INVESTIGATING THE EFFECTS OF MINDFULNESS MEDITATION ON L2 LEARNERS’ SELF-EFFICACY IN AN INSTRUCTED FOREIGN LANGUAGE CONTEXT

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ABSTRACT

A large body of research in Second Language Acquisition (SLA) is dedicated to the effects of individual differences among language learners. However, specific pedagogical interventions to either enhance or lessen these individual differences have been scarcely investigated and often overlooked in the literature. The present study investigated how mindfulness meditation could be implemented as such an intervention in a university-level Spanish course.

Five Spanish sections ($n = 65$) received mindfulness meditation as a treatment, consisting of five-minute sessions every class period over the span of 13 weeks. An additional five sections ($n = 59$) were the control group and were used for baseline comparisons, as they completed no such treatment. The Freiberg Mindfulness Inventory (Walach, Buchheld, Buttenmüller, Kleinecht & Schmidt, 2006) elicited participants’ mindfulness scores to measure the effectiveness of the treatment. Using an experimental design at two levels (pre- and posttest comparisons), I used an adapted version of the Questionnaire for English Self-efficacy (Wang, Schwab, Fenn, & Chang, 2013) for an L2 self-efficacy measurement. The Language Orientation Questionnaire (adapted from Dornyei & Chan, 2013) measured participants’ motivation, and the Foreign Language Classroom Anxiety Scale (Horwitz, Horwitz, & Cope, 1986) measured participants’ foreign language anxiety. Finally, participants in the experimental group also completed the Mindfulness Experience Questionnaire (created for this study) to provide open-ended responses regarding their experience with the mindfulness meditation practice in the foreign language classroom.
Using a mixed between-within analysis of variance (SPANova), this study quantitatively analyzes differences in scores using pretest and posttest survey data. Qualitatively, I used Charmaz’s (2006) *Constructivist Grounded Theory* to do a line-by-line analysis of the open-ended responses provided by the learners regarding various aspects of the experimental group’s perceptions of the treatment. Quantitative findings from this investigation did not show a significant difference in the survey scores between the experimental and control groups in any of the dependent variables except for the mindfulness scores. However, the qualitative findings indicated that participants had strong positive sentiment towards the mindfulness meditation practice. There were two major categories that emerged from the qualitative data analysis, which related to language learners’ anxiety and a mindset for language learning. Overall, this study provides evidence that mindfulness meditation can be a useful pedagogical tool in the instructed foreign language classroom.
DEDICATION

This dissertation is dedicated to my family for all of their sacrifices they have made so that I could succeed. I hope this work makes you proud. I love you with all of my heart.
<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>ANOVA</td>
<td>Analysis of variance</td>
</tr>
<tr>
<td><em>F</em></td>
<td>Fisher’s F ratio: a ratio of two variances</td>
</tr>
<tr>
<td><em>FLCAS</em></td>
<td>Foreign Language Classroom Anxiety Scale</td>
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<tr>
<td>L2</td>
<td>Second language</td>
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<tr>
<td><em>M</em></td>
<td>Mean: the sum of a set of measurements divided by the number of measurements in the set</td>
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<td><em>n</em></td>
<td>Number in sample</td>
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<tr>
<td><em>p</em></td>
<td>Probability associated with the occurrence under the null hypothesis of a value as extreme as or more extreme than the observed value</td>
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<tr>
<td>SD</td>
<td>Standard Deviation</td>
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<td>SLA</td>
<td>Second Language Acquisition</td>
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<tr>
<td><em>SPANOVA</em></td>
<td>Mixed between-within analysis of variance</td>
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<td><em>t</em></td>
<td>Computed value of <em>t</em>-test</td>
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<td><em>η</em>&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Partial eta squared: estimate of the degree of association for the sample</td>
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ACKNOWLEDGMENTS

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CONTENTS

ABSTRACT ....................................................................................................................... ii

DEDICATION .................................................................................................................. iv

LIST OF ABBREVIATIONS AND SYMBOLS ................................................................ v

ACKNOWLEDGMENTS .................................................................................................... vi

LIST OF TABLES ............................................................................................................ x

LIST OF FIGURES ........................................................................................................ xii

CHAPTER 1: INTRODUCTION ......................................................................................... 1

1.1 Introduction to the Study ......................................................................................... 1

1.2 Chapter Overview ..................................................................................................... 3

CHAPTER 2: LITERATURE REVIEW ............................................................................... 5

2.1 Introduction to the Literature Review ...................................................................... 5

2.2 Relevant Second Language Acquisition Literature ................................................ 6

2.2.1 Transitioning Pedagogical and Research Practices ............................................. 6

2.2.2 Self-efficacy in the Foreign Language Classroom ............................................... 11

2.2.2.1 Definition and Framework from Bandura’s (1977) Theory of Self-efficacy .... 11

2.2.2.2 Applicability of Self-efficacy Theory in the Second Language Acquisition Research .... 13

2.2.3 Overview of Foreign Language Anxiety Theory .................................................... 14

2.2.3.1 Horwitz, Horwitz, and Cope’s (1986) Conceptualization of Foreign Language Anxiety 15

2.2.3.2 Effects of Foreign Language Anxiety on Second Language Acquisition ........... 15

2.2.3.3 Foreign Language Anxiety’s Relationship to Self-efficacy .............................. 17
2.2.4 Overview of Second Language Motivation ......................................................... 18
2.2.4.1 Dörnyei’s (2009) L2 Motivational Self System .................................................. 18
2.2.4.2 Effects of Motivation on L2 Acquisition .......................................................... 20
2.2.4.3 L2 Motivational Self System’s Relationship to Self-efficacy ............................ 21
2.3 Relevant Mindfulness Meditation Literature ......................................................... 23
2.3.1 Description and Definition of Mindfulness as a Practice .................................. 23
2.3.2 Theoretical Framework for Mindfulness .............................................................. 23
2.2.3 Summary of Mindfulness Meditation Research ............................................... 25
2.2.3.1 Mindfulness Research in Cognitive Sciences .................................................. 25
2.2.3.2 Mindfulness Research in Education ................................................................. 26
2.2.3.3 Mindfulness Research as it Pertains to Bandura’s Self-efficacy Theory .............. 27
2.4 Research Questions ................................................................................................. 29
CHAPTER 3: METHODOLOGY .................................................................................. 30
3.1 Description of Participants ..................................................................................... 30
3.2 Course Description ................................................................................................. 31
3.3 Instruments ............................................................................................................ 32
3.4 Procedures ............................................................................................................. 35
3.4.1 General Procedures ............................................................................................ 35
3.4.2 Quantitative Data Analyses Procedures .............................................................. 37
3.4.3 Qualitative Data Analysis Procedure ................................................................... 38
3.4.4 Subjectivity Statement ....................................................................................... 39
CHAPTER 4 RESULTS ............................................................................................. 41
4.1 Quantitative Analysis of Survey Responses .......................................................... 41
4.1.1 Introduction to Quantitative Results

4.1.2 Mindfulness Meditation Scores

4.1.3 Self-efficacy Analysis

4.1.4 Anxiety Analysis

4.1.5 Motivation Analysis

4.1.6 Summary of Quantitative Results

4.2 Analysis of the Mindfulness Experience Questionnaire

4.2.1 Introduction to Qualitative Analysis

4.2.2 Overview of Perceptions Towards Mindfulness Meditation

4.2.2.1 Summary of Positive Sentiments in the Mindfulness Experience Questionnaire

4.2.2.2 Summary of Neutral Perceptions in the Mindfulness Experience Questionnaire

4.2.2.3 Summary of Negative Sentiments in the Mindfulness Experience Questionnaire

4.2.3 Analysis of Categories Found in Mindfulness Experience Questionnaire Responses

4.2.3.1 Overview of Category Construction using Charmaz’s (2006) Constructivist Grounded Theory

4.2.3.2 Construction and Elaboration of the Anxiety Category in Participants’ Open-ended Responses

4.2.3.3 Construction and Elaboration of the Mindset Category in the Participants’ Open-ended Responses

4.2.4 Motivation in the Mindfulness Experience Questionnaire

4.3 Summary of Qualitative Analysis

CHAPTER 5: DISCUSSION

5.1 Introduction

5.2 Self-efficacy in the Foreign Language Classroom

5.3 Foreign Language Anxiety Versus Stress
5.4 Intentionality and Mindfulness in the Foreign Language Classroom ........................................... 85
5.5 Implications for the Foreign Language Classroom ........................................................................... 89
5.5.1 Implications for Foreign Language Classroom Research ........................................................... 89
5.5.2 Pedagogical Implications ............................................................................................................. 91
5.5.3 Recommendations for Implementing a Mindfulness Practice in the Classroom ................. 94
5.5.3.1 Promoting L2 Learner Openness to Mindfulness ................................................................. 94
5.5.3.2 Supporting L2 Learner Intentionality of Mindfulness ............................................................ 95
5.5.3.3 Guide to Implementing Mindfulness Meditation in the Foreign Language Classroom ... 96

CHAPTER 6: CONCLUSION ......................................................................................................................... 101
6.1 Lessons Learned from Investigating Mindfulness Meditation in an L2 Setting ...................... 101
6.2 Limitations and Future Directions of the Present Study ........................................................... 102
6.3 The Future of Mindful Language Learning in the L2 Classroom ............................................. 106

REFERENCES ........................................................................................................................................ 111

APPENDICES ......................................................................................................................................... 124
LIST OF TABLES

Table 1. Mindfulness Scores by Group................................................................. 42
Table 2. Self-efficacy Scores by group................................................................. 43
Table 3. Self-efficacy Scores by Group and Survey ............................................ 44
Table 4. Anxiety Scores by Group...................................................................... 45
Table 5. Anxiety Scores by Group and Survey Subsection................................. 47
Table 6. Motivation Scores by Group.................................................................. 48
Table 7. Motivation Scores by Group and Survey Subsection.............................. 49
Table 8. Positive, Neutral, and Negative Response Rates for the Mindfulness Experience Questionnaire .......................................................... 51
Table 9. Examples of Positive Responses from the Mindfulness Experience Questionnaire ..... 53
Table 10. Examples of Neutral Responses from the Mindfulness Experience Questionnaire .... 55
Table 11. Anxiety-themed and Mindset-themed Response Rates for the Mindfulness Experience Questionnaire .......................................................... 59
LIST OF FIGURES

Figure 1. Shapiro et al.’s (2006) theoretical framework of mindfulness meditation .................. 25
CHAPTER 1: INTRODUCTION

1.1 Introduction to the Study

With the advancements in Second Language Acquisition (SLA) research, investigators have become increasingly concerned with the role that self-efficacy may play during the language learning process. Self-efficacy theory, born out of Alberta Bandura’s Social Cognitive Theory (Bandura, 1977), is commonly understood as the confidence one has in their own abilities to complete or succeed during a task. Factors such as performance accomplishments, vicarious experiences, verbal persuasions, and physiological states are central to one’s self-efficacy with a task. Researchers in the field of SLA have established that learners are more likely to succeed in acquiring a second language (L2) if they report high self-efficacy scores (Mills, Pajares, & Herron, 2007; Pajares, 2003; Wang, Spencer, & Xing, 2009; Yusuf, 2011), and the lack of self-efficacy in language learners can have negative effects on the language acquisition process (Torres & Turner, 2016). The question that needs to be answered now, though, is what steps can be taken in order to increase learners’ self-efficacy in the classroom.

A potential catalyst for increasing self-efficacy in an academic context may be found in a recently popularized intervention—mindfulness meditation. Unique from traditional meditation practices, mindfulness meditation is the conscious act of making oneself more cognizant, nonjudgmental, and aware of the present moment. The goals of secular mindfulness meditation as a treatment are to improve cognitive function, decrease anxiety, and aid as a clinical
intervention for various demographics. This is evidenced by the existing research, which claims that mindfulness meditation can increase working memory (Jha, Stanley, Kiyonaga, Wong, & Gelfand, 2010; Mrazek, Franklin, Phillips, Baird, & Schooler, 2013), reduce general anxiety (Hofmann, Sawyer, Witt, & Oh, 2010), and even help with emotion regulation (Roemer, Williston, & Rollins, 2015).

The research dedicated to mindfulness meditation and its effects in the classroom suggests that it can effectively lower participants’ anxiety, particularly in a formal educational setting, and studies have examined future healthcare professionals (Irving, Dobkin, & Park, 2009), undergraduate university students (Galante et al., 2018), and high school students (Caldwell, Harrison, Adams, Quin, & Greeson, 2010). These findings corroborate previous studies that suggest that mindfulness meditation can increase cognitive function and alter the physiological characteristics of the brain (Hölzel et al., 2009; Vestergaard-Poulsen et al., 2009). Despite mindfulness meditation research suggesting that it can lower anxiety and increase university students’ achievement, it has not been investigated as a potential tool in the classroom to affect learners’ self-efficacy in an instructed foreign language classroom. Therefore, the present study aims to bridge the existing mindfulness meditation literature with that of SLA.

Fallah (2016) found that dispositional mindfulness scores were strongly correlated with high levels of Coping Self-Efficacy in the foreign language context. The current study expands this work by using a longitudinal, experimental design to determine the outcomes of a mindfulness meditation practice. To the author’s knowledge, Fallah’s research is the first empirical investigation that explores the relationship between mindfulness and self-efficacy in language learners. However, this study targeted dispositional mindfulness (i.e., mindfulness trait) and did not include a mindfulness meditation practice. As such, it is still unknown whether
an intervention can change participants’ mindfulness traits and, in turn, have an effect on learners’ self-efficacy. The next step is to determine whether or not introducing a mindfulness practice into the classroom can alter language learners’ self-efficacy scores. Because this study is the first to do so, I utilize several measures to triangulate the effects that mindfulness meditation has on learners’ foreign language anxiety, motivation, and general self-efficacy, as well as a quantitative and qualitative mixed methods approach.

1.2 Chapter Overview

This dissertation is organized into six chapters. The current chapter introduces the purpose of the study. The second chapter begins by briefly summarizing the relevant transitions in foreign language pedagogy and research. I then summarize the existing literature for both areas of research: SLA and mindfulness meditation. I then turn to an overview of the theoretical frameworks and previous studies relating to Bandura’s (1977) theory of self-efficacy. Next, I summarize the works regarding Horwitz, Horwitz, and Cope’s (1986) foreign language anxiety, and finally those pertaining to Dörnyei’s (2009) theory of the L2 Motivational Self System. The second half of the literature review is dedicated to the tenants of mindfulness meditation, for which I provide a basic introduction, its theoretical framework, and the relevant empirical research. The last subsection of the literature review contains the research questions that guide the present study. Chapter 3 contains an outline of the methods. The beginning provides a description of the participants and the type of classroom in which the study takes place. I then detail the instruments I implemented for data collection. Chapter 4 provides the quantitative and qualitative results from the experiment, and Chapter 5 is where I discuss and interpret the data analysis. Chapter 5 also provides implications for instructed L2 pedagogy and mindfulness meditation research. Chapter 5 concludes with recommendations to foreign language instructors
that are interested in implementing a mindfulness meditation practice in their classes. Finally, I discuss the conclusions in Chapter 6 and provide future avenues of research as they pertain to the methodology and findings from this study.
CHAPTER 2: LITERATURE REVIEW

2.1 Introduction to Literature Review

This chapter is dedicated to positioning the present study within the parameters of the existing literature and theoretical frameworks of both SLA and mindfulness research. I begin the review of SLA literature by briefly discussing a student-centered pedagogical approach. A historical perspective of the pedagogical transitions in the L2 classroom also play an important role in informing the present study. Specifically, the movement for more humanistic, student-centered pedagogy forms the foundation for how mindfulness fits within the L2 classroom. In order to further establish my viewpoint for how mindfulness can exist within an SLA theoretical paradigm, I briefly explore role that cognitive, empirical research can play in determining best practices for L2 education. I conclude my brief representation of pedagogical practices by emphasizing the importance of learners’ emotions in the L2 classroom.

Next, I discuss the major areas of SLA investigation for the present study. They are general self-efficacy, foreign language anxiety, and L2 motivation. I highlight the works of Bandura (1977), Horwitz, Horwitz, and Cope (1986), and Dörnyei (2009) by first providing the theoretical framework from each scholar, and then I summarize relevant empirical findings from their theories. In order to understand how foreign language anxiety and L2 motivation contribute to the broader sense of general self-efficacy, I conclude by discussing their interconnectedness with, and relationship to, Bandura’s theory of self-efficacy.
The second section of this literature review is dedicated to mindfulness research. I first provide the theoretical framework for the present study, Shapiro, Carlson, Astin and Freedman’s (2006) three axioms, which are intention, attention, and attitude. I then turn to mindfulness research as it pertains to general cognitive sciences and education. I conclude this portion of the literature review by highlighting previous studies that investigate the effects of mindfulness meditation on self-efficacy.

2.2 Relevant Second Language Acquisition Literature

2.2.1 Transitioning Pedagogical and Research Practices

To best situate the present study within the related lines of research, especially with regard to self-efficacy, it is first important to establish how pedagogical practices have moved from an instructor-centered classroom to a student-centered focus. A catalyst for this shift was the emphasis on implicit learning, as this practice forces learners to be more autonomous with their learning. Traditional pedagogical approaches to L2 instruction in formal contexts often place the teacher at the center of curriculum design. In these contexts, the teacher assumes the role of source of knowledge and/or driving force for language acquisition. Students, on the other hand, assume a passive role in their language acquisition and experience less autonomy with their learning. Teacher-centered foreign language pedagogy typically relied on explicit instruction of grammatical forms. It was believed that this allowed for more controlled instruction of target forms, which, in turn, supposedly resulted in explicit linguistic understanding of the target language.

In contrast, student-centered pedagogy allows for more learner autonomy in the L2 classroom. With the implementation of more communicative methods in the classroom, students are expected to take on more personal agency in their learning. As such, implicit approaches to
pedagogy force the student to become responsible for their learning through autonomous activities. Among these activities are tasks in which teachers present new aspects of the target language without specifically defining them or explaining the linguistic rules that govern them, thus placing more of a focus on implicit L2 knowledge. However, explicit versus implicit teaching and learning is still widely debated among SLA researchers (Andringa & Rebuschat, 2015; Ellis, 2006; Hulstijn, 2005; Paciorek & Williams, 2015).

As educators became more concerned with a student-centered approach, a humanistic movement began the process of embodying the entire learner as an integral part of the learning experience. To date, several instructors and researchers have expanded student-centered pedagogy to encompass the individual needs of the learner. This transition centers around what is termed as humanistic language teaching/learning. First emerging in the 1970s as a reaction to the structural approach, humanistic learning pushes the student-centered approach to language teaching by recognizing that learners are people with their own means of learning and existing. Broadly, humanistic education focuses on “empower[ing] people to lead a meaningful and purposeful life by boosting their intellectual and emotional abilities as well as their types of relationships, attitudes, values and thinking styles” (Ketabi, Zabihi, & Ghadiri, 2012, p. 2, as cited in Dabbagh & Noshadi, 2016). Additionally, Grundy (2013) cites Moskowitz’s (1978) ten “categories of awareness” that serve as a guide for accomplishing a humanistic approach to teaching. These categories are: “Relating to Others; Discovering Myself; My Strengths; My Self-Image; Expressing My Feelings; My Memories; Sharing Myself; My Values; The Arts and Me; Me and My Fantasies” (Grundy, 2013, p. 23). The objectives of humanistic teaching/learning can also be described as allowing the language learner to focus on personal expression by letting them be autonomous in a supporting, nonjudgmental environment.
Humanistic approaches have been shown to be beneficial to language learners. For example, they have been found to have a significantly positive effect on learner performance as a result of instructor’s empathic behaviors (Bozkurt & Ozden, 2010). As a result, researchers state that the syllabus should take a more holistic approach, evoking more life-relating skills, enhancement of the whole-learning, and intellectual development (Dabbagh & Noshadi, 2016). Also, findings have shown that learners prefer humanistic approaches to formal education versus traditional, teacher-centered methods (Bashir, 2013).

Importantly, humanistic teaching/learning has shaped the way we view L2 learners’ emotions. Dörnyei and Ryan (2015) are one of the leading advocates for a tailored focus on L2 learners’ emotions. As such, they have argued that “feelings and emotions play a huge part in all our lives […] L2 learning is an emotionally loaded experience and any description of what makes a particular learner unique needs to take this into account” (pp. 9-10). Emotions, cognition, and identities are widely understood as having an interrelated impact on overall L2 acquisition (Van Veen & Lasky, 2006). The connection between emotions and identities with learners’ beliefs are still in question today but show promise of further articulating the language learning experience (Barcelos, 2015).

Unfortunately, the issues surrounding L2 learners’ emotions are often overlooked (Dörnyei & Ryan, 2015), but there is a growing movement to return to the student-centered, holistic understanding of the L2 acquisition experience. For example, only recently are we fully beginning to understand that emotional intelligence is a leading predictor for L2 learners’ attitudes towards L2 learning (Oz, Demirezen, & Pourfeiz, 2015). Emotions, such as joy and shame, are seen to have a distinct relationship with learners’ motivational systems (Teimouri, 2017). Additionally, fMRI research has been able to identify the emotional differences between
reading tasks in the L2 versus the L1, which further explains how emotions are processed in bilinguals (Hsu, Jacobs, & Conrad, 2015).

Rooted in a humanistic approach, one of the strongest movements for a student-centered pedagogy is encompassed by what is termed positive psychology. Founded by Martin Seligman, this movement continues to gain popularity in the field of SLA. As a brief introduction, Oxford (2016) outlines the term EMPATHICS, an acronym that represents the “important psychological forces that help learners achieve high well-being and progress rapidly, develop proficiency, and relish the language learning experience” (p. 10). EMPATHICS stands for (i) emotion and empathy, (ii) meaning and motivation, (iii) perseverance, including resilience, hope, and optimism, (iv) agency and autonomy, (v) time, (vi) hardiness and habits of mind, (vii) intelligences, (viii) character strengths, and finally (ix) self-factors (p. 10). While most of the aforementioned letters in EMPATHY are self-descriptive, the final letter of the acronym encompasses a common area of interest in SLA, such as self-efficacy, self-concept, and self-esteem. It is important to note that positive psychology views these nine facets that compose the overall learning experience as having an intricate, cyclical relationship. Oxford continues by stating that, “Positive psychology, with its concentration on well-being, does not ignore human difficulties, but it faces them from the point of view of human strength rather than weakness” (p. 11).

Researching the effects of a positive psychology perspective in the language classroom is an emerging interest in SLA. Previous findings show that the incorporation of positive psychology activities can have beneficial outcomes for the learning experience, particularly with social capital and learners’ meaning with language acquisition (Gregersen, Macintyre, & Meza, 2016), as well as enjoyment, engagement, and achievement in the language classroom.
(Seligman, Ernst, Gillham, Reivich, & Linkins, 2009). Novice instructors reported a more enjoyable experience when considering their own sense of hope and hardiness in the L2 classroom (Hiver, 2016). Others have found that, outside the classroom, positive psychology is found to alleviate symptoms of depression and anxiety with only limited interventions (Bolier, Haverman, Westerhof, Riper, Smit, & Bohlmeijer, 2013). Though positive psychology is posed to usher in more advancements in L2 pedagogy, more research is still needed.

Returning to the independent study of cognition, cognition and emotion have been studied as being two distinct aspects of L2 acquisition (Dörnyei, 2009b). In particular, cognitive research in SLA emerged as an area of research that attempts to understand the underlying processes that take place in the brain during language learning. Cognitive SLA understands language acquisition as a process which occurs primarily, if not solely, in the brain. Emotions are also considered within this paradigm as being part of the cognitive understanding of the L2 acquisition experience. Research in the field considers language acquisition a quantifiable and measurable phenomenon that can be investigated using experimental methods. Typically, the design includes an experimental group and a control group (used for baseline comparisons). Cognitive SLA research, then, uses validated instruments and controlled conditions to answer hypotheses regarding how languages are acquired.

There are several examples of how cognitive SLA research has informed our using of L2 acquisition. Tomlin and Gernsbacher (1994) first called for more research in the field of cognitive SLA as a means to detangle the confounding tenants that dictate our understanding of L2 acquisition. A common area of research in cognitive SLA centers on the role of attention in the language acquisition process (Bak, Long, Vega-Mendoza, & Sorace, 2016; DeKeyser, 2003; Leow, 1998; Tomlin & Villa, 1994), which relates back to the continued debates regarding
implicit and explicit learning. Other popular areas of research in cognitive SLA include morphosyntactic processing (Dowens, Vergara, Barber, & Carreiras, 2009), comparing explicit versus implicit training’s effects on gender agreement (Morgan-Short, Sanz, Steinhauer, & Ullman, 2010), and variation in L2 acquisition and bilingualism (Birdsong, 2018).

2.2.2 Self-efficacy in the Foreign Language Classroom

Under the broad umbrella research of individual differences of cognition and emotion Bandura’s (1977) theory of self-efficacy highlights four major principles: performance accomplishments, vicarious experience, verbal persuasion, and physiological states. Notably, Bandura’s examples center around phobic stimuli outside of academia. However, for the purposes of this study, the following principles are discussed specifically in relation to the language learners’ experience in an academic context. Crucially, self-efficacy is a broad term that encompasses several variables, such as motivation and foreign language anxiety, both of which will also be addressed individually in later sections.

2.2.2.1 Definition and Framework from Bandura’s (1977) Theory of Self-efficacy

The first principle of Bandura’s (1977) theory of self-efficacy, performance accomplishments, relates to learners’ achievement and progress with a task. Repeated success with a task is theorized to have compounding benefits for learners’ self-efficacy. Conversely, continued failure results in lowered self-efficacy for the learner. Bandura states that the compounding positive affect of success on self-efficacy can result in “improvements in behavioral functioning […] to similar situations [and] activities that are substantially different from those on which the treatment was focused” (Bandura, 1977, p. 195). He also points to the fact that successfully learned coping skills can be implemented in transferrable ways, thus
promoting higher self-efficacy based on capacity for handling challenging tasks (e.g., completing assessments).

The second principle, vicarious experiences, highlights the positive effects of witnessing successful performances of a task through modeled behavior. Bandura (1977) indicates that inhibitions can be lowered by observing success with overcoming anxiety-inducing tasks. For example, a novice language learner who is giving oral presentations as an assessment in a high-stakes context may experience high levels of stress. These feelings of stress, according to the theory, could be lowered by witnessing other language learners successfully give their oral presentations. This principle also accounts for learner motivation by stating that “showing the gains achieved by effortful coping behavior not only minimizes for observers the negative impact of temporary distress but demonstrates that even the most anxious can eventually succeed through perseverance” (Bandura, 1977, p. 197).

Bandura (1977) states that the third principle, verbal persuasion, takes place when “people are led, through suggestion, to believe they can cope successfully with what has overwhelmed them in the past” (p. 198). This principle, then, partially places responsibility of learners’ self-efficacy on the language instructor. Bandura states that words of encouragement, however, are weaker than first-person accomplishments, stating that “whatever mastery expectations are induced by suggestion can be readily extinguished by disconfirming experiences” (p. 198). This implies that while this principle contributes to overall self-efficacy, it does not fully support an individual’s self-efficacy independently from the other principles. Verbal persuasion is most supported by the first principle, performance accomplishment, but acts of praise and suggestion can also be fostered through the other principles as well, including vicarious experiences and physiological states.
The final principle, physiological states, relates to the emotional state of the individual. Bandura (1977) suggests that this principle plays a key role in individual self-efficacy because these emotional responses reflect and predict the individual’s experience with the previous three principles. Importantly, physiological states, coupled with environment stimuli, are susceptible to coping mechanisms. For example, Bandura explains that “individuals who come to believe that they are less vulnerable than they previously assumed are less prone to generate frightening thoughts in threatening situations” (p. 200).

Overall, the reciprocity between the four principles described here encompass one’s self-efficacy to accomplish a task. One can then consider Bandura’s (1977) theory of self-efficacy an instructional guide for enhancing learners’ self-efficacy.

2.2.2.2 Applicability of Self-efficacy Theory in Second Language Acquisition Research

Bandura’s (1977) theory of self-efficacy provides a theoretical framework for several areas of investigation in SLA. Researchers have examined the potential relationships self-efficacy may have with other related factors that affect language learning. For example, Nosratinia, Savei, and Zaker (2014) found a strong correlation between self-efficacy and metacognitive awareness, as learners with high self-efficacy will elevate their linguistic competence and achievement in the target language, while those with lower self-efficacy will not. SLA research also indicates that self-efficacy beliefs are a major contributing variable for learner performance (Mahyuddin et al., 2006; Wang, Spencer, & Xing, 2009), and increased general academic achievement (Yusuf, 2011). Self-efficacy can also predict achievement of specific tasks, such as writing achievement in the target language (Pajares, 2003). Consequently, self-efficacy is also correlated with reading and listening proficiency in a target language (Mills, Pajares, & Herron, 2006).
Others have taken Bandura’s (1977) theory of self-efficacy and expanded it. For example, Zuo and Wang (2016) provide a qualitative analysis of Chinese learners’ self-efficacy shows learners have five factors which influence self-efficacy: “past performance, peers’ and advisors’ influence, social persuasions, emotional and physiological states, self-awareness of English proficiency, familiarity with and the difficulty level of the tasks, and interest” (p. 101). It is important to note that the authors claim that there may be differences when considering an individual’s cultural background. Nonetheless, the most widely accepted theory still lies with Bandura’s four principles that significantly contribute to the make-up of an individual’s self-efficacy.

Current research points toward investigating manipulations of self-efficacy in an effort to aid language learners in becoming more successful with their target language acquisition. Such investigations embrace interdisciplinary methods, including brain-based teaching, a holistic pedagogy that focuses on learners’ natural cognitive processes, which can yield significantly positive changes for adolescent English learners (Oghyanous, 2017). With respect to the four principles of Bandura’s (1977) theory, recent studies point to performance (often stated as mastery) experience as the most influential factor in L2 learners’ overall self-efficacy beliefs (Fantuzzo & McWayne, 2002; Klassen, 2004, as cited in Busse, 2013), which suggests that isolating this principle can result in positive benefits for the language learner.

2.2.3 Overview of Foreign Language Anxiety Theory

Within the broader notion of self-efficacy, is the related emotion of anxiety. Foreign language anxiety can be defined as “a distinct complex of self-perceptions, beliefs, feelings, and behaviors related to classroom language learning arising from the uniqueness of the language learning process” (Horwitz, Horwitz, & Cope, 1991, p. 31). Because this factor has concerned
instructors and researchers alike for decades, foreign language anxiety is one of the most
dominant variables of study in SLA research.

2.2.3.1 Horwitz, Horwitz, and Cope’s (1986) Conceptualization of Foreign Language Anxiety

Horwitz, Horwitz, and Cope (1986) originally provided three examples as to how foreign
language anxiety is different from general anxiety: (i) Communication Apprehension, (ii) Test
Anxiety, and (iii) Fear of Negative Evaluation. Horwitz (2017), however, has since debunked the
common misinterpretation of the Horwitz et al.’s (1986) conceptualization of foreign language
anxiety as consisting of only three formulaic components. Instead, she points to the necessity for
language teachers to simply acknowledge foreign language anxiety as a pervasive, debilitating
variable (Horwitz, 2017). She proposes that language anxiety is better understood as the feeling
of anxiousness that is a result of language learners not being able to fully express themselves in
an authentic manner in the L2 (Horwitz, 2013, p. 42).

While the constructs of foreign language anxiety are still ambiguously defined and still
widely debated (Park, 2014), one of the most prominent outcomes of this line of work is Horwitz
et al.’s (1986) *Foreign Language Classroom Anxiety Scale* (FLCAS). This instrument is still
among the most reliable instruments for detecting learners’ foreign language anxiety. As a
specific example of how this scale has been implemented in recent work, Lileikienė and
Danilevičienė (2016) were able to use the FLCAS to report that, out of 200 foreign language
learners, 80% of their participants experienced high levels of anxiety.

2.2.3.2 Effects of Foreign Language Anxiety on Second Language Acquisition

Beyond just reporting that anxiety is present, it is also important to understand the
negative consequences associated with high levels of foreign language anxiety in language
learners and how this may affect the language acquisition process. Steinberg and Horwitz (1986)
were among the first researchers to analyze the effects of anxiety on the language acquisition process. They found that apprehension with language performance, specifically “the degree of subjectivity, of personal input, in the second language message” (Steinberg & Horwitz, 1986, p. 135), were among the subtle influences of foreign language anxiety on the learners’ willingness to express themselves.

Another impact of anxiety is its subtle effects on L2 performance and cognitive processing. Tobias (1986) characterize language learning as having three different stages: (i) language input, (ii) processing and interpretation, and (iii) output. Previous findings indicate that language anxiety slows progression between the first and second stage and impairs quality of production at the third stage, and performance measurements may not provide an adequate insight into the subtleties of foreign language anxiety (MacIntyre & Gardner, 1994b, p. 301). Fundamental studies found that foreign language anxiety could easily be induced by an external stimulant, which results in performance issues in the target language (MacIntyre & Gardner, 1994a; Steinberg & Horwitz, 1986). With regard to environment, previous research has shown that language learners’ source of foreign language anxiety may stem from intrinsic demands for correctness and grammatical precision (Coryell & Clark, 2009).

Recent investigations into the effects of foreign language anxiety also raise concerns regarding learners’ test anxiety (Salehi & Marefat, 2014), oral performance (Hewitt & Stephenson, 2012; Kim, 2009), listening comprehension (Elkhafaifi, 2005), learner attrition (Bailey, Onwuegbuzie, & Daley, 2003), and academic achievement (Bailey, Onwuegbuzie, & Daley, 2000; Cakıcı, 2016). Similarly, Erkan and Saban (2011) found that there was a negative correlation between learners’ writing performance and their anxiety. Despite extensive research, relatively few investigations have gone beyond reporting the presence of foreign language
anxiety. To the author’s knowledge, two prominent studies point to the L2 instructor as having the most influential role in reducing foreign language anxiety (Alrabai, 2015; Young, 1991). Nonetheless, continued research is necessary in order to understand how to alleviate foreign language anxiety in L2 learners.

2.2.3.3 Foreign Language Anxiety’s Relationship to Self-efficacy

A straightforward relationship exists between Bandura’s (1976) theory of self-efficacy and Horwitz et al.’s (1986) conceptualization of foreign language anxiety. To highlight the similarities between these two variables, it is important to first establish both as individual differences. Ehrman, Leaver, and Oxford (2003) place foreign language anxiety and self-efficacy under the umbrella term of individual difference because of their variability among language learners. Zhang (2013) argues that individual differences (e.g., foreign language anxiety, motivation, self-efficacy, etc.) have a reciprocal relationship by stating, “These factors do not act in isolation from one another. On the contrary, these [individual differences] are dynamically related and they can interact with each other during the course of learning [a foreign language]” (p. 175).

Previous studies demonstrate the strong relationship between foreign language anxiety and self-efficacy. For example, Doğan (2016) investigated foreign language anxiety and self-efficacy in an English as a Foreign Language program in Turkey, finding a direct relationship between the two variables. Additionally, Mills, Pajares, and Herron (2007) found that individuals who self-rated higher self-efficacy demonstrated superior reading capabilities in the target language as opposed to those who self-rated lower self-efficacy. Anaydubalu (2010) also found that self-efficacy and anxiety were the strongest predictors for target language performance when compared to factors such as exposure to the target language outside of class, L2 learning
environment, and teaching style. And finally, Chen and Lin (2009) found lower L2 writing self-efficacy was correlated to higher foreign language anxiety.

2.2.4 Overview of Second Language Motivation

The third and final individual difference to be discussed is L2 motivation, which I also consider to be part of the broader notion of self-efficacy. SLA researchers understand that motivated behavior influences learners in educational contexts. Dörnyei and Otto (1998) highlight motivation’s complex role in foreign language learning in particular as “not so much a relatively constant state but rather a more dynamic entity that changes in time, with the level of effort invested in pursuit of a particular goal oscillating between regular ups and downs” (p. 45). Over the course of several decades, researchers have been preoccupied with defining and accurately measuring L2 motivation.

2.2.4.1 Dörnyei’s (2009) L2 Motivational Self System

Several theories have attempted to properly define and measure the variables associated with L2 motivation. This include the Socio-Educational Model (Gardner, 1988), which was criticized and later fell out of favor in the research community for not considering enough variables (Oxford & Shearin, 1994). Many would argue that because of the plethora of variables associated with L2 motivation cannot be housed under one theoretical framework (Dörnyei & Ushioda, 2011). Nonetheless, the most commonly accepted framework in SLA for motivation is Dörnyei’s (2009) L2 Motivational Self System. This theory accounts for changing behavior over time. Born out of the Possible Selves Theory (Markus & Nurius, 1986), Dörnyei’s system defines the notion of the self as it pertains to L2 learners’ continuous transition from present-state competencies to an idealized future-self L2 user. He defines this idealization’s influence on language learning by saying that “the ideal L2 self has a definite guiding function in setting to-
be-reached standards and, in a negative way, the feared self also regulates behavior by guiding the individual away from something” (Dörnyei, 2009, p. 13). Dörnyei proposes three components that make up the L2 Motivation Self System: the Ideal L2 Self, the Ought-to L2 Self, and the L2 Learning Environment. These three components were born out the findings of a large-scale study involving more than 8,000 adolescent participants in Hungary (Csizér & Dörnyei, 2005). As such, they encompass both intrinsic and extrinsic factors that make up a more holistic idea of the construct of L2 motivation.

The first component of Dörnyei’s (2009) understanding of motivation, the Ideal L2 Self, relates to what the language learner perceives as the perfect identity which the L2 learner wants to assume as their own. This imagined future self as an ideal L2 agent serves the purpose of decreasing the distance between the current (actual) L2 learner and the ideal (future) L2 user. This conceptualization is seen as a motivating, or guiding, factor to catalyze continued L2 development.

The second component, the Ought-to L2 Self, denotes the L2 learner’s expectations that they place on their own language acquisition. While the first component is the perfection of a future self, the Ought-to L2 Self specifically targets the linguistic gaps found in learners’ state of proficiency at a given time. This second tier relates directly to language learners’ desire to perform more accurately in the target language and strive towards the Ideal L2 Self. Another distinction between the first and second component of this framework is that the first is both “integrative and internalized” (Dörnyei, 2009, p. 29), whereas the second is more intrinsic.

The third component is the L2 Learning Environment, which centers around the “immediate learning environment and experiences (e.g., the impact of the teacher, the curriculum, the peer group, the experience of success)” (Dörnyei, 2009, p. 29). This piece of the
framework focuses on the moment-by-moment situations in which the learners may find themselves, including curriculum design, materials, cohorts, and instructor, among other outside influencing variables.

2.2.4.2 Effects of Motivation on L2 Acquisition

Numerous studies have validated Dörnyei’s (2009) theory of motivation and have shown that learners’ motivation can have a major impact on the overall success with a target language. For example, Dörnyei and Chan (2013) found that there are positive correlations between the self-reported Ought-to L2 Self, intended grades and actual grades, while Dörnyei’s L2 Learning Environment did not have a significant influence on learners’ motivation. Papi (2010) found that the Ideal L2 Self and L2 Learning Environment were able to decrease L2 learners’ foreign language anxiety, whereas the Ought-to L2 Self dimension of the theory induced more anxiety. Relatedly, the Ideal L2 Self has been shown to maintain learners’ motivation in spite of a lower quality L2 Learning Environment. This finding reinforces the notion that the visualization, idealization, and guidance from the Ideal L2 Self is effective for high levels of L2 motivation. Similarly, visualization and imagination (a central component to Dörnyei’s theory) of oneself as a competent user of the L2 for language learners has been shown to improve L2 learners’ motivation (Al-Shehri, 2009; Anya, 2011; Kim & Kim, 2014). Inversely, low levels of motivation are shown to negatively impact the language acquisition process. For example, low levels of motivation show more technology usage and perceptions of failure in study abroad participants (Hanson & Dracos, 2016).

Although such studies show the impact of motivation on L2 learning, similar to that of foreign language anxiety, little research has been dedicated to interventions by which L2 motivation can be enhanced. The most prominent of propositions for enhancing motivation is
seen in Dörnyei and Csizér (1998) ten “commandments” for increasing motivation. Among the commandments, they dictate that the instructor must “create a pleasant, relaxed atmosphere in the classroom” and “familiarize learners with the target culture” (Dörnyei & Csizér, 1998, p. 215). Additionally, Sampson (2012) found that language learners’ motivation could be enhanced by “initially consulting with learners about their self-images might help to empower the course-planner to create motivating lessons” (p. 332). Sampson’s findings are consistent with previous research that shows motivation can be enhanced by focusing on the Ideal L2 Self in pedagogical practices (Magid & Chan, 2012).

2.2.4.3 L2 Motivational Self System’s Relationship to Self-efficacy

I consider Dörnyei’s (2009) L2 motivation theory as an innately related, contributory variable of self-efficacy. This position is also supported by the various researchers that have found that these two individual differences are significantly correlated (Roshandel, Ghonsooly, & Ghanizadeh, 2018) and interdependently related (Piniel & Csizér, 2013). Busse (2013) reinforced the connection between learners’ self-efficacy and their motivation, noting that there were significant correlations between learners’ self-efficacy beliefs and their perceptions of the Ideal L2 Self. She concluded that “low self-efficacy beliefs may curb a further development of an existing Ideal L2 Self” (Busse, 2013, p. 393).

Given the constant findings regarding the overlap between L2 motivation and self-efficacy, an interpretation of the crossover between the three components that form Dörnyei’s (2009) theory of L2 motivation and Bandura’s (1977) four principles for self-efficacy is warranted. Bandura argues that cognitive reinforcements and persistence to complete a challenging task are key contributors to motivated behavior. Dörnyei’s theory of motivated behavior relies on envisioned and idealized future-selves as a source of motivation. Dörnyei’s
first two components (Ideal L2 Self and Ought-to Self) highlight the individual’s agency with regard to motivation but allows for external factors (L2 Environment), or circumstances outside of the learner’s control, to play a substantial role. Relating back to Bandura’s principle of performance accomplishment, Dörnyei states that the Ideal L2 Self entails a process of “reduc[ing] the discrepancy between our actual and ideal selves” (Dörnyei, 2009, p. 29). In terms of Bandura’s theory, demonstration of capabilities or expression of knowledge is required in order to reduce the said discrepancy between current state of L2 acquisition and the idealized L2 user.

In addition to the parallels between the two theories, Dörnyei’s (2009) reference to fear in his introduction mirrors that of Bandura’s (1977) principle of physiological states. However, Dörnyei’s notion of fear differs from that of Bandura. While fear is a motivator for changed behavior, and fear is a hindrance in self-efficacy theory, Dörnyei characterizes both as serving as dynamic systems. That is to say, they both provide reciprocal benefits, and the learner is the functional agent determining, albeit subliminally, the directionality of behavior. To further explain, Dörnyei cites fear (henceforth anxiety) as being a guiding variable that pushes learners to progress through tasks. For example, a learner may experience high levels of anxiety towards public speaking thus leading her to extensively practice and cognitively process all requisite information for the presentation as to not be ridiculed by her peers. Anxiety, in Dörnyei’s definition, is not innately positive nor negative. That same anxiety could debilitate the learner, thus hindering continued course enrollment, inhibited spontaneous production of the L2, among others.
2.3 Relevant Mindfulness Meditation Literature

2.3.1 Description and Definition of Mindfulness as a Practice

Mindfulness meditation is the practice of “focusing attention on the experience of thoughts, emotions, and body sensations, simply observing them as they arise and pass away” (Hölzel et al., 2011, p. 538). While a common interpretation of meditation typically entails clearing the mind of all thoughts, Hölzel et al. (2011) outline mindfulness meditation’s goals as allowing the brain to think, experience, and reflect on the present moment. This practice, then, “involves a broader observation of one’s present moment experience, that is, physical sensations, thoughts and feelings” (Baer, 2003, p. 125).

Roeser (2016) characterizes the multiple ways to practice mindfulness meditation as body scan, focused attention practice, open monitoring practice, loving kindness, and mindful movement. The first three practices are most relevant to this study. Body scanning is “characterized by the systematic directing of attention to each region of the body to cultivate somatic awareness” (p. 390). The next practice, focused attention, involves directing one’s attention on one particular object, such as one’s own breath or a sound. Open monitoring, conversely, is not focused on one object, but rather a gentle observation of one’s surroundings. Traditionally, these practices take place in designated areas with an experienced meditation guide that leads a group of practitioners. However, previous research has shown that such practices can also be achieved through the support of online resources (Spadaro & Hunker, 2016).

2.3.2 Theoretical Framework for Mindfulness

There are several definitions of mindfulness meditation (see Bishop et al., 2004), and each one has similar foundations. While several different theoretical frameworks for mindfulness
are commonly cited, the theory to which I align the present study is that of Shapiro, Carlson, Astin and Freedman (2006). This particular framework was chosen based on its cyclical nature and because it includes a component dedicated to the commencement of a mindfulness practice.

Shapiro et al. (2006) propose three axioms of mindfulness meditation, which are based off of Kabat-Zinn’s (1994) definition of mindfulness. They are (i) intention, (ii) attention, and (iii) attitude. The first axiom, intention, relates to the practitioner’s rationale for practicing mindfulness meditation. Shapiro et al. suggest that intention may be the catalyzer for the subsequent axioms in which practitioners must first establish their intrinsic rationale for practicing mindfulness meditation to be able to accomplish the other axioms. The second axiom, paying attention, is defined as “observing the operations of one’s moment-to-moment, internal and external experiences” (Shapiro et al., 2006, p. 376). To practice mindfulness productively, practitioners must detach themselves from their previous mental, physical, and emotional states to live entirely in the moment. Practitioners must observe their surroundings and day-to-day events in such a way that they do not identify with them. The purpose is to create a mind state where spectators observe their emotions and question why their emotions arise in the way that they do. The third axiom, attitude, is characterized by the manner in which practitioners approach the mindfulness meditation practice. This axiom directly influences the second axiom, attention. As Kabat-Zinn (2003) notes, attitude must have compassionate and open-minded characteristics and not a cold, critical attention to the present. The relationship between the three axioms is presented in Figure 1.
Figure 1. Shapiro et al.’s (2006) theoretical framework of mindfulness meditation

As seen in Figure 1, the three components of the theoretical framework do not work independently, but rather they are coordinated and cyclical. For this reason, all three axioms of the theoretical framework must be taken into consideration when working within this paradigm of mindfulness research.

2.2.3 Summary of Mindfulness Meditation Research

2.2.3.1 Mindfulness Research in Cognitive Sciences

We can first look to research in the field of psychology to understand how mindfulness meditation has been implemented outside of academic contexts. Lazar et al.’s (2005) findings, for example, show that participants who practice mindfulness meditation show more cortical thickness, which is related specifically to attention, introspection and sensory processing. Other findings in cognitive science show that anatomical changes occur as a result of mindfulness practice, such as increased gray matter density (Vestergaard-Poulsen et al., 2009) and the amygdala (Hölzel et al., 2009). These structures are associated with cognitive and emotional functions in the brain (Vestergaard-Poulsen et al., 2009).

As for cognitive function, researchers have found that “mindfulness meditation is associated with higher-order brain organisms such as the pre-frontal cortex and the anterior cingulate cortex at early stages of this form of mental training” (Zeidan, 2015, p. 172). This is
corroborated by studies that show that cognitive executive function and working memory can be improved after an intensive mindfulness practice (van Vught & Jha, 2011) and short-term practice (Zeidan, Johnson, Diamond, David, & Goolkasian, 2010). Other prominent studies found that experienced mindfulness meditators exhibit an enhanced capacity to effectively process new information (Slagter et al., 2007; Spadaro & Hunker, 2016). Substantial research also points to mindfulness meditation’s cognitive benefits for attention control (MacLean et al., 2010; Moore & Malinowski, 2009; Semple, 2010; Spadaro & Hunker, 2016).

There are, however, conflicting results in mindfulness research. For example, recent studies have shown that mindfulness practice in a workplace detaches practitioners from stressors, but also impairs motivation in the workplace (Hafenbrack & Vohs, 2018). Furthermore, previous researchers have pointed to methodological concerns in mindfulness research, which still requires more concerted efforts and improvements (Van Dam et al., 2018).

2.2.3.2 Mindfulness Research in Education

Drawing from previous findings in cognitive studies, mindfulness research then expanded to educational settings. Hall (1999) was among the first to investigate the influence that mindfulness meditation could have on education, looking specifically at students’ GPA. The findings from this study show that mindful participants had higher academic achievement as compared to the control group. Notably, these mindfulness meditators not only had higher grades in their psychology course at the end of the semester, but they also showed higher GPAs cumulatively across all courses. Since Hall’s study, a great deal of research has found that mindfulness meditation is beneficial in a formal education context (McLean, 2001). For example, mindfulness has been shown to enhance academic performance (Rosaen & Benn, 2006; Rosenstreich & Margalit, 2015), improve English and math scores on standardized tests (Nidich
et al., 2011), and improve academic achievement in learners with learning disabilities (Beauchemin, Hutchins, & Patterson, 2008; McCloskey, 2015). Importantly, mindfulness meditation has also been found to affect enjoyment in task completion in university students (Gardner & Moore, 2004; Kee & Liu, 2011; Kee & Wang, 2008).

Another specific aspect of mindfulness meditation research has been its capability of alleviating anxiety. For example, research shows that mindfulness meditation can alleviate stress and increase wellbeing (Myint, Choy, Su, & Lam, 2011; Schwind et al., 2017; Shapiro, Brown, & Biegel, 2007; Song & Lindquist, 2015). Research has also shown that continued benefits can be seen after completion of the mindfulness practice, meaning that there can be a lasting effect after the completion of the mindfulness training (Newsome, Waldo, & Gruszka, 2012). These findings are supported by meta-analyses that have investigated the effects of mindfulness meditation in formal learning contexts (Waters, Barsky, Ridd & Allen, 2015). Moreover, in a majority of the studies, lowered anxiety was the primary effect of the mindfulness meditation training and that “mindfulness-based approaches are effective in reducing the effects of stress on university learners, including reducing levels of anxiety, depression and cortisol responses” (Regehr, Glancy, & Pitts, 2012, p. 10).

2.2.3.3 Mindfulness Research as it Pertains to Bandura’s Self-efficacy Theory

Mindfulness meditation has been found to increase self-efficacy in numerous academic contexts. For example, Caldwell, Harrison, Adams, Quin, and Greeson (2010) found that university students that actively engaged in mindfulness meditation showed a statistically significant increase in mindfulness scores, and that change directly correlated to increased self-efficacy and lower stress. Similarly, Greason and Cashwell (2009) found that mindfulness was a significant predictor of doctoral students’ self-efficacy with their ability to provide professional
counseling, which was their field of study at the graduate level. Additionally, Keye and Pidgeon (2013) revealed a relationship between mindfulness and self-efficacy to predict learners’ ability to face stress.

Research into the effects of mindfulness meditation supports Bandura’s (1977) theory of self-efficacy, particularly in the principle of emotional arousal. For instance, researchers have found that a seven-week mindfulness course can reduce the effects of negative emotional arousal and increase attention control during a task (Ortner, Kilner, & Zelazo, 2007). There were also strong relationships between participants’ anxiety and mindfulness meditation (Bamber & Schneider, 2015).

The most direct support, though, between Bandura’s (1977) theory of self-efficacy, mindfulness research, and SLA is found in Fallah (2016), which serves as the foundation for the present study. Fallah investigated a specific form of self-efficacy, Coping Self-efficacy. Related to Bandura’s theory of self-efficacy, Coping Self-efficacy is understood as one’s confidence in their abilities at the point of performing a task. Fallah’s study indicated that dispositional mindfulness scores (i.e., without mindfulness training) significantly affected Coping Self-efficacy, which in turn significantly affected foreign language anxiety. Importantly, Coping Self-efficacy was found to mediate the relationship between learners’ dispositional mindfulness and foreign language anxiety. Fallah provided the foundation for mindfulness research in SLA by revealing that there is a relationship between language learner’s naturally-occurring mindfulness trait and foreign language anxiety. As a continuation, the present study builds on Fallah’s findings by investigating mindfulness meditation and its effects on general self-efficacy, foreign language anxiety, and motivation.
2.4 Research Questions

The following research questions will be used to achieve the overarching goal of the study. For the first research question, I will investigate the effects of mindfulness meditation on the broader understanding of self-efficacy:

Research Question 1: Does mindfulness meditation promote significantly more development of L2 learners’ self-efficacy in an introductory Spanish course at the university level?

The second research question targets one specific aspect of self-efficacy, foreign language anxiety:

Research Question 2: Does mindfulness meditation significantly lower L2 learners’ foreign language anxiety in an introductory Spanish course at the university level?

The third question targets another specific facet of language learner self-efficacy, motivation:

Research Question 3: Does mindfulness meditation promote more development of the L2 Self motivation in an introductory Spanish course at the university level?

The fourth question moves away from explicit measures of self-efficacy and investigates the general perceptions of the intervention:

Research Question 4: What are participants’ perceptions towards a mindfulness meditation practice in an introductory Spanish course at the university level?

The final question seeks to understand the common perceptions towards a mindfulness meditation in the L2 classroom amongst all experimental participants:

Research Question 5: What are participants’ reactions towards a mindfulness practice in the L2 classroom as expressed in the Mindfulness Experience Questionnaire?
CHAPTER 3: METHODOLOGY

3.1 Description of Participants

Participants were recruited from 10 introductory Spanish courses during the Fall 2017 semester at a large Southeastern university. There were 164 participants recruited for this study, although 37 were removed because they did not complete all portions of the study (i.e., did not answer all of the questions in the surveys). Another three participants were removed for not meeting the minimum age requirement (18 years of age) to legally participate in the study. A total of 124 participants’ responses were used for the present study after attrition, with 65 participants in the experimental group and 59 in the control group. The average age of the participants was 18.56 years old ($SD = 0.86$), and there were 27 males and 97 females\(^1\). As for language background, one participant in the experimental group indicated that she was a Spanish-English bilingual, while the rest of the participants were English native speakers learning Spanish as an L2. Most participants were in their first year of university study ($n = 82$), but there were some second-year ($n = 27$), third-year ($n = 11$), and fourth-year students ($n = 3$), as well as one participant who did not provide a response for the question. Participants also provided information regarding the number of years that they previously studied Spanish. The experimental group had an average of 5.41 ($SD = 1.99$) previous semesters of Spanish

\(^1\) Participants were given the open-ended question “What gender do you identify as?” in the demographic survey. Participants’ responses were solely binary (male or female).
instruction, and the control group had 5.21 ($SD = 1.83$), and one participant did not provide a response. It is important to mention that the groups consisted of a variety of learners who enrolled in this course for different reasons. Among the experimental group, 28 indicated that they were taking the course for credit towards their degree, 27 were enrolled because of their desire to learn the language or culture, and 8 indicated a combination of the two previous reasons. The control group consisted of 28 participants enrolled into the course for course credit, 26 for desire, and 4 with a combination of the two. One participant in the control group did not provide a reason for their matriculation into the course. With regard to area of study, most students’ primary focus of study was outside Spanish, with no one listing it as their major. However, 10 participants in the control group and 16 in the experimental group stated that they were studying Spanish as a minor for their degree. Also, one participant for each group stated that they were studying Secondary Education, with Language Arts as their concentration.

### 3.2 Course Description

The study took place in coordinated sections of Spanish 103 ($n = 10$), which is an accelerated course designed to cover two semesters of introductory Spanish in one semester. The course is designed to allow students to solidify their understanding of the grammar and vocabulary topics before progressing to more advanced topics covered in the intermediate-level Spanish courses. In order to enroll in this course, students must have had previous Spanish instruction or exposure (e.g., Spanish courses in high school, introductory-level transfer credits from another university). All sections were hybrid courses that met three times a week (Monday, Wednesday, and Friday) for 50-minute sessions and had three days of online assignments to be completed outside of the classroom.
The experimental and control groups were split evenly among three different instructors of the course. All three instructors had several years of teaching experience ($M = 7.33$ years) and taught using a communicative teaching approach. As part of a coordinated program, all 10 sections of the course used the same textbook and followed the same teaching calendar. Although some of the specifics of the activities may have varied, the instructors covered the same basic material on the same day for every class session during the semester. Participants also received the exact same assessment throughout the semester, which included five projects (written and oral), five quizzes, and a daily participation grade.

3.3 Instruments

*Demographic Questionnaire.* The Demographic Questionnaire (Appendix A) was an 18-item survey created for the present study. This instrument was used to elicit a participant’s general demographics, such as their age, experience with the target language, cumulative GPA, and other related information. It can also help determine potential outliers in the data analysis.

*Simple Habit App.* The Simple Habit App served as the treatment for the present study. The program (www.simplehabitapp.com) contained all of the meditations that were used as the treatment for the experimental groups. It was accessible with a subscription, and the online program offered a diverse assortment of specific mindfulness meditations (e.g., preparing for a test, getting ready for a class session, relaxing after a stressful day, etc.). A more detailed explanation of what a mindfulness meditation entails is outlined in the general procedures section (Section 3.4.1) of this chapter.

2 There were also two Spanish 103 sections that did not take part in the study, as they were taught by the researcher.
Mindfulness Meditation Schedule. The Mindfulness Meditation Schedule (Appendix G) was implemented by the instructors of each section to ensure that the participants received the same mindfulness meditation across classes in the experimental group. The mindfulness meditations began with an introduction as to what the practice is and then branched out to mindfulness practices for specific areas of either personal or professional life, such as stress before tests, managing stress, and general mindfulness practices.

Mindfulness Survey. For the Mindfulness Survey, I used the Freiburg Mindfulness Inventory (Appendix B). This instrument was a 14-item survey on a four-point Likert scale (Walach, Buckheld, Buttenmüller, Kleinknecht, & Schmidt, 2006) that was used during the pretest and posttest to determine the effectiveness of the treatment. This measurement was used to detect a change in mindfulness scores as it is a widely accepted instrument in mindfulness research (Park, Reilly-Spong, & Gross, 2013). The Freiburg Mindfulness Instrument has high internal consistency (Cronbach’s alpha between .67 and .93), recognition amongst scholars, and accessibility (Baer, Smith, Hopkins, Krietemeyer, & Toney, 2006; Walach, Buckheld, Buttenmüller, Kleinknecht, & Schmidt, 2006).

Self-efficacy Survey. For this survey, I use an adapted version of the Questionnaire of English Self-Efficacy (Wang, Schwab, Fenn, & Chang, 2013) (see Appendix C) to determine the broadest effects of the treatment on the participants’ self-efficacy, as stated in Research Question 1. It was adapted to reflect instructed Spanish learning in a formal context. For example, all references to English were edited to reflect Spanish as the target language. Additionally, cultural components were adjusted from English-speaking cultures to Spanish-speaking cultures where necessary. Finally, item number 29, “Can you understand English articles on Korean culture?” was changed to “Can you understand Spanish articles on American culture?” The instrument
uses a 7-point Likert scale, with higher scores indicating higher self-efficacy and was picked based on its recognition and high internal consistency (Cronbach’s alpha of .97) (Wang, Hu, Zhang, Chang, & Xu, 2012; as cited in Kim, Wang, Ahn, & Bong, 2015). This instrument contains four distinct components that can be used to measure language learners’ self-efficacy with the target language. Respectively, there are eight items dedicated to self-efficacy with listening, speaking, reading, and writing.

**Anxiety Survey.** For the anxiety survey, I employed the FLCAS (see Appendix D). This instrument was used in order to target a possible reduction in participants’ foreign language anxiety in correlation with the treatment, as it relates to Research Question 2. The FLCAS contains 33-items using a 5-point Likert scale and was created by Horwitz et al. (1986). As previously stated, this instrument is frequently used in SLA research to measure participants’ levels of foreign language anxiety. Scoring for this instrument ranges from 33 to 165. The higher the score, the more anxiety the participant experiences. The instrument has been shown to be reliable, with significant internal consistency (Cronbach’s alpha of .93) (Horwitz, 1986). This instrument can also be divided into three subcomponents: communication apprehension (7 items), test anxiety (5 items), and fear of negative evaluation (8 items).

**The Motivation Survey.** To measure motivation, I use the Language Orientation Questionnaire (see Appendix E). The Motivation Survey was used to determine a change in participants’ motivation in correlation to the treatment, as stated in Research Question 3. This instrument was adapted from the version used in Dörnyei and Chan (2013) to only reflect the ‘Ideal L2 Self” (15 questions), which coincides with the theoretical framework of the present study. This pretest and posttest instrument consisted of 15 questions on a five-point Likert scale, and participants completing this survey used the scale to self-rate their motivation. Higher scores
indicate higher participant motivation. Dörnyei and Chan also report that these 15 questions were found to have appropriate reliability (Cronbach alpha ranging from .76 to .81). Dörnyei and Chan additionally provide a breakdown of the instrument into three components with five items each pertaining to the Ideal L2 Self, Ought-to Self, and Intended Effort.

*Mindfulness Experience Questionnaire.* This survey (Appendix F) consisted of nine open-ended questions that elicited participants’ perceptions towards their interactions with the mindfulness practice throughout the semester. The questions were related to various aspects of their experience, such as their enjoyment, usefulness, etc. Participants were given this instrument via online data collection software, Qualtrics, and did not have a maximum or minimum word limit for their responses. All responses from this instrument were used for the qualitative data analysis to answer Research Questions 4 and 5.

**3.4 Procedures**

**3.4.1 General Procedures**

Participants completed the instruments at two distinct points during the 15-week semester: (i) the second week of classes, and (ii) the second-to-last week of classes. Participants in the control and experimental groups completed data collection materials on the same day. In order to reduce the amount of participant attrition, the first date was after the drop/add period, which is a specific day during the second week of classes of the semester when the students choose to either remain enrolled or not in the class for the semester.

Data collection took place during the regularly scheduled class session, and the duration was the entire class period (50 minutes). Consent forms were distributed physically using paper copies. As the researcher, I personally attended the experimental group sections to administer the data collection materials. The control group completed the instruments on the same day as the
experimental classes, but they were administered by the instructors of each section. I did not attend the control group classes for data collection due to scheduling, in that several of the class periods were at the same time. During the first data collection day, all participants completed the Demographic Questionnaire, Mindfulness Survey, Motivation Survey, Anxiety Survey, and Self-Efficacy Survey via Qualtrics. Participants completed these instruments using either their personal computer, tablet, or cellphone.

Mindfulness meditation was administered similarly to that of Spadaro and Hunker’s (2016) methodology by using an electronic, asynchronous online program. Mindfulness meditation was an obligatory portion of the course in that students were penalized with minor deductions to the attendance component of the final grade if they entered the classroom after the mindfulness meditation began. The control group held regularly scheduled classes without any other replacement for the mindfulness meditation, receiving the same instruction as the experimental group sections of Spanish 103.

Over the course of the semester, the experimental group participated in 13 weeks of mindfulness training with 33 individual mindfulness meditation sessions that each consisted of approximately 5-minute audio recordings. During the first day of data collection, an example of mindfulness meditation was used by me, the researcher, to inform the experimental group participants what would take place during the subsequent class periods when mindfulness meditation would be implemented. The remainder of the mindfulness meditations were administered by the instructors of the classes. In these sessions, the instructors started the Simple Habit mindfulness recording at the beginning of each class hour, and participants engaged with a specific mindfulness meditation practice for five minutes. At the end of the semester, the second round of data collection followed identical procedures as that of the beginning of the semester.
The experimental group was given an additional instrument, the Mindfulness Experience Questionnaire, on the last day of the mindfulness meditation schedule.

A majority of the meditations were directed towards alleviating collegiate stress and enhancing focused attention (see more details in Appendix G for an overview of the specific meditation topics). There was one specialized meditation that coincided with the days in which participants completed formal assessments, as dictated by the course calendar. These meditations, titled “Before an Exam”, were chosen because I hypothesized that they would be the least intrusive given that the participants would lose 5 minutes of time to complete the assessment. Additionally, the mindfulness meditation was the most relevant to the task participants were completing on these specific days.

3.4.2 Quantitative Data Analyses Procedures

The quantitative data was downloaded from Qualtrics and numerically coded into Excel based on the requirements for each instrument, including the required coding inversions for the appropriate items. Data was then entered into the statistical software packaged SPSS. (IBM Corp. Released 2017). Using SPSS, I then used several statistical analyses to investigate for differences between groups across time. This analysis, a mixed between-within analysis of variance (henceforth SPANOVA), was performed for the Mindfulness Survey, Self-efficacy Survey, Anxiety Survey, and Motivation Survey to answer Research Questions 1, 2, and 3.

The quantitative data analysis is divided into three primary sections. The first investigated the holistic differences between the experimental group and the control group. In this analysis, I considered the changes between the experimental group and control group’s self-reported scores in self-efficacy, anxiety, and motivation. I then performed a SPANOVA on the subsections for each instrument. As previously mentioned, the Self-efficacy Survey contained
four subsections (Listening, Speaking, Reading, and Writing); the Anxiety Survey contained three sections (Communication Apprehension, Test Anxiety, and Fear of Negative Evaluation); the Motivation Survey contained three sections (Ideal, Ought-to, and Intended Effort Selves). I conclude the quantitative analysis by providing a summary of the results.

3.4.3 Qualitative Data Analysis Procedure

For the qualitative data analysis, data from the Mindfulness Experience Questionnaire was retrieved from Qualtrics and entered into NVivo in order to answer Research Questions 4 and 5. Individual responses for each item in the survey were first coded based on three opinion-based criteria: (i) positive, (ii) negative, or (iii) neutral. Responses were coded as positive if they favored the mindfulness meditation (e.g., *I liked the mindfulness meditation, I find the mindfulness meditation helpful*). Responses were coded as negative if they did not favor the mindfulness meditation (e.g., *I did not like the mindfulness meditation*). If a response showed both positive and negative sentiment towards the mindfulness meditation experience, they were designated as neutral. An example of a neutral code can be seen in Identifier E02’s response to the general opinions question in the Mindfulness Experience Questionnaire:

I enjoy the idea of it but sometimes I did not think that it was for me and did not help me.
I do enjoy that it helped me forget about my worries but sometimes I felt it to be no help at all. (Identifier E02)

I then used the *Constructivist Grounded Theory* (Charmaz, 2006) to determine if there were emergent themes found in the qualitative data. The combination of related themes gave way to the creation of overarching categories within the open-ended responses. This process involved analyzing each participant’s responses individually for every question from the Mindfulness Experience Questionnaire. As trends appeared throughout the data (using only the participants’
responses and controlling for researcher bias), themes were then defined as they related to how the codes informed each other. For example, codes such as “attention,” “focus,” and “awareness” were allocated to one overarching category.

3.4.4 Subjectivity Statement

According to Charmaz’s (2006) Constructivist Grounded Theory, researcher bias and subjectivity plays an active role in qualitative data analysis. Personal beliefs, positionality, and environment must be consistently acknowledged in order to best understand the decisions of a researcher. My personal belief is that reality was created through the perceptions of individuals or group. In other words, there is not one single reality, but a multiplicity of realities based on first-person perception of experience. When analyzing qualitative data generally, I considered the possibility that each participant’s experience throughout this study is individualistic in nature and must be interpreted. I also acknowledge that my personal biases play a significant role in the interpretation of the data. At every point of data analysis, I made every attempt to control for these biases when performing a Constructivist Grounded Theory methodology to ensure and maintain the rigor of the present study. In doing so, I must acknowledge my personal identity, my relationship to the individual differences (foreign language anxiety, motivation, and self-efficacy) as a multilingual language learner, and my relationship with mindfulness meditation.

I am a doctoral candidate at The University of Alabama, a large southeastern public university, that has formally studied four languages (Spanish, French, Italian, and German), and my native language is English. I began acquiring my first language at the age of 18 and have continued my studies in linguistics as a result of my passion for SLA, L2 pedagogy, and culture. I am also a foreign language instructor and the program coordinator for level of Spanish in which the present study took place. Because of my role as a coordinator of the language program in
which the study took place, I acknowledged that I had an impact on the participants’ language learning experience.

I also must describe my relationship with mindfulness as a practice. My experience with mindfulness meditation was initially very limited. I was first introduced to the principles of a mindfulness practice as a graduate student, but I only practiced mindfulness as a way of introducing myself to the topic. At the beginning of the project, I clearly defined my goal as an investigation of mindfulness meditation with as much as a scientific perspective as possible. To control for my own personal bias, I only practiced mindfulness meditation so that I could familiarize myself with what the treatment would entail. As my engagement with data analysis and interpretation continued, I began to have more “buy-in” as far as the utility and effectiveness of a mindfulness practice. For example, I would often recommend mindfulness meditation to the people in my life that were struggling with a loss in their family, university stress, and other negative circumstances. As such, my relationship with the data progressively changed as my understanding and personal opinions towards mindfulness meditation evolved. I still attempted to avoid bias at every possible stage, whether it be in data analysis or interpretation.
CHAPTER 4: RESULTS

4.1 Quantitative Analysis of Survey Responses

4.1.1 Introduction to Quantitative Results

As outlined in Chapter 3, three independent instruments were used to measure learners’ individual differences: the Self-efficacy Survey, Anxiety Survey, and Motivation Survey. In addition to measuring the possible effects of mindfulness meditation in the foreign language classroom, I also used the Mindfulness Survey to determine the efficacy of the treatment. That is to say, before analyzing any possible changes in foreign language anxiety, motivation, or general self-efficacy, I first performed an analysis on the participants’ mindfulness scores to determine if there was a change.

4.1.2 Mindfulness Meditation Scores

By using the responses from the Mindfulness Survey, I found that there were differences between the experimental and control groups with regard to change in mindfulness scores between the pretest and posttest. Both groups received comparable scores, in that the range (for either group at either point) was from 35.71 to 37.98. However, the groups did diverge in that the mindfulness scores for the experimental group increased on average between the pretest and posttest by about 4.5%, whereas the control group decreased mindfulness scores by about 1.7%. Descriptive statistics for this instrument’s results can be seen in Table 1.
Table 1

Mindfulness Scores by Group

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td></td>
</tr>
<tr>
<td>Experimental (n = 65)</td>
<td>35.71</td>
<td>6.93</td>
<td>37.29</td>
<td>6.58</td>
<td>+1.58</td>
</tr>
<tr>
<td>Control (n = 59)</td>
<td>37.98</td>
<td>6.97</td>
<td>37.34</td>
<td>7.54</td>
<td>-0.64</td>
</tr>
</tbody>
</table>

Note: Minimum possible score is 14 points. Maximum possible score is 56 points.

A SPANOVA showed a statistically significant interaction between time and group, $F(1, 122) = 4.00, p = .048$ partial $\eta^2 = .032$. However, there was not a main effect for time, $F(1, 122) = 712, p = .400$ partial $\eta^2 = .006$, nor were the between-subjects effects significant, $F(1, 122) = 1.06, p = .306$ partial $\eta^2 = .009$. The experimental group showed statistically significant simple main effects for mindfulness scores, $F(1, 64) = 4.13, p = .046$ partial $\eta^2 = .061$, which contrasts with the control group’s nonsignificant change in scores, $F(1, 58 = .657, p = .421$ partial $\eta^2 = .011$). These results indicate that the treatment was successful at significantly increasing mindfulness scores for the experimental group.

4.1.3 Self-efficacy Analysis

Research Question 1: Does mindfulness meditation promote significantly more development of L2 learners’ self-efficacy in an introductory Spanish course at the university level?

The first research question sought to investigate the change in self-efficacy scores and how they differ based on receiving the mindfulness treatment or not. Table 2 provides descriptive statistics for the average scores of the groups at the pretest and posttest, as well as the difference between the two.
Table 2

Self-efficacy Scores by Group

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>Score</td>
</tr>
<tr>
<td>Experimental (n = 65)</td>
<td>140.58</td>
<td>25.69</td>
<td>158.38</td>
<td>29.81</td>
<td>+17.80</td>
</tr>
<tr>
<td>Control (n = 59)</td>
<td>140.24</td>
<td>22.65</td>
<td>156.75</td>
<td>23.71</td>
<td>+16.51</td>
</tr>
</tbody>
</table>

Note: Minimum possible score is 32. Maximum possible score is 224.

As shown in Table 2, both groups show almost identical pretest average scores; however, both show large differences in standard deviations, indicating that both groups are heterogeneous with regard to level of self-efficacy. Both groups also performed similarly at the posttest, with the two groups increasing in self-efficacy scores at a parallel rate, with the experimental group increasing by about 12.7% and the control group by about 11.8%.

A SPANOVA using self-efficacy scores tested the possible effect of the mindfulness treatment on participant self-efficacy. There was a main effect for time, $F(1, 122) = 58.09$, $p < .001$ partial $\eta^2 = .323$, which indicates that both groups significantly increased in self-efficacy scores between the pretest and posttest. However, the test of between-subjects effects was not significant, $F(1, 122) = .060$, $p = .806$, partial $\eta^2 = .000$, nor was there a statistically significant interaction between time and group, $F(1, 122) = .082$, $p = .775$ partial $\eta^2 = .001$. These results show that mindfulness meditation did not have a significant impact on the participants’ self-efficacy scores when compared to the control group.

A continued analysis into participants’ responses to the Self-efficacy Survey included four subsections. The subsections targeted self-efficacy with specific to tasks targeting listening, speaking, reading, and writing. Descriptive statistics for each subsection of self-efficacy can be
seen in Table 3. The experimental group increased in scores by approximately 8.9%, 11.3%, 9.3% and 18.1% in each of the respective subsections, and the control group performed similarly, increasing by approximately 13.4%, 12.3%, 10.2%, and 14.7%.

Table 3

*Self-efficacy Scores by Group and Survey Subsection*

<table>
<thead>
<tr>
<th>Subsection</th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$</td>
<td>$SD$</td>
<td>$M$</td>
</tr>
<tr>
<td><strong>Experimental (n = 65)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening</td>
<td>32.15</td>
<td>5.99</td>
<td>35.00</td>
</tr>
<tr>
<td>Speaking</td>
<td>38.42</td>
<td>6.48</td>
<td>42.78</td>
</tr>
<tr>
<td>Reading</td>
<td>35.76</td>
<td>5.37</td>
<td>39.07</td>
</tr>
<tr>
<td>Writing</td>
<td>33.75</td>
<td>7.22</td>
<td>39.85</td>
</tr>
<tr>
<td><strong>Control (n = 59)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Listening</td>
<td>31.18</td>
<td>7.41</td>
<td>35.37</td>
</tr>
<tr>
<td>Speaking</td>
<td>38.42</td>
<td>6.81</td>
<td>43.14</td>
</tr>
<tr>
<td>Reading</td>
<td>33.75</td>
<td>7.22</td>
<td>39.85</td>
</tr>
<tr>
<td>Writing</td>
<td>34.77</td>
<td>7.73</td>
<td>39.88</td>
</tr>
</tbody>
</table>

Note: Minimum possible score is 8. Maximum possible score is 56.

A separate SPANOVA for each subsection revealed that there was a significant main effect for time for: listening self-efficacy, $F(1, 122) = 48.27, p < .001$, partial $\eta^2 = .283$; speaking self-efficacy, $F(1, 122) = 75.59, p < .001$, partial $\eta^2 = .383$; reading self-efficacy, $F(1, 122) = 44.99, p < .001$, partial $\eta^2 = .269$; and writing self-efficacy, $F(1, 122) = 105.93, p < .001$, partial $\eta^2 = .465$. However, there was no significant interaction between time and group ($p > .05$), nor
was the test of between subjects effects significant \( (p > .05) \) for any of the analyses. Mindfulness meditation did not have a significant impact on the experimental group’s self-reported self-efficacy when compared to the control group for any of the individual subcomponents of the Self-efficacy Survey, as the participants as a whole (regardless of group) significantly increased for each.

4.1.4 Anxiety Analysis

**Research Question 2: Does mindfulness meditation significantly lower L2 learners’ foreign language anxiety in an introductory Spanish course at the university level?**

This research question seeks to investigate the change in anxiety scores in conjunction with the treatment. Based on the responses from the Anxiety Survey, descriptively both groups started with comparable anxiety levels at the pretest. The experimental group decreased in their scores by about 10.5%. The control group, on the other hand, decreased by about 8.3%. Table 4 provides the descriptive statistics for this instrument.

Table 4

**Anxiety Scores by Group**

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( M )</td>
<td>( SD )</td>
<td>( M )</td>
</tr>
<tr>
<td>Experimental ((n = 65))</td>
<td>101.91</td>
<td>22.77</td>
<td>91.25</td>
</tr>
<tr>
<td>Control ((n = 59))</td>
<td>102.71</td>
<td>22.77</td>
<td>94.17</td>
</tr>
</tbody>
</table>

Note: The lower the score, the less anxious the participant is. A negative difference score is a positive result for this instrument. Minimum possible score is 33. Maximum possible score is 165.

A SPANOVA revealed that there was a significant main effect for time, \( F(1, 122) = 47.25, p < .001 \) partial \( \eta^2 = .279 \), meaning that both groups significantly decreased between the pretest and posttest. However, the test of between-subjects effects was not significant \( F(1, 122) = 47.25, p < .001 \) partial \( \eta^2 = .279 \), meaning that both groups significantly decreased between the pretest and posttest. However, the test of between-subjects effects was not significant \( F(1, 122) = \)
.237, \( p = .627 \) partial \( \eta^2 = .002 \), nor was there a significant interaction between time and group, \( F(1, 122) = .575, p = .450 \) partial \( \eta^2 = .005 \). These findings suggest that mindfulness meditation did not significantly impact participants’ anxiety scores when compared to the control group.

After determining that there were not significant differences between the two groups when comparing the scores from the Anxiety Survey holistically, I then ran a series of SPANOVA\(\text{s}\) on the individual components that make up Horwitz’s (1986) scale. The first subsection measured language learners’ communication apprehension, the second measured foreign language test anxiety, and the third measured fear of negative evaluation. Again, participants performed similarly, with the experimental group improving by approximately 11.3%, 7.8%, and 14% in each subsection, and the control group by about 6.9%, 9.4%, and 9.2%. Descriptive information can be seen in Table 5.
Table 5

Anxiety Scores by Group and Survey Subsection

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Posttest</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td><strong>Experimental (n = 65)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Apprehension</td>
<td>36.42</td>
<td>7.67</td>
<td>32.32</td>
</tr>
<tr>
<td>Foreign Language Test Anxiety</td>
<td>43.85</td>
<td>10.12</td>
<td>40.43</td>
</tr>
<tr>
<td>Fear of Negative Evaluation</td>
<td>21.65</td>
<td>5.52</td>
<td>18.49</td>
</tr>
<tr>
<td><strong>Control (n = 59)</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication Apprehension</td>
<td>35.44</td>
<td>7.86</td>
<td>32.98</td>
</tr>
<tr>
<td>Foreign Language Test Anxiety</td>
<td>46.39</td>
<td>9.91</td>
<td>42.03</td>
</tr>
<tr>
<td>Fear of Negative Evaluation</td>
<td>21.37</td>
<td>5.73</td>
<td>19.41</td>
</tr>
</tbody>
</table>

Note: The lower the score, the less anxious the participant is. A negative difference score is a positive result for this instrument. Minimum possible score is 11. Maximum possible score is 55.

Each individual SPANOVA revealed that there was a significant main effect for time for: communication apprehension, $F(1, 122) = 35.58, p < .001$, partial $\eta^2 = .226$; foreign language test anxiety, $F(1, 122) = 35.86, p < .001$, partial $\eta^2 = .227$; and fear of negative evaluation, $F(1, 122) = 46.47, p < .001$, partial $\eta^2 = .276$. However, there was not significant interaction between time and group ($p > .05$), nor was the test of between subjects effects significant ($p > .05$, partial $\eta^2 = .000$). As the only significant finding was that all scores reduced at a similar rate in each group, this result indicates that mindfulness meditation did not have an effect on any specific subsection of the Anxiety Survey.
4.1.5 Motivation Analysis

**Research Question 3: Does mindfulness meditation promote more development of the L2 Self motivation in an introductory Spanish course at the university level?**

The third research question investigated the potential impact the treatment may have on learners’ motivation, particularly with the notion of the Ideal L2 Self from Dörnyei’s (2009) theory of motivation. Interestingly, the motivation scores for both groups appear to move in the opposite direction than what was predicted, as both groups decreased in scores between the pretest and posttest. The experimental group decreased in motivation scores by 3.0%, while the control group decreased by approximately 1.2%. Descriptive results can be seen in Table 6.

**Table 6**

*Motivation Scores by Group*

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>Score</td>
</tr>
<tr>
<td>Experimental (n = 65)</td>
<td>41.62</td>
<td>10.72</td>
<td>40.37</td>
<td>13.23</td>
<td>-1.25</td>
</tr>
<tr>
<td>Control (n = 59)</td>
<td>38.97</td>
<td>9.67</td>
<td>38.49</td>
<td>9.38</td>
<td>-0.48</td>
</tr>
</tbody>
</table>

Note: Minimum possible score is 15. Maximum possible score is 75.

A SPANOVA determined that there was not a statistically significant interaction between time and group, $F(1, 122) = .234$, $p = .629$ partial $\eta^2 = .002$, meaning both groups behaved similarly. There were also no significant main effects with time, $F(1, 122) = 1.17$, $p = .283$ partial $\eta^2 = .009$. The test of between-subjects effects was also not significant, $F(1, 122) = 1.59$, $p = .209$ partial $\eta^2 = .013$. In sum, both groups maintained their motivation scores between the pretest and posttest.
A continued analysis of the Motivation Survey included a look at its subsections related to the Ideal L2 Self, the Ought-to Self, and the Intended Effort Self. Descriptive statistics can be seen in Table 7. There was little change overall, with either group increasing or decreasing at most 5.3%.

Table 7

*Motivation Scores by Group and by Survey Subsection*

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th></th>
<th>Posttest</th>
<th></th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
<td>SD</td>
<td>Score</td>
</tr>
<tr>
<td>Experimental (n = 65)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideal L2 Self</td>
<td>16.28</td>
<td>5.20</td>
<td>15.72</td>
<td>5.96</td>
<td>-0.56</td>
</tr>
<tr>
<td>Ought-to Self</td>
<td>8.40</td>
<td>3.72</td>
<td>8.77</td>
<td>4.30</td>
<td>+0.37</td>
</tr>
<tr>
<td>Intended Effort Self</td>
<td>16.68</td>
<td>4.88</td>
<td>15.88</td>
<td>5.49</td>
<td>-0.88</td>
</tr>
<tr>
<td>Control (n = 59)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ideal L2 Self</td>
<td>14.63</td>
<td>4.12</td>
<td>14.85</td>
<td>4.19</td>
<td>+0.22</td>
</tr>
<tr>
<td>Ought-to Self</td>
<td>9.20</td>
<td>3.97</td>
<td>9.08</td>
<td>4.24</td>
<td>-0.12</td>
</tr>
<tr>
<td>Intended Effort Self</td>
<td>15.22</td>
<td>3.72</td>
<td>14.86</td>
<td>3.98</td>
<td>-0.36</td>
</tr>
</tbody>
</table>

Note: Minimum possible score is 5. Maximum possible score is 25.

Each respective SPANOVA found no significant main effects ($p > .05$), nor significant interactions between time and group ($p > .05$). Finally, each between subjects effects was above the $p = .05$ threshold. These results confirm there was no change in the participants’ self-reported motivation, regardless of group.
4.1.6 Summary of Quantitative Results

In summary, the quantitative analysis revealed that the mindfulness meditation treatment did not have a significant effect on participants’ foreign language anxiety, motivation, or general self-efficacy. A series of SPANOVA revealed that participants from both the control group and experimental group significantly decreased in their foreign language anxiety and increased in self-efficacy scores between the pretest and posttest. Both groups also maintained their levels of self-reported motivation between the pretest and posttest. This was further corroborated by the analysis of the subsections for each instrument, which also showed that there were not significant differences between groups.

4.2 Analysis of the Mindfulness Experience Questionnaire

4.2.1 Introduction to Qualitative Analysis

As detailed in Chapter 3, the Mindfulness Experience Questionnaire was designed to elicit the perceptions and attitudes towards the mindfulness meditation itself and seek a holistic understanding of the students’ experience with mindfulness meditation in a first-semester foreign language classroom. Recall that the questionnaire included nine different questions, to which participants only in the experimental group provided open-ended answers.

Before beginning the qualitative analysis, I coded the open-ended responses into three different categories. I first elaborate on this process and present the results from this analysis. For the final examination of participants’ data, I used Charmaz’s (2006) Constructivist Grounded Theory to seek out themes in the open-ended responses provided by the participants in the Mindfulness Experience Questionnaire. A line-by-line analysis of the 585 individual responses gave way to two major categories, anxiety and mindset. In the following sections, I elaborate on the topics that contributed to the formulation of these two categories. In doing so, I use
representative quotes to support my claims. Participants are quoted using their participant identification number (i.e., Identifier E##).

4.2.2 Overview of Perceptions Towards Mindfulness Meditation

**Research Question 4: What are participants’ perceptions towards a mindfulness meditation practice in an introductory Spanish course at the university level?**

I first classified each response into one of three categories. *Positive* responses are those where mindfulness meditation played an active, beneficial role in whichever aspect is being elicited. The inverse situation was coded as a *negative* response. Finally, a *neutral* response was one that did not completely fit as either positive or negative, such as scenarios in which participants vacillated between stating that mindfulness meditation was effective and not effective within the same open-ended response. The percentages of positive, negative, and neutral responses for the Mindfulness Experience Questionnaire for each item can be seen in Table 8.

Table 8
*Positive, Neutral, and Negative Response Rates for the Mindfulness Experience Questionnaire*

<table>
<thead>
<tr>
<th>Question</th>
<th>Positive Response</th>
<th>Neutral Response</th>
<th>Negative Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the mindfulness meditation in class? Why?</td>
<td>85%</td>
<td>11%</td>
<td>5%</td>
</tr>
<tr>
<td>2. Did you find the mindfulness meditation helpful for anything? If so, what specifically?</td>
<td>86%</td>
<td>11%</td>
<td>3%</td>
</tr>
<tr>
<td>3. Do you think that the mindfulness meditation helped you learn</td>
<td>45%</td>
<td>38%</td>
<td>17%</td>
</tr>
</tbody>
</table>
Spanish better? If so, how?

4. Would you recommend mindfulness meditation to your friends or peers? Why or why not?

5. If there were an advanced level Spanish class that incorporated mindfulness meditation into the curriculum, would you purposefully take that class? Why or why not?

6. Do you feel that mindfulness meditation helped alleviate any anxiety or fears while in the Spanish classroom? Why or why not?

7. Did you feel more motivated to learn Spanish as the course progressed? Why or why not?

8. Do you feel that the mindfulness meditation helped you pay attention more in the classroom? Why or why not?

9. What are your general opinions
towards mindfulness meditation?

| Average percentage | 68.33% | 24.66% | 7.22% |

Descriptively, a large percentage of participants self-reported positive perceptions toward the meditation, regardless of the individual question. In particular, though, participants gave the most positive responses for the first two items, which center on enjoyment and helpfulness. They also were highly positive regarding their willingness to recommend mindfulness meditation to fellow peers.

4.2.2.1 Summary of Positive Sentiments in the Mindfulness Experience Questionnaire

The majority of the participants indicated that they had positive sentiments towards the mindfulness meditation in a foreign language classroom. I determined whether a participants’ response was positive if the entirety of the response for the individual item in the Mindfulness Experience Questionnaire stated that mindfulness meditation had an effect, was beneficial, was enjoyable, and so on. Each item in the Mindfulness Experience Questionnaire possessed its own characteristics for what determined a positive response. Examples of positive responses for each item can be seen in Table 9.

Table 9

*Examples of Positive Responses from the Mindfulness Experience Questionnaire*

<table>
<thead>
<tr>
<th>Question</th>
<th>Examples Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the mindfulness meditation in class? Why?</td>
<td>“Yes it gave me time to refocus my mind before class and focus on what we’re about to do” (Identifier E01)</td>
</tr>
<tr>
<td>2. Did you find the mindfulness meditation helpful for anything? If so, what specifically?</td>
<td>“Yes and helpful in terms of me focusing on the task at hand. It assisted me to quickly lay out a plan” (Identifier E04)</td>
</tr>
</tbody>
</table>
3. Do you think that the mindfulness meditation helped you learn Spanish better? If so, how?  

“Yes, it helped me prepare my mind for Spanish” (Identifier E13)

4. Would you recommend mindfulness meditation to your friends or peers? Why or why not?

“Yes I would recommend it because it truly does help with stress and anxieties” (Identifier E27)

5. If there were an advanced level Spanish class that incorporated mindfulness meditation into the curriculum, would you purposefully take that class? Why or why not?

“Yes. If I knew the professor valued the benefits of mindfulness meditation, I would be more inclined to seek instruction from them” (Identifier E47)

6. Do you feel that mindfulness meditation helped alleviate any anxiety or fears while in the Spanish classroom? Why or why not?

“Yes definitely, I feel it was one of the meditation method[s] main accomplishment[s]” (Identifier E31)

7. Did you feel more motivated to learn Spanish as the course progressed? Why or why not?

“Yes because [mindfulness meditation] made me realize I want to get better than what I am right now” (Identifier E36)

8. Do you feel that the mindfulness meditation helped you pay attention more in the classroom? Why or why not?

“Yes. It just helps you clear your head of everything so while you[‘re] in class it[‘]s easy to just focus on the subject at hand” (Identifier E42).

9. What are your general opinions towards mindfulness meditation?

“I think that everyone should meditate, it makes your life a lot less stressful” (Identifier E48)

Each item also elicited the rationale for the participants’ perceptions by including “Why?”, “Why or why not?”, or “If so, what specifically?” The only item that did not include a secondary question was the last item, which elicited general opinions towards mindfulness meditation. Each participant’s response typically included a brief primary response to the yes-no portion of the question, such as “yes” or “definitely” to indicate a positive response, as well as a secondary response providing an elaboration as to the specific relationship between mindfulness meditation and the topic of the question specifically. These relationships were nearly always unique to each participant; however, there were similarities between respondents. That is to say,
participants did not provide a positive response without explaining why they felt that the mindfulness meditation was a positive experience.

4.2.2.2 Summary of Neutral Perceptions in the Mindfulness Experience Questionnaire

The second portion of the participants’ perceptions analysis relates to the neutral responses. These responses were typically coded neutral because they contained both a positive and negative sentiment within the same response to an individual question in the Mindfulness Experience Questionnaire. There were also responses in which participants stated that they did not have an opinion, or they expressed uncertainty. Examples of neutral responses can be seen in Table 10.

Table 10

Examples of Neutral Responses from the Mindfulness Experience Questionnaire

<table>
<thead>
<tr>
<th>Question</th>
<th>Examples Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the mindfulness meditation in class? Why?</td>
<td>“I was neutral. I don’t think it added anything but I did not dislike doing it” (Identifier E64)</td>
</tr>
<tr>
<td>2. Did you find the mindfulness meditation helpful for anything? If so, what specifically?</td>
<td>“As far as it being helpful I’m not so sure. I liked it but maybe I didn’t try as hard as I should have but one thing I have positive say about mindfulness meditation as far as helping is that I was able to close my eyes for a little while and made sure I was ready for the rest of the day” (identifier E36)</td>
</tr>
<tr>
<td>3. Do you think that the mindfulness meditation helped you learn Spanish better? If so, how?</td>
<td>“Maybe, I can’t be sure how I would have learned Spanish had I not used the meditations, but [I] felt like it made me more focused and eager to be in class” (Identifier E3)</td>
</tr>
<tr>
<td>4. Would you recommend mindfulness meditation to your friends or peers? Why or why not?</td>
<td>“Not sure. It depends on the person” (Identifier E57)</td>
</tr>
</tbody>
</table>
5. If there were an advanced level Spanish class that incorporated mindfulness meditation into the curriculum, would you purposefully take that class? Why or why not?

“Not necessarily because I don’t feel that it particularly helped me with my Spanish but it was a nice addition at the beginning of the class” (Identifier E1)

6. Do you feel that mindfulness meditation helped alleviate any anxiety or fears while in the Spanish classroom? Why or why not?

“The class is small enough and we’ve all gotten to know each other pretty well, so I haven’t been very anxious about being in class. I don’t know if part of that comes from the meditation or just the atmosphere of the class itself” (Identifier E29)

7. Did you feel more motivated to learn Spanish as the course progressed? Why or why not?

“I don’t know. I never thought about how motivated I was” (Identifier E24)

8. Do you feel that the mindfulness meditation helped you pay attention more in the classroom? Why or why not?

“It may have helped me pay attention better but I’m not sure because I don’t normally have problems with paying attention in class” (Identifier E7)

9. What are your general opinions towards mindfulness meditation?

“I think it’s cool and it helps a lot of people but it’s not really for me” (Identifier E50)

As seen in Table 10, neutral responses manifested in different ways. For example, Identifier E1’s response to the fifth question in the Mindfulness Experience Questionnaire begins with negative sentiment (“Not necessarily because I don’t feel that it particularly helped me with my Spanish”); however, they conclude with positive sentiment (“[…]it was a nice addition at the beginning of the class itself.”). Some participants simply stated that they were unsure as to whether or not mindfulness meditation played a role in their uncertainty, similar to that of Identifier E24’s response to the seventh question in the questionnaire.

4.2.2.3 Summary of Negative Sentiments in the Mindfulness Experience Questionnaire

Relatively few responses showed negative sentiment towards the mindfulness meditations. Participants had the most negative responses towards mindfulness meditation’s
abilities for helping them learning Spanish (17%) and if they would enroll in another Spanish course that incorporated mindfulness meditation (18%). The negative responses for mindfulness’ ability to help them learn Spanish mirrored the structure of a positive response in that they often began with “No” or “Not really,” and these often only included one-word responses. The second item, interest in another course that included mindfulness, primarily contained negative responses towards interest in another Spanish course and not necessarily a negative sentiment towards the mindfulness meditations.

There was one response that was unique from the other negative responses. As opposed to suggesting the treatment had no effect, this participant discussed how mindfulness meditation had a negative impact on their motivation: “No I typically enjoy learning Spanish but with the meditation it made it harder on me which caused me to be more discouraged in my Spanish skills and abilities” (Identifier E19). Identifier E19’s response is unique because it is the only one that shows mindfulness meditation as having a negative effect on their language learning experience. They stated that they did not believe that the mindfulness meditation helped with their “Spanish skills,” and that they “simply could not remember simple words or things [they] knew very well before” (Identifier E19, in response to item #5). However, this participant showed positive sentiments towards mindfulness meditation in response to other items in the Mindfulness Experience Questionnaire:

Yes, I would recommend to friends and family to start meditating simply because it relaxes you and helps you slow down for the day. I probably would recommend that they try meditating before going to bed or at night or even first thing in the morning because it’s a good way to help repave yourself for the day. (Identifier E19, in response to item #4)
As seen in the response, they enjoyed mindfulness meditation in general, and they believe that mindfulness meditation is a good practice. However, practicing mindfulness meditation at the specific hour of this participant’s class had a strong impact on their experience. Consider the following:

I honestly think that the meditation caused me to be more tired. I don’t get as much rest as I should so when I’m kind of tired the meditating just relaxes me and my sleepiness and I’m almost more sleepy. Occasionally, the meditating helped me pay attention when I would de-stress. (Identifier E19)

The participant’s habits outside of the classroom had an impact on the effectiveness of the mindfulness practice because they were not getting the rest that they needed before coming to the classroom. The mindfulness meditation, then, triggered too much of a restful state, thus causing the mindfulness meditation to negatively impact their learning experience.

4.2.3 Analysis of Categories Found in Mindfulness Experience Questionnaire Responses

4.2.3.1 Overview of Category Construction using Charmaz’s (2006) Constructivist Grounded Theory

**Research Question 5: What are participants’ reactions towards a mindfulness practice in the L2 classroom as expressed in the Mindfulness Experience Questionnaire?**

In conjunction with the positive, negative, and neutral classifications, I used Charmaz’s (2016) *Constructivist Grounded Theory* to analyze the participants’ responses for emergent categories and answer Research Question 5. Two categories are most prevalent throughout all of the participants’ responses, which I refer to as *anxiety* and *mindset*. Table 11 highlights the percentage of responses for each question in which these categories emerged.
The first category emerged because participants believed that the mindfulness meditation was successful at lowering their foreign language anxiety. Anxiety was constructed using comparable word categories from the participants themselves, such as “stress,” “nervous(ness),” and “worry.” Participants often reflected on their anxiety in a variety of ways, and they pointed to a specific aspect of language learning as their rationale for why mindfulness meditation alleviated their anxiety.

The second major category to emerge from the data, which was mindset, was present in conjunction with the first category. For example, one participant stated that mindfulness meditation was effective at reducing their anxiety and, in turn, allowed them to “focus on Spanish class and nothing else” (Identifier E02). Six participants explicitly described a “mindset” that they would assume in the classroom after participating in the mindfulness meditation. More generally, though, this category includes references to their ability to prepare for the foreign language class, remove distractions, and enter a productive mode. Participants used this category with the purpose of calling attention to and explaining their experience as being similar to that of a mental switch into a language acquisition state of being or a “transition in learning” (Identifier E11).

Table 11.

Anxiety and Mindset Response Rates in the Mindfulness Experience Questionnaire

<table>
<thead>
<tr>
<th>Question</th>
<th>Anxiety Responses</th>
<th>Mindset Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Did you enjoy the mindfulness meditation in class? Why?</td>
<td>65%</td>
<td>41%</td>
</tr>
<tr>
<td>2. Did you find the mindfulness meditation helpful for anything? If so, what specifically?</td>
<td>59%</td>
<td>60%</td>
</tr>
</tbody>
</table>
3. Do you think that the mindfulness meditation helped you learn Spanish better? If so, how?  
 22% 48%

4. Would you recommend mindfulness meditation to your friends or peers? Why or why not?  
 62% 43%

5. If there were an advanced level Spanish class that incorporated mindfulness meditation into the curriculum, would you purposefully take that class? Why or why not?  
 17% 20%

6. Do you feel that mindfulness meditation helped alleviate any anxiety or fears while in the Spanish classroom? Why or why not?  
 68% 14%

7. Did you feel more motivated to learn Spanish as the course progressed? Why or why not?  
 0% 0%

8. Do you feel that the mindfulness meditation helped you pay attention more in the classroom? Why or why not?  
 26% 46%

9. What are your general opinions towards mindfulness meditation?  
 29% 14%

As seen in Table 11, the two major categories, anxiety and mindset, are found in nearly all of the items in the Mindfulness Experience Questionnaire. Both are equally present throughout the questions in that one does not seem to be more dominant than the other. There was one item in the Mindfulness Experience Questionnaire in which neither anxiety nor mindset are apparent, which is related to motivation throughout the course. Responses for this question
vary substantially to such a degree that there are few trends. The following subsections first target the anxiety category and the mindset category as they appear throughout the majority of the questions in the Mindfulness Experience Questions. This is followed by a more in-depth analysis of the motivation question as an outlier.

4.2.3.2 Construction and Elaboration of the Anxiety Category in Participants’ Open-ended Responses

The construction of the anxiety category included two broad themes related to anxiety. The first revolve around the canonical issues related to foreign language anxiety, including their alleviated communication apprehension, test anxiety, and fear of negative evaluation. I then discuss how participants’ responses to the Mindfulness Experience Questionnaire illustrated mindfulness meditation’s ability to alleviate general anxiety and stress. To do so, I use several quotations from the participants to represent the overall findings from this report.

The first way in which the participants felt less anxious in the classroom was through their willingness and ability to communicate in Spanish after practicing mindfulness meditation. Several responses in the Mindfulness Experience Questionnaire highlighted mindfulness meditations ability to lower foreign language anxiety and increase confidence to speak in Spanish. For example, one participant stated that the mindfulness meditation alleviated the nervous feelings associated with producing the L2 (Identifier E04). Others stated that they were “more comfortable and able to participate more” (Identifier E05), “felt more comfortable” and “able to participate more” (Identifier E53). Iconic to this theme, one participant articulated how “the more I meditated, the less I worried about my Spanish being perfect and I was more willing to speak in front of my peers” (Identifier E35).
Interestingly, these statements indicate that the meditation had an effect on their willingness to communicate; however, there appears to be a procedural aspect to this positive finding. Participants often used terms that indicated a transitional phase in which they became less anxious (i.e., “as I was in class,” “as the semester and mindfulness went on,” “prior to the start of class,” and “the more I meditated,” respectively). Mindfulness meditation in the classroom, then, was effective because it was a consistently repeated practice that was incorporated into the structure of the class. This finding also shows that participants did experience impeding levels of foreign language anxiety, and an intervention was able to control for this anxiety.

The second area in which participants said that they experience lowered foreign language anxiety related specifically to test anxiety. There were several participants that attributed their lowered test anxiety to the “Before a Test” meditation (Appendix G), which was the only specialized mindfulness meditation for assessments. One participant stated that the Before a Test meditation allowed them to hear that they’re “okay and know everything that [they] needed to know”. In turn, mindfulness meditation facilitated a “boost” in their confidence just before completing a formal assessment. (Identifier E09). In terms of the emotional effects of a mindfulness practice before formal assessments in the L2 classroom, many participants experienced a reduction of negative emotions (i.e., anxiety). Identifier E23 stated that they, “tend to get anxious about [their] grades and doing well and the mindfulness meditation really calmed those nerves of [theirs]”. While some participants indicated that they would feel less anxious, but not completely free of anxiety (Identifier E42), this specialized mindfulness meditation was generally a positive experience for most participants.
Finally, mindfulness meditation was able to address the needs of the L2 learners by reducing irrational fears of negative evaluation in the L2 classroom. A common occurrence in the qualitative data was that the learners were generally nervous about producing Spanish because they believed their attempt would have a negative effect on the way in which they were perceived in the classroom. Fear of “mak[ing] mistakes” (Identifier E60), or the perception that they their linguistic abilities were not on par with the expectations of their peers or instructors, was alleviated by the meditations. Participants were more inclined to “just speak and write in Spanish and if [they] mess up it doesn’t matter” (Identifier E60) and “realize these fears are unnecessary” (Identifier E53). The meditating participants were “no longer scared to take tests or raise [their] hand” and “getting things wrong wasn’t a big deal in the big picture” (Identifier E59).

Similar to the two previous themes in the anxiety category, there appears to be a transition from mindlessness to mindfulness as learners progress through the mindfulness training. This can be seen in how participants illustrate a before and after by using phrases such as “I was always nervous” and “I was no longer scared” to show that they recognize a change in their behavior and emotional response. The introduction of mindfulness meditation into the L2 classroom was a moment in which participants experienced a pivoting transition from anxiety-induced learning to an awareness that their L2 acquisition did not have to be coupled with a sense of fear nor “a big deal in the big picture”. Participants appear to be able to use their trained mindful awareness to objectively observe their environment (i.e., the L2 classroom) and self-determine that they are not at risk from unexpected negative outcomes. This, in turn, allowed the participant to attempt to use the language, thus potentially allowing for more spontaneous
production of the language, as seen in the “now I just speak and write”, as if to mimic a more care-free mentality with target language usage.

In addition to communication apprehension, test anxiety and fear of negative evaluation, there were broad benefits that the participants mention in their open-ended responses that are still related to anxiety more generally. Mindfulness meditation was effective at improving their general learning experience and their overall mental health. There was a large number of individual responses throughout the Mindfulness Experience Questionnaire that referenced “stress.” These responses unanimously considered mindfulness meditation as being an effective treatment for their stress, whether it be general or academic. Identifier E03 stated that they “handled stress better” and were able to be “more active in classes now when it comes to getting [their] work done ahead of time.” For this participant, mindfulness meditation changed many aspects of their performance as a student in general. Mindfulness was helpful for them in making more pervasive changes that extended beyond the class time.

Similarly, enjoyment with the mindfulness meditation was linked to 1) their ability to focus on their personal mental health and 2) the language classroom. First, participants stated that mindfulness was a “great brain break to stop stressing about what [they] needed to that day or who [they] needed to see” and they “enjoyed collecting [themselves] before class and clearing [their] mind (Identifier E08). This finding is associated with a positive overall experience in the L2 classroom:

The mindfulness meditation was very helpful for my Spanish class, but it was also helpful in my [everyday] life. I found myself being excited through the day to get to Spanish and do our meditation. As a very worrisome person, it was so appealing to let those worries go for a few minutes. It definitely affected my attitude throughout the day. I
also started using some of the meditation techniques by myself throughout the day when I was feeling especially stressed. (Identifier E37)

Enjoyment with the mindfulness training appears to facilitate an enjoyable learning environment in the previous quote. To fully analyze the previous response, it is important to note that this E37 created a mental bridge between the L2 classroom practices and their personal life. Mindfulness training incited a behavioral change that was enjoyable to practice beyond the boundaries of the classroom. Enjoyment with the pedagogical intervention also led to “excite[ment] through the day to get to get to Spanish” class is iconic to the relationship between mental health, lowered stress, enjoyment, and the L2 classroom.

While Identifier E37’s references the broader effects of mindfulness meditation, many participants argued in favor of the incorporation of mindfulness meditation as a necessary and applicable contribution to existing academic curricula. Select participants stated that “having a class that offers a practice to support students’ mental health would be much better than a class that doesn’t” (Identifier E21) and that learners would “purposefully enroll in classes that incorporate meditation [because] developing this skill is extremely helpful in everyday life” (Identifier E32). Another participant also indicated that their lowered stress (as a result of the mindfulness training) was an added benefit to the opportunity to learn the language (Identifier E23). One participant went as far as to express that being mindful is a “life skill” (Identifier E32) that academia has the responsibility of training its learners to achieve. Considering the aforementioned positive findings associated with the mindfulness meditation training, an expected finding in the qualitative data is the participants’ desire to see more recognition on their mental health on the part of academia in general. Participants stated that they “enjoyed that
[they] were given a few minutes to relax and allow [themselves] to be relieved of stress”
(Identifier E02).

4.2.3.3 Construction and Elaboration of the Mindset Category in the Participants’ Open-ended Responses

Containing themes such as “preparation,” “focus,” and “productivity,” this category highlights the cognitive effects of a mindfulness meditation practice. I provide examples from the participants’ responses in order to illustrate how this category was constructed. In this section, I will discuss how participants’ responses form the mindset category and how the participants pose this category as containing three themes that function as phases: (i) preparing the mind; (ii) focusing the mind and eliminating distractions; and (iii) productivity as an outcome of the mindfulness practice.

Before providing the findings from this analysis, it is important to remember that mindset often presented itself as an outcome of being less anxious. Thus, the relationship between anxiety and mindset can be understood as a cause and effect relationship. An example of this directionality can be seen in the following responses:

Mindfulness meditation helped me feel less stressed while in class which allowed me to feel more focused and prepared and less anxious about speaking and participating in class. Instead of carrying all my anxiety or stress from [that] day or week into class, I could leave it at the door and focus completely on improving my Spanish during that class. (Identifier E16)

I would feel more calm and relaxed when I participate in mindfulness so I become more focused on my work and learning. Sometime[s] I come in and I'm so stressed that I cant focus on the meditation and I carry that stress with me during class. (Identifier E38)
I definitely would because it forces you to think about things you wouldn’t otherwise think of and recognize the tension in parts of your body you wouldn’t otherwise recognize. It helps you take a step back and realize that whatever you have to do later is out of the question; all we care about is this moment. That’s what the meditation helped me with the most, and it would be so cool if my friends could experience that too, since we go through the same stress. (Identifier E12)

A commonality between these statements is that all participants reflected on their ability to focus on the present moment and attend to their current task—learning Spanish. Mindfulness meditation, according to the statements above, changed the mindset of the participants and caused them to be more focused on what was taking place during the class session. Identifier E16 and E38 reflected on how mindfulness increased their cognitive control in the foreign language classroom due to their lowered foreign language anxiety. In comparison, however, Identifier E12 points to the general benefits of mindfulness meditation for their mindset. “Recogniz[ing] the tensions in part of your body you wouldn’t otherwise recognize” indirectly addresses anxiety and stress that is subconsciously affecting mood. More explicitly, Identifier E12’s response is more directed at how body scans (one of the more common mindfulness practices) can help lower anxiety and stress, which will increase general focus.

The first phase within the mindset theme relates to how participants perceived mindfulness meditation at the beginning of the class session. Participants indicated that mindfulness meditation directly affected their initial preparation for the course. Direct references to “[mindfulness meditation] helped me focus and feel more prepared for class” then resulted in “making [them] feel more confident and more willing to participate in class. This led to improving [their] speaking skills” (Identifier E16). Another participant stated:
The routine of meditation helped me focus before class started. It almost felt like I was turning on a switch before class started. It became a point of feeling like my brain was saying, "Ok, when we meditate, it is time to start thinking and speaking in Spanish." It really helped with the 180 language switch required for the class. (Identifier E51)

E51’s opinions were also reflected in another participant’s statement that, “rather than switching from ‘all English’ to ‘all Spanish’, there was a buffer in which my mind could start over and focus” (Identifier E59) and “it got [their] mind ready to learn a new language” (Identifier E60). This finding supports how mindfulness meditation was effective at helping participants transition into an optimal language learning state of mind. Notably though, none of the quotations above reference anxiety explicitly. Identifier E16’s response reveals that, for this participant, mindfulness meditation affected their preparedness for the class, which in turn increased their confidence and willingness to actively use Spanish in the classroom. Mindfulness meditation helped them prepare for the class session, and they were more actively engaged with the classroom, resulting in improved language acquisition. Identifiers E51 and E59’s responses exemplify this portion of the mindset category in its entirety with references to a “switch” in the language classroom. Examples such as “turning on a switch before class started,” “when we meditate, it’s time to start thinking and speaking in Spanish,” and the “180 language switch required for the class” summarize how mindfulness meditation trained participants for an optimal cognitive mindset adapted to language acquisition in the instructed foreign language classroom. Furthermore, Identifier E59’s use of the word “buffer” provides more support that there was a transitional phase that occurred as a result of the mindfulness meditation at the beginning of the class session.
A change in their mood, “healthy frame of mind […] and tension in the body” (Identifier E47) was shown to be the catalyst for improved mindset and transition into the course, as previously mentioned. Mindfulness meditation helped learners transition into a language learning mindset by allowing participants to “actually focus on what [they] were doing or what [they] needed to be doing” (Identifier E41). Moreover, it one participant indicated that mindfulness meditation “helped clear [their] mind to help make room for more information” (Identifier E18). Another participant said, “It definitely helped me to clear my mind so that I could focus more on learning Spanish” (Identifier E41).

The second phase presented in the mindset category shows how mindfulness meditation affected participants’ ability to focus and remove distractions at the beginning of the class. Participants stated that they were able to “be aware when [their] mind was wandering or wasn’t engaged” (Identifier E27) with the material or lesson. Participants were able to “clear [their] mind” and “focus more” (Identifier E40). Mindfulness meditation helped participants relieve feelings of being “scatter-brained” and “hone into Spanish and nothing else” (Identifier E23). Other stated that “starting class [with mindfulness meditation] really made a difference” in their ability to focus on learning Spanish rather than being distracted by external stimuli, such as a “to-do list” (Identifier E33).

As seen in the aforementioned statements, the participants believed that the mindfulness meditation significantly changed their level of focus and attentional awareness in the foreign language classroom. Each of these participants indicate that prior to the mindfulness meditation they were not focused but were able to transition into a focused state after the practice. For these participants, the mindfulness meditation was effective at preparing them for the class session and for receiving information and input of the language. Importantly, E33’s response does relate
back to anxiety but also shows the relationship between the two categories. The participant reflects on mindfulness meditation’s ability to transition students into a “class time mode” by focusing on the present moment and removing distractions. By referencing this “mode,” the participant highlights a change in mental state as a result of the mindfulness meditation, signifying that the mindfulness practice was effective. This participant continues by stating that there is a need for more practices of this nature to allow students to achieve the optimal “mode” for the classroom, which parallels previous responses that general education should incorporate mindfulness meditation into the curriculum. Identifier E33, however, differs from previous statements by stating that they “needed to remind’ themselves to maintain a mindful state, which provides more insight into this portion of the mindset category. This finding indicates that participants had the responsibility of maintaining the mindful state in order to remain less anxious and with an enhanced mindset in the foreign language classroom.

The final phase of the mindset category focuses on participants’ beliefs that they were more productive as a result of mindfulness meditation in the foreign language classroom. One participant stated, “Yes, not only in the class, but I found that I handled stress better and I am more active in classes now when it comes to getting my work done ahead of time” (Identifier E03). Other participants stated that they were able to “think about what [they] have to do, come up with a game plan about how to do it, and get things done in an organized and reasonable time” (Identifier E21). This finding, which was not particularly expected in this study, shows mindfulness having three distinct points of contact with the productivity theme in learners’ mindset. This finding shows that mindfulness had an effect on learners’ mindset in different ways, and there were multiple benefits for each participant as opposed to a unified singular benefit. Not only was the mindfulness meditation at the beginning of the class, there was also a
returned benefit to mindfulness even after the meditation had completed: “I found mindful meditation helpful for focusing because it helped me refocus” (Identifier E18). Here, E18 indicates that there was a shift in their attention at some point before the commencement of the class session, but mindfulness served as a way of reorienting their attention to L2 learning which in turn led to their ability to “think about what [they] needed to do and get it done”. Similarly, Identifier E64 accentuates the specific ways in which mindfulness meditation oriented L2 learners’ attention to the class session, thus making them more productive learners:

I think the meditation was helpful in focusing on what was important and stop putting so much emphasis on what isn’t. During the first part of the semester, I felt significantly more productive, and I attributed it to the mindfulness meditation because that was the only thing that had changed in my daily life. (Identifier E64)

Interestingly, each of these responses use the term “done” when discussing the tasks that they need to accomplish. However, productivity is an ambiguous, so it can only be assumed that “productivity” or “getting things done” is most associated with performing learning-related tasks. Still considering that there is a sense of productivity and accomplishment, there was an association between mindfulness meditation and the completion and finalization of tasks. There also appears to be a newfound sense of confidence in learners’ ability to form a sense of task-completion self-efficacy. For example, Identifier E21 clearly outlines how mindfulness meditation helped with the planning and execution of their tasks. Productivity is explicitly mentioned in Identifier E64’s response, stating that they could only attribute their changed behavior to the mindfulness meditation.

Some participants may have also experienced diminished returns on the benefits of practicing mindfulness meditation in the L2 classroom. For example, Identifier E64’s response
also included references the “first part of the semester,” which may imply that the end of the semester did not have as great of an impact on their productivity. This finding may also show that certain participants became accustomed to the mindfulness practice and that the novelty of mindfulness in the classroom had an impact on the

4.2.4 Motivation in the Mindfulness Experience Questionnaire

The final analysis of the Mindfulness Experience Questionnaire isolates the following question: “Did you feel more motivated to learn Spanish as the course progressed? Why or why not?” This item on the questionnaire did not possess any responses that fit with the anxiety nor mindset categories. As such, I analyzed this item independently to further explore how mindfulness meditation may have affected participants’ motivation throughout the course.

Findings from this investigation show that relatively few participants directly correlated their mindfulness meditation practice with their motivation. Participants often stated that they were more motivated for various reasons without specifically mentioning mindfulness meditation, such as “having so many opportunities to speak Spanish” (Identifier E07) and because they “saw that [they] were progressing more and more” (Identifier E22).

Nonetheless, there were a select number of participants that directly correlated their enhanced motivation with the mindfulness meditation practice. Some participants attributed the fact that Mindfulness meditation was the reason for their increased motivation. For example, one participant stated that “for some reason Spanish clicked for [them] this semester, and [they] think it had to do in part with the meditation” (Identifier E27). This participant states that they experienced a reaction to mindfulness trainings, which caused an underlying change in their emotional, connection with the classroom and language learning. It is unclear how Other participants stated that “the class was inviting and it is almost like the meditation made it easier
for my brain to learn Spanish rather quickly” (Identifier E41). Another participant stated that the “meditation equipped [them] with a confident attitude about the course and my abilities; I knew I could become fluent with continued practice and used that as a motivation tactic” (Identifier E47).

As seen in the participants’ responses above, many of the participants attributed a change in motivation throughout the course to the mindfulness meditation practice explicitly. Identifier E27 does not specifically state how mindfulness meditation helped with language acquisition; however, there are implications of how mindfulness meditation increased cognitive function in Identifier E41’s reference to making “it easier for [their] brain.” This finding shows how mindfulness meditation had cognitive benefits for motivation and language acquisition in general. More specifically, explicit information from Identifier E47 highlights how mindfulness meditation gave learners a new perspective and increased self-efficacy in the foreign language classroom by using the term “confidence.”

4.3 Summary of Qualitative Analysis

The experimental group’s reflections on their experience with the mindfulness meditation practice in a foreign language classroom point to several benefits for L2 acquisition and strong favorability of the practice in a foreign language classroom on the part of the language learner. The majority of participants stated that mindfulness meditation was an overall positive experience, while a smaller percentage indicated that they had negative or neutral sentiments towards mindfulness meditation in the instructed foreign language classroom.

Among the 585 open-ended responses to the Mindfulness Experience Questionnaire, two major categories emerged with several themes. The anxiety category points to both general and L2 acquisition-specific anxieties. Participants reported that mindfulness meditation was the cause
for their lowered foreign language anxiety with regards to communication apprehension, test anxiety, and fear of negative evaluation. They also stated that mindfulness meditation relieved their stress, which led to more efficient language learning. Relatedly, the mindset category consisted of three distinct themes or phases in which mindfulness meditation affected their experience in the foreign language classroom through preparation, focus, and productivity. The first step found in the responses was that mindfulness meditation gave participants the ability to effectively cognitively prepare for language acquisition. The second step, which was focus, revealed that mindfulness meditation impacted participants’ sustained attention and focus during the class session by removing external distractors. The final phase of the participants’ experience, as it relates to the mindset category, was that they found themselves to be more productive as a result of the mindfulness meditation. Evidence of this cognitive effect can be seen in participants’ reflections on their ability to accomplish tasks.

An important finding was that the anxiety category contributed significantly to the mindset category. A majority of the responses in the mindset category were also in the anxiety category. Reduced anxiety acted as a catalyst for the characteristics found in mindset, meaning that lowered anxiety improved the language learning experience. Participants were more prepared to receive instruction, more focused during the class session, and more productive as language learners as a result of lowered foreign language anxiety. The relationship between lowered stress and improved cognitive function is also represented in the connections between the two categories. Further elaboration and interpretation of these findings can be seen in Chapter 5.

The final analysis of the Mindfulness Experience Questionnaire also shows that meditation played a minor role in the participants’ motivation. There were some participants that
indicated mindfulness meditation positively impacted their motivation during the longitudinal study; however, there were not any references to the anxiety nor mindset categories found in the participants’ responses to the seventh item in the Mindfulness Experience Questionnaire (Appendix F).
CHAPTER 5: DISCUSSION

5.1 Introduction

In this chapter, I first discuss the findings for language learners’ self-efficacy. I then transition to a discussion of foreign language anxiety and stress as they pertain to the qualitative report. I continue by discussing how the first axiom of the mindfulness theory (Shapiro, Carlson, Astin, & Freedman, 2006) may inform the outcomes of this study, including L2 motivation. Finally, I conclude by considering the pedagogical implications from this study, as well as providing recommendations to L2 instructors that are interested in implementing mindfulness meditation in their classroom.

The present study attempted to draw connections between a mindfulness practice and language learners’ self-efficacy in an instructed foreign language context. The treatment was effective at increasing language learners’ mindfulness scores in the experimental group, while the control group expectedly showed no significant difference in scores. Nonetheless, the quantitative analysis revealed that there were no significant differences between the groups’ change in language self-efficacy in general, nor its related component (foreign language anxiety and motivation) when analyzing the self-reported data from the surveys. That is to say, despite the effective change in mindfulness scores, the intervention did not significantly impact these variables. The open-ended responses provided by the experimental group participants, however, point to substantial benefits. Also, a majority of the responses indicated that participants found
the mindfulness meditation practice to be positive for several factors (i.e., enjoyableness, helplessness, etc.). Moreover, the majority of the participants experienced enhanced cognitive preparation, maintained focus, and productivity in an L2 classroom.

5.2 Self-efficacy in the Foreign Language Classroom

This study shows that self-efficacy can significantly increase on average within one academic semester of L2 instruction at the university level. While the quantitative data does not show significant differences between groups, the experimental group only seldomly referenced topics associated with self-efficacy. In other words, it would appear that mindfulness meditation did not play a role in increasing participants’ self-efficacy. In this section, I explore some of the reasons why both groups experienced significantly increased self-efficacy between the pretest and posttest, including Bandura’s principles of performance accomplishments and physiological response. I also discuss how my findings appear to be incongruent with, but not exactly contradicting, Fallah’s (2016) proposed relationship between dispositional mindfulness, Coping Self-efficacy, and foreign language anxiety.

To begin, one possible explanation for the positive findings for self-efficacy across both groups may be Bandura’s (1977) principle of performance accomplishments. Many researchers have argued that successfully performing a task that causes tension or anxiety is a primary source of self-efficacy (Bandura, 1977; Fantuzzo & McWayne, 2002; Klassen, 2004, as cited in Busse, 2013). The present study appears to support this argument. In other words, the act of completing a semester of a Spanish course at the university level may have been a primary source of self-efficacy for many participants upon completing the posttest. Unfortunately, as the methods were not designed to explicitly test the effect of general instruction on self-efficacy, this explanation is
speculative; however, it would be worth taking into consideration for future studies that attempt to manipulate self-efficacy in the foreign language classroom.

While this study shows strong support for Bandura’s (1977) first principle, it also draws connections between the fourth principle (physiological states) and mindfulness practice in the foreign language classroom. Bandura (1977) states that one of the major sources of self-efficacy stems from treatments that address relaxation, which contributes to the umbrella term titled physiological states. One participant’s response exemplifies how mindfulness meditation served as a remedy for their imagined fears/anxieties in the foreign language classroom. They state, “I just knew that there wasn’t as much riding on it as my brain was trying to trick me into believing there was” (Identifier E37). Not only does this finding align with previous studies (Bamber & Schneider, 2015; Ortner, Kilner, & Zelazo, 2007), but it also suggests that there were positive outcomes for language learning. For example, the same participant indicated that they were more “confident in [their] ability to speak in front of the class” as a result of the mindfulness meditation treatment. This suggests that it is possible to enhance L2 self-efficacy, and limited interventions that specifically attempt to do so may have more impact than previously believed. For example, mindfulness meditation was shown to accomplish this, thus implying that it may have benefits for L2 learners.

In consideration of how this study informs previous research on self-efficacy, the findings may be incompatible with those of Fallah (2016). As a reminder, Fallah’s study examined the dispositional (no treatment) mindfulness scores of the participants and their relationship with foreign language anxiety and Coping Self-efficacy. His findings showed that higher mindfulness scores were associated with lower foreign language anxiety and high Coping Self-efficacy scores. Considering Fallah’s findings and previous research that has shown that a
mindfulness practice can increase mindfulness scores, there is reason to believe that a
mindfulness practice for the experimental group (and no treatment for the control group) would
have resulted in significant differences after the completion of the program. However, the goals
of these two studies differed in that Fallah (2016) used dispositional mindfulness scores (no
treatment) and I investigated how a mindfulness treatment affected the similar variables in
Fallah’s study. As such, the different findings between the present study and Fallah’s can be
explained by the different methodologies, participants, and theoretical frameworks.

First, the present study used a longitudinal data collection approach, and Fallah (2016)
collected data at one time point. It is possible that there would have been more comprehensive
information for each of the studies had there been more data collection. More data collection for
each of the studies would have answered different questions. For example, I would have been
able to determine how the variables in question changed over time. Specifically, I would have
seen if participants did not start to increase in trait mindfulness until closer to the end of the
study, thus leaving less time for them to be able to increase in self-efficacy. Fallah may have
been able to determine to what extent dispositional mindfulness scores maintained their
relationship with Coping Self-efficacy scores and foreign language anxiety.

Secondly, the participants in Fallah’s study had different characteristics than the present
study’s participant pool. Fallah’s (2016) study included Iranian university learners of English.
The present study collected data primarily from North American university students enrolled in
an introductory level Spanish class. Cultural differences between the two studies may explain
why these two studies show different results, which would support Zuo and Wang’s (2016)
assertion that self-efficacy presents itself differently depending on cultural background.
Additionally, while it is clear that nearly all participants in the present study were novice
mindfulness practitioners, it is unclear if Fallah’s participants were familiar with concepts of mindfulness or mindfulness meditation. Moreover, approximately half of the participants that took part in the present study were enrolled in the Spanish course because of their desire to acquire Spanish and/or learn about Hispanic culture. Fallah only provides the following information regarding his participants:

They were undergraduates who had never been abroad but had studied English as a foreign language formally for 6 consecutive years in junior high school and high school. They were all taking general English as a compulsory university course prior to their English for specific purposes (ESP) courses. (Fallah, 2016, p. 4)

Further studies should continue to look at how cultural background, prior knowledge and practice of mindfulness meditation, and the purpose for which language learners enrolled in the course would provide more insight into the relationships between state mindfulness and learners’ individual differences. This data would provide more information as to how self-efficacy manifests itself differently according to each culture.

Finally, different definitions and theoretical frameworks highlight the different goals for this study. Fallah (2016) used the Coping Self-efficacy Scale (Chesney et al., 2006), which has been primarily cited in studies related to physical health (Brown & Vanable, 2008; Guardino & Schetter, 2014; Schetter & Dolbier, 2011). In contrast, the type of self-efficacy investigated here related more to one’s ability to complete tasks related to language acquisition and using acquired skills, such as self-efficacy with speaking Spanish in the classroom. The difference in types of self-efficacy may explain why there were not significant differences between the two groups in the present study. Further investigations that focus more specifically on language learning self-
efficacy may yield more information regarding the relationship between language learners’
levels of self-efficacy and their mindfulness scores.

5.3 Foreign Language Anxiety Versus Stress

The findings from this study complicate our understanding of foreign language anxiety. Recall that the participants clearly expressed that mindfulness meditation lowered their foreign language anxiety. The topics identified within the anxiety category align with the most prominent examples of foreign language anxiety, such as communication apprehension, test anxiety, and fear of negative evaluation (Horwitz, 2017; Horwitz, Horwitz, & Cope, 1986). In this section, I explore how the fourth major topic of the anxiety category, general stress, may potentially explain the effects of a mindfulness practice in the foreign language classroom, thus clarifying the disconnect within the data. To support this argument, I discuss how mindfulness meditation may have been more effective at reducing general stress than foreign language anxiety. I then argue that the presence of both foreign language anxiety and general stress in the qualitative report may serve as a justification to include general stress as a contributing factor for foreign language anxiety and L2 acquisition. I conclude by arguing for more emphasis in SLA research on university stress’s influence on L2 learners’ overall success with the target language and how mindfulness meditation may be an effective solution for this issue.

There is strong evidence to believe that the mindfulness meditation treatment employed in this study was more effective at reducing general stress than foreign language anxiety. First of all, there was no quantitative effect on anxiety, and because there was not quantitative measure for general stress, I must rely solely on the qualitative results for my interpretations. For example, the qualitative results revealed how participants were more capable of achieving a relaxed state and had strong positive perceptions (85%) towards mindfulness meditation’s ability
to reduce fears and anxieties. This approach is in line with the large body of research that evidences mindfulness meditation’s innate ability to reduce stress in university students (Caldwell, Harrison, Adams, Quin, & Greeson, 2010; Galante et al., 2018; Irving, Dobkin, & Park, 2009; Mendelson et al., 2010; Myint, Choy, Su, & Lam, 2011; Schwind et al., 2017; Shapiro, Brown, & Biegel, 2007; Song & Lindquist, 2015). The participants also showed that there was a distinction between general stress and foreign language anxiety, as has been showed in the literature several times (Horwitz, 2017; Horwitz, Horwitz, & Cope, 1986; MacIntyre, 2007; MacIntyre & Gardner, 1994a; Zhang, 2013).

Based on what was seen in the qualitative report, mindfulness meditation’s primary influence rests with lowering practitioner’s general stress. An overwhelming majority of the participants indicated that they felt more relaxed and calmer after practicing mindfulness meditation. Because of this majority, there is reason to believe that the primary effect was for general stress rather than a specialized type of anxiety. This could be due to the fact that none of the meditations explicitly pertained to the foreign language classroom. Most of the meditations were about general stress. The mindfulness practices may have lowered participants’ general stress without targeting known aspects of foreign language anxiety. For example, participants may have benefited from meditations that trained L2 learners how to be comfortable with their developing linguistic capacities or to recognize that they were not losing their personal identity as it has been suggested that this is a common feeling associated with L2 acquisition (Horwitz, 2017). Importantly, these findings suggest that due to its broader success at reducing general stress, mindfulness meditation can still be considered an effective tool in the L2 classroom; however, it perhaps should not be considered SLA-specific. Looking to the future, an instrument
that measures general stress would be beneficial at addressing this interrelatedness. As such, future research should consider how general stress affects foreign language anxiety.

The presence of both general stress and foreign language anxiety in the participants’ responses lead me to believe that the two must be related. To support this, I return to the following representative statements to show the interrelatedness of general stress and foreign language anxiety:

Yes, I enjoyed the mindfulness meditation immensely. I think for me, it’s important to have those few minutes to take a breath and stop worrying about everything, especially the stress that I feel prior to Spanish class because I am nervous about how much I will have to speak in class. The meditation alleviated a lot of that stress for me, making me feel relaxed and even more confident in my ability to speak in front of the class. I just knew that there wasn’t as much riding on it as my brain was trying to trick me into believing there was. (Identifier E37)

The juxtaposition by E37 in the above quote of both “stop worrying about everything” (general stress) and “nervous[ness] about how much [they] will have to speak in class” (communication apprehension) shows how this participant felt two distinct emotions. Even more so, one emotion appears to play a role in the existence of the other. Assuming such a scenario is common for L2 learners, I posit two possible interpretations regarding the relationship between stress and foreign language anxiety. The first is that general stress is a source of foreign language anxiety. The second is that it is possible to experience stress with learning a language and not experience foreign language anxiety. With regard to the first interpretation, lowering the stress levels may have positive outcomes for L2 acquisition. That is to say, if we want to have more successful L2 acquisition in the university setting, we must also consider how much stress the L2
learners are experiencing inside and outside of the class. Additionally, general stress could be added to the list of contributing factors for foreign language anxiety (Young, 1991) alongside the insecurity that students often experience when learning L2 grammar (Coryell & Clark, 2009). Importantly, if general stress leads to foreign language anxiety, it is possible that mindfulness meditation’s ability to reduce general stress may, in turn, have an indirect effect on the reduction of foreign language anxiety.

For the second interpretation, more research is needed regarding how general stress plays a role in L2 acquisition. Identifier E37 was enrolled in the course solely as a requisite for their university degree. As such, this participant may show how mindfulness meditation is helpful for those that do not necessarily intend on fully acquiring the L2 and could help then become more able to express themselves in the L2 classroom. Because Horwitz (2017) claims that foreign language anxiety and general stress must be essentially different, it is then worthwhile to explore how general stress can affect L2 acquisition directly. This could be accomplished by focusing more on humanistic language teaching and learning (Bashir, 2013; Bozkurt & Ozden, 2010; Dabbagh & Noshadi, 2016; Grundy, 2013; Ketabi, Zabihi, & Ghadiri, 2012). For example, by accounting for the whole learning experience, it allows researchers and instructors alike to understand the complexities of the learning environment. Learners in this study did not consider the L2 classroom in isolation. It was part of the whole learning experience. The university setting coupled with the other learning experiences is a fundamental characteristic of the whole learner. Until future investigations parse apart these issues, we cannot eliminate the possibility that university students’ overall stress is the source of inhibited L2 acquisition.

In summary, more investigations are needed to fully understand the relationship between general stress and foreign language anxiety. Regardless of the specifics, though, mindfulness
meditation can be effective at reducing some inhibitory emotions for L2 learners. It is still unclear whether or not that emotion was solely stress, a combination of stress and foreign language anxiety, or if there were other extraneous variables at play. However, one of the substantial outcomes from this study is that participants found it to be highly beneficial for their mental health and for the foreign language classroom. Mindfulness meditation, then, seems to be an effective solution to university stress, although its exact relationship with foreign language anxiety is still unclear. Notably, the qualitative data helps confirm that L2 learners in the university setting still struggle with foreign language anxiety (Horwitz, 2017; Lileikienė & Danilevičienė, 2016), and mindfulness meditation may be able to address this issue, as it has done with other negative emotions (Regehr, Glancy, & Pitts, 2012).

5.4 Intentionality and Mindfulness in the Foreign Language Classroom

The first axiom of mindfulness mediation, intention or “on purpose” (Kabat-Zinn, 1994; Shapiro, Carlson, Astin, & Freedman, 2006), played an important role in the present study. Recall that intention is understood as the catalyzer of mindfulness, and Shapiro et al. emphasize that the reason why someone practices mindfulness meditation is “crucial to understanding the process as a whole” (Shapiro et al., 2006, p. 376). To further accentuate the importance of intentionality, Shapiro (1992) argued that positive outcomes are directly associated with the intention of the practitioner. That is to say, if a practitioner wants to improve their emotional self-regulation, they are more likely to do so if they have fully developed intentions for the meditation. This reliance on intent could potentially undercut the usefulness of a mandatory, instructor-led pedagogical intervention like the one employed. Nonetheless, the participants in this study showed significantly positive gains in mindfulness scores (and considered it an
enjoyable and helpful experience), despite not receiving instructions to develop their own intentions for the mindfulness meditations.

One explanation for these findings is that participants were able to develop their own intentions for the mindfulness practice. In the qualitative data, there were several participants that indicated that they changed their opinions. For example, Identifier E54 summarized their experience by saying the following: “Now? I appreciate [mindfulness meditation] and think it works. [It is] no longer a hoax.” Along the same lines, many participants indicated that “as the meditations went on” (Identifier E05) over time, they began to believe more in the mindfulness practice. The fact that participants indicated a certain level of buy-in suggests that participants’ intentionality may have been intrinsically established at the individual level without prompting. In other words, the participants may have simply picked their own intentions for their mindfulness practice on their own, such as improving mental health, reducing anxiety, have a nice beginning to the class session. A likely indication that they were able to develop their own intentions, given that they are fundamental to the efficacy of a mindfulness practice (Kabat-Zinn, 1994; Shapiro, 1992; Shapiro, Carlson, Astin, & Freedman, 2006), is that there were distinct outcomes for each participant. Mindfulness meditation was much more personalized, and this could be seen in how some participants found mindfulness meditation to be helpful with relieving stress, lowering foreign language anxiety, enhancing sustained focus during the class session, and so on.

This study shows provides evidence that by not imposing a specific purpose for the meditation in the classroom there can still be positive outcomes. This is to say, simply incorporating mindfulness meditation in the classroom in as natural a way as possible may be most beneficial to L2 learners. The participants’ free will to decide how to personally approach
the mindfulness practice allowed them to cater the intervention to their own personal needs. As such, this approach to the implementation of mindfulness meditation could be considered learner-centered and humanistic. A number of participants’ interpretation of intentionality was specific to L2 acquisition. For example, some participants found themselves more capable of communicating in Spanish as a result of the mindfulness meditation (e.g., Identifiers E04, E05). Nonetheless, this was not the case for all participants, and it should be noted that many of the participants reflected on their intentions to the broader learning context.

Other participants, conversely, established their intentionality beyond the classroom in a more general way, as was seen in participants’ reflections on their mental health (e.g., Identifiers E02, E21). These connections with more general lifestyle issues may explain some of the findings from this study, as there was divergence from the SLA-specific purposes. This can also be considered as a positive characteristic of this study because participants may have enjoyed the mindfulness meditation more because they were free to apply the tenants of mindfulness meditation as they saw fit. This was evidenced by the overwhelmingly positive responses in the Mindfulness Experience Questionnaire. Learners may especially like the ability to develop their own purpose for the mindfulness meditation, which may explain the positive responses for enjoyment and helpfulness in the qualitative data. As a caveat, it is difficult to determine whether or not these self-identified intentions will be SLA-related or not.

I also argue that there are substantial caveats to the openness and flexibility of L2 learners’ intentionality for the L2 classroom. Specifically, administrators, educators, and the learners may find the mindfulness meditations perplexing or separate from their educational experience without some form of guidance. Though I argue that there are more benefits associated with learners’ ability to establish their own intentionality, implementation without
proven outcomes may be an inhibitory factor for the implementation of mindfulness meditation on a larger scale. Using the present study as an example, mindfulness meditation had significant influence on the learning experience for anxiety, and there is reason to believe that the experimental group associated their mindfulness practice with increased self-efficacy and motivation. Conversely, these findings are innate to the individual as opposed to the group. As it stands with the current findings from this study, broader generalizability in the L2 classroom may be less possible. Potential solutions to this issue could be through creation of mindfulness practices designed specifically for the L2 learner. This is partially supported by the positive reactions towards the Before a Test mindfulness practice, which participants believed was a source of enhanced self-efficacy and lowered anxiety. To date, mindfulness meditation for the sole purpose of acquiring an L2 does not yet exist but may bridge educators’ and administrators’ requirements for proven outcomes at the larger scale, rather than simply at the individual level.

As a retort to the need for evidenced outcomes from a mindfulness practice, it is important to note that humanistic practices dictate the need for individuality. This is to say that not all participants will respond in the same manner to any practice, and even less so when the practice requires introspection and reflection of the present moment. By placing a standard by which we measure the efficacy of any practice eliminates the possibility of truly developing a student-centered learning environment. This openness in terms of intentionality, allows educators and learners to achieve student-centered pedagogy in ways that to date are merely hypothesized. For example, mindfulness meditation may be a way of addressing Arnold’s (2011) call for more humanistic practices in the classroom. Recall that she posits that diversity is represented in our classroom in ways beyond the superficial “good” versus “bad” students. Rather, she proposes that learners’ “emotions, thinking, and learning are inextricably linked” and that “the brain needs
to connect to meaningful experience[s]” (Arnold, 2011, p. 13). By not imposing the intentions for a mindfulness practice, educators nurture learners’ self-discovery of the “meaningful” with regard to both L2 acquisition and a mindfulness practice. The juxtaposition of both of these self-discoveries within the same environment, in this case the L2 classroom, places humanistic teaching/learning at the forefront. For these reasons, the imposition of intentionality is at the same time beneficial for targeted needs, but also limits the flexibility and nature of humanism.

In summary, this study was limited in the sense that it did not bring in intentionality as a measured variable nor as an open-ended question in the Mindfulness Experience Questionnaire; however, there is reason to believe that intentionality played an important role in the success of the mindfulness meditations. This finding partially supports previous works that indicate intention for practice is important to the success of the practitioner’s mindfulness experience (Kabat-Zinn, 1994; Shapiro, 1992; Shapiro, Carlson, Astin, & Freedman, 2006). Future research should investigate how participants are able to develop their own intentionality while consistently practicing mindfulness meditation. Implications from the present study showed that mindfulness meditation is capable of enhancing trait mindfulness scores, regardless of pre-established intentionality or lack thereof. In short, mindfulness meditation is a tool that anyone can implement in the foreign language classroom and see learners benefit from the experience.

5.5 Implications for the Foreign Language Classroom

5.5.1 Implications for Foreign Language Classroom Research

It is possible that, when using pedagogical interventions outside of the field of SLA, participants will interpret and experience the practice differently than originally intended. As mentioned in the previous section, many of the participants did reflect on their language learning throughout the study, such as their foreign language anxiety, but many of them also indicated
that mindfulness practices had prominent gains outside of the classroom as well. In fact, select participants made no reference whatsoever to the foreign language classroom context. Participants stated that they found the practices beneficial to their life more broadly, not to the specific task of learning a language. In the broadest sense, instructors and researchers in an L2 context should recognize that any intervention may have alternative or unforeseen effects on learners, particularly when it is not SLA-specific. This finding may appear to be negative in nature, as it seems to undercut the original intent for the study. However, it is important for instructors to recognize that despite being unintended, in this particular case, there were still positive gains for the L2 acquisition process. Thus, it is crucial that instructors not be discouraged by alternative findings and not shy away from incorporating elements from different fields of study.

Additionally, it may be time for instructors (and researchers of foreign language instruction) to focus on the whole learning experience of L2 learners as university students. An important aspect of the current findings is that learners reflected on the applicability of mindfulness meditation beyond the foreign language classroom and more about the university experience as a whole. This finding suggests that learners, in general, do not necessarily think about the foreign language classroom in isolation. Rather, their comments reflect how they consider the different elements of their entire learning context as being intertwined. This is supported by how participants indicated that they wished other curricula besides Spanish would incorporate mindfulness meditation, as it created a better learning environment in general. Moreover, some participants stated that they looked forward to the mindfulness sessions (and in turn, Spanish class) and that it was a way of “repav[ing] yourself for the day” (Identifier E19). This may explain why several participants spoke more generally about their gains from a
mindfulness practice, not focusing solely on its effects on the foreign language classroom. This finding, derived entirely from the qualitative data, has implications for how we perceive the foreign language classroom and how it is researched. Researchers and instructors, alike, may find it more fruitful to think beyond the classroom and consider the broader context. For many learners, this would include the university learning experience, as the classroom is inextricably linked to the other university classes for learners like those in this study whose language learning is just one part of a broader academic context. Importantly, this context would be completely different for younger learners enrolled in high school, for example, or for learners who are not full-time students. Regardless of the specifics, though, learners are shaped by their experiences, and this development (positive or negative) could have effects on the L2 acquisition process. Unfortunately, this consideration is often ignored. I argue that it is time to consider the entire learning context so that researchers can determine best practices for helping learners be effective inside and outside of the foreign language classroom.

5.5.2 Pedagogical Implications

Several findings from this study apply directly to the foreign language classroom. In this section, I discuss how the positive and enjoyable outcomes for L2 learners were a result of reduced general anxiety and stress in university-level foreign language courses. I also explore the participants’ deliberate satisfaction with a mindfulness practice before formal assessments. I then discuss how mindfulness meditation is an accessible humanistic practice in the language classroom. I conclude by drawing connections between L2 learners’ appreciation of focus-enhancing activities and the foreign language classroom.

First, the role of stress in the foreign language classroom is important implication from this study. L2 learners positively respond to stress-free, low anxiety contexts of learning. This is
evidenced by the numerous responses that stated that they particularly enjoyed mindfulness meditation in the classroom because they had a moment to relax before the class session began. As a result, there were indications of positive effects on L2 acquisition, such as more willingness to communicate and receptivity to L2 input. Instructors should be conscientious of the stress levels of their learners. One way of accomplishing this would be by giving their learners anxiety measures, such as the FLCAS (Anxiety Scale) to at least have an understanding of their levels of foreign language anxiety. In addition to awareness, though, instructors should also consider proactive ways to reduce general stress levels in the classroom. For example, explicit approaches to lowering stress in the foreign language classroom appear to have an effect on learners. Instructors, then, can be flexible in how they manage their learners’ stress levels.

Participants explicitly stated that they enjoyed using the mindfulness practices as a way to prepare themselves for their formal assessments (in-class quizzes). This is an interesting outcome because it meant that they sacrificed a portion for the meditation rather than directly beginning their assessment. Participants’ reflections that showed how mindfulness meditation was helpful with this task completion further evidences that mindfulness has a place in the learning experience. This finding also gives further support to the importance of allowing learners to focus on their emotions and prepare themselves for a task that they may perceive as being high risk. It also provides more insight into how foreign language anxiety may impede learners from performing their working knowledge of the target language. Importantly, mindfulness meditation as a pedagogical tool, though only used as a minimal intervention, can have lasting effects on L2 learners’ anxiety. Importantly, this is an area of positive psychology and mindfulness research that has not been thoroughly explored. Instructors and researchers alike may find it useful to explore how a mindfulness practice may increase learners’ performance.
Another explanation for the learners’ positive perceptions towards meditation is that mindfulness meditation naturally coincides with a humanistic, positive psychology approach to L2 learning. Many educators may consider a positive psychology approach to be inaccessible. Concerning oneself as an educator with the individual can be a daunting task, particularly for the instructor with several courses and numerous other responsibilities. Several aspects of the present study’s findings imply that the individual is accounted for when they are given the chance to focus on their own emotions. This 5-minute intervention, though minimal, had lasting benefits for several participants. Educators may find it useful to strategically implement mindfulness meditation as a way of setting the tone in the language classroom that every individual is important, accounted for, and recognized. I argue that mindfulness meditation allows learners to return to their emotions, consider their emotions, meaning, resilience, etc. (Oxford, 2016). Many of the participants’ reflections about the mindfulness intervention in this study closely align with the EMPATHICS framework. Naturally, many educators may strongly desire using this approach. I propose mindfulness meditation as a way of subverting the difficulties surrounding a positive psychology approach in the common learning environment.

Further support of mindfulness meditation as an effective pedagogical tool is that many of the participants in this study favored a practice that allowed them to find more clarity and focus before and during the regular class session. As with reduced stress, L2 learners also enjoy practices that allow them to achieve clarity and focus in a formal learning context. As a result of the mindfulness practice in this study, many stated that they were able to achieve more productivity and were able to sustain their focus throughout the class session more effectively. These findings signify that instructors should consider the role of engagement in the classroom. Learners enjoy having the opportunity to achieve the proper mindset for L2 acquisition.
Moreover, this finding shows that learners’ focus in the classroom is fluid. As seen in this study, learners are capable of becoming more engaged in the classroom but may require more assistance with arriving at this capacity. That being said, instructors do not need to consider learners as being incapable, but rather can consider alternative pedagogical practices for enhancing learners’ productivity in the foreign language classroom. Notably, this concept appears to be closely linked to the way class sessions begin. Such practices may be mindfulness meditation, engaging cognitive tasks at the beginning of the class, warmup activities, and so on.

5.5.3 Recommendations for Implementing a Mindfulness Practice in the Classroom

This section is dedicated to providing advice for instructors who are interested in incorporating mindfulness meditation in their introductory language courses. As part of my holistic understanding of the present findings, I have two aspects that were seen to be crucial to the success of a mindfulness practice in such a context. They are considerations for: the (i) openness to mindfulness practices; and (ii) the learners’ intentionality. Following these essential elements, I continue by providing a step-by-step guide that instructors can follow for their first-ever implementation of mindfulness meditation in the foreign language classroom.

5.5.3.1 Promoting L2 Learner Openness to Mindfulness

Openness is one of the most important emotions for the efficacy of a mindfulness practice. Openness refers to the willingness to learn about what a mindfulness practice entails, follow a guided mindfulness practice, and consider how the principles associated with mindfulness can be beneficial to one’s own wellbeing. With this in mind, it is crucial that both the instructor and learner consider how open they are to a mindfulness training before beginning the practice in the foreign language classroom. This is particularly true if the instructor is not familiar with what the practice entails. In such cases, I recommend that instructors investigate
what a mindfulness practice requires. Instructors can begin by evaluating several mindfulness practices to determine which types of meditations are most comfortable for them. After determining the most suitable practices for the instructor, learners can then provide their own opinions regarding which meditations they may wish to practice. For example, some participants may be more open to general meditations rather than meditations specifically designed to increase their attention.

As seen in the qualitative response, there are some learners that will not develop openness immediately, but rather with continued practice. Instructors may find it beneficial to allow learners the opportunity to opt in or out of mindfulness practices by providing appropriate alternatives as they see fit. In doing so, learners’ choice and volition can play an important role in their practice, thus targeting their openness to the experience of being a mindful learner.

5.5.3.2 Supporting L2 Learner Intentionality of Mindfulness

Instructors should help learners develop their intentionality for their mindfulness practice. Learners do not necessarily have to have an imposed intention for the mindfulness meditations; my study contributes to mindfulness research by supporting Shapiro et al.’s (2006) first axiom, intention. My findings show that mindfulness meditation does not affect mindfulness state nor develop a mindfulness trait in the participants if learners do not establish an intrinsically-derived purpose for the practice. Intention, in this sense, is not stagnant nor artificially created. I propose that mindfulness as a state and trait can be seen, metaphorically, as nutrition for the mind. This metaphor is rooted in the qualitative data analysis findings which showed participants’ anxiety reduction and mental health improvements. One single mindfulness practice may not be a “one-size-fits-all” for a classroom of individuals with their own needs.
One way in which intention may be accounted for is by providing a variety of mindfulness practices. My study implemented meditations geared towards alleviating stress and anxieties. There were practices dedicated to college students and training attention control. These are only representative of productivity-inducing meditations, which is limited in scope. Mindful communication practices may be more beneficial to conversation courses in the L2. The instructor should have a firm grasp on the students’ purposes. To accomplish this, learners can report their intentions for the meditation by way of written reflection. However, instructors should use their personal discretion as far as intentionality with the mindfulness practice. If instructors want to use specialized mindfulness practices, such as the “Before a Test” meditation in this study, they may find it resourceful to clearly articulate the purpose for the meditation.

5.5.3.3 Guide to Implementing Mindfulness Meditation in the Foreign Language Classroom

This section serves as a guide for instructors that are interested in implementing mindfulness meditation in their foreign language classroom. The six steps are as follows: (i) familiarize yourself with mindfulness meditation, (ii) determine which practices are most beneficial to the learners, (iii) include mindfulness meditation in the course calendar, (iv) specify the amount of time for each meditation, (v) consistently practice mindfulness at the beginning of every class, and (vi) troubleshoot learners’ experiences when necessary.

Step 1: Familiarize yourself with the principles of a mindfulness practice. To begin, I recommend that you learn as much as possible about a mindfulness practice before setting out to add it to your classroom. This is especially important for novice meditators, as the instructor’s opinion sets the tone for the mindfulness meditations. An instructor’s opinion would logically have a positive or negative impact on the learners’ experience. As such, familiarizing yourself with what a mindfulness meditation practice entails would inform you as to whether or not you
would want to implement the practice or not. As a point of departure, there are several resources available to the instructor, such as scholarly articles, online training programs, apps, and so on. There are several types of mindfulness meditations (examples seen in Roeser, 2016), such as the Mindfulness-based Stress Reduction (Kabat-Zinn, 1994).

Step 2: Determine which practices are most beneficial to the learners. After familiarizing yourself with the distinct mindfulness practices, determine which practices would be most beneficial for the learners. For example, if learners experience high levels of general anxiety, they may benefit from meditations designed to lower anxiety. Similarly, if learners have a difficult time maintaining their attention during a class session, a mindfulness meditation that enhances sustained attention may help students focus in the classroom. As seen in the present study, you are not limited to one theme, but rather you can incorporate a variety of mindfulness meditations. I recommend using a series of meditations that provide explicit information for first-time mindfulness practitioners, similar to the meditations used in this study. Additionally, decide if there are special mindfulness practices for certain situations, such as a meditation for before taking a test or before giving a presentation. These meditations were found to be particularly helpful to the participants in this study.

Step 3: Include mindfulness meditation in the course calendar. The next step is to explicitly add mindfulness meditation to the course calendar. This will set the tone for the learners that the mindfulness is inextricably linked to their foreign language course. In doing so, instructors can strategically add mindfulness meditations that align with the semester (e.g., mindfulness for test preparation, public speaking, etc.). This will also allow for instructors to determine how mindfulness meditation fits within the context of their course. I recommend implementing mindfulness meditation in the classroom at the beginning of the class session.
While it is possible for learners to practice independently or separately from the class session, this study shows that the mindfulness meditations were a great way of starting the class sessions. In particular, starting a class session can set the tone for the class session and allow the learners to achieve the appropriate mindset for learning.

**Step 4: Specify how long learners will practice mindfulness meditation.** Along the same lines, establish how long learners will practice mindfulness meditation for each class session. As an example, I implemented a 5-minute mindfulness practice because it was the shortest known practice that was marketed to still have positive effects on the practitioners. A 5-minute practice is most appropriate for a 50-minute session because it allowed learners to get into a proper mindset for the class session without taking away from the instruction. But it depends on the length of each class session, as a 10-minute practice in a 75-minute class would also be appropriate, for example. In general, I recommend not going beyond 10% of the class session, as it may not be most applicable to the purpose of the foreign language classroom. Arguably, more mindfulness practice would result in more gains for the learners; however, it is important that the duration is not too long as to reduce the amount of learning, nor too short to negate the effectiveness of the practice.

**Step 5: Consistently practice mindfulness meditation.** As an important next step, maintain consistency with the practice in the foreign language classroom. This will allow learners to develop their intentionality, create a routine for the class, help learners get into a mindset for L2 acquisition, among other benefits. This can be accomplished by referring back to the course calendar in which an instructor has already determined which meditations learners will practice.

**Step 6: Troubleshoot the learners’ experiences when necessary.** Now that mindfulness is successfully implemented into the foreign language classroom, it is important to recognize that
each learner will have an individualistic response to the mindfulness practices. As such, there are a few aspects that need to be addressed. For example, instructors may be concerned about distractions at the beginning of a class session (i.e., a student enters in late while the rest of the class is mid-practice). I recommend enforcing a policy for learners to enter after the completion of the mindfulness meditations, at least during the introductory weeks. Mindfulness meditation is unique in that practitioners should recognize external distractors and then return to their centered focus. The act of returning focus to the breath is a crucial skill associated with mindfulness meditation. As such, after the introductory phase of the mindfulness meditation, instructors should be less concerned about distractors. Instead, instructors can encourage learners to take advantage of this situation as an opportunity to learn how to refocus their attention.

Furthermore, a mindfulness practice often entails the recognition of one’s personal feelings and emotions. Instructors must be cognizant that there are external emotions that the learner is experiencing of which the instructor has no prior knowledge. If a learner is experiencing a period of extreme stress, it is possible that the mindfulness meditation will cause a learner to experience distressful emotions. In this scenario, I recommend instructors quietly allow the learner to stop meditating and seek the appropriate counseling for their circumstances. Learners should consult professional support services, such as counseling centers, rather than relying on the meditations in the foreign language classroom. Along these lines, instructors must be prepared for these situations, though they may be rare occasions.

Anecdotally, many L2 instructors are concerned with practicing a guided mindfulness meditation that is not in the target language. Resources for mindfulness meditations in other languages, such as Spanish, are less abundant than they are in English. I would argue that, though not ideal, it is the current reality of the practice. A way of addressing this issue would be
by becoming a certified mindfulness instructor and serving as the mindfulness guide. However, it may be difficult to replicate an identical meditation if an instructor teaches multiple classes. I would argue that it is more beneficial to learners if the instructors serve as the guides, but an online platform is more suitable when researching the effects of mindfulness meditation in a foreign language classroom.

Finally, instructors should be prepared to change their calendars to include meditations that are more applicable to the learners. Periodic conversations with the learners regarding their personal experiences with the mindfulness meditations are beneficial to the overall effectiveness of the practice. Learners’ input regarding their experience with the meditations can be a resourceful tool. It is possible that the learners react negatively to a meditation for whatever reason. Flexibility and willingness to change a set of meditations to better accommodate learners’ interests will be a valuable asset to the overall experience.
CHAPTER 6: CONCLUSION

6.1 Lessons Learned from Investigating Mindfulness Meditation in an L2 Setting

The present study investigated the effects of a mindfulness practice in a foreign language classroom. Specifically, participants in an experimental group practiced 5-minute mindfulness meditations during one academic semester (13 weeks). When compared to the control group, there were not significant differences for self-efficacy, foreign language anxiety, nor motivation. In the qualitative data, though, there were two major categories that emerged: anxiety and mindset. The anxiety category consisted of responses related to reducing foreign language anxiety (communication apprehension, test anxiety, and fear of negative evaluation), which closely aligned with the commonly understood characteristics of foreign language anxiety (Horwitz, Horwitz, & Cope, 1986). They also stated that mindfulness meditation was very beneficial for their general stress and had a positive impact on their mental health. The mindset category showed how the meditations increased the learners’ mental preparation for L2 acquisition, controlled attention throughout the class session with the ability to recognize distractions and refocus on the task at hand, and enhanced productivity. Moreover, a large majority of the participants stated that they found mindfulness meditation to be a positive experience (i.e., helpful, enjoyable, recommendable, etc.).

In consideration of these findings, there are several implications from this study. Among which, there were strong connections to Bandura’s (1977) theory of self-efficacy, particularly concerning the first and last principles (performance accomplishments and physiological
response). There were also outcomes that showed an interrelatedness between foreign language anxiety and general stress, even though they are often considered distinct from one another (Horwitz, 2017; Horwitz, Horwitz, & Cope, 1986). The intention (Shapiro, Carlson, Astin, & Freedman, 2006) was an important aspect of the learners’ experience with mindfulness meditation, as it appears the learners diverged from the SLA-specific benefits to a broader reflection of how the practice was beneficial for their overall wellbeing.

In terms of implications for the foreign language classroom, I focus on two different areas—research and pedagogical application in the foreign language classroom. For the research aspect, I emphasize how interdisciplinary approaches in a foreign language classroom can result in unexpected outcomes, as was seen in some cases in this study. I then call for researchers to shift their perspectives of university-level acquisition beyond the confines of the foreign language classroom. Instead, I argue for the inclusion of the entire learning experience and to position the foreign language classroom within the context of the university learning. With regard to pedagogical implication, I state that an L2 learners’ openness and intentionality with the mindfulness practice are fundamental to the successful mindfulness experience in a foreign language classroom. Finally, I provide a guide to instructors for the implementation of mindfulness practices in the foreign language classroom.

6.2 Limitations and Future Directions of the Present Study

The present study was the first attempt at investigating mindfulness meditation as a pedagogical tool in the foreign language classroom. For this reason, there were limitations to the present study that can be improved for continued research. Namely, the quantity and type of participants, the scope of the study, the number of times data were collected, and the limited qualitative information are among the limitations of the present study. Along the same lines, I
was only able to assume that learners were practicing the mindfulness meditations. There were no explicit questions that asked learners if they consistently followed the guided meditations. I discuss these specific limitations and, in doing so, provide ways in which these limitations can be addressed in continued investigations.

First, more participants may have provided more statistical power for the present study. The population size in this study was limited by the accessibility. Out of 10 sections, there were 124 participants that completed all portions of the study. Among which, 65 were allocated to the experimental group, and 59 were in the control group. A continued study may benefit from collecting data across two academic semesters as to collect data from a larger population size.

Secondly, a majority of the participants in this study were primarily focused on fulfilling a requirement for their university degree rather than truly acquiring a foreign language. This is a characteristic of the university course in which the present study took place. I chose Spanish 103 course sections because of the enrollment and number of sections. Also, they all had three class sessions per week, which made for easy comparisons. More advanced courses, though, are more likely to have learners that desire to fully acquire Spanish, and they are typically more variable in terms of class sessions and instructors. For the future, collecting data from more advanced levels may account for some of these limitations and provide more information as to how mindfulness meditation can be beneficial to more advanced learners.

Next, the scope of the present study was limited to self-efficacy, foreign language anxiety, and motivation. There are several other variables that need to be investigated, such as the effects of mindfulness meditation on L2 attention, proficiency development, performance on assessment, among others. Because this was the first investigation with mindfulness meditation as an intervention in the L2 acquisition process, I considered individual differences of the learner
to be the most productive point of departure. Now that these findings have established that the relationship between these factors and a mindfulness practice is variable, it is possible to expand to other facets of the acquisition process. As a continuation, I believe that the mindset category is the most logical next step in this line of research. Specifically, an understanding of how L2 learners’ enhanced attention can influence language processing would be beneficial to the field of SLA.

Another limitation is that this study only used pretest/posttest data collection procedures. While the longitudinal aspect of the study gave important information as to how mindfulness meditation would impact certain variables after an academic semester of practice, a mid-point data collection cycle could have provided more information as to how these variables change over time. As discussed in the previous chapter, a mid-point data collection procedure could have indicated whether or not the treatment began impacting self-efficacy, foreign language anxiety, or motivation immediately or if participants only begin reacting to the treatment after a certain amount of time. This information could partially explain how the treatment works longitudinally. Also, this information could have provided a unique insight into how these individual differences change over time during one academic semester of foreign language instruction. Future investigations may be able to accomplish more data collection procedures with more focus on one of these variables. Because this study intended to cast a broad area of investigation, a mid-point data collection procedure would have been too invasive to the foreign language classroom. As such, more specialized investigations, with fewer instruments and lessened required time to complete surveys and questionnaires in the classroom.

As previously mentioned, this study attempted to use recognizable instruments, such as the Freiburg Mindfulness Inventory (Walach, Buchheld, Buttenmüller, Kleinecht & Schmidt,
2006), an adapted version of the Questionnaire for English Self-efficacy (Wang, Schwab, Fenn, & Chang, 2013), the FLCAS (Horwitz, Horwitz, & Cope, 1986), a commonly used motivation survey (Dörnyei & Chan, 2013), and an open-ended response questionnaire that I created for the present study, the Mindfulness Experience Questionnaire. All of these instruments required the participant to reflect introspectively on their experience and use their best judgment of their emotions. A typical limitation with these studies is that it is hard to determine if participants are able to be objective with their own individual differences (Weseley, 2012). Future studies may benefit from adding more cognitive measures, like electroencephalography and event-related potentials, to map how mindfulness meditation affects cognitive processes.

Similarly, more qualitative information would be useful. The present study only used the Mindfulness Experience Questionnaire, which was given solely to the experimental group. By giving one qualitative instrument to both the control group and the experimental group, this study could have made comparisons between groups. I also believe that more qualitative data, such as focus groups or interviews, could have given more information regarding the mindfulness meditation experience. In this study, I used a mixed-methods approach to analyze the effects of mindfulness meditation; however, this approach limited my contact with the participants. More qualitative information could have provided more insight into how the mindfulness meditation impacted the learners’ experience. As an example, more explanation could have provided for interrelatedness of foreign language anxiety and general stress for the participants. Furthermore, this rich data could have given more insight into which intentions the participants established.

Finally, another limitation of this study is that it was indeterminable as to whether or not the participants actually practiced the mindfulness meditations. Mindfulness meditation research
in an academic context takes a unique approach to the confidentiality of the participants based on the nature of the training. Mindfulness meditation is a cognitive and psychological process that cannot be observed nor recorded accurately. The limitation of mindfulness meditation research in the context of the present study is that it is impossible to be sure if, and to what degree, the participants practice the meditation. The Mindfulness Survey was used to determine if the treatment was effective or not. Relying on this one instrument may not be sufficient. Future research must address this issue. One recommendation is to simply elicit this information from participants; however, the participants may feel obligated to state that they have completed the meditations to appeal to the researcher.

6.3 The Future of Mindful Language Learning in the L2 Classroom

The present study served as the first bridge between our understanding of mindfulness research and SLA. Mindfulness meditation in the L2 classroom yielded unexpected findings, among which were counter to the previous scholarship in mindfulness and SLA research, respectively. While many of the quantitative findings were not significant, the fact that a majority of the participants had substantially favorable things to say indicates that there is a bright future for what I believe to be the future for mindful language learning. In the following, I express my personal opinions of how mindfulness could shape the formal education context by considering mindfulness to be innately biological and focusing on mindfulness as the root of the human and educational experience. I conclude by providing a cursory selection of potential research projects beyond the present study that hopefully inspire continued research in this subfield of SLA.

It is important to note that being mindful is in and of itself a biologically ingrained ability that is accessible to practically every person. A notable reflection by one participant portrayed
mindfulness as a “skill” that must be learned (Identifier E23). This important statement may shed light on how future generations view their ability to observe the present moment without judgment. This internalization that being mindful is an inaccessible skill that requires explicit training should cause concern amongst educators and learners alike. The pervasiveness of mindlessness could be related to the increasing usage of technology, desire to avoid the negative feelings associated with the formal academic context, etc.

It may now be the responsibility of general education to reframe this mindset by placing more focus on learners’ mindful skills, thus awakening the dormant mindful attributes that every learner possesses. This is to say that, if properly utilized, mindfulness can be a universal pedagogical approach that can have lasting effects on the learner even beyond the academic context. Beyond just a student-centered approach, mindfulness appears to satisfy the humanistic teaching philosophy of teaching by empower[ing] people to lead a meaningful and purposeful life by boosting their intellectual and emotional abilities as well as their types of relationships, attitudes, values and thinking styles” (Ketabi, Zabihi, & Ghadiri, 2012, p. 2, as cited in Dabbagh & Noshadi, 2016) and focusing on the whole learner and intellectual development (Dabbagh & Noshadi, 2016). Furthermore, mindfulness may be one of the most approachable means by which instructors can appease their learners’ desire for more humanistic approaches to lowering stress levels in the classroom. Above all, I envision mindfulness as being a way in which learners are recognized more as humans rather than learners are not void cognitive spaces nor devoid of emotions.

The future for mindfulness as a pedagogical tool includes perceiving mindfulness as an essential cognitive training. A strong metaphor for how mindfulness fits within the educational context is by paralleling it with physical training. Nearly every person has a certain degree of
muscles that give structure and strength to their body. Physical training isolates results in increased strength and agility, for example. In terms of a person’s cognition, every human comes with a certain degree of cognitive ability. Mindfulness meditation is essentially the equivalent to working out a brain. I believe that one of the most beneficial ways in which educators can train the current generation of learners is by incorporating mindfulness as a way of cognitive and emotional training.

Mindfulness meditation’s relationship to language acquisition may still be in question per the findings from this study; however, the emotional benefits seem to be quite clear. Anecdotally, several months after the completion of this study, there were several former experimental participants that approached me to inform me of how much the meditations had influenced their lives. Many stated that they still practiced mindfulness meditation on their own time. Some had made special requests to their professors to include mindfulness into their curriculum. Among these, there were several that mentioned how important mindfulness was for their mental health. One participant went as far as to say that mindfulness had allowed them to “survive the semester” after experiencing a severe depressive episode in their personal lives.

Mindfulness made a difference in their learning experience for these participants and further supports how mindfulness can fit into the future educational curricula as a way of focusing on the entire learner.

In terms of how SLA research can benefit from the incorporation of mindfulness, I envision mindfulness fitting well with cognitive studies. Specifically, researchers will find it beneficial to explore how state mindfulness can affect L2 learners’ attention. For example, researchers could compare the timed responses of participants that completed a brief mindfulness meditation versus those that did not complete a mindfulness meditation during a vocabulary
recognition task. Other researchers may find it useful to use eye-tracking during reading tasks with distractors and compare the results between meditating and non-meditating learners. I believe that one area of research that is often overlooked is the negative impact of technology on learners’ controlled attention. In the digital age, social media can be more distracting in the classroom. Mindfulness meditation may be a way of helping learners focus more on the L2 input rather than external distractors.

While cognitive studies are beneficial to the field of SLA, there is also a need to understand how mindfulness can aid with L2 learners’ emotional control. Following Dewaele and MacIntyre’s (2014) foundational work in foreign language enjoyment, researchers should explore what aspects of a mindfulness practice (improved attention, lowered stress, etc.) may result in an improved learning experience. I found that there were several positive aspects to lowered foreign language anxiety, such as more confidence going into formal assessment. Researchers may find it useful to explore why many of the participants in the present study were willing to trade five minutes of their examination time for a mindfulness practice. This finding further explains how test anxiety is less about the content that is being assessed, but rather is the culmination of fear of failure and of the unknown during an assessment. I predict that mindfulness was mostly beneficial for certain learners because it brought them back into the reality of the present moment. A continued analysis of these changed behaviors and emotions is critical to the continuation of mindfulness research in SLA as it helps us understand (and subvert) the obstacles surrounding L2 acquisition for the learner.

Mindfulness research must include both quantitative and qualitative analysis. The present study heavily benefited from the inclusion of both quantitative and qualitative analyses of the learners’ experience with the mindfulness research. It is important that researchers find a
way to appropriately compare the experiences of both meditating and non-meditating groups of learners. Theoretically, two areas that merit exploration: how mindfulness fits within the existing theoretical paradigms, and what is the appropriate manner in which we can measure the learners’ experience given the university

Researchers should also investigate the effects that mindfulness may have on L2 instructors. Anecdotally, many of the instructors from this study clearly stated that the mindfulness practices had a positive effect on their personal emotions and attention, which parallels a majority of the L2 learners’ reflections. I envision this also being a valuable avenue of research in SLA. As an example, mindfulness meditation may be beneficial for first-year instructors, such as secondary educators and graduate teaching assistants. These two types of instructors experience high levels of stress, among other emotions. Mindfulness may be a useful resource for these two types of instructors. Previous researchers have found that mindfulness meditation leads to better student-teacher interactions in general education (Braun, Roeser, Mashburn, & Skinner, 2019; Elreda, Jennings, DeMauro, Mischenko, & Brown, 2019). SLA research would benefit from investigating whether or not L2 instructors can also benefit from the same outcomes given that the means of communication are vastly different in an L2 classroom.

In summary, there are several reasons for why mindfulness is an intriguing field of study within SLA. The research methodology is relatively non-invasive and easily paired with other fields of applied linguistics. Mindfulness is a biological feature, which implies that practically every person is capable of practicing mindfulness meditation. There are several points of departure for new research question that are rooted in education, psychology, etc. This study should serve as the call to action for researchers in SLA to take up mindfulness both as a pedagogical tool and line of research.
REFERENCES


Nvivo qualitative data analysis software (2018); QSR International Pty Ltd. Version 11.4.2.


Appendix A: Demographic Questionnaire

Background Questions

Q82 Which class are you in?

Q1 What is your first name?

Q94 What is your last name?

Q59 What is your email address?

Q64 What gender do you identify as?

Q65 How old are you?

Q66 What is your native language(s)?
Q67 What is your current major?
________________________________________________________________

Q68 What is your current minor?
________________________________________________________________

Q69 What is your classification?
Freshman (1)
Sophomore (2)
Junior (3)
Senior (4)
Graduate (5)

Q70 What is your current GPA?
________________________________________________________________

Q71 How many semesters of formal Spanish classes have you had before this class? (including high school semesters - 2 per year)
1 (1)
2 (2)
3 (3)
4 (4)
5 (5)
6 (6)
7 (7)
8 (8)
9 or more (9)
Q72 Have you had extensive previous exposure to Spanish? (i.e. lived abroad, family speaks Spanish in the home, worked at restaurant where you would speak Spanish with other employees, etc.) If so, please describe your experience

________________________________________________________________________

Q73 Do you feel comfortable speaking in Spanish in the classroom? If no, please explain.

________________________________________________________________________

Q74 Do you have trouble with concentrating or suffer from an attention deficit disorder? Please explain.

________________________________________________________________________

Q76 Have you ever taken part in any meditation training or attention training programs? If so, please describe your experience.

________________________________________________________________________

Q77 Why are you currently taking this Spanish class?

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Q99 Use the following scale to rank your own Spanish proficiency in the following categories:

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<th>Poor (3)</th>
<th>A little below average (4)</th>
<th>Average (5)</th>
<th>A little above average (6)</th>
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Appendix B: Freiburg Mindfulness Inventory

Use the following scale to answer each question.

1 = rarely  2 = Occasionally  3 = fairly often  4 = almost always

1. I am open to the experience of the present moment.
2. I sense my body, whether eating, cooking, cleaning or talking.
3. When I notice an absence of mind, I gently return to the experience of the here and now.
4. I am able to appreciate myself.
5. I pay attention to what’s behind my actions.
6. I see my mistakes and difficulties without judging them.
7. I feel connected to my experience
8. I accept unpleasant experiences.
9. I am friendly to myself when things go wrong.
10. I watch my feelings without getting lost in them.
11. In difficult situations, I can pause without immediately reacting.
12. I experience moments of inner peace and ease, even when things get hectic and stressful.
13. I am impatient with myself and others.
14. I am able to smile when I notice how I sometimes make life difficult.
Appendix C: Self-efficacy Survey

Important: Read the following questions through carefully and try to assess your English language competence as accurately as possible, regardless of whether you have ever had to perform the actions described or not. The questions have been conceived in order to measure your self-perceived capabilities. There are therefore no right or wrong answers. Please do not enter your name on the questionnaire. However, you should not forget your student registration number and you should answer all the questions.

1- I am totally unable to do this.
2- I am unable to do this.
3- I am possibly unable to do this.
4- I am possibly able to do this.
5- I am basically and in principle able to do this.
6- I am able to do this.
7- I am able to do this well.

1. Can you understand stories told in Spanish?
2. Can you do homework/home assignments alone when they include reading Spanish texts?
3. Can you understand TV programs in Spanish?
4. Can you describe your university to other people in Spanish?
5. Can you compose messages in Spanish on the internet (Facebook, Twitter, blogs, etc.)?
6. Can you describe the way to the university from the place where you live in Spanish?
7. Can you write a text in Spanish?
8. Can you tell a story in Spanish?
9. Can you understand radio programs in Spanish-speaking countries?
10. Can you understand Spanish-language TV programs made in the United States?
11. Can you leave a note for another student in Spanish?
12. Can you guess the meaning of unknown words when you are reading a Spanish text?
13. Can you form new sentences from words you have just learned?
14. Can you write emails in Spanish?
15. Can you understand Spanish dialogs (audio recordings) about everyday school matters?
16. Can you understand messages or news items in English on the internet?
17. Can you ask your teacher questions in Spanish?
18. Can you produce Spanish sentences with idiomatic phrases?
19. Can you introduce your teacher (to someone else) in Spanish?
20. Can you discuss subjects of general interest with your fellow students (in Spanish)?
21. Can you read short Spanish narratives?
22. Can you understand Spanish films without subtitles?
23. Can you answer your teacher’s questions in Spanish?
24. Can you understand Spanish songs?
25. Can you read Spanish-language newspapers?
26. Can you find out the meaning of new words using a monolingual dictionary?
27. Can you understand telephone numbers spoken in Spanish?
28. Can you write diary entries in Spanish?
29. Can you understand Spanish articles on American culture?
30. Can you introduce yourself in Spanish?

31. Can you write an essay in about two pages about your lecturer in Spanish?

32. Can you understand new reading materials (e.g., news from Time Magazine) selected by your instructor?
Appendix D: Foreign Language Classroom Anxiety Scale

Name: ______________________________________________________________

I never feel quite sure of myself when I am speaking in my foreign language class.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

I don't worry about making mistakes in language class.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

I tremble when I know that I'm going to be called on in language class.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

It frightens me when I don't understand what the teacher is saying in the foreign language.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

It wouldn't bother me at all to take more foreign language classes.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

During language class, I find myself thinking about things that have nothing to do with the course.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

I keep thinking that the other students are better at languages than I am.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

I am usually at ease during tests in my language class.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

I start to panic when I have to speak without preparation in language class.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree

I worry about the consequences of failing my foreign language class.

Strongly agree   Agree   Neutral   Disagree   Strongly disagree
I don't understand why some people get so upset over foreign language classes.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

In language class, I can get so nervous I forget things I know.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

It embarrasses me to volunteer answers in my language class.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I would not be nervous speaking the foreign language with native speakers.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I get upset when I don't understand what the teacher is correcting.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

Even if I am well prepared for language class, I feel anxious about it.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I often feel like not going to my language class.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I feel confident when I speak in foreign language class.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I am afraid that my language teacher is ready to correct every mistake I make.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I can feel my heart pounding when I'm going to be called on in language class.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

The more I study for a language test, the more confused I get.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree
I don’t feel pressure to prepare very well for language class.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I always feel that the other students speak the foreign language better than I do.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I feel very self-conscious about speaking the foreign language in front of other students.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

Language class moves so quickly I worry about getting left behind.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I feel more tense and nervous in my language class than in my other classes.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I get nervous and confused when I am speaking in my language class.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

When I'm on my way to language class, I feel very sure and relaxed.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I get nervous when I don't understand every word the language teacher says.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I feel overwhelmed by the number of rules you have to learn to speak a foreign language.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I am afraid that the other students will laugh at me when I speak the foreign language.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree

I would probably feel comfortable around native speakers of the foreign language.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree
I get nervous when the language teacher asks questions which I haven't prepared in advance.

Strongly agree  Agree  Neutral  Disagree  Strongly disagree
Appendix E: Language Orientation Questionnaire

Please answer the following questions to the best of your ability

Name: ________________________________________________

Please rate the following questions using the given scale.

5 = very much, 4 = quite a lot 3 = neutral 2 = not really 1 = not at all

1. I often imagine myself speaking Spanish as if I were a native speaker.
2. I study Spanish because close friends of mine think they are important.
3. I am prepared to expend a lot of effort in learning Spanish.
4. When I think of the future, I can imagine myself using Spanish in a variety of ways.
5. I have to study Spanish because, otherwise, I think my parents will be disappointed with me.
6. When I am in my language class, I volunteer as much as possible.
7. I can imagine myself being a very competent speaker of Spanish.
8. People around me believe that I must study Spanish to be an educated person.
9. I would like to spend lots of time studying Spanish.
10. I can imagine myself writing emails in Spanish fluently.
11. I would like to concentrate on studying Spanish more than any other topics.
12. Studying Spanish is important to me in order to gain the approval of my family.
13. I can imagine myself participating in a debate in Spanish.
14. I consider learning Spanish important because the people I respect think I should do it.
15. I would like to study Spanish even if I were not required to do so.
Appendix F: Mindfulness Experience Questionnaire

Please answer the following questions to the best of your ability

Name: ________________________________

1. Did you enjoy the mindfulness meditation in class? Why?

2. Did you find the mindfulness meditation helpful for anything? If so, what specifically?

3. Do you think that the mindfulness meditation helped you learn Spanish better? If so, how?

4. Would you recommend mindfulness meditation to your friends or peers? Why or why not?
5. If there were an advanced level Spanish class that incorporated mindfulness meditation into the curriculum, would you purposefully take that class? Why or why not?

6. Do you feel that mindfulness meditation helped alleviate any anxiety or fears while in the Spanish classroom? Why or why not?

7. Did you feel more motivated to learn Spanish as the course progressed? Why or why not?

8. Do you feel that the mindfulness meditation helped you pay attention more in the classroom? Why or why not?

9. What are your general opinions towards mindfulness meditation?
Appendix G: Mindfulness Meditation Calendar

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<td><em>Tarea en línea 31</em></td>
<td>11A</td>
<td><em>Tarea en línea 32</em></td>
<td>11AB</td>
<td><em>Tarea en línea 33</em></td>
<td>11B</td>
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<tr>
<td><em>Prepare for final quiz</em></td>
<td><em>Final Quiz</em> (Unidad 11) Time: 3:30 – 6:00 pm Location: TBA</td>
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** diciembre 2017 **

- **26**
  - No hay tarea en línea
- **27**
  - 10B
  - *Feeling Tired 1*
- **28**
  - 11A
  - *Prepare for quiz*
- **29**
  - *Prueba 4* (Unidad 9 y 10)
  - *Before an exam*
- **30**
  - *Tarea en línea 30*
Appendix H: Internal Review Board Approval
February 28, 2018

William Justin Morgan  
Department of Modern Languages & Classics  
College of Arts & Sciences  
The University of Alabama  
Box 870246

Re: IRB # 16-OR-425-R1-B "Mindfulness Meditation and Second Language Acquisition: Improving Academic Outcomes"

Dear Mr. Morgan:

The University of Alabama Institutional Review Board has reviewed the revision to your previously approved expedited protocol. The board has approved the change in your protocol.

Please remember that your protocol will expire on July 27, 2018.

Should you need to submit any further correspondence regarding this proposal, please include the assigned IRB application number. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants.

Good luck with your research.

Sincerely,

[Signature]

dr. Cartantato T. Myles, MSM, CMM, CIP  
Director & Research Compliance Officer  
Office for Research Compliance