of FF and MF, and thus contribute indirectly to improved language ability. However, other activities that involve neither FF nor MF do not contribute to improved language ability (e.g., eating). The dashed arrow in figure 1 represents how some activities that involve neither FF nor MF will contribute to improved language ability, while others will not.
Figure 2.1. Theoretical framework of the relationship between types of activities performed by learners in preparation for class and success in language learning. Bold items represent aspects of the framework that are investigated in the current study.
Chapter 3: Method

3.1. Definition of terms

Form-focus – Any time a learner consciously attends to a language form, the learner is considered to focus on form. For purposes of this study, form-focus is operationally defined as participants’ verbalizations during stimulated recall that contain language suggesting that the learner has focused primarily on a language form or forms.\(^{20}\)

Meaning-focus – Any time a learner consciously attends to a form’s abstract meaning or the context in which a form is used, the learner is considered to focus on meaning. For purposes of this study, meaning-focus is operationally defined as participants’ verbalizations during stimulated recall that contain language suggesting that the learner has focused primarily on the abstract meaning of a language form or forms or the context in which a language form or forms is used.\(^{21}\)

Activity – The behavior a student engages in, both observable and mental, in response to a task (Oxford, Cho, Leung, & Kim, 2004). In-class language performance –

\(^{20}\) For a description of language considered to be indicative of FF and examples of how specific verbalizations were coded, see section 3.6.

\(^{21}\) For a description of language considered to be indicative of MF and examples of how specific verbalizations were coded, see section 3.6.
Criteria referenced scores given by participants’ instructors for a student’s performance in class. The scores are intended to reflect how a native speaker would respond to a student’s performance in communicating in the target language and culture in a class. These scores are also referred to as “daily grades”. In-class performance will be treated as an interval variable. The rubric given in Christensen and Warnick (2006, pp. 68-69) will be used to assign in-class performance scores to students. Because scores of 1 and 0 do not reflect in-class performance, these scores are removed from analysis.\(^{22}\) Task – “… instructions or directions that the teacher gives students for learning” (Oxford et al., 2004, p. 7). In the context of the present study, task consists of the assignments students are asked to perform prior to a certain class session, and the directions students receive from instructors either verbally or in writing regarding the performance of these assignments outside of class.

Thought – Verbalizations during stimulated recall (SR; see section 3.4) that are considered to be descriptions of participants’ mental activity, whose content differs from the content of other verbalizations according to the coding criteria given in section 3.5.2. Since thoughts are operationalized using verbalizations, only mental activity that learners are consciously aware of and express verbally during SR are considered to be thoughts.

In operationalizing thoughts as only being those that are expressed verbally, I am acknowledging the possibility that participants may choose not to express thoughts that they are consciously aware of. For example, a participant may be hesitant about expressing a thought that is negative about the program in the presence of the researcher.

\(^{22}\) For the complete rubric used in assigning in-class performance scores, see section 3.4.
This operationalization also acknowledges that unconscious mental activity will not be verbalized. For example, what a participant does to study the language that is highly automatized is less likely to be part of conscious awareness, and less likely to be verbalized during SR.

3.2. Participant characteristics

Participants were students enrolled in 1st year 2nd semester classroom-track Japanese language classes at the Ohio State University in spring semester of 2013. 1st year students were selected as the target population because it was felt that there would be a higher probability of having poorer performing students participate among 1st year students. Since poorer performing students tend not to continue on to higher levels, it was considered that 1st year students would provide the highest concentration of poorer performing students. In other words, with 1st year students there would be better chance of having poorer performing students participate.

Participants’ Japanese language classes met 5 times per week for 15 weeks. Each class session lasted 55 minutes. Generally, 4 class sessions per week were ACT classes, in which students met in small sections, and 1 class session per week was a FACT class. The largest class size of the ACT classes was 17 students, and the smallest was 12 students, with an average size of 13.4 students. All students met together for FACT class, which had a class size of 67 students.

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23 For a more detailed description of ACT and FACT classes, see section 1.1.
Out of the 65 students who were enrolled for credit in these classes at the end of the semester\textsuperscript{24}, 36 students participated in the questionnaire portion of the study, for a response rate of 55%. Of the 36\textsuperscript{25} students who were recruited to participate in the stimulated recall (SR) portion of the study (see section 3.3), 20 students elected to participate, for a response rate of 56%. Of these 20 students, 18 completed the SR task. All 20 SR participants also completed the questionnaire.

Of those students who participated in the questionnaire portion of the study, 50% were male and 50% female. The average age was 20.7 years (see figure 3.1). 83% of participants had no prior formal Japanese language education (see figure 3.2). Of those who did have prior formal language study, the average length of study for those who had studied at a college or university prior to studying Japanese at their current institution was 1 year; the average length of high school study for those who had studied in high school was 2.3 years; and the length of junior high school study for the participant who studied in junior high school was 1 year. The participant who studied in junior high school also studied for 3 years in high school, for a total of 4 years of prior Japanese language study, the largest of any participant. None of the participants who studied Japanese in high school had also studied at a college or university prior to studying at their current institution.

\textsuperscript{24} Of the 67 students who were enrolled in the course at the beginning of the semester, one student withdrew from the course mid-semester, and one student was auditing the course.
\textsuperscript{25} These 36 students were randomly selected from the 65 students enrolled for credit (see section 3.3). The fact that 36 students also completed the questionnaire is coincidence.
Figure 3.1. Frequency distribution of ages of participants who participated in the questionnaire portion of the study.
While only 6 of 36 participants (17%) had studied Japanese formally prior to enrolling in Japanese classes at their current institution, 16 of 36 participants (44%) had previously studied Japanese informally or on their own. Of those who had studied Japanese informally, half reported having studied the writing system, while those who reported having studied vocabulary or grammar were relatively few. Watching Japanese media and using Japanese language learning computer programs were the most common methods of informal study.
Figure 3.3. Frequency distribution of types of informal Japanese language study engaged in by those who participated in the questionnaire portion of the study.

3 participants reported having lived in Japan previously. One reported living there for 3 months, one for 5 years, and one for 3 years, from birth until she was 3 years old. The participant who lived there for 3 months and the one who lived there for 3 years were also the only participants to report that they had native-speaking relatives, a grandmother and a mother, respectively. 4 participants reported that they have native-speaking Japanese friends who speak Japanese around them. These 4 participants included the participant who lived in Japan for 5 years and the one who lived in Japan for 3 months.

29 of the 36 individuals who participated in the questionnaire portion of the study (72%) reported that they watch TV or movies in Japanese, including movies with
subtitles. 24 out of 36 participants (67%) reported that they watch either 1-3 times per week or 1-3 times per month (see figure 3.4).

![figure 3.4](image)

*Figure 3.4. Frequency distribution of how often participants watch TV or movies in Japanese, including movies with subtitles, for those who participated in the questionnaire portion of the study.*

In addition to watching TV or movies in Japanese, participants also reported engaging in the following activities, which were considered unrelated to participants’ classwork, but could potentially lead to improved Japanese language ability:

- Reading manga
- Reading the newspaper online in Japanese
- Reading Japanese Pokémon cards
● Reading Japanese food labels
● Reading any Japanese that one encounters
● Sending and receiving text messages using Japanese script
● Browsing Japanese websites
● Listening to Japanese music
● Listening to Korean music\(^{26}\)
● Reading textbooks
● Reading about grammar
● Practicing drills
● Speaking with or to others in Japanese
● Speaking on the phone to people in Japan
● Attending a Japanese conversation club
● Using flashcards
● Using smartphone study applications
● Translating conversations and thoughts into Japanese
● Translating Japanese into English

32 of the 36 individuals who participated in the questionnaire portion of the study (89\%) had previously studied a foreign language other than Japanese. 5 of 36 participants

\(^{26}\) The participant who wrote this indicated explicitly that she felt that because the languages were similar, listening to Korean music helped her to be better at Japanese.
(14%) had previously studied an Asian language. The average length of time spent studying a foreign language prior to study of Japanese was 3.4 years\(^{27}\) (see figure 3.5).

![Figure 3.5. Frequency distribution of length of time of previous foreign language study of participants in the questionnaire portion of the study.](image)

6 of 36 participants (17%) reported that they were able to speak a language other than English that they had not previously studied. All of these participants reported being able to speak an Asian language. 4 reported Chinese language ability\(^{29}\), 1 Vietnamese, and 1 Thai.

\(^{27}\) The length of study of English for non-native English speaking participants who reported English language study (n=3) was not included in this calculation. These participants reported 13 years, 11 years, and 10+ years of English language study, respectively.

\(^{28}\) One participant reported 15 years of Korean language study. This participant’s Korean language study data was not included in this calculation.

\(^{29}\) One of these participants reported speaking ability in both Cantonese and Mandarin.
3.3. Sampling procedures

Potential participants (i.e., 1st year 2nd semester classroom-track Japanese language students) were initially contacted in their Japanese language class. The purposes of the study, both the questionnaire portion and the SR portion, were explained, and the questionnaire was distributed, accompanied by a Japanese five-yen coin\(^30\) as an incentive to complete the questionnaire. Those who were not in attendance received initial contact through email, in which the purposes of the study were explained and the questionnaire was included as an attachment. Those initially contacted through email were offered a Japanese five-yen coin upon request. All those enrolled in 1st year 2nd semester classroom-track Japanese classes at Ohio State University were considered eligible to complete the questionnaire. Participants who did not return their questionnaires within two week’s time received follow-up contact. Participants who expressed a desire not to complete the questionnaire were not contacted further.

For the SR portion of the study, participants were randomly selected from the 65 students enrolled for credit in 1st year Japanese at the time of recruitment. A list of students currently enrolled in 1st year 2nd semester classroom-track Japanese language classes at Ohio State University was obtained from the instructor of record and used as the sampling frame. Once a participant was selected, the participant was assigned to a class for which the participant would engage in SR for their preparation for class. Participants were assigned to the next class for which a participant had not yet been

\(^30\) Due to the homophony between go-en (five-yen) and goen (fate or karma), Japanese five-yen coins are considered by some to be lucky.
assigned and for which the participant could still be contacted at least 5 days\textsuperscript{31} prior to the date of the class. The selected participant was then contacted by email. In this email the purpose of the study and the procedures were explained, and participants were offered an incentive of $100.00 to participate. Participants were informed that they could withdraw participation at any time. Participants who chose to withdraw participation still received the entire incentive. Participants who failed to respond within two days time received further contact through email. Participants who expressed a desire not to participate were invited to still complete the questionnaire, but were not contacted further regarding participation in the study. If participants expressed a desire not to participate at least 5 days prior to the class for which their preparation would have been video recorded, another participant was randomly selected to be recorded preparing for the same class. Participants that expressed a desire to participate but were unable to be recorded preparing for the selected class due to logistical reasons (e.g., failing to respond to the invitation to participate in a timely manner) were assigned to prepare for the next class that a participant had not yet been assigned to. A total of 36 students were recruited to participate, and of these 36 students 20 elected to participate.

\textsuperscript{31} Initially, this time frame was 7 days, but due to difficulties in recruiting participants it was amended to 5 days.
3.4. Research procedures

The objectives of the current study, the research procedure used for each objective, and the method of analysis employed for each objective are summarized in table 3.1.
<table>
<thead>
<tr>
<th>Objective</th>
<th>Method</th>
<th>Analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Describe the demographic characteristics of the target population.</td>
<td>Questionnaire</td>
<td>Mean, range, frequency</td>
</tr>
<tr>
<td></td>
<td></td>
<td>distribution</td>
</tr>
<tr>
<td>Describe the number of occurrences of form-focus in learners’ preparation for class</td>
<td>Stimulated recall</td>
<td>Sum and mean</td>
</tr>
<tr>
<td>Describe the number of occurrences of meaning-focus in learners’ preparation for class</td>
<td>Stimulated recall</td>
<td>Sum and mean</td>
</tr>
<tr>
<td>Compare the number of occurrences of form-focus and the number of occurrences of meaning-focus</td>
<td>Stimulated recall</td>
<td>Paired samples t-test</td>
</tr>
<tr>
<td>Describe the relationship between the number of occurrences of meaning-focus and the variable in-class performance</td>
<td>Stimulated recall and in-class performance scores</td>
<td>Pearson product-moment correlation</td>
</tr>
<tr>
<td>Describe the relationship between the number of occurrences of form-focus and the variable in-class performance</td>
<td>Stimulated recall and in-class performance scores</td>
<td>Pearson product-moment correlation</td>
</tr>
</tbody>
</table>

*Table 3.1. Research objectives, methods, and analyses.*
Prior to gathering the data to be used in the final analysis, a field test of the procedure was conducted. 3 Japanese language students and 2 Chinese language students participated. All 5 field test participants (hereafter referred to as FT#1, FT#2, etc.) were graduate students. The Japanese language students were taking Japanese classes at the second-year level and above. The Chinese language students were taking Chinese at the first-year and second-year levels. Based on the results of the field test, some alterations to the final procedure were made. The final procedure is reported on below.

Data were collected by means of a questionnaire, SR (Calderhead, 1981; Gass, 2001; Gass & Mackey, 2000; Lyle, 2003; O’Brien, 1993), and grades assigned by participants’ teachers (i.e., daily grades; see section 1.1). The questionnaire was used to collect data regarding the following: (a) demographic characteristics (see section 3.1), (b) activities learners engage in outside of class with the potential to improve their language ability but which are not performed specifically for the purpose of preparing for language class (e.g., watching movies, speaking to Japanese natives in Japanese, etc.; see section 3.1), (c) how learners typically study (i.e., the location(s), time(s), and materials used). These data were used to describe the characteristics of the target population and to compare the environment participants were video recorded studying in with the environments they typically study in. The questionnaire is given in Appendix A.

SR is a data collection method that has been used effectively in teaching, psychological, counseling, and nursing research, and it is considered to be an effective method of eliciting data on participants’ cognitive processes when the activity is time-sensitive (Lyle, 2003). The procedure consists of having participants introspect regarding
an event that occurred previously with the aid of a stimulus. The stimulus is used to facilitate recall of the prior event (Gass & Mackey, 2000; Gass, 2001).

The think aloud protocol is another technique that can be used to elicit verbal reports of participants’ cognitive processes. However, the technique results in increases in the amount of time required to complete a task, and is therefore considered poorly suited to tasks that must be performed in a limited amount of time (Ericsson & Simon, 1987). In regard to students’ out-of-class study behaviors, it was believed that time would be a factor that would affect how students prepared for class. This belief was confirmed during the field test. Field test participant (FT) #3 indicated that she gave up on an activity because she felt it would take too much time, as one of the comments she produced during SR demonstrates: “…you can just spend a lot of time repeating this sentence, and so I feel very frustrated because this is only the first sentence. And then I think I just give it up.”

The think aloud protocol is also considered inappropriate for tasks where verbalization during the task would affect task performance (Lyle, 2003). Gass and Mackey observe that “it is extremely difficult if not impossible to carry out a speaking task and talk about it simultaneously, without the process of think-aloud affecting the task talk” (2000, p. 18). In the field test, each of the 5 field test participants was observed speaking during their out-of-class study. Thus, SR was felt to be a more appropriate method of data collection than the think aloud protocol.

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32 In order to preserve the anonymity of the field test participants, the gender used in referring to field test participants does not necessarily reflect the actual gender of the field test participants.
In this study, SR was conducted in a manner similar to that in Ewing and Whittington’s (2009) investigation of students’ in-class behavior. Participants were first video recorded as they prepared for class. They were then asked to describe what they had been thinking during their preparation as they watched the video.

Attempts were made for participants’ out-of-class study during SR to be as similar as possible to how they normally study in terms of content, timing, and degree of collaboration with other students. However, for several participants certain aspects of the study sessions, including location, did not resemble participants’ normal study environment (see section 5.1).

Both the video recording portion and the recall portion of SR took place prior to the class being prepared for, at a time that was convenient for both the researcher and the participant. Participants that typically studied in multiple sessions were allowed to complete SR in multiple sessions. However, while 15 out of 20 participants self-reported studying in multiple sessions, only 1 participant actually completed her study during SR in multiple sessions.

In order to encourage participants to complete all of their preparation for class while being video recorded, participants were asked to prepare for class as if the class was going to be held immediately following completion of their final session of preparation. In the event that the materials a participant typically used to prepare for class were unavailable (e.g., a desktop computer), participants were provided with the materials necessary to prepare for the class. Participants were allowed to take a break at
any time. The researcher was not present during the video recording. Participants were asked to inform the researcher as soon as they completed their preparation for class.

While it was considered desirable to video record participants at the times at which they normally studied for purposes of external validity (see section 3.5), for only 1 out of the 20 individuals who participated in this study was SR conducted during times at which the participant typically studied. There are two major reasons why the majority of participants were not recorded during times they typically study at. The first reason is that participation in SR immediately following the video recording was given priority. In other words, video recording occurred at the time participants typically studied only to the extent that participants were available to participate in SR immediately following completion of their study. In particular, the majority of students who participated in SR also typically spent time studying right before class (see section 4.1). If this preparation were recorded at the time it usually occurs, students would not be able to participate in SR immediately afterward because they would need to attend class instead. Students who tended to study right before going to a part-time job, or attending a different class, were in a similar situation. Since not performing SR immediately following the activity weakens the internal validity of SR (Gass, 2001; Gass & Mackey, 2000), participants who would not have been able to engage in SR immediately following their preparation for class had that preparation occurred at its normal time were asked to perform the same activities at a time when they were available to engage in SR immediately following their preparation.
The second reason why so few participants were recorded during times at which they normally studied was convenience. In particular, while 9 out of 20 participants reported studying between the hours of 10:00pm and 2:00am\(^33\), efforts were not made to record participants studying during these times.

For participants that typically studied with a partner or group, the partner or group were allowed to participate in the video recording portion of the study, although, unlike participants, no incentive was provided. While no participant reported that they study exclusively with partners or groups, 7 out of 20 participants reported that there are times when the study with partners or groups (see section 4.1). However, no video recordings were conducted of participants studying with partners or groups.

Video recording took place in three separate locations. Each of these locations were quiet and private. These locations were chosen for several reasons. First, the field test revealed that some students prepare for class at locations where video recording would not be feasible, such as on the bus, at a restaurant, or in a bedroom. Second, data Luft (2012) collected from 4 students who were studying Japanese with PCA regarding the locations at which they typically prepared for class suggested that the locations at which students prepare for class are mostly different for each student. It would have been difficult to obtain approval to record at several different locations for each participant. Third, recording in noisy locations could have had negative effects. While it is not uncommon for students to study in noisy locations, many of these students use headphones as they study. If participants were using headphones as they studied, the video camera would record different audio than what the participants heard, which would

\(^{33}\) See section 4.1 for the times at which questionnaire participants studied at.
negatively affect the quality of the stimulus. Furthermore, if the recall was conducted in a noisy location—which would be necessary if participants’ study had occurred in a noisy location and recall was to occur immediately following study—the noise could negatively affect the quality of the audio recording of participants’ verbalizations. Because of these considerations, the locations given above were used.

Since participants were being video recorded, and the location and the time of their preparation were generally different than normal, it was possible that participants would prepare for class in manner different from how they usually prepare for class. To address this concern, participants were encouraged not to change anything about how they prepared for class as they were videotaped, and they were assured that the information gathered would in no way have a negative affect on their grade in their Japanese language course. In the field test, the comments of one participant suggested that the research situation did have an effect on participants’ behavior. One field test participant accessed a website as he completed an assignment. During SR afterwards, he indicated that he had debated whether or not to use the website to study, because the website provided answers to exercises and it could be considered cheating. However, he did study using the website, as usual. Thus, on the one hand, the participant’s comments indicate that he had considered changing his behavior because of the research situation. However, on the other hand, this participant opted not to change how he studied.

In addition to encouraging participants not to change how they studied, data regarding the times and locations that are typical for participants’ preparation for class were collected through a questionnaire. These data were compared to the times and
locations at which participants were video recorded preparing for class to assess how different the time and location of video recording was from how participants normally study. These differences are discussed in section 5.1.

Ericsson and Simon (1987) warned that during think aloud protocols, participants occasionally slip into forms of verbal communication that are not descriptions of their thoughts. The field test confirmed that this would be a concern for participants in the SR task of the current study. In particular, participants had a tendency to describe what they were doing, why they were doing it, and what they usually do, rather than what they were thinking. In order to discourage this behavior, and in accordance with Ericsson and Simon’s recommendation, prior to engaging in SR participants engaged in a brief warm-up activity. The activity’s purpose was to help accustom participants to the data collection process and to ensure that all participants were correctly verbalizing their thoughts. Similar to a procedure used by Hosenfeld (1976), participants were asked to solve a simple math problem. They were given approximately 1 minute to solve the problem, and were video recorded. After they either finished the math problem or 1 minute had elapsed, participants were asked to verbalize their thoughts as they watched the video of themselves solving the math problem. Participants were encouraged to verbalize their thoughts as if right now they were having the thoughts that they had had during their preparation for class. Participants were encouraged to verbalize their thoughts in this manner because it was observed that participants that did verbalize their thoughts in this manner because it was observed that participants that did verbalize their thoughts in this manner.

34 The first 4 participants were not encouraged to verbalize their thoughts in this manner. However, once it became clear that participants who verbalized their thoughts as if the thoughts were now occurring to them were much less likely to provide descriptions of their actions, particularly habitual actions, participants were encouraged to verbalize their thoughts in this manner.
thoughts in this manner were less likely to describe what they did or what they usually do instead of what they had been thinking. During training, when participants were observed describing their actions rather than their thoughts, they were asked to watch the video again and repeat the verbalization process, and to refrain from describing their actions as they did so.

Following the training, participants described what they had been thinking during their preparation while watching the video of their preparation. Participants were allowed to pause and rewind as necessary to facilitate the recall process. Participants were also allowed to look at the materials they had used to study in order to facilitate recall. If, during the first minute or so of verbalization, participants were found to be verbalizing in a manner inconsistent with how they had been trained, participants were asked to start over and encouraged to verbalize as they had been trained.

Gass and Mackey (2000) provide a thorough description of potential pitfalls in conducting SR research. One concern they mention is that the interview questions and the questioning method used by the researcher can encourage participants to respond in a certain way. Gass and Mackey (2000) refer to this concern as “the most serious of difficulties” (p. 89). In this study, the researcher did not ask participants questions about their preparation for class during SR, thereby avoiding any affect the questioning method might have had on the validity of participants’ verbalizations. The comments the researcher made during SR were limited to the following: (a) answering questions participants directed at the researcher; (b) asking participants whether or not they were able to continue with the research; (c) confirming that participants were describing
thoughts that had occurred during their preparation; (d) encouraging participants to continue talking, by using the phrase “keep talking” or “please keep talking” (Ericsson & Simon, 1987); (e) encouraging participants to verbalize their thoughts.

Comments of type (c) were employed because it was occasionally unclear if participants were describing recalled thoughts or thoughts that they were currently having. The following is an example from FT #4: “Oh, I also remember in a dialogue previously that we had ta ya jiushi neige you shou you ai—no, no, no. Wait. Huh? How does it go? Ta ya jiushi neige you shou you ai de nanren.” In this example, when the participant says “No, no, no. Wait. Huh? How does it go?” it seems likely that the participant has begun to verbalize thoughts that are occurring in the present rather than at the time of recall. In order to address the concern that participants may verbalize current thoughts, participants were asked to inform the researcher if they made a comment that referred to a current thought. On occasions where it seemed likely to the researcher that the participant had described a current thought, the researcher paused the video and asked the participant whether or not the thought had been a current one (i.e., comment type [c]).

Comments of type (e) were given because many participants had a tendency to describe either what they did during their preparation or what they usually do during preparation rather than what they were thinking during their preparation. Even when participants had demonstrated during training that they could successfully describe their thoughts, some would occasionally begin describing their actions during the actual SR. The question “What were you thinking here?” (Gass & Mackey, p. 95) was usually a

35 Since field test participants often did not produce Chinese words with recognizable tones, tones have not been included in transliterations of Chinese spoken by field test participants.

36 In English, “He’s that short skinny man.”
sufficient prompt for participants to describe their thoughts. In this way, any affect that questioning might have in encouraging participants to respond in a certain way was avoided. In addition to not questioning participants about their preparation during SR, the specific aims of the study were not disclosed to participants so that they would not be encouraged to respond in a certain way.

Another concern in SR research is the amount of verbalization each learner provides in response to the stimulus. As Gass and Mackey (2000) point out, while the quality of the recall is generally more important than the quantity, large differences in the quantity of speech of participants can affect the quality of the recall. In the field test of this study, participants generally refrained from pausing the video, and the length of the recalls for all participants was very close to the length of the stimulus (i.e., the video). However, some participants did make more comments than others.

The language of the recall session can also be a concern. Gass and Mackey suggest that if a task is performed in the target language, but the recall is performed in the base language, “the disparity in events and possibly the locus of knowledge accessed” (p. 97) might lead to less valid data. In the field test of this study, participants did not give outward signs suggesting that they were having difficulty verbalizing the thoughts that occurred during their study of the second language, except when verbalization involved use of the second language, as in the example from FT #4, which is reprinted here: “Oh, I also remember in a dialogue previously that we had *ta ya jiushi neige you shou you ai*—no, no, no. Wait. Huh? How does it go? *Ta ya jiushi neige you shou you ai de nanren.*” While it is possible that this participant is continuing to verbalize thoughts that occurred
during completion of the task, it is also possible that difficulty in remembering or producing the second language has led him to verbalize thoughts that were occurring in the present. Thus, the validity of the verbalizations may have been affected when verbalization of thoughts involved production of the second language.

The native language of the participant is also a concern. Gass and Mackey note that when participants have limited proficiency in the language that the recall occurs in, some interpretation may be necessary when analyzing the recall transcriptions. They also note that participants may not verbalize thoughts that they had during the recalled event because their language proficiency is not sufficient to express the thought. They suggest pilot testing to ascertain whether or not the kind of verbalizations expected from participants who verbalize in their second language will be beyond their competence. In the field test of this study, 3 non-native speakers of English who were graduate students participated. No difficulties were encountered in analyzing their recall data for form-focus and meaning-focus that were not encountered in analyzing the transcripts of native speakers of English. Thus, it is believed that participants who verbalize in their second language are adequately able to express themselves for the purposes of this study.

Another concern is that as time increases between the event and the recall of the event, the ability to accurately recall decreases (Gass & Mackey, 2000). In this study, recall occurred almost immediately following the video recording of participants’ preparation for class, thereby maximizing participants’ ability to accurately recall.

Fatigue can occur if the SR procedure takes too long (Gass & Mackey, 2000). In this study, while no time limit was imposed on participation, participants were allowed to
take a break at any time. Furthermore, they were not required to pause the video to verbalize their thoughts. They were allowed verbalize their thoughts concurrently as they watched the video, although they were allowed to pause the video if they felt it would facilitate recall. This procedure was expected to reduce the amount of time required of participants and to lessen the potential for fatigue, while still allowing SR to be performed for a participant’s entire study session.

When participants verbalize their thoughts concurrently while watching a video, the sound from the video can interfere with the recording of participants’ verbalizations and make transcription difficult (Gass & Mackey, 2000). To minimize this interference, participants were directed to hold the recording device near their mouth and speak into it. When it seemed that the volume of the video might interfere with the recording of participants’ verbalizations, the volume of the video was adjusted so that it was audible, but not loud.

Once all participants had completed the data collection process and the audio recordings had been transcribed and coded, the daily grades of participants were obtained from participants’ teachers, with participants’ consent. Daily grades were only obtained after the coding process was complete so that knowledge of participants’ daily grades would not influence the coder’s judgment. Once daily grades were obtained, scores of 0 and 1 were removed, and the remaining scores were used as a measure of participants’ in-
class performance. These scores were given based on the following rubric, which uses a 4-point scale:

4.0  Solid preparation is evident and performance is fully coherent culturally; that is, students speak, write and respond in ways in which natives of Japanese culture expect people to speak, write, and respond. The performance presents no difficulty, discomfort, or misunderstanding for a native. Repair (restating, or correcting oneself) is self-managed. The performance reflects a sense of language as communication - an interpersonal exchange (not just parroting memorized material).

3.5  Good preparation with solid performance, such that there would be little to create difficulties, discomfort, or misunderstanding in interaction with a native speaker. However, some noticeable errors could hinder smooth interaction. Most repairs are self-managed.

3.0  Good preparation with good performance. A few aspects of the performance would create difficulties, discomfort, or misunderstanding in communication with a native speaker.

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37 The rubric that appears is the same as that used by Christensen and Warnick (2006). It was originally developed by language faculty in The Ohio State University’s Department of East Asian Languages and Literatures.
Weakness or patterned error that would require occasional correction from another (instructor, classmate) is evident.

2.5 Some preparation is evident and performance enables communication, but there are also several clear sources of difficulty, discomfort, or misunderstanding in communicating with a native speaker. Repair is largely a matter of correcting problems, and comes mostly from others.

2.0 Minimal preparation. The performance presents definite obstacles to communication and would cause more than simple discomfort. Utterances would cause puzzlement that the native would be at a loss to resolve. Repair requires multiple, often repeated, corrections and guidance from another (mostly the teacher).

1.5 Barely any preparation. The performance would create considerable difficulties, discomfort, or misunderstanding in communicating with a native. Communication is achieved only with repeated correction and guidance from the teacher. The student is clearly not in control of the assigned material.
1.0 Attended class, but did not participate or failed to perform with any viable degree of competence.

0 Absent (Christensen & Warnick, 2006, pp. 68-69)

For SR and questionnaire data, data collection occurred between February 19, 2013 and April 20, 2013. Daily grades were obtained on November 14, 2013.

The timeline for data collection is given below in table 3.2.

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>February 19, 2013</td>
<td>Distributed questionnaires</td>
</tr>
<tr>
<td></td>
<td>Recruited participants for questionnaire participation</td>
</tr>
<tr>
<td></td>
<td>Began recruitment for SR participation</td>
</tr>
<tr>
<td>March 4, 2013</td>
<td>Began collecting SR data</td>
</tr>
<tr>
<td>April 2, 2013</td>
<td>Re-recruited those who had not yet completed the questionnaire</td>
</tr>
<tr>
<td>April 20, 2013</td>
<td>Ended data collection for SR and questionnaire</td>
</tr>
<tr>
<td>November 14, 2013</td>
<td>Obtained daily grades of participants following completion of coding of SR data</td>
</tr>
</tbody>
</table>

*Table 3.2. Timeline for data collection*
The total amount of data collected is summarized in table 3.3. While SR was initiated with 20 participants, 2 participants withdrew before completing the data collection process.

<table>
<thead>
<tr>
<th>Type of data</th>
<th>Total amount of data collected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questionnaire data</td>
<td>36 questionnaires</td>
</tr>
<tr>
<td>SR data</td>
<td>18 complete transcripts</td>
</tr>
<tr>
<td>In-class performance scores</td>
<td>20 participants’ scores</td>
</tr>
</tbody>
</table>

*Table 3.3. Total amount of data collected.*

3.5. Validity and Reliability

A field test of the procedure was performed to establish face validity and to establish criteria for categorizing thoughts. Field test participants were asked to indicate if any questions or procedures were unclear or confusing as they completed the data collection process. For both the questionnaire and SR, all field test participants indicated that the questions and directions were clear.

To establish intra-rater reliability, 10 transcript pages were randomly selected from the 344 total pages of transcribed verbalizations from SR participants. These 10 pages were again segmented and coded 1 week following the initial segmentation and coding. For segmentation, reliability was measured using percentage agreement based on the number of segment-by-segment agreements (DeVellis, 2005). The percentage intra-
rater agreement for segmentation was 92.2%. For coding, kappa was used to measure reliability\textsuperscript{38}. The value of kappa for intra-rater reliability was 0.887 among those segments which were segmented identically, which is considered almost perfect agreement (Landis & Koch, 1977).

To establish inter-rater reliability, an independent rater was trained in the rating criteria and practiced classifying thoughts from the field test transcripts. 10 pages of SR participant transcript were then randomly selected and segmented and coded by the rater. The percentage agreement for segmentation between the two raters was 90.0%. The value of kappa was 0.553 among those segments which were segmented identically, which is considered to be moderate agreement (Landis & Koch, 1977).

In regard to reliability of the variable in-class performance, all teachers had participated in training in assigning daily grades. Luft (2013) reported an average inter-rater reliability of $\alpha$=0.890 among classroom teachers who had been trained in assigning daily grades to students.

The ecological validity of this study is not without limitations. In particular, for nearly all of the participants the time that their out-of-class study was recorded at was different from the times at which they normally study, and for several participants the characteristics of the location at which they were recorded studying were different from the locations at which they normally study (see section 4.1 and 5.1). Such changes could affect how participants study. For example, having participants study at a time that is earlier than their normal study time could cause them to be more awake than normal. A

\textsuperscript{38}Kappa is a statistic used to assess agreement among raters that corrects for the possibility that agreements could occur by chance (DeVellis, 2005).
change in location from a busy, noisy location to a quiet location relatively free of
distractions could affect how participants’ attention is directed during their study. Not
having certain electronic devices available during their study could also affect
participants’ behavior. Thus, participants may study in a manner that is different from
how they normally study because of differences in the conditions under which that study
is conducted.

However, it would be difficult to improve the ecological validity of this study
without sacrificing validity in other areas. In regard to the time of participants’ study,
participants who have commitments immediately following their study when they study
at their normal time are unavailable to engage in SR when the memories of their study are
most fresh. Thus, to record these participants studying at their normal time would require
sacrificing validity in the recall data.

Recording participants at the locations they usually study at leads to similar
concerns. For participants that study in noisy locations, it is not possible to conduct SR in
the same location without sacrificing the quality of the recording of participants’
verbalizations. Moving to a quiet location would take time, and could affect participants’
ability to recall accurately. Furthermore, some participants who study in noisy locations
use headphones as they study. If these participants were recorded using their headphones,
what the participants actually listened to during their study would not be recorded and the
quality of the stimulus would be negatively affected. If these participants were asked to

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39 In this study, participants are encouraged to bring with them any materials that they use to study Japanese. The researcher supplies materials that they would typically use to study but did not bring with them. However, it is possible that some participants would use an electronic device, such as a computer, during their study but not for the purpose of studying, and consequently would not bring the device because it is not used for the purpose of studying.
study without using headphones, their ability to study effectively could be negatively affected and the ecological validity would remain limited, even with recording occurring at the locations participants typically study at.

The transcript data suggests that participants generally studied how they normally do, although the research setting did have an effect on the behavior of some. On the one hand, participants were observed engaging in a number of behaviors that would be expected during a normal study session, but not necessarily in a lab setting, such as getting on Facebook, checking email, sending text messages, reading blogs, listening to music, eating, and drinking. On the other hand, comments in some participants’ transcripts suggest that the lab setting may have affected how they studied. A number of participants mentioned being nervous about speaking out loud in front of the camera. (All of these participants did actually speak in front of the camera during their study.) The comments of a few participants suggested that they were thinking about how hungry they were during their study. If they had not been involved in research, these participants may have tried to relieve their hunger instead of continuing to study. One participant commented that she felt she could study better if only she had been studying at midnight.40

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40 Other comments made by the same participant suggest that this comment may not have been made in complete seriousness.
3.6 Analysis of verbalizations

Audio recordings of participants’ verbalizations during SR were transcribed with the assistance of a transcriber. Contextual elements (e.g., descriptions of what was happening in the video) were included in the transcriptions when these elements were considered to provide substantial support to understanding what participants had referred to in their verbalizations (Gass & Mackey, 2000, pp. 63-66). The pedagogical materials participants had used during their preparation for class were occasionally referred to during the segmentation and coding process.

3.6.1 Segmentation

For purposes of this study, a thought was operationalized as participants’ verbalizations that described their conscious mental activity (see section 3.1). The transcription was segmented into individual thoughts using the coding criteria described in section 3.6.2 as a guideline. When a change was detected in the kind of thought, as suggested by the coding criteria, it was treated as if a new thought had occurred, and the transcript was segmented accordingly. For example, the utterance “Don’t know what *jin cha* means. Oh, wait, maybe that’s customs, because they’re saying that he has to go there after getting off the plane” (FT #5) was segmented as follows, into 3 thoughts:
1. Don’t know what *jin cha* means. (MF: concern about a meaning that is connected to a form)

2. Oh, wait, maybe that’s customs, (MF: description of the meaning of a form)

3. because they’re saying that he has to go there after getting off the plane. 
   (MF: mention of the context)

During verbalization, participants would occasionally repeat themselves.
Repetition, when verbatim or close to verbatim, was considered an instance of a single thought. For example, the following utterance was considered one thought: “That’s what it was. This is what it was” (FT #4). When the repetition was not verbatim or close to verbatim, the utterances were treated as separate thoughts.

It was not uncommon for a participant to describe an action followed by a description of the purpose or goal of the action. In such instances, the action and the goal were segmented and coded separately. For example, “Let me just check the schedule and make sure I know what it is that I’m supposed to do” (FT #4) was segmented into “Let me just check the schedule” and “and make sure I know what it is that I’m supposed to do”.

3.6.2 Coding

Thoughts were coded into the following 5 categories: (a) not suitable for analysis, (b) form-focus, (c) meaning-focus, (d) indeterminate, (e) other. Specific criteria for each
category were established during the field test. These criteria are given below, with examples. Further explanation of the coding process follows.

Not suitable for analysis (N):

- Descriptions of what a participant was currently thinking (as opposed to descriptions of what a participant was thinking while being video recorded; e.g., “no, no, no. Wait. Huh? How does it go?” [FT #4], “I think I mixed ryokan and yoru” [FT #2]).
- Inquiries directed at the researcher (e.g., “does that make sense?” [FT #2]).
- Thoughts that are interrupted (e.g., “It’s er” in “It’s er—ah man, ah, they’re already giving the answer” [FT #4])
- Comments that clearly suggest that the participant has inferred rather than recalled (Ericsson & Simon, 1987; e.g., “I must have been thinking…”).
- Descriptions of habitual actions (e.g., “I normally mark them” [FT #2]).
- Explanations as to why the participant was thinking something (e.g., the second segment in the following: “I think I am trying to think about the two person [sic]. / Because I know they are living in the ryokan right now” [FT #2]).
- Any other comments that do not qualify as descriptions of mental activity.\footnote{For example, descriptions of knowing, thinking, realizing, focusing, remembering, etc. would all qualify as mental activity. Actions that involved acquisition of new knowledge (e.g., learning, memorizing, etc.) were also considered to qualify as mental activity.}
Form-focus (F):

- Thoughts in which a comment is made about the nature of forms (e.g., “bai is a second tone” [FT #4], “in China they introduce themselves according to their work space” [FT #4]).
- Thoughts that mention one’s ability to accurately produce forms (e.g., “Bai is a hard tone to get to” [FT #4]).
- Thoughts that express concern about a form that is connected to a meaning (e.g., “What was normal university?” [FT #4], “I am thinking about how to change the language according to the change of the speaker’s role” [FT #2])
- Thoughts that describe the state of one’s knowledge of forms (e.g., “I forgot the verb” [FT #4])
- Thoughts that express one’s affective reaction to forms (e.g., “There’s too many verbs in Chinese for reading a book” [FT #5]).

Meaning-focus (M):

- Thoughts that describe the meaning or function of a form or forms, or give the English equivalent (e.g., “polite inquiry” [FT #4], “new terms of address” [FT #4]).
- Mention of the context in which the target language occurs.
• Thoughts that express concern about a meaning that is connected to a form (e.g., “I don’t know what xiashuo means” [FT #5], “Why didn’t he say hua mei mao yi gong si?” [FT #4])

• Thoughts that mention one’s ability to comprehend or understand meaning (e.g., “Oh, I completely missed that it was a teacher” [FT #4], “I’m not really understanding the words” [FT #5])

• Thoughts that describe the state of one’s knowledge of meaning (e.g., “I remember that character [i.e., that person]” [FT #4])

• Thoughts in which a meaning or context is compared to another context (e.g., “Hey, that’s exactly like me” [FT #5])

• Thoughts that express one’s affective reaction to specific meanings (e.g., “This dialogue seems a little bit silly because the Dad never seems to understand anything and his daughter has to keep pointing out stuff to him” [FT #5]).

Indeterminate (I):

• Thoughts that consist solely of target language forms (e.g., “Ni shi bai jiaoshou ma?” [FT #4])

• Thoughts for which one describes the state of one’s knowledge, but it is unclear if form or meaning is primarily focused on (e.g., “I remember

42 In English, “Chinese-American Trading Company”.
43 In English, “Are you Professor Bai?”
“huanying huanying so well” [FT #4], “Chuang, I know this” [FT #5], “We didn’t really learn that vocabulary word” [FT #4]).

- Thoughts for which an action is described, but it is unclear if form or meaning has been primarily focused on (e.g., “I marked the enkai there” [FT #2], “I try to memorize the whole sentences here” [FT #2], “I was checking the structure” [FT #2])
- Thoughts that describe one form being compared to another form, but it is unclear whether form or meaning is the primary grounds for comparison (e.g., “This drill is pretty much the same pattern as the CC [dialogue]” [FT #2])
- Thoughts that mention both form and meaning, but it is unclear which has been primarily focused on (e.g., “Oh, and they used nin here to be polite” [FT #4]).

Other (O):

- Comments regarding the nature of an activity or situation (e.g., “I don’t think I understand the direction here” [FT #2], “the audio is a little bit fuzzy” [FT #4]).
- Thoughts describing a decision, plan, or intention to perform an action, but without reference to specific forms or meanings (e.g., “I won’t memorize those answers” [FT #3], “Here we go” [FT #4], “I’ll just get the textbook” [FT #3]).
• Thoughts that describe the state of one’s knowledge or ability, but not in regard to specific forms or meanings (e.g., “I knew it was review” [FT #4], “All right, I get it” [FT #4], “Yep, heard this before” [FT #4], “O, that’s right” [FT #4], “Where is it?” [FT #4]).

• Thoughts regarding one’s affective reaction, but not to a specific form or meaning (e.g., “I feel very frustrated” [FT #3], “Haha” [FT #4], “Oh, man” [FT #4], “That’s okay” [FT #4]).

• Other descriptions of mental activity that do not refer to specific forms or meanings.

The distinction between the categories of not suitable for analysis (N) and other (O) was not a necessary distinction for purposes of conducting the final analysis. However, this distinction was retained because it seemed to facilitate accurate coding. For example, “And sometimes I think the key is not correct because the context shows otherwise” (FT #2) includes reference to context, but also includes language suggesting that the participant may have inferred rather than recalled (i.e., “sometimes”). Since this utterance was not necessarily a description of what the participant was thinking during her preparation for class, the utterance was coded as not suitable for analysis. Retaining a distinction between N and O was thus felt to encourage coders to first consider whether a thought qualified as N or not before coding it as one of the other 4 categories, and thus to discourage coders from coding thoughts as form-focus (F) or meaning-focus (M) when those thoughts were not, in fact, descriptions of recalled mental activity.
A second reason for including a distinction between N and O was that verbalizations coded as O could potentially be used in future analyses that investigate aspects of participants’ out-of-class study other than form-focus and meaning-focus.

The indeterminate (I) category was included because for some verbalizations it was clear that the participant had focused on either form or meaning, but it was unclear which had been focused on. For example, the participant who produced the utterance “I remember huanying huanying so well” (FT #4) may have been focusing on the form “huanying huanying” or he may have been focusing on what huanying huanying means. Though there is certainly some degree of attention being paid to the language in this example, it is unclear whether form or meaning is being primarily focused on.

“This”, “that”, and other pronouns were not generally considered to refer to specific forms or meanings, for two main reasons. First, the referent of the pronoun would need to be determined through context, leading to a greater amount of inferring in the analysis, which would presumably lead to a less reliable analysis. Second, when pronouns were used to refer to forms or meanings in the transcription, it consistently seemed as if the participant was focusing on something else beside the form or meaning. For example, in a comment such as “I never realized that before” (FT #5), the participant seems to be focusing more on the fact that her realization had not occurred previously, than on the form or meaning which comprise the substance of that realization.

An exception to this guideline was when participants would move the target language form in an utterance to the initial position. For example, “Mangzhe, I don’t know what that means” (FT #5) or “Huamei maoyi gongsi. I can say that now.” (FT #4).
In such instances, the pronoun was treated as referring to the initial target language item, and the utterance was segmented as a single thought. Another exception to this guideline was when, even if the pronoun was not considered to refer to a specific form or meaning, the information conveyed in the remainder of the utterance was sufficient to suggest that the participant had focused on a specific form or meaning.

On occasion participants would have difficulty recalling what they had been thinking. If a participant provided their best guess as to what they were thinking, and it was clear that they were attempting to recall (i.e., no evidence is provided to suggest that they were inferring rather than recalling), then the utterance was not coded as N. For example “I think I am trying to find the meaning for enkaɪ” (FT #2) was coded as M.

In thoughts that described behavioral forms, the behavioral forms were described in English. While the English used to describe the behavioral form was typically a description of the function of the form, the presence of what could be considered the English equivalent of the behavioral form was not taken as evidence that the participant had focused on meaning. For example, the utterance “It’s interesting that in China they introduce themselves according to their work space” (FT #4) was coded as an instance of form-focus. The form in question was considered to be the behavioral form of introducing oneself. The thought was considered to be a description of the nature of this form, and thus was coded as form-focus.

On occasion participants’ comments would suggest that rather than attending to the kind of contextual elements that they would encounter in the target culture, they attended to the fact that the form had appeared in a pedagogical material. For example,
the following comment was made by FT #5: “Why is everybody always just something xiansheng in this book?” Even though the participant had attended to the context in which this form appears (i.e., the form appears in a book for learning Chinese), no evidence is given that the participant attended to the kind of contextual elements that would lead to a deeper understanding of how this form is used in the target culture. In such instances, the thought was not coded as an instance of meaning-focus.

The majority of participants described their thoughts in the present tense, as if the thoughts they had had during preparation were currently occurring to them. For these participants, it was generally assumed that their comments referred to mental activity. Descriptions of actions given by these participants were considered to be expressions of mental decision-making, and were not coded as N.

Some other participants described their thoughts by addressing their comments to the researcher and including with each description a statement like “I thought” (e.g., “I am thinking about how to change the language according to the change of the speaker’s role” [FT #2]). For these participants, verbalizations that included a statement suggesting mental activity were coded as F, M, I, or O, depending on the nature of the verbalization.

However, these participants had a tendency to produce utterances for which it was unclear if the utterance was a description of what they been thinking or not. One type of utterance that may not have been a description of what the participant had been thinking was explanation, as in the following example: “…I am trying to think about the two person [sic]. Because I know they are living in the ryokan right now…” (FT #2). In this example, it is unclear if the statement “I know they are living in the ryokan right now”
was made because this participant had actually been thinking this at the time of study, or if this statement was made for the researcher’s benefit. Such statements, for which it was unclear if the statement was what the participant had been thinking at the time of study or not, were coded as N.

Another kind of utterance that may not have been a description of what the participant was thinking was a repeated idea. For example, in the following excerpt it is unclear if the repeated idea reflects the fact that the participant had spent more time focusing on that idea, or if the repetition was provided for the researcher’s benefit: “Then I’m thinking what is this—blah blah blah, where is it—the someone is [sic] go between. So I think what is this in Japanese” (FT #3). In the first sentence, the participant indicates that he is thinking about what the word for “go between” is. He restates that idea in the second sentence. Since the second sentence may have been additional information provided for the researcher’s benefit, and not a reflection of what the participant was thinking, this utterance was coded as N.

A third kind of utterance that may not have been a description of what the participant was thinking was a description of the participant’s actions. Participants may have been merely describing what they saw in the video, rather than recalling what they were thinking during their study. However, since descriptions of actions were also common among participants who described their thoughts in the present tense, these verbalizations were generally coded as F, M, I, or O, even if the participant did not include a statement suggesting mental activity.
However, descriptions of habitual actions (e.g., descriptions of actions that included phrases like “sometimes”, “usually”, or “generally”) were coded as N. Since such verbalizations seemed to suggest that the participant was inferring what they had done or thought rather than recalling, these verbalizations were considered not to be suitable for analysis.

For samples of participants’ transcripts and how they were coded, see Appendix B.

3.7 Data analysis

Below I discuss the methods of data analysis in conjunction with each of the objectives of the study.

3.7.1 Participants’ demographic characteristics

Questionnaire data, which is used to describe the demographic characteristics of the population, were analyzed using descriptive statistics, including means, ranges, and frequency distributions. Given this data is used to describe the demographic characteristics of the population, descriptive statistics seems appropriate.
3.7.2 Describing the number of occurrences of form-focus and meaning-focus

The mean and range will be reported for the number of transcript segments coded as form-focus and meaning-focus. Given that the nature of these objectives are descriptive, these analysis methods seem appropriate.

3.7.3 Comparing the number of occurrences of form-focus and meaning-focus

A paired samples t-test will be used to compare the number of occurrences of form-focus and meaning-focus. A paired samples t-test is considered appropriate for ascertaining whether the difference between two means is statistically significant when both means come from the same sample.

3.7.4 Describing the relationship between form-focus and meaning-focus and in-class performance

Pearson product-moment correlations will be used to describe the relationship between form-focus and meaning-focus and in-class performance. Given that the hypothesis this study investigates is concerned with whether or not a relationship exists in the target population, and all variables are either interval or ratio variables, Pearson product-moment correlations are considered appropriate.
3.8 Conclusion

This study investigates whether or not a positive relationship exists between meaning-focus and in-class performance scores among 1st year PCA students. SR is used to assess the extent to which learners are focusing on form and meaning during their out-of-class study. SR is a technique that provides data regarding what learners were thinking during the performance of a task, but with the benefit that learners are able to complete the task uninterrupted. Participants’ in-class performance scores are used in conjunction with SR data to assess whether a positive relationship exists between meaning-focus and in-class performance. Questionnaire data is used to assess how the environment participants were video recorded studying in compares to the environments they typically study in. It is also used to describe participant characteristics, so that instructors who may wish to generalize the finds of this study to other programs will have demographic information upon which to assess the feasibility of such generalization.
Chapter 4: Findings

In this chapter I first describe the participants using questionnaire data. Based on these findings, I discuss the nature of the population that the SR participants are considered to be representative of. I then describe the average in-class daily grades of participants and implications regarding the generalizability of the findings of the study. Next, I describe occurrences of form-focus and meaning-focus among SR participants and how these compare. Lastly, I describe the relationship between form-focus and meaning-focus and in-class performance.

4.1. Time and environment of Japanese study

The responses of participants to the questionnaire item regarding times at which studying occurs are summarized in the frequency distribution given in figure 4.1. In this frequency distribution, if a participant reported that some studying occurs during a certain hour, regardless of whether or not the studying lasted the entire hour, the participant was considered to have studied during that hour. Participants were provided with space in the questionnaire to write up to 5 separate intervals during which they typically study.

For the 36 participants who completed the questionnaire portion of the study, the times at which they studied were bimodally distributed, with modes occurring at the 10
o’clock AM hour and the 11 o’clock PM hour. 12 students reported that some studying occurs during the 10 o’clock AM hour (i.e., between 10:00 AM and 10:59 AM), which was the greatest number of students to report that studying occurs during a single hour. The number of students who reported that they study during the 11 o’clock PM hour was markedly fewer, being nearly half as many as that of the 10 o’clock AM hour (n=7).

Figure 4.1. Frequency distribution of times at which participants reported studying Japanese (n=36).

This data suggests that students generally did not study during the times that video recording took place. The majority of participants prepare for class in the morning and the late evening. However, for 17 of the 20 stimulated recall (SR) participants data
collection occurred in the afternoon or early evening, a time in which participants were actually less likely to study. It is possible, for example, that a student who studied earlier in the day than normal could be study more effectively than normal. This discrepancy thus limits the external validity of the findings of the study.

The questionnaire provided space for participants to describe up to 4 separate locations at which they typically study. The types of locations described by participants are summarized in the frequency distribution that appears in figure 4.2. Nearly all participants (34 of 36) reported that they spent time studying at a location in their home, such as a bedroom, dorm room, or living room. Campus locations, such as a library or classroom, were also used by a number of participants.
Figure 4.2. Frequency distribution of locations at which participants reported studying Japanese for which the frequency was at least 2⁴⁴ (n=36).

The data regarding the lighting conditions experienced by participants was used to identify which of the following 3 conditions participants experience as they study: (a) bright or moderate lighting, (b) dim lighting, or (c) both bright/moderate and dim lighting. These data are summarized in the frequency distribution in Figure 4.3. The majority of participants only studied in locations that were brightly or moderately lit. For only 7 participants (19%) was it found that they only study in dimly lit locations.

⁴⁴ Locations for which the frequency was 1 were the following: in a car, outside, at the bus stop, in a dorm lobby, and at a restaurant.
Figure 4.3. Frequency distribution of the lighting conditions experienced by participants in the locations at which they typically study (n=36).

The data regarding the general noise level of locations in which participants typically study was used to identify whether participants experience (a) only quiet locations, (b) only noisy locations, or (c) both noisy and quiet locations. These findings are summarized in the frequency distribution in figure 4.4. The majority of participants (61%) were found to spend time studying in both noisy and quiet locations. Only 4 participants (11%) were found to study exclusively in noisy locations.
Figure 4.4. Frequency distribution of the noise level experience by participants in the locations in which they typically study (n=36).

The data regarding whether others are present or not during participants’ study is summarized in the frequency distribution in figure 4.5. The number of participants who only study in locations where no others are present was less than the number of participants who only study in locations where others are present. However, the largest proportion of students (50%) study in both types of locations.
Figure 4.5. Frequency distribution of the social environment experienced by participants as they study (n=36).

No participant reported that they study exclusively with a partner or group, and 25 participants reported that they never study with a partner or group. Of the 11 participants who reported that they occasionally study with others, 4 reported that their study partners were other classmates that they would study with in the hall or classroom before class begins. These 4 participants did not report studying with others in any settings other than the hall by the classroom or the classroom before class begins. For the remaining 7, the number of study partners ranged from 1 to 5, with an average of 2.2\textsuperscript{4546}.

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\textsuperscript{45} One of these participants failed to specify specifically how many study partners he or she typically studies with.

\textsuperscript{46} For participants who reported a range for the number of study partners they typically study with (e.g., 3-5), the midpoint was used in calculating the average. For participants who reported different numbers of study partners depending on the location, the average number of study partners for that participant was used.
These data suggest that, in contrast to the time at which video recording took place, the environment in which participants were video recorded studying more closely matched an environment that the majority of participants reported that they study in. The location at which video recording took place was moderately lighted, quiet, and private. 80% of participants reported that they study in bright or moderately lit locations, and 89% of participants reported that they study in quiet locations. While not participant was recorded studying with a study partner, no participant reported that they study exclusively with a study partner. In other words, study without a study partner was an experience that all participants would have been familiar with. Thus, in regard to these factors the environment was well suited to what the majority of participants would have been familiar with. In regard to whether or not other individuals are present during participants’ study, however, the environment in which participants were video recorded did not match what the majority of participants experience. While 83% reported that they study in places where others are present, only 67% reported that they study where no others are present. On the one hand, the privacy afforded by the room in which video recording took place may have led some participants to change their behavior. For example, a student may be more willing to speak out loud while studying if no other people are present. On the other hand, the presence of the video camera may have made the situation feel more like there was someone present in the room than that the participant was completely alone.

14 participants did not report the body position that they typically studied in. The body positions reported by the remaining 22 participants are summarized in figure 4.6.
All but one of these participants reported that they study sitting down. Participants also reported that they study while lying down, standing, and walking.

**Figure 4.6.** Frequency distribution of the body positions that participants study in, according to questionnaire data (n=22).

Participants reported using a number of materials to prepare for class. The materials that they reported using, and the number of participants that reported using that kind of material, are summarized in figure 4.7. All of the 34 participants who reported the kinds of materials that they use to prepare for class indicated that they used a textbook. Only 2 of the 34 did not report that they used a computer. In addition to the physical materials listed in figure 4.7, some participants also reported using supplemental learning
software\textsuperscript{47}, online audio and video materials, and other online resources (e.g., dictionaries, self-study websites, etc.). Participants did not report making use of any materials to study that they could not have made use of during video recording, with the exception of the one student who reported making use of a whiteboard during study.

\textbf{Figure 4.7.} Frequency distribution of materials used by participants during study, according to questionnaire data (n=36).

The findings of the questionnaire portion of the study suggest that the environment in which participants were video recorded studying had characteristics similar to environments participants typically study in for the majority of participants. However, the times at which participants were recorded studying were mostly different

\textsuperscript{47}The software in question comes from a CD-ROM that corresponds to the textbook but is typically sold separately.

110
than the times at which participants typically studied, and in this respect the external validity of the current study is limited.

4.2 Form-focus, meaning-focus, and in-class performance

The frequency distribution of average in-class performance scores for the 18 participants who completed the SR portion of the study\(^{48}\)\(^{49}\) appears in figure 4.8. The distribution was negatively skewed, with the greatest number of participants having an average in-class performance score of between 3.5 and 4.0. The average of all 18 participants’ average in-class performance scores was 3.62, with the highest average performance score obtained by a single participant being 3.95, and the lowest being 2.91.

\(^{48}\)2 participants withdrew participation before completing the SR portion of the study. These participants’ data were not included in the final analysis.

\(^{49}\)One participant, who was video recorded preparing for a FACT class, indicated soon after starting the SR portion of data collection that she had never prepared for a FACT class before. This participant’s SR data was subsequently disregarded.
Figure 4.8. Frequency distribution of in-class performance scores among participants in the SR portion of the study (n=20).

As the frequency distribution in figure 4.8 indicates, poorer performing students are not well represented in the sample. In fact, only a single participant had an average daily grade of less than 3.0. Thus, it is difficult to make any claims regarding the behavior of poorer performing students based on these data.

On the other hand, a relationship was found between the time students spent studying and their average in-class performance scores that was not unlike that reported by Luft (2007) and Curtin (2012). Correlations were performed between the amount of time SR participants self-reported that they typically spend studying and their average in-class performance scores (n=18). The result was a low negative correlation ($r=-0.231$, $p=0.357$; see figure 4.9). While the magnitude of the correlations was not as strong as that
reported by Luft ($r=-0.347$, $p=0.044$), the relationship is similar. Furthermore, in Curtin’s sample, only 2 out of the 22 3rd-year participants for whom a negative correlation was found between self-reported time spent studying and average daily grades had average daily grades lower than 3.0. This distribution is similar to the distribution in the current study. Thus, while poorer performing students are not well represented in the current sample, the sample is not unlike the samples that Luft and Curtin reported on in these respects. Because of this similarity, the current study should be able to address whether or not neglect of meaning-focus could provide an explanation of the negative correlations between self-reported time spent studying and in-class performance found by Luft and Curtin.

![Figure 4.9. Scatterplot of in-class performance and self-reported time spent preparing for class.](image)

113
Among the 18 participants who completed the stimulated recall (SR) portion of the study, the total number of thoughts identified during the study session of a single participant ranged from 0 to 1800\(^5\), with an average of 415.9. The total number of form-focused thoughts for a single participant ranged from 0 to 93, with an average of 36.17. The total number of meaning-focused thoughts for a single participant ranged from 0 to 134, with an average of 32.72. The total number of form-focused thoughts recorded for all 18 participants was 651. For meaning-focused thoughts, the total for all 18 participants was 589.

A t-test was used to assess whether the difference between the number of form-focused and meaning-focused thoughts was significant among the 18 participants who completed SR. No significant difference was found (p=0.712).

In the number of occurrences of meaning-focus, an outlier was identified in the data. A single participant was found to have 134 occurrences of meaning-focus during his study. The number of occurrences of meaning-focus for this participant was markedly higher than that of other participants (the next highest was 77), and constituted 22.8% of the total number of occurrences of meaning-focus for all participants. A closer look at the data of this participant revealed that the participant had not been preparing for a regular FACT or ACT class, but rather for the final oral interview exam. This difference in the type of class that this participant had prepared for may account for his results.

A second t-test was performed between the number of occurrences of form-focus and the number of occurrences of meaning-focus with this participant’s data removed. The

\(^5\) The participant for whom 0 thoughts were identified was the participant who was recorded preparing for a FACT class, who later confessed that she had never prepared for a FACT class before.
result indicated that the difference between the two variables was significant at the α=0.05 level (p=0.031). This finding suggests that PCA students tend to focus on form somewhat more than they focus on meaning when preparing for FACT and ACT classes, but the difference is not pronounced.

4.3 The relationship between the variables of form-focus and meaning-focus and in-class performance.

To assess whether a relationship exists between the degree to which PCA students focus on meaning during their preparation for class and their in-class performance, a Pearson product-moment correlation was performed between the average in-class performance score and the number of occurrences of meaning-focus for each of the 18 participants who completed the SR portion of the study. While a moderate negative correlation was found between these two variables, the correlation failed to reach statistical significance (r=-0.305, p=0.218). Thus, the hypothesized relationship was not identified.
Figure 4.10. Scatterplot of in-class performance and number of occurrences of meaning-focus.

A Pearson product-moment correlation was also used to assess whether a relationship exists between the degree to which students focus on form during their out-of-class study and their in-class performance. The correlation was performed using participants’ average in-class performance scores and the number of occurrences of form-focus. The result was a low positive correlation between these two variables that was not statistically significant ($r=0.168$, $p=0.504$; see figure 4.11).
Both correlations were performed again with the data from the participant who had studied for the oral exam (rather than for an ACT or FACT class) removed. With this participant’s data removed, both correlations were negligible. The correlation between number of occurrences of meaning-focus and in-class performance scores was $r=-0.097$ ($p=0.710$). The correlation between the number of occurrences of form-focus and in-class performance scores was $r=0.085$ ($p=0.746$). Thus, this study fails to find a relationship between students’ degree of meaning-focus and their in-class performance.

With the data from the participant who had studied for the oral exam removed, a very strong association emerged between the number of occurrences of form-focus and the number of occurrences of meaning-focus ($r=0.741$, $p<0.001$; see figure 4.12). This finding suggests that in preparing for FACT and ACT classes, students who focus more

\begin{figure}
\centering
\includegraphics[width=\textwidth]{scatterplot}
\caption{Scatterplot of in-class performance and number of occurrences of form-focus.}
\end{figure}
on form also focus more on meaning, and students who focus less on form also focus less on meaning. The finding provides further evidence that PCA students do not overemphasize form-focus or meaning-focus in their out-of-class study.

![Figure 4.12. Scatterplot of number of occurrences of form-focus and number of occurrences of meaning-focus.]

4.5 Conclusion

This study fails to find a statistically significant relationship between instances of meaning-focus and in-class performance scores. Thus, evidence in favor of the hypothesis that guided this study was not obtained. It therefore seems likely that focus on meaning does not provide an explanation of the findings of Luft (2007) and Curtin (2012).
This study does find a very strong correlation between instances of form-focus and meaning-focus. While it also finds a significant difference between instances of form-focus and meaning-focus, the difference is not pronounced. These findings together suggest that 1st year students in PCA are not over-emphasizing form-focus and neglecting meaning-focus in their out-of-class study.
Chapter 5: Discussion and Conclusion

5.1 Form-focus, meaning-focus, and in-class performance

This study finds that participants as a whole were not overemphasizing form-focus or meaning-focus during their out-of-class study. While the second t-test revealed a significant difference between the number of occurrences of form-focus and the number of occurrences of meaning-focus, the difference was not strongly pronounced. Furthermore, the correlational analyses performed after the outlier was removed revealed that the number of occurrences of form-focus and meaning-focus were strongly correlated. This finding indicates that 1st year students who focus more on form focus more on meaning as well. Thus, the participants in this study who focused more on form did not neglect meaning-focus as they did so.

These findings suggest that the students who participated in this study, who were being taught using the performed culture approach, were not over-emphasizing form-focus nor neglecting meaning-focus in their out-of-class study. While it was suggested earlier that the emphasis on dialogue rehearsal and performance in the performed culture approach could lead some students to overemphasize form-focus in their study, these data do not support this conclusion. Rather, these data suggest that when dialogue performance and variation are elicited through context, and performances are assessed on
a daily basis, that dialogue rehearsal can be a activity that is both form-focused and meaning-focused.

The findings of some studies suggest that if language learners fail to focus on both form and meaning, they will have difficulty gaining the ability to use the language communicatively and accurately (e.g., Morgan-Short & Bowden, 2006; VanPatten, 1990; VanPatten & Cadierno, 1993). This study finds that 1st year PCA students focus on both form and meaning during their out-of-class study. This finding speaks well to the efficacy of PCA as an approach to language teaching.

Since the current study investigated all activities learners engaged in during out-of-class study, it does not address the extent to which learners are focusing on form or meaning during specific types of activities. For example, with listening comprehension exercises it is clear that one would need to focus on meaning to successfully complete the exercise. However, with dialogue rehearsal the necessity for meaning-focus is less obvious. Thus, it is possible that if an activity such as dialogue rehearsal were investigated specifically, the extent to which students focus on form and meaning may be less balanced. Future research to investigate form-focus and meaning-focus in dialogue rehearsal to ascertain the extent to which students are focusing on meaning during dialogue rehearsal specifically is therefore recommended.

Since the need to focus on meaning during dialogue rehearsal is not as obvious as with other activities, it is possible that if not assessed using the techniques of variation and elicitation through context, students may neglect to focus on meaning during this activity. Research on processing instruction, which finds that students have difficulty
using the language to communicate meaning when learning activities do not require access to meaning (VanPatten & Cadierno, 1993; Morgan-Short & Bowden, 2006) supports this possibility. Future research that investigates which aspects of instruction and assessment contribute most to ensuring that students focus on meaning in their dialogue rehearsal outside of class is therefore also recommended.

The current study fails to find a relationship between in-class performance scores and form-focus, or between in-class performance scores and meaning-focus. Thus, the hypothesized relationship, that a positive relationship would exist between the degree to which students focus on meaning and their in-class performance, was not obtained. On the contrary, the data suggests a slight tendency towards the opposite relationship, in which a higher degree of meaning focus is weakly associated with worse in-class performance. An implication is that requiring PCA students in their first year of study to engage in additional meaning-focused activities outside of class (e.g., listening comprehension exercises) may not result in significant gains in in-class performance. In other words, since these students do not appear to be neglecting meaning-focus, one would not expect assigning additional meaning-focused activities to fill an un-met need.

While this study fails to find the hypothesized relationship, some comments made by participants during SR seem to corroborate the anecdotal evidence that led to the formation of the hypothesis that guided this study. The following is an excerpt from one participant that seemed to suggest behavior similar to what the researcher had observed in struggling students prior to conducting this study. Slashes indicate segmentation, and codes are given in parenthesis. The participant’s average daily grade for the semester was
3.45 out of 4 (86.25%). Based on comments that occurred prior to the comment following, the participant was working on rehearsing a dialogue at this point in his study.

All right, I think I'm starting to get it, (O) / at least how to pronounce it. (F) / Still not sure what it means, (M) / but at least I can say it, (F) / and that's what I get graded on technically. (O) / But I really want to figure out what this means. (M) /  

On the one hand, this participant’s comment suggests that the participant is focusing more on form than on meaning, since the participant has apparently learned how to pronounce the dialogue without knowing what the dialogue means. However, on the other hand the participant also indicates a desire to know what the dialogue means. In fact, the participant’s next comment suggests that the participant is attempting to figure out the meaning of words in the dialogue from context: “Kamawanai, (I) / kamaru, (I) / that reminds me of komarimasu. (I) / I wonder if it's the same. (I) / It seems like it in context. (M)” Based on the comments from the participant’s transcript, the participant continued to learn how to say the dialogue, and then moved on to practicing the drills, and at the very end of his study looked up what the words in the dialogue (which would be expected to also appear in the drills) actually meant. Thus, the participant did focus on what the forms in the dialogue meant, it was just that this activity occurred some time after the forms themselves had been learned.

Overall, the number of occurrences of form-focus and meaning-focus for this participant were similar: 28 occurrences of meaning-focus and 33 occurrences of form-
focus were identified for this participant. Thus, while the participant’s rehearsal of the dialogue was apparently a more form-focused activity, meaning-focus was not neglected. It merely occurred later in the participant’s study.

Another participant also made a comment suggesting a degree of neglect of meaning: “I have no clue what she is saying, (I) / but let’s imitate. (O)” The participant’s comment suggests she is planning on imitating a native speaker’s words without knowing what those words mean. However, the participant’s next comment indicates that she has focused on meaning: “This is what this means. (M)” Since it is this comment immediately follows the previous comment about imitating, it is probable that the participant has learned the meaning of what she had been imitating (or planning to imitate). The comments of these two participants seem to suggest that 1st year students in PCA may be inclined to focus on form prior to focusing on meaning, rather than neglecting meaning-focus altogether. Input processing theory would predict that focusing on meaning first would lead to superior language learning (VanPatten & Cadierno, 1993), although skill-building models of language learning would not necessarily support this claim (e.g., Dekeyser & Sokalski, 1996). How focusing on form before meaning compares in effectiveness to focusing on meaning first may be an area for future research.

In regard to previous findings that self-reported time spent studying for class has a negative relationship with in-class performance scores among PCA students (Curtin, 2012; Luft, 2007), the current findings suggest that it is not because students whose in-class performance scores are relatively lower neglect focusing on meaning in their out-of-class study that they are spending more time studying and yet doing poorer than others. A
number of possible interpretations of Luft and Curtin’s data remain. One possible interpretation of the data is that prior knowledge of the language, either through formal education or other means, could be a significant factor in predicting student success. Students who had studied the language before would be expected to require less extensive preparation to prepare for class, and thus may be able to perform well with only a short amount of out-of-class study. Furthermore, given that the standard to which students in communicative approach programs are held in regard to pronunciation (Richards & Rodgers, 2001, p. 156) is likely to be lower than the standard to which PCA students are held, students with prior experience studying the language may need to focus on form more than meaning to prepare for class well. Thus, this interpretation would also explain why the correlation for meaning focus was weakly negative while that for form-focus was weakly positive.

Aptitude for language learning could also provide a potential interpretation of the data. As suggested by Luft (2007), it may be that students with high aptitude for language learning are able to achieve more in less time than students with low aptitude for language learning. If aptitude is a significant predictor of students’ performance scores, training students to use the kinds of strategies used by those with high aptitude may be a way of helping low performing students to be more successful (O’Malley & Chamot, 1990, pp. 162-163).

A third possibility is that higher performing students are more effective at using language learning strategies than lower performing students. Language learning strategy research has found that higher performing students make use of metacognitive strategies
(Chamot, 2005). Since metacognitive strategies do not involve language forms and meanings directly (unlike, for example, memory strategies), participants’ use of metacognitive strategies may not have been manifest in the occurrences of form-focus and meaning-focus that were measured in the current study. Use of metacognitive strategies in particular seems a plausible explanation as to why students who study for longer tend to do more poorly, for metacognitive strategies could lead students to conduct their out-of-class study more efficiently (i.e., in less time).

This researcher’s informal observation was that students who were more effective tended to be very focused on their study for a short period of time. Students who were less effective tended to be less focused during their study. For example, the longest period of study that was recorded was close to 2 hours long. However, based on the participant’s SR comments, the participant spent a considerable amount of her study time thinking about the music she was listening to, rather than focusing on learning the target language. Thus, degree of focus may also be a significant factor in successfully preparing for in-class performance.

Related to degree of focus is the observation that students who studied for longer than half an hour would make comments suggesting that were not studying as effectively as they had been during the first half hour of their study. For example, around 30 minutes into his study one participant commented “I wonder how much more of this—these drills I can take before I have to break. (O)” The participant went on to make the following comment directly to the researcher: “At this point I was starting to fade a bit in the video. (N) / … I was starting to just get just real distractible (N) / and like, ugh, I don't know
what a lot of these words mean, (N) / and I just don't know how to do this right. (N)"

Ericsson, Krampe, and Tesch-Römer (1993) also note how deliberate practice cannot be sustained for extended periods of time. Thus, it may be that more effective students are able to stay focused throughout their study because their study is shorter. Students who are less focused during their study, such as the participant who was thinking about her music, may sacrifice the time in which they could have studied most effectively.

Another possibility is that measurement error could explain why a negative relationship was found between self-reported time spent studying and in-class performance. It may be that students who are relatively poor performers are more inclined to exaggerate the amount of time they spend studying, perhaps to demonstrate that it is not because of lack of effort that they are doing poorly. Students who are higher performers may be more inclined to report study time amounts that are smaller than reality, in order to demonstrate the extent of their ability. If such a tendency exists, the data could suggest a negative relationship when one does not, in fact, exist.

It is also worth mentioning measurement error in connection with daily grades. It could be that the rubric used in assigning daily grades is a poor reflection students’ actual language ability, or it could be that the rubric is not effectively implemented by teachers. However, I find both of these possibilities to be unlikely. According to the daily grading rubric, the highest score is given when a student’s performance “presents no difficulty, discomfort, or misunderstanding for a native” (Christensen & Warnick, 2006, p. 68). This standard includes not only a lack of misunderstanding, which would be necessary to successfully convey messages to others, but also a lack of difficulty, which would entail
communication of grammatically correct utterances with good pronunciation, and a lack of discomfort, which encompasses aspects of communication unrelated to the content of a message but which relate to one’s relationship with the recipient of the message, and can affect whether or not one gives offense in the course of conveying a message. It is difficult to conceive of any aspect of successful communication what would fail to fall under this description. Thus, a student who receives the highest score would be expected to be successful communicating with native speakers in the target culture.

The opposite situation, in which a learner receives lower scores, but is still able to communicate successfully with native speakers, is not inconceivable under certain circumstances. For example, a learner may be adept at conveying messages to others in the target language, but may do poorly at making typical native speakers comfortable. In the situation that the learner’s interactions in the target culture are limited to natives who are used to communicating with foreigners, and who would not interpret the learner’s outwardly offensive behavior as intentional, such a learner may be successful. However, since such a learner’s ability would be limited, it does not seem inappropriate for the score to reflect that limitation.

The possibility that teachers fail to implement the daily grading system as intended also seems unlikely. Reliability data reported by Luft (2012) suggests good reliability among grades assigned by trained teachers. Personal experience with daily grading, both as a teacher and as a student, also suggests that the system provides a fairly accurate reflection of how able students are at using the language.
In light of the previous discussion, it is recommended the future research investigate the extent to which prior language study, language aptitude, language learning strategy use, degree of focus, and error in measurement of time spent studying are able to account for why a negative relationship has been found between self-reported time spent studying for class and in-class performance in performed culture language learning.

5.2 Limitations

A number of limitations ought to be considered in regard to the current study. First, while efforts were made so that the coding would be as straightforward as possible, it was not always clear how certain segments of participants’ transcripts ought to be coded. The extent of this difficulty is reflected in the reliability data for the coding process. For example, “what?” was an utterance that was difficult to code. The difficulty lies in how the code changes depending on how one interprets the utterance’s meaning in context. Here is the utterance in context, with codes from both raters given in parenthesis for the segment in question: “I thought that was just supposed to be a clock or a watch. (M) / What? (I/O) / Oh well. (O) / I’ll just accept it for now. (O)” If one considers that “what?” is referring to some language item, then coding the utterance as “I” makes sense. However, if one considers that “what?” is merely an exclamation or an expression of frustration, and does not refer to any specific language item, then “O” would be appropriate.
More difficulty was experienced in coding transcripts when participants did not describe their thoughts as if the thoughts were currently occurring to them. In such instances, it was necessary to infer from the participants’ comments what the participant had been thinking during study. For example, the segment “so I try to figure out how to say this one quickly” is less a description of what they participant actually thought and more a description of the participant’s goal or purpose. While this segment may seem like form-focus (F), because of the apparent attempt at producing an utterance quickly, the following comment suggests that the participant may not have actually been concerned with fluency: “Do I say it using a gerund *de* or do I just break it into multiple sentences? (I)” Thus, the participant may be not so much interested in fluency as interested in arriving at the right answer quickly, which would be other (O).

Another similar example is the following: “and then while looking at the book I just keep trying to read it (O)” This example was followed by “and keep trying to get it stuck in my head. (I)” While the first segment involves reading, which one would suppose would consist of focus on the language, the second segment also contains such a description. It is therefore possible that the first segment is a description of what the participant did, and the second segment a description of what the participant was focused on during that activity. If the first segment is merely a description of what the participant did, with a description of what the participant had been thinking during that activity following, then the segment would be categorized as other (O). However, if the segment is actually a description of what the participant thought, it may be more appropriately classified as indeterminate (I).
As the above examples illustrate, not all segments could be straightforwardly coded. This difficulty experienced in determining which of the 5 categories an utterance ought to be coded as is a limitation of the current study.

Second, the size of the sample was rather small. In the final analysis, data from 18 participants were used. Considering that the research procedure employed in this study required large amounts of time from both the participants and the researcher, it would have been difficult to conduct the study with a much larger sample. However, the small sample size limits the generalizability of the findings.

A third limitation regards the extent to which the sample is representative of the population. For both the questionnaire and the SR portions of the study, slightly more than half of those invited to participate elected to do so. It is possible, for example, that the majority of those who opted not to participate had poor out-of-class study habits, or poor in-class performance scores. The distribution of in-class performance scores in the sample seems to suggest that this is the case, for only one participant had a score of less than 3.0. It is therefore likely that the findings of this study are not representative of all students enrolled in 1st year Japanese classes at the institution where this research was conducted.

However, while poorer performing students are underrepresented in the sample, the sample is not unlike those of Luft (2007) and Curtin (2013). A negative correlation between self-reported time spent studying and in-class performance was found among SR participants, although the correlation was of less magnitude than that reported by Luft, and did not reach significance. Curtin’s (2013) sample of 3rd year students contained only
2 students with grades lower than 3.0, which is similar to the distribution of poorer performing students in the current study. Thus, while poorer performing students are underrepresented in the sample, it is nonetheless possible to address possible interpretations of the findings of Luft and Curtin based on these data.

A fourth limitation regards the extent to which students’ study was similar to how they normally study (see sections 4.1 and 5.1). The fact that students were involved in research may have affected how they studied during video recording. Differences between the times and locations at which participants normally study and where they were video recorded studying may also have affected how they studied. Being video recorded also may have affected how participants studied. Thus, it may be that participants studied differently than they normally do as they participated in this research, which could limit the generalizability of the findings. Further research on how students study at the times and in the locations in which they normally study would provide useful information that could be used to further assess whether the lab setting in which the participants in the current study were video recorded had an effect on how they studied.

5.3 Conclusion

The current study was conducted to ascertain whether or not a positive relationship exists between the degree to which students focus on meaning in their out-of-class study and their in-class performance scores. Previous research by Luft (2007) and Curtin (2012) had found that among certain groups of PCA students lower performing
students spend more time studying than higher performing students. It was hypothesized that the number of instances of meaning-focus would be positively related to in-class performance among PCA students. If lower performing students were neglecting to focus on meaning during their out-of-class study, then they may study for longer without achieving significant improvements in their language ability.

This study fails to find that the number of instances of meaning-focus is positively correlated with in-class performance among PCA students. An implication of this result is that pedagogical interventions for lower performing students that are designed to encourage students to focus more on meaning may not lead to significant improvements in students’ performance ability in PCA. It is recommended that future research investigate the extent to which previous study of the target language, language aptitude, use of language learning strategies, degree of focus, and error in measurement of time spent studying are able to account for why lower performing students in PCA have been found to spend more time studying outside of class than higher performing students.

This study finds that students in PCA in general do not neglect meaning-focus in their out-of-class study. While a slight preference for form-focus over meaning-focus was found, a strong correlation between form-focus and meaning-focus was also found. In other words, students who focus more on form also focus more on meaning. This finding suggests that dialogue rehearsal and performance, if implemented appropriately, can be part of a program where students balance form-focus and meaning-focus in their out-of-class study. It is recommended that future research investigate the extent to which dialogue rehearsal specifically is a meaning-focused activity for PCA students. It is also
recommended that future research investigate which aspects of instruction and assessment most effectively encourage students to focus on meaning during dialogue rehearsal.
References


Appendix A: The Performed Culture Approach Out-of-Class Study Behavior Survey
Performed Culture Approach Out-of-Class Study Behavior Survey

2013
Name: ____________________________________________
Age: ______
Gender: ______

1. How much time do you typically spend preparing for a single ACT class, in total? (select one)

<table>
<thead>
<tr>
<th>Time Range</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>less than 15 minutes</td>
<td>15 minutes</td>
</tr>
<tr>
<td>15 - 30 minutes</td>
<td>30 minutes</td>
</tr>
<tr>
<td>30 minutes - 1 hour</td>
<td>1 hour</td>
</tr>
<tr>
<td>1 - 2 hours</td>
<td>2 - 3 hours</td>
</tr>
<tr>
<td>other:</td>
<td>_____________</td>
</tr>
</tbody>
</table>

2. Please describe the location(s) where you typically prepare for Japanese class. Also describe the lighting, the sounds, your study partners (if any), the social environment, and the furniture:

Location #1: _______________________________________________________________

Lighting (is it dimly lit? brightly lit?): _______________________________________

Sounds (is it quiet? noisy? do you listen to music?): _____________________________

Study partners (do you study by yourself or with others? how many others?): _______

Social environment (are you [and your study partners] alone? are people present?): ___

Furniture you use (do you lie on a bed? sit in a rocking chair? a hard chair?): ______
Location #2: __________________________________________________________

Lighting: __________________________________________________________

Sounds: ___________________________________________________________

Study partners: _____________________________________________________

Social environment: ________________________________________________

Furniture you use: _________________________________________________

Location #3: _______________________________________________________

Lighting: __________________________________________________________

Sounds: ___________________________________________________________

Study partners: _____________________________________________________

Social environment: ________________________________________________

Furniture you use: _________________________________________________

Location #4: _______________________________________________________

Lighting: __________________________________________________________

Sounds: ___________________________________________________________

Study partners: _____________________________________________________

Social environment: ________________________________________________

Furniture you use: _________________________________________________
3. Please describe the time(s) at which you would typically prepare for a Japanese class in a single day. Include all time, regardless of how short (e.g., reviewing right before class starts).

Time #1: From ________ to ________ (approximately) Location: __________________

Time #2: From ________ to ________ (approximately) Location: __________________

Time #3: From ________ to ________ (approximately) Location: __________________

Time #4: From ________ to ________ (approximately) Location: __________________

Time #5: From ________ to ________ (approximately) Location: __________________

4. Please list all materials you might use to prepare for Japanese class (e.g., Japanese: The Spoken Language vol. 2, laptop computer, headphones, pencil, etc.).

5. Select all that apply:

   I have taken Japanese classes at a College or University prior to studying Japanese at Ohio State University.
   If yes, how long did you take classes? ____________________

   I have taken Japanese classes in High School.
   If yes, how long did you take classes? ____________________

   I have taken Japanese classes in Junior High School.
   If yes, how long did you take classes? ____________________
Japanese was part of my formal education in Elementary School.

If yes, how long did you study Japanese? ____________________

I have studied Japanese informally or on my own.

If yes, please describe how you studied: _________________________

I have lived or stayed in Japan.

If yes, how long in total? ____________________

I have native-speaking Japanese relatives.

If yes, who is your closest native-speaking Japanese relative?
________________

I have native-speaking Japanese friends who speak Japanese around me.

I watch TV or movies in Japanese (including movies with subtitles).

If yes, how often? _____ times per week/month/year (select one).

I have studied a foreign language (not Japanese) before.

If yes, which language(s)? ________________________________

How long did you study the language(s)? ____________________

I speak another language (not English).

If yes, which language(s)? ________________________________
6. Is there anything you do outside of class that could help your Japanese improve but that isn’t done specifically to prepare for class (e.g. watching movies)? Please specify below.

7. Did you satisfy the prerequisites for Japanese 1102 by taking Japanese 1101 or by taking a placement test? (select one)

   1101  Placement test

8. List all other Japanese language classes you have taken at Ohio State University besides 1101 and 1102:

Thank you!
Appendix B: Sample Coded Transcript Excerpts

What follows is several excerpts from participants’ transcripts that have been segmented and coded. Exerpts were selected so as to provide examples of each kind of coding category. The first excerpt is from a field test participant, while the rest are from the participants’ whose data was used for the final analysis. The slashes (“/”) indicate segmentation, or where one thought is considered to end and a new thought is considered to begin. The letters in parenthesis preceding the slashes indicate how each thought was coded.

Excerpt #1: A field test participant working on a listening comprehension exercise.

I know they’re talking about missing each other due to context, (M) / but I’m not really understanding the words. (M) / Oh, hua xuan, I remember that. (I) / That’s that hand game that we learned about last year. (M) / Don’t understand this sentence, (M) / but I think it has something to do with letting the guy rest after getting off the plane. (M) / Don’t know what jin cha means. (M) / Oh, wait, maybe that’s customs, (M) / because they’re saying that he has to go there after getting off the plane. (M) / Hui to jien. I really don’t know what that means (M) /
and they just said it three times. (F) / Something to do with seeing you, maybe
later. (M) (FT#5)

Excerpt #2: A participant working on dialogue rehearsal.

_Yobimasyoo ka._ (I) / Okay, I thought call meant just call, like telephone for a
second, (M) / but no, it means beckon as well. (M) / That’s interesting. (O) / Okay.
(O) / _Asuko. Asuko. Asuko._ (I) / Oh. (O) / What is that word? (F) / _Betu ni. Betu ni._
(I) / Oh. (O). / _Isogasikunai._ (I) / So difficult to pronounce. (F) / _Isogasikunai._ (I) /
_Yobimasyoo ka,_ in comparison, much easier to pronounce. (F) / What is that word?
(F) / _Tanaka-san, asuko._ (I) / Not _asoko, asuko._ (F)

Excerpt #3: A participant working on a writing assignment.

Why can’t I figure this out? (O) / This is possibly my lowest moment in Japanese
history. (O) / I should really have reviewed my katakana. (O) / I haven’t really
reviewed that or like studied that since last semester. (O) / It’s probably not that
good to do. (O) / I don’t know. (O) / Maybe I should write that down in my weird
kanji book. (O) / It’s like kanji symbols. (O) / What did I even name that? (O) /
What is this under my nail? (O) / Why am I distracted right now? (O) / I should
really be doing something. (O) / This dumb pencil. (O) / I really hope I don’t get too frustrated with this. (O) / How am I not figuring out what this is saying? (O) / This music is not making this any better actually. (O) / Another dumb Spotify commercial. (O) / And her voice, my Lord. (O) / I never thought I would hear a voice so annoying. (O) / And what is this saying? (I) / Seriously, like why am I not figuring this out? (O) / It’s probably something I just read like last week. (O) / I don’t know. (O) / That was a good day last week. (O) / I actually did good. (O)

Excerpt #4: A participant working on dialogue rehearsal.

At this point I’m usually just thinking about how hard a couple of the words—the new words are to say, (N) / so I just keep thinking about repeating it over and over (F) / and thinking of the English word in my head (M) / to try and associate it with it, (I) / and I usually think about reading through the whole thing, once through each part (N) / and then while looking at the book I just keep trying to read it (O) / and I keep trying to get it stuck in my head. (I) / Then I come across a word that always gives me problems even when I’m just reading it, (I) / so I just repeat it (F), / because it can help build that reinforcement in my head. (N)
Excerpt #5: A participant working on dialogue rehearsal.

I don’t know how to say this word without the o in front. (F) / Let’s catch it again. (O) / I need to make sure I say this right. (F) / I think I’m saying it wrong. (F) / I wasn’t sure if it’s *yasuku* or *yasoku*. (F) / That sounds right. (F) / So I’m not sure if I’m saying this right. (F) / I’m tripping on this. (F) / How is she saying it? (F) / What’s the difference between the two? (I) / Let’s see if I can remember it. (O) / Is that right? (I) / I keep saying *natta n* or *datta n*. (F) / It’s *datta n*. (F) / Stopped it a little too early. (O) / Let’s see what it sounds like combined with the phrase before it. (F) / Is that right? (I) / I can’t remember how to say this word. (F) / Let’s do it again, (O) / see if I can remember it without the book. (O)