EMOTION, MOTIVATION, AND VOCABULARY LEARNING: A STUDY OF HERITAGE AND FOREIGN LANGUAGE LEARNERS OF SPANISH

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EMOTION, MOTIVATION, AND VOCABULARY LEARNING: A STUDY OF HERITAGE AND FOREIGN LANGUAGE LEARNERS OF SPANISH

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ABSTRACT

Within second language acquisition (SLA), researchers now identify emotion as a cornerstone of cognition and learning (e.g., Dewaele, 2010a; LeBlanc, McConnell, & Monteiro, 2015) and a key component driving learners’ motivational systems (MacIntyre & Vincze, 2017). Traditionally, most SLA studies in emotion and motivation have investigated negative emotions exclusively. However, with the introduction of positive psychology in SLA (MacIntyre, Gregersen, & Mercer, 2016), scholars have taken an increased interest in the implications of positive emotions, such as enjoyment (e.g., Dewaele & Alfawzan, 2018; Dewaele & MacIntyre, 2014, 2016), for foreign language learning. Still, studies on emotion in general have chiefly focused on so-called second language (L2) or foreign language learners (FLLs) and largely fail to address questions of affect and language learning for heritage language learners (HLLs), who make up a continuously increasing percentage of the language learning community in the U.S. (Torres, 2011). Scholars now place greater importance on the study of emotion within HLL populations and highlight the need for ongoing research addressing emotion in diverse populations, particularly within the context of instructed SLA (e.g., Prada, Guerrero-Rodriguez, & Pascual y Cabo, 2020; Tallon, 2009).

Considering these gaps, the present study takes a mixed methods approach to 1) explore advanced-proficiency Spanish HLLs’ and FLLs’ both positive and negative emotional reactions to emotional reading content, 2) compare the effects of emotional content on vocabulary learning for HLLs and FLLs, 3) investigate the relationship between HLLs’ and FLLs’ trait emotions, linguistic
insecurity, language motivations, and vocabulary learning, and 4) investigate the implications of learners’ linguistic (e.g., Spanish proficiency) and sociobiographical variables (e.g., heritage background, academic institution, gender) on vocabulary learning outcomes. 121 participants, 64 HLLs and 57 FLLs, read three emotion-laden texts, positive, negative, and neutral in nature. While reading, they reported the intensity of their state emotions in response to each text’s themes. They also completed questionnaires on their trait emotions, linguistic insecurity, and L2 motivation during two separate sessions. After completing all tasks and questionnaires, they were asked to respond to an exit questionnaire at the close of each session. Their vocabulary learning was tested via form recognition, translation, and multiple choice subtests. The data were submitted to omnibus tests of analysis and mixed effects modeling.

The results showed that HLLs and FLLs both showed a range of positive and negative emotions in response to emotional reading content, as well as overall positive emotions and high motivation with respect to HL/FL learning. Findings also revealed that the emotional content of the readings as well as positive and negative emotional reactions to that content, predicted different vocabulary outcomes. Motivation and trait emotion interest were seen as influential on vocabulary learning achievement, particularly for FLLs. Spanish proficiency was also a predictor of vocabulary achievement for FLLs. The study suggests the implications of affective variables for vocabulary learning for both HLLs and FLLs and provides qualitative evidence for the influences behind the key differences between the two groups.
DEDICATION

A la abuela Celia.
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## TABLE OF CONTENTS

Chapter 1: Statement of the Problem .................................................................1

1.1 The Importance of Heritage Language Learners in Language Education ..........1

1.2 The Centrality of Emotions in Language Learning ..................................2

1.3 Goals of the Present Study .................................................................3

1.4 Definition of Participant Linguistic Profiles ........................................4

Chapter 2: Review of the Literature ..............................................................5

2.1 Heritage Language Learners ...............................................................5

2.1.1 Defining Heritage Language Learner: A Critique of Narrow and Broad Senses .........................................................................................................................6

2.1.2 Heritage Language Education and the Pedagogical Implications of Emotional Content in the Mixed Foreign Language Classroom ......................11

2.2 Emotion ..............................................................................................16

2.2.1 Defining Emotions: Perspectives from Neuroscience and Cognition .......17

2.2.2 Categorizing Emotions: Dimensional versus Discrete Models .............19

2.2.2.1 Dimensional Models of Emotion - The Valence Model: Positive versus Negative ..............................................................................................................21

2.2.2.2 The Arousal Model: Activating versus Deactivating .................21

2.2.2.3 The Circumplex Model: Considering both Valence and Arousal .23

2.2.2.4 The Goal Achievement Model: Pre- versus Post-Goal ..............23

2.2.2.5 Discrete Models of Emotion .........................................................25

2.2.3 The Positive Turn in Emotion Research: Are Positive Emotions Always Good? ...........................................................................................................26

2.2.4 Emotion in Second Language Acquisition .........................................29

2.2.5 Emotion in Minority Populations ......................................................35
4.1.5 Emotional Intensity Felt ..................................................110
4.1.6 Emotional Fluctuation while Reading .................................111
4.1.7 Summary of Findings for Research Question 1 ......................117

4.2 Research Question 2: The Influence of Emotion-laden Texts and Words on Vocabulary Learning and Retention .................................................................118

4.3 The Influence of Affect on Vocabulary Learning and Retention ........123
4.4 The Influence of Motivation on Vocabulary Learning and Retention ..........130
4.5 The Influence of Learning Characteristics on Vocabulary Learning and Retention .135
4.6 The Open-Ended Responses on Two Exit Questionnaires: Qualitative Insights .....137

Chapter 5: Discussion and Conclusion .............................................149

5.1 Summary of Main Dissertation Findings ......................................149
5.2 Emotional Reactions in Response to Learning Content .......................151
5.3 The Association between Emotion-Laden Texts and Words and Vocabulary Learning .................................................................154
5.4 The Implications of Emotional State on Vocabulary Learning ............157
5.5 Explaining the Limited Impact of Trait Emotions and Linguistic Insecurity on Vocabulary Learning in the Present Study ................................................160
5.6 Motivation Does Make a Difference on Vocabulary Learning ..............164
5.7 Proficiency also Mattered in Vocabulary Learning ............................165
5.8 Limitations .............................................................................166
5.9 Future Research ......................................................................169
5.10 Pedagogical Implications ..........................................................172
5.11 Conclusion .............................................................................176

Appendix A: Trait Emotion Questionnaire (TEQ) ................................178
Appendix B: Linguistic Insecurity Questionnaire ................................180
Appendix C: L2 Motivation Self System .................................................................182
Appendix D: State Emotion Questionnaire (SEQ) ..............................................184
Appendix E: Background Questionnaire ..........................................................185
Appendix F: Exit Questionnaires ......................................................................191
Appendix G: Emotion-laden Readings ...............................................................192
Appendix H: Documentation of Target Pseudowords and their Meanings ........200
Appendix I: Vocabulary Assessment .................................................................202
References .......................................................................................................205
LIST OF FIGURES

Figure 1. Procedure for main study ...............................................................96

Figure 2. Average emotion ratings by text for Heritage Language Learner group
(Bars: ±1 SD) ............................................................................................104

Figure 3. Average emotion ratings by text for Foreign Language Learner group
(Bars: ±1 SD) ............................................................................................104

Figure 4. Fluctuation in state emotions by text for Heritage Language Learner group over
three times ..................................................................................................113

Figure 5. Fluctuation in state emotions by text for Foreign Language Learner group over
three times ..................................................................................................113
# LIST OF TABLES

Table 1. Theoretical perspectives and definitions of emotion (LeBlanc et al., 2015) ..............18

Table 2. Summary of dimensional and discrete models of emotion (LeBlanc et al., 2015) ........20

Table 3. List of high and low arousal emotions (Lim, 2016, p. 107) ........................................22

Table 4. Component parts of word knowledge (Nation, 2013, p. 49) ......................................65

Table 5. Participant background data across Heritage Language Learner and Foreign Language Learner groups ..............................................................................................................83

Table 6. Mean lexical characteristics for emotion-laden English translation words ..................91

Table 7. Main characteristics of the two linguistic profiles .......................................................99

Table 8. Average ratings for 12 state emotions by text ..............................................................103

Table 9. Average immediate posttest scores by text and word type ........................................120

Table 10. Average delayed posttest scores by text and word type .........................................120

Table 11. Best-fitting model for Research Question 2 immediate posttest data .......................122

Table 12. Best-fitting model for Research Question 2 delayed posttest data ............................122

Table 13. Average ratings for 5 trait emotions and linguistic insecurity ..................................124

Table 14. Best-fitting model for Research Question 3 immediate posttest trait emotions data ........................................................................................................................................126

Table 15. Best-fitting model for Research Question 3 delayed posttest trait emotions data ......127

Table 16. Best-fitting model for Research Question 3 immediate posttest state emotions data ........................................................................................................................................129

Table 17. Best-fitting model for Research Question 3 delayed posttest state emotions data ......129

Table 18. Average ratings for motivation and its subcomponents .........................................131

Table 19. Best-fitting model for Research Question 4 immediate posttest data .......................134

Table 20. Best-fitting model for Research Question 4 delayed posttest data ............................134

Table 21. Best-fitting model for Research Question 5 immediate posttest data .......................137
Table 22. Best-fitting model for Research Question 5 delayed posttest data ..........................137
CHAPTER 1: STATEMENT OF THE PROBLEM

In this chapter I present a brief statement of two assumptions that will guide the present dissertation study. One is that heritage language learners (HLLs) are a substantive presence in language classrooms and a worthy population to include in studies. The other is that emotions of a variety of valences, positive as well as negative, must be studied because they impact on language learning processes, and particularly may create additional vulnerabilities for heritage language learners learning their heritage language in a classroom context. I close the chapter with a brief preview of the study.

1.1 The Importance of Heritage Language Learners in Language Education

According to the U.S. Census Bureau (2020), over 40 million Spanish-speakers reside in the United States, representing more than 13% of the population, with Spanish maintained perhaps more than any other heritage language (HL) in the country (Oh & Nash, 2014). Carreira and Kagan (2018) estimate that some twelve million children in the U.S. are heritage speakers, that is, they grow up hearing and sometimes speaking a language other than English at home. This makes up 22% of the school-age population, and this number only increases when we take into account adult speakers and learners. As the number of Spanish HLLs in the U.S. continues to rise (Torres & Turner, 2017), heritage language education (HLE) is slowly becoming a more central topic of linguistic research, for example, with its own handbooks (Kagan, Carreira, & Chik, 2017; Potowski, 2018; Pozzi, Quan, & Escalante, forthcoming; Wiley, Peyton, Christian, Moore, & Liu, 2014), dedicated journals (Heritage Language Journal), and conferences (International Conference of Heritage Languages Around the World, HLAW). Still, no agreement has been made on how to best support children and adults of Latinx heritage in learning about their own culture, language, history, and identity. Moreover, a majority of work in SLA continues to exclude HLLs
from the participant pool in favor of focusing on the development of the Spanish second language (L2) learner with no previous experience with or ancestral ties to the language.

1.2 The Centrality of Emotions in Language Learning

Language learning is no doubt an emotional endeavor, with learners experiencing a wide range of emotions during their language learning journey in reaction to the language learning process, such as excitement or anxiety. Research on emotion within the context of the traditional L2 classroom has sparked interest for decades, and this has increased particularly since the so-called affective turn in SLA (Pavlenko, 2013). Historically, the majority of research efforts have focused on negative emotions, with particular attention to foreign language anxiety (e.g., Horwitz, 1986; Dewaele, 2017), and have ignored the implications of positive emotions for language learning. With the rise in the last decade of positive psychology in SLA, positive emotions have now also garnered attention within the field, mostly concentrating on the new construct of foreign language enjoyment (e.g., Dewaele & MacIntyre, 2014). Given the many discrete emotions that have been identified in the research on psychology (Russell, 1980), scholars in SLA highlight a need for research exploring the implications of a variety of emotions within the many learning contexts that fall under the umbrella of SLA and also have called for more investigations that acknowledge the wide linguistic, cultural, and social diversity of the FL classroom (Boudreau, MacIntyre, & Dewaele, 2018; Jiang & Dewaele, 2020; Prada, Guerrero-Rodriguez, & Pascual y Cabo, 2020).

Though language learning is an emotional endeavor for any student, eliciting anxiety, enjoyment, and frustration, among other emotions, these emotional reactions are multiplied for HLLs, whose identities are highly interconnected with issues of language, race, and minority status (Beaudrie, Ducar, & Potowski, 2014). Nonetheless, many scholars still note the scarcity of
research on affect and emotion within the realm of SLA as a whole (Butler, 2017; Dewaele, 2010a; Pavlenko, 2013; Quiñones-Camacho, Shih, Savage, Lamar Prieto, & Davis, 2018; Swain, 2013), and identify it as particularly rare within the context of HLE (e.g., Jee, 2016; Tallon, 2009, 2011). Indeed, themes such as language diversity and language norms, race and ethnicity, and minoritization are central in many foreign language (FL) and HL classrooms and have occasionally been identified as controversial and emotionally stimulating for HLLs in particular (Carreira, 2003). However, to the best of my knowledge, no studies have explored the implications using this emotional content in the language classroom for Spanish HLLs, or for other minorities who may be similarly affected by topics of race and identity, as compared to non-heritage and non-minority (i.e., White, English-speaking, middle class) L2/FL learners.

1.3 Goals of the Present Study

The language classroom is a vulnerable place for many learners. By overlooking HLLs’ emotional and motivational reactions as they learn language, educators underestimate and undervalue their presence and impact on the FL classroom, and this neglect ultimately leads to pedagogical methods and theories biased towards monolingual, non-heritage learners. Thus, the present study intends to explore the effects of emotional-laden classroom materials in order to address the scarcity of research in emotion within the realm of SLA. Furthermore, it goes beyond the more commonly investigated negative emotions to additionally explore the potential for motivation and positive emotion as factors leading to HL/FL success and learner satisfaction (Oxford & Bolaños-Sánchez, 2016).

Considering these factors, which will be reviewed in full in Chapter 2, the study aims to: (1) incorporate a dynamic approach to investigate the effects of emotional topics on language learners’ state emotions, that is, their moment-to-moment emotional responses to the topics; (2)
investigate the effects of emotion-laden reading content on vocabulary learning outcomes; (3) explore not only state but also trait emotions, linguistic insecurity, and motivation as potential predictors of vocabulary achievement; and (4) investigate which linguistic (e.g., Spanish proficiency) and sociobiographical variables (e.g., heritage background, academic institution, gender) may act as predictors of success in vocabulary learning and emotional response to sensitive content, with special attention to potential differences the data may reveal between HLLs and foreign language learners (FLLs). Research of this nature is expected to deepen the current understanding in SLA not only of emotion and motivation in relation to language development, but also of the learning processes of HLLs and FLLs. In addition, in acknowledging the diversity in the Spanish language learner population, the results of the current study will have implications for HL, FL, and mixed Spanish language classrooms.

1.4 Definition of Participant Linguistic Profiles

**Heritage Language Learner (HLL):** Briefly, the current study acknowledges as HLL any individual who was exposed to a non-English language at home, who began their formal heritage language (i.e., Spanish) studies with any degree of speaking or receptive skills, and has a cultural connection to the language. More details are offered in Chapter 3.

**Foreign Language Learner (FLL):** Though much of the research in SLA uses the terms L2 learner and FLL interchangeably, this dissertation purposefully implements *FLL* in an effort to acknowledge the large number of multilinguals who are included under this umbrella term as well as the wide linguistic and cultural diversity of the group.
CHAPTER 2: REVIEW OF THE LITERATURE

In this chapter, I provide a comprehensive review of the definitions, theories, and previous studies that drive the present dissertation. First, I discuss the challenges associated with characterizing heritage language learners and with addressing the emotional nature of heritage and foreign language education. Next, I give a brief summary of the central theories and models on emotion and highlight studies that have driven the research on emotion forward in SLA, particularly with respect to HLLs and other minority populations, including work on linguistic insecurity, positive psychology, and emotions as fluctuating variables. In addition, I present motivation as an affective variable within SLA in general and, more specifically, within HLE. I follow this with a review of the theories on vocabulary learning and development most relevant to the current study, including research on emotion and vocabulary, for both FLLs and HLLs. I close the chapter with the research questions that drive the present dissertation.

2.1 Heritage Language Learners

Scholars in North America have used a multitude of terms to refer to languages other than English that are spoken at home by immigrants and their families, including “minority language,” “immigrant language,” “community language” (Wiley, 2005), “indigenous language,” “native language,” “ancestral language,” and “mother tongue” (Fairclough & Beaudrie, 2016; He, 2010; Wiley, 2005). Though criticized by some as a term evoking a fraught past and lack of power or vitality (García, 2005; Wiley, 2001), “heritage language” has now been accepted by most researchers and educators in the USA as the least stigmatized and most neutral term (Hornberger, 2005a; Wiley, 2001). Because participants for the present study will specifically be learners recruited from heritage and mixed Spanish classrooms, this dissertation will employ the term heritage language learner (HLL), described in detail in this section, to reflect the fact that
participants in this dissertation are all active learners of Spanish. Nevertheless, the complexities and controversies surrounding the term HLL continue to run deep in the fields of language education and SLA. It is for this reason that it is important to examine definitions more closely so as to establish a common ground for the meaning given to the term and its acronym, HLL, in the present dissertation.

2.1.1 Defining Heritage Language Learner: A Critique of Narrow and Broad Senses

Within the field of heritage language studies, individuals exposed to a heritage language in the home from a young age have been referred to as “heritage speakers,” “community language learners” (Beaudrie, Ducar, & Potowski, 2014), “native speakers” (Carreira, 2003; Faltis, 1990), “bilinguals” (Valdés, 1989, 1997), and “transitional bilinguals” (Lipski, 1993), among other terms. Though “heritage language learner” has become the most commonly used expression within language education and research in the United States (Beaudrie et al., 2014), scholars have yet to agree on a universal definition of the term (Ortega, 2020), adding to the confusion in identifying not only members of this community but also in building a foundation on the past and present research on these speakers.

The wide variation in definitions of HLL within the literature (e.g., Bale, 2010; Benmamoun, Montrul, & Polinsky, 2013; Carreira, 2004; Kelleher, 2010; Hornberger, 2005b; Valdés, 2000; Van Deusen-Scholl, 2003; Wiley, 2001) has been characterized as signaling a broad and a narrow meaning of the term (Polinsky & Kagan, 2007). Those adopting a more narrow understanding of HLL traditionally require that individuals hold some level of oral or receptive proficiency in the heritage language, specifically as a result of home exposure, in order to be identified as HLLs in the research (Beaudrie et al., 2014). In the narrowest of terms, Benmamoun, Montrul, and Polinsky (2013) define the HLL as,
an early bilingual who grew up hearing (and speaking) the heritage language (L1) and the majority language (L2) either *simultaneously* or *sequentially* in early childhood (that is, roughly up to age 5 […]), but for whom L2 became the primary language at some point during childhood (at, around, or after the onset of schooling). (p. 133, italics in original)

Though narrow definitions like the one above with strict language requirements may succeed in defining a more linguistically homogenous group than those that describe HLLs in a broader sense, they also result in the exclusion of a large number of individuals who socially, culturally, historically, and even still linguistically identify more with HLLs than with L2 speakers. Perhaps more broadly, Benmamoun, Montrul, and Polinsky (2013) offer another definition to additionally describe HLLs as “bilingual speakers of an ethnic or immigrant minority language, whose first language often does not reach native-like attainment in adulthood” (p. 129) and claim that “[t]he term *heritage speaker* typically refers to second generation immigrants, the children of the original immigrants, who live in a bilingual/multilingual environment from an early age [and who] have as their dominant language the language of the host country” (p. 132). They later add that “the crucial criterion is that the heritage language was first in the order of acquisition but did not develop fully at age appropriate levels because of the individual’s switch to the societally-dominant language” (p. 133). While these descriptions are perhaps more linguistically inclusive by avoiding exact minimum requirements for proficiency in the heritage language, the limits they place on social and historic background for HLLs, i.e., immigration background, as well as the implied requirement of having an “underdeveloped” heritage language in order to be accepted as a HLL, raise a number of issues. Moreover, scholars that refer to the HL as the L1 and include simultaneous as well as sequential HLLs in their definition (i.e., Benmamoun et al., 2013) further complicate matters. For simultaneous bilinguals, there is no L1-L2 order distinction and, even for other HLLs, the
distinction may not be clear or relevant, which leaves for a cloudy understanding of terms and problems for comparing across studies.

Kupisch (2013) brings a European perspective to the discussion and analyzes the aforementioned descriptions of heritage speaker (HS) in order to highlight some crucial shortcomings. Her central argument addresses the idea of “incomplete acquisition” as an apparent defining characteristic of these speakers. Essentially, she states that this requirement implies that: (1) two languages cannot be mastered in parallel, and (2) HSs cannot develop their heritage language at age-appropriate levels. It can be added that this very narrow definition also implies that any non-standard varieties do not hold the same value as standard varieties or as the language as spoken by L1 speakers of the heritage language. According to Benmamoun, Montrul, and Polinsky’s (2013) understanding, HSs are picked out by their lower proficiency and less standard or less academic use of the language, while, as Kupisch (2013) points out, the same language use and written and oral proficiencies are rarely if ever deemed “incomplete” for L2 learners. This suggests that HSs are unjustly characterized as inadequate speakers of the heritage language instead of viewed as bilinguals, an assessment that can be challenged by adopting a broader understanding of HS.

The apparent proficiency required for one to claim HS identity is another issue that can be addressed when reviewing narrow definitions of HS. Again, Kupisch (2013) questions whether the narrow definitions mentioned above include simultaneous bilinguals who were raised in bilingual households or those who are “50% minority (i.e., have only one parent who speaks the minority language)” (p. 205). Many narrow definitions like the one Kupisch reviews not only suggest a minimum requirement for speaking and listening skills in the HL but, though not yet commented on in the literature, also imply a maximum proficiency allowed if one is to be included under the
HS description (i.e., those who are too native-like in the HL are considered L1 speakers of the HL or, alternatively, left in a linguistic limbo of sorts between HL and L1 speaker). Put simply, speakers who are “too good” or “too bad” in the HL are necessarily excluded from the HS population. Often, only those who are “100% minority” (Kupisch, 2013, p. 205) and with language skills in the HL that are “just right” are deemed members of the HS group.

In perhaps the most cited definition, Guadalupe Valdés (2000) establishes a somewhat broader definition and identifies HLL as an individual “raised in a home where a non-English language is spoken” (p.1). She includes in her characterization those who are bilingual in English and the HL to almost any degree, whether this implies speaking or simply receptive skills, though she does highlight a connection to the HL either in the home or in the community as a central factor in defining HLL. While, linguistically, only minimal proficiency is required to meet the HLL definition under this description, pedagogically, HLLs with lower proficiency are still not identified as HLLs and often are left with no other option than to be placed in L2 classrooms (Beaudrie et al., 2014; Carreira, 2012), an environment which may not address the cultural or affective needs of these learners (Beaudrie & Ducar, 2005; Carreira, 2003, 2012).

Scholars who adopt a broad definition of HLL often place less importance on proficiency in the HL and instead highlight experiences with the heritage language and culture to characterize this population. Fishman (2001), for example, describes HLLs as individuals with a strong historical and cultural connection to a language and who are often exposed to the language in the home through family interaction but who do not necessarily speak or understand the language. Within this scope, emphasis is placed on the personal and emotional ties one has to the language, in addition to family connections, without any requirement of proficiency in the heritage language (Guzmán, 2017). Wiley (2001) also promotes going beyond language to incorporate identity in the
HLL description and cautions on the effects of the labels that are placed on HLLs. Furthermore, he underlines the importance of the definitions that are applied to these individuals in establishing the social status of both the population and its HL. Learners who do not yet speak the language may identify as HLLs for a number of reasons, and imposing or denying them the label of HLL may bring up questions of identity related to the prerequisites for inclusion in this group of learners. Kelleher (2010) addresses the growing concern about excluding individuals from the HLL group who demonstrate no HL skills but nonetheless identify as members of the community by elaborating on the definition put forth by Valdés (2000). While Valdés emphasizes that HLLs necessarily come from non-English-speaking homes, Kelleher describes HLL as anyone “studying a language who has proficiency in or a cultural connection to that language” (p. 1, italics for emphasis) and underscores the diversity that is seen among HLLs. For the purposes of the U.S. K-12 and university education systems, HLLs are most often those with a family connection as well as some level of proficiency in the HL, however Kelleher brings up HLLs of indigenous languages to show how wide the description of HLL may reach. She notes that,

"[f]or members of indigenous communities […], any member of the community studying the language might be considered a heritage language learner. [A]ll learners are members of the community and are heritage language learners regardless of their levels of [HL] proficiency, [and] children who come from homes where [the HL is not] spoken would be considered heritage language learners, as would children who have had some home exposure to the language. (p. 1)"

Under this characterization, *heritage language learner* refers to any learner who identifies as part of the HL community, including simultaneous or sequential bilinguals, emerging bilinguals at any
proficiency in the HL, and those with no prior experience who are just beginning their studies in the HL.

The complexity in establishing one definition for HLL remains clear after a review of the multiple and varied definitions currently used in the literature. In line with broad definition of the term (e.g., Fishman, 2001; Valdés, 2000; Wiley, 2001), the current study acknowledges as HLL any individual who was exposed to a non-English language at home, who began their formal Spanish studies with any degree of speaking or receptive skills, and has a cultural connection to the language. Due to study design, the study investigates a subgroup of HLLs, namely those who have reached an advanced level of Spanish proficiency whether directly through home exposure or formally through any amount of coursework. Further details are offered in Chapter 3.

2.1.2 Heritage Language Education and the Pedagogical Implications of Emotional Content in the Mixed Foreign Language Classroom

With an increasingly globalized world has come a rise in the number of HLLs of many languages, in particular Spanish (Carreira and Kagan, 2018), in the U.S. and a multilingual turn within studies in second language acquisition (SLA). Acknowledging the growing population of HLLs and a resulting demand for defined and transparent objectives for these students, educators have begun to emphasize the development of academic skills in the HL, positive attitudes toward both the HL and its various dialects and cultures, and development of cultural awareness, among other objectives, in HLE (Aparicio, 1997; Valdés, 1995). Together, these objectives attempt to draw attention to the historical, linguistic, cultural, and affective dimensions of the Spanish HL classroom that so often go neglected in the FL classroom (Beaudrie et al., 2014).

Textbooks designed for Spanish HL classrooms have been seen to explore topics of social justice, inclusion, access, and identity (Leeman & Martínez, 2007) with the aim of developing
students’ reading, writing, speaking, and listening skills (Potowski & Carreira, 2004; Valdés, 1981). Classroom discussions within the HLL context have been seen to encompass sociolinguistic patterns of language and dialect use (Kagan, 2012), awareness-raising of minority language variation and change (Beaudrie & Fairclough, 2012), discussion of histories of immigration, including difficult discussions about oppression, ethnicity, and race (He, 2010; Kagan, 2012), in addition to other linguistic, social, and cultural phenomena. For example, in one ethnographic study on the interactions in a university Spanish HLL classroom, Showstack (2012) found that assigned classroom topics included bilingual and bicultural identities, as well as reflections on students’ intercultural experiences, such as the pros and cons of Spanglish. In addition to the themes already mentioned, advocates of HL education encourage talk of language ideologies and issues of public policy within the HL classroom (Brecht & Ingold, 2002; Valdés, 2017) as well as considerations of sociolinguistic variation (Shin & Henderson, 2017).

Though trends in globalization and immigration have led to the development of HLL programs within educational settings (Carreira & Kagan, 2018), many institutions lack the resources, teacher training, and enrollment numbers for successful coordination of a language track dedicated to the HLL. These issues result in mixed classes of HLLs and L2 learners at various ratios (Carreira, 2016), with subsequent pedagogical challenges for instructors of these integrated classrooms. Hedgcock and Lefkowitz (2016), for example, conducted a classroom-based empirical study with 109 university-level Spanish HLLs and 138 Spanish FL students and, through surveys and guided interviews, found support for previous studies (i.e., Carreira & Kagan, 2011; Valdés, 2001) that characterize HLLs’ and FL students’ distinct learning profiles. Namely, they uncovered differences in socio-affective variables, including attitudes toward Spanish, self-perceptions of Spanish proficiency, and motivations for learning Spanish, and call for research and curricula that
address simultaneously HL and FL learners’ needs, perceptions, and goals. Some scholars have supported the mixed classroom design and have shown that reciprocal learning can be achieved by harnessing skills of HLLs and L2 learners that complement each other (Bowles, 2011; Bowles, Adams, & Toth, 2014; Henshaw, 2016; Valentín-Rivera, 2016). Researchers and educators continue to explore methods for supporting HLLs’ and L2 learners’ complementary abilities and understanding the synergistic, yet often complex, opportunities that arise within a mixed classroom framework (Carreira & Kagan, 2018; Pascual y Cabo & Prada, 2018).

Specifically, within the context of Spanish in the U.S., researchers now call for Spanish foreign language curricula and programs to consider the needs of Hispanic/Latinx students’ “unique linguistic, sociocultural, and affective profiles” (Hedgcock & Lefkowitz, 2016, p. 1). With these efforts in mind, some scholars argue for the recognition of Spanish as a domestic or local, as opposed to foreign, language with its own U.S. variety (Alvarez, 2013) and highlight the benefits that could be seen by integrating Spanish HL pedagogies and communities into foreign language program curricula (Torres, Pascual y Cabo, and Beusterien, 2018). In this respect, Pascual y Cabo and Prada (2018) outline an initiative, which they term Redefining Spanish Teaching and Learning (RSTL), for recognizing and building on common educational goals for Spanish HLLs and FLLs in order to foster cultural diversity in foreign/second language programs. Among their list of strategies for centralizing HLLs and the Latinx community within Spanish (foreign) language programs, they propose that educators incorporate issues that relate to students’ personal experiences and goals beyond the classroom and promote the development of a positive self and community. It is worth noting that these themes all address affective issues and are all potentially emotional topics for HLLs, given that personal experiences often relate to experiences with immigration, political movements, and challenges associated with language, education, and the
work force. Still, as will be seen, the literature only rarely acknowledges the implications of working with sensitive and emotional topics in any classroom, language or otherwise.

With more educators devising pedagogies that take into account the needs of both HLLs and FLLs and placing U.S. Spanish at the core of curriculum design (Pascual y Cabo & Prada, 2018), many language classes, even those whose main objective is to develop students’ grammatical and lexical knowledge, incorporate the same topics of race and identity mentioned above that have been central to HL education (Carreira & Kagan, 2018; Mori & Takeuchi, 2016; Pascual y Cabo & Prada, 2018; Shin & Henderson, 2017). What still remains to be considered in HLL research and pedagogy and within the field of SLA in general, however, is how these topics of race and identity affect the language learning experience. Reyes (2017) discusses the construction and negotiation of ethnoracial identities in the university Latinx community in response to racial climates established within various university contexts. She discusses the ideologies as well as the inclusive and exclusive practices that lead students to feel either connected to or alienated from their Latinx community and how feelings of pride or shame shape how Latinxs interact and learn within a university setting. Beverly Tatum (1992) discusses the guilt, shame, anger, and despair that were generated by race-related content in a college-level psychology course held at three socially and demographically very different institutions. The courses attracted mainly White and Black students, but Asian and Latinx students were also seen to take the course as well. Issues of racism, classism, and oppression were seen to have an effect on students’ motivation levels, leading to a resistance to the learning process and, ultimately, interference with cognitive understanding of the content (Tatum, 1992). In another study that investigated learning in race-related courses (e.g., the Psychology of Prejudice and Racism), Chick, Karis, and Kernahan (2009) found that students from all different ethnoracial backgrounds who learned how to not only react
but also work with their feelings were more successful in learning about diversity and meeting the goals of the course. This included instances that elicited negative feelings of guilt, discomfort, shock, anger, or sadness. In becoming more emotionally self-aware, students were seen to experience less negative emotions of discomfort and guilt when dealing with sensitive topics and more positive emotions, such as interest and curiosity. Given these findings, it serves to reason that the content seen in language classrooms may elicit emotional responses that also positively or negatively affect learners’ motivations and language learning, though no studies have explored this question.

One of the main goals of the current study is to explore emotional-motivational responses induced by emotion-laden content and its effects on Spanish learners’ language development. In exploring Spanish HLLs’ versus FL learners’ emotional responses and linguistic development in response to sensitive content that approaches issues of ethnicity, race, and language within the Latinx community in the United States, the study also aims to consider the full linguistic and ethnoracial backgrounds and experiences of learners to gain an understanding of HL and mixed classrooms. Many Spanish classes include not only Spanish HLLs but also speakers of other languages that may or may not be closely related to Spanish (e.g., Portuguese versus Mandarin HLLs) (Carreira & Kagan, 2018), in addition to students multiple and mixed ethnoracial backgrounds. The current study, therefore, considers the possibility that heritage and FL learners, who represent a wider diversity than the HL-L2 learner dichotomy, may both reflect on various social, cultural, and linguistic experiences related to their own background that lead to emotional responses even in the mixed Spanish classroom. Accordingly, we may find that race-related content specific to the Latinx community leads to emotional responses that affect language
development in both Spanish HLLs and FL learners in much the same way. The current study sets forth to explore this question.

2.2 Emotion

Scholars in SLA have become aware of the increasing amount of research on emotion coming from psychology (e.g., Oatley, Parrott, Smith & Watts, 2011; Tyng, Amin, Saad, & Malik, 2017) and educational psychology (e.g., Muis et al., 2015; Pekrun, Vogl, Muis, & Sinatra, 2017; Trevors, Muis, Pekrun, Sinatra, & Muijselaar, 2017) and have acknowledged the need for studies addressing emotion specifically in relation to language learning and the FL classroom. This has led to research that expands past the commonly-studied emotion anxiety to explore other discrete emotions within SLA (e.g., Dewaele & Alfawzan, 2018; Dewaele & MacIntyre, 2014; Teimouri, 2017, 2018). The move has been supported by and also further sparked a positive psychology turn in SLA (MacIntyre & Mercer, 2014; MacIntyre, Gregersen, & Mercer, 2016). In addition, this attention to emotion has also given way to the development of instruments for specific emotions in (I)SLA (e.g., Dewaele & MacIntyre, 2014; Teimouri, 2017, 2018) and methodological adaptations from psychology and neuroscience for investigating emotions as dynamic variables in SLA, including the idiodynamic approach (MacIntyre, 2012) and sensors for measuring physiological responses to emotion (e.g., Caldwell-Harris, Tong, Lung, & Poo, 2011). Given that HLE is an emotional field in many respects, it is surprising that HLLs have been largely left out of investigations into emotion, as has been the case with many past research trends in SLA. In this section, therefore, I give a brief summary of the central theories and models on emotion, before highlighting studies that have driven the research on emotion forward in SLA and, more specifically, research that addresses questions of affect with HLLs and other minority populations.
2.2.1 Defining Emotions: Perspectives from Neuroscience and Cognition

Scholarly interest in affect and emotions has seen a large increase across fields in recent decades, yet these and other related terms such as mood and vibes are still often used interchangeably in the literature and only vaguely defined, if at all. Within cognitive science, emotions are understood as “short-lived, feeling-arousal-purposive-expressive phenomena that help us adapt to opportunities and challenges that we face during important life events” (Reeve, 2009, p. 301) and, as described below, are multidimensional in nature. Examples of emotions include anxiety, fear, disgust, joy, and interest. Though similar, mood is defined as “a lower level of everyday general feeling” (Butler, 2017, p. 730) that often outlives any one given emotion. Taken together, emotion – which has been the center of a majority of the research – and mood are understood by psychologists as the two compositional elements that comprise affect.

The influence of emotion, specifically, on attention, memory, perception, and problem-solving has been acknowledged in recent decades by various models of emotion within the behavioral and neurosciences (Barrett & Satpute, 2017; Butler, 2017; LeBlanc, McConnell, & Monteiro, 2015; Li, Li, Wang, Fan, Tong, & Hu, 2020; Pessoa, 2018; in SLA, see Dewaele & Li, 2020; Gregersen, MacIntyre, & Meza, 2014; Wang, 2020). Apart from models that highlight the social (Fischer & Manstead, 2008) or perhaps physiological (Caldwell-Harris et al., 2011) effects of emotion, within the general concept of the term, emotions have been defined and measured from different perspectives, mapped conceptually in Table 1 (adapted from LeBlanc et al., 2015).

Neuroscientists conceive of emotions as the physiological and neuronal responses that serve to signal the level of threat in a situation (Damasio, 1994). The somatic marker hypothesis proposed by Damasio (1994, 1996) provides perhaps the most popular neuroscience account of emotions and proposes that physiological changes, for example in heart rate, blood pressure, and
skin conductance, act as somatic markers that signify emotional reactions in any given situation. Traditionally, scholars have focused primarily on somatic responses to negative emotions, given that these are the markers of undesirable or potentially harmful situations and thus, throughout human evolution, have served for survival purposes (i.e., somatic responses to negative situations are what alert us to danger and instigate the fight-or-flight response to get us to safety). Nevertheless, desirable responses and positive emotions may also be indicated by somatic measures, such as a return of the body to homeostasis or changes in hormone levels (Burgdorf & Panksepp, 2006).

**Table 1. Theoretical perspectives and definitions of emotion (LeBlanc et al., 2015)**

<table>
<thead>
<tr>
<th>Perspective</th>
<th>Definition</th>
<th>Measures</th>
<th>Theories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neurosciences</td>
<td>Somatic and neuronal responses that signal desirable or threatening situations (e.g., Burgdorf &amp; Panksepp, 2006; Damasio, 1994)</td>
<td>Physiological: Heart rate, hormone levels, skin conductance, blood pressure, etc.</td>
<td>Somatic marker hypothesis</td>
</tr>
<tr>
<td>Cognitive sciences</td>
<td>Subjective experiences of feeling, e.g., joy, sadness, that provide information on the value of experiences and perceptions</td>
<td>Self-report scales</td>
<td>Affect-as-information theory</td>
</tr>
</tbody>
</table>

From a cognitive viewpoint, scholars understand emotions as subjective experiences, such as feeling happy, guilty, or interested, and treat emotions as a fundamental part of cognitive function (Izard, 2009). Though once thought of as two separate and unrelated structures, emotion and cognition are now commonly viewed as parallel systems, in which subjective emotions play an essential role in a myriad of cognitive functions, including attention, memory, decision making,
and reasoning (Clore & Palmer, 2009; Kensinger, 2009; Lerner & Keltner, 2000). This cause-and-effect relationship can be thought of as bidirectional, sometimes referred to as a cognitive-affect integrated approach (Butler, 2017), where cognitive functions, or an individual’s response to these functions, can elicit various emotions (LeBlanc et al., 2015). As Calkins and Bell (2010) suggest, “cognitive processes of thinking, learning, and action can be viewed as regulators of a child’s emotion behaviors. Likewise, emotions can be understood as organizers of behaviors, essentially modifying a child’s thinking, learning and action” (p. 4). The affect-as-information model (Clore & Storbeck, 2006; Schwarz & Clore, 2003; Storbeck & Clore, 2008) takes both cognitive and neuroscience perspectives into account and suggests that subjective emotional responses can provide physiological information that can guide individuals on how to respond in various circumstances (e.g., whether to fight or flee).

2.2.2 Categorizing Emotions: Dimensional versus Discrete Models

A number of theories and models have been proposed for categorizing emotions into groups, all of which fall under two types of models: dimensional and discrete. The two models are summarized in Table 2, adapted from LeBlanc et al. (2015), where an in-depth review of both models can be found. Dimensional models identify emotions according to different core dimensions, for example valence (i.e., whether they have a positive or negative connotation) and arousal (i.e., whether they activate or deactivate physiological responses), and place emotions into groups based on their similarities with respect to the dimension. These dimensional descriptions are then meant to account for the similarities and differences seen between emotional states. In contrast, discrete models of emotion characterize each emotion as a unique phenomenon based on an individual’s self-reported interpretation of an event and the behavioral and physiological descriptions that accompany the emotion (LeBlanc et al., 2015). The following sections expand
Table 2. Summary of dimensional and discrete models of emotion (LeBlanc et al., 2015)

<table>
<thead>
<tr>
<th>Dimensional models</th>
<th>Description</th>
<th>Related scholars</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>One-dimensional</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valence</td>
<td>Emotions are characterized as positive or negative. Positive emotions broaden effects on cognitive skills, including memory and attention, among others.</td>
<td>Bernsten, 2002; Fredrickson, 2001, 2004; Fredrickson &amp; Branigan, 2005; Gasper &amp; Clore, 2002</td>
</tr>
<tr>
<td>Arousal</td>
<td>Emotions are characterized as activating or deactivating. Activating emotions are believed to focus attention and enhance memory, though some claim similar effects for some deactivating emotions as well.</td>
<td>Cahill &amp; McGaugh, 1995, 1998; Hamann, 2001; Kensinger, 2004; Talarico et al., 2004</td>
</tr>
<tr>
<td><strong>Two-dimensional</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circumplex</td>
<td>Emotions are characterized two dimensions: valence (positive vs. negative) and arousal (activating vs. deactivating).</td>
<td>Friedman, 2010; Posner et al., 2005; Russell, 1980; Scherer, 2000</td>
</tr>
<tr>
<td><strong>Time-contextual</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal relevance</td>
<td>Emotions are characterized as pre-goal or post-goal. Pre-goal emotions are associated with increased motivation, attention, and memory. Post-goal emotions are linked to the completion of a task, such as happiness, pride, guilt, and sadness.</td>
<td>Kaplan et al., 2012; Levine &amp; Edelstein, 2010; Gable &amp; Harmon-Jones, 2008, 2010</td>
</tr>
<tr>
<td><strong>Discrete models</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Discrete emotions</td>
<td>Emotions are described as multidimensional. Each distinct emotion is expected to have unique effects on cognitive, behavioral, and physiological responses.</td>
<td>Roseman &amp; Evdokas, 2004; Siemer et al., 2007; Talarico et al., 2009</td>
</tr>
</tbody>
</table>
on these two types of models, examining each in turn as they are listed in Table 2, in order to lay the foundation for understanding emotion within the context of SLA. It should be noted that all of these models, while still relevant today, predate the positive psychology turn.

2.2.2.1 Dimensional Models of Emotion - The Valence Model: Positive versus Negative

Within dimensional models of emotion, multiple approaches have been adopted in an attempt to describe and categorize emotions among various contexts. Perhaps most familiar, the valence model has served as a central pillar to a majority of research in this field by making a clear distinction between negative and positive valence emotions with respect to their effects on cognitive functions, including problem solving, cognitive organization, and memory (Fredrickson & Branigan, 2005). Negative emotions (e.g., anxiety, fear, guilt, shame) have been addressed most in the literature and are suggested to lead individuals to demonstrate ‘tunnel’ memory of an event (Bernsten, 2002; Gasper & Clore, 2002), where they attend more to local or central details while neglecting periphery details and overlooking the “big picture.” Conversely, and as proposed by the broaden-and-build theory (Fredrickson, 2001, 2004; Fredrickson & Branigan, 2005), described in further detail in Section 2.2.3, positive emotions (e.g., joy, interest, love, pride) are expected to have a broadening effect on cognitive skills by leading to more global processing and expanding the scope of attention to the peripheral and sensory details of an emotional event (Bernsten, 2002; Gasper & Clore, 2002).

2.2.2.2 The Arousal Model: Activating versus Deactivating

The arousal, or activating, model, is also referenced by many scholars in emotion and considers the degree of physiological arousal instigated by emotions in order to differentiate between those of activating and deactivating nature. For example, anger and sadness, both negative emotions, are characterized as activating/arousing and deactivating, respectively. While anger
tends to raise heartrate and elicit other physiological and neurological responses, sadness has a calming effect and brings the body to homeostasis (Arias et al., 2020). Neurologically, emotional activation is thought to mainly have an effect on the amygdala and hippocampus regions of the brain (Hamann, 2001). Activation in these areas, whether by a positive or negative emotion, leads to selective and narrowed attention and memory enhancement for the most essential details of an event (LeBlanc et al., 2015).

**Table 3.** List of high and low arousal emotions (Lim, 2016, p. 107)

<table>
<thead>
<tr>
<th>Study</th>
<th>High arousal emotions</th>
<th>Low arousal emotions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Russell (1980)</td>
<td>Afraid, alarmed, angry, annoyed, aroused, astonished, delighted, distressed, excited, frustrated, glad, happy, tense</td>
<td>At ease, bored, calm, contented, depressed, droopy, gloomy, miserable, pleased, relaxed, sad, satisfied, serene, sleepy, tired</td>
</tr>
<tr>
<td>Feldman (1993)</td>
<td>Afraid, enthusiastic, nervous, peppy</td>
<td>Calm, relaxed, sleepy, sluggish</td>
</tr>
<tr>
<td>Tsai (2007)</td>
<td>Elated, enthusiastic, excited, fearful, hostile, nervous</td>
<td>Calm, dull, peaceful, relaxed, sleepy, sluggish</td>
</tr>
<tr>
<td>Suh &amp; Koo (2011)</td>
<td>Irritated, joyful</td>
<td>Helpless, peaceful</td>
</tr>
</tbody>
</table>

Though some studies have shown support for the model by finding that emotionally arousing, as compared to neutral, situations will lead to enhanced memory of an event’s central aspects (e.g., Cahill & McGaugh, 1995, 1998; Hamann, 2001), other scholars have challenged the model with results that show memory enhancement even for situations that elicit deactivating emotions, such as sadness (Kensinger, 2004). Table 3 presents a list adopted from Lim (2016) of high arousal (i.e., activating) and low arousal (i.e., deactivating) emotions from the psychology literature on emotion.
2.2.2.3 The Circumplex Model: Considering both Valence and Arousal

The valence and arousal models are considered dimensional, albeit one-dimensional, models of emotion given that they characterize emotions according to subgroups or dimensions of one trait (e.g., positive vs. negative, activating vs. deactivating) (Ekman, 1999). While some studies do support these models, there is now research to suggest that one-dimensional models are not sufficient for explaining all of the findings in emotion (Kensinger, 2004). Consequently, emotions are now often described according to a two-dimensional model that proposes one aspect for valence (positive vs. negative) and another for level of physiological activation or arousal (activating/high arousal vs. deactivating/low arousal) (Friedman, 2010; Posner et al., 2005; Russell, 1980; Scherer, 2000; Tellegen, Watson, & Clark, 1999). Though rarely referred to by name in most studies, this model, known as the circumplex model (Russell, 1980), has been supported by self-reports and is used across the research to offer more complete descriptions of emotions (Friedman, 2010). Under the circumplex model, emotions are necessarily identified by a combination of where they fall on the two continuums of valence and arousal. Emotions with similar degrees of valence and arousal, for example anxiety and anger – both negative activating emotions – are expected to have similar effects on cognitive processes and behavior (LeBlanc et al., 2015).

2.2.2.4 The Goal Achievement Model: Pre- versus Post-Goal

A final dimension that can be considered when classifying emotions is goal achievement, which, as we will see, is time-relevant or time-contextual. Under this goal relevance model (Levine & Edelstein, 2010), the information that is most relevant to reaching a goal is of prime importance. As one moves closer or farther away from attaining a goal, various emotions may arise, which in turn are believed to modify certain cognitive processes, such as perception, decision making, and
attention, among others (Kaplan, Van Damme, & Levine, 2012). Specifically, emotions related to goal relevance are separated into pre- and post-goal emotions (Kaplan et al., 2012). As the name suggests, pre-goal emotions are those felt while an individual is still working towards a goal, before any successful or unsuccessful results. These emotions, often feelings such as desire, excitement, and fear, are associated with higher motivation, which can lead to increased and narrowed attention and memory of the information relevant for obtaining the desired outcome (Gable & Harmon-Jones, 2008, 2010). Alternatively, post-goal emotions, including guilt, happiness, and sadness, arise once a goal is achieved or forfeited. While the previous dimensional models allow for comparisons between emotions of different valence and/or arousal level, they do not permit differences between emotions of the same name at different points in time. For example, happiness would always be expected to yield the same effects on cognitive processes, regardless of other factors.

Of the four dimensional models described, the goal relevance model is the only one that begins, if only implicitly, to address the dynamicity of emotions – a progressively more central interest in research not only on emotion (Lewis, 2000) but across multiple fields. Little research has been conducted on the goal relevance model. However, researchers may find greater success in explaining emotional states and their effects by considering emotional valence and activation levels, as in the more common circumplex model, at different points in time and in relation to various events, as suggested by the goal relevance model. By doing so, emotions would be addressed as points in constant movement on a multidimensional continuum. This would respond to calls that have been made for dynamic approaches to emotion in neuroscience (Rule, Shimamura, & Knight, 2002), cognition (Sato & Yoshikawa, 2004; Scherer, 2009), and, most relevant to the current study, SLA (MacIntyre, 2012). As will be seen in Chapter 3, this dissertation
acknowledges the dynamic approach for emotion in SLA (Cameron & Larsen-Freeman, 2007; MacIntyre, 2012) in an attempt to consider emotions as phenomena that are volatile in nature.

2.2.2.5 Discrete Models of Emotion

In contrast to dimensional models, which consider emotions as one- or two-dimensional units, discrete models of emotion have been proposed to consider emotions as multidimensional. Discrete approaches predict that even emotions that are grouped together and expected to have the same effect under a dimensional model (e.g., anger and anxiety under the valence model, or pleasure and depression in the arousal model) can lead to unique cognitive, behavioral, and physiological responses (Roseman & Evdokas, 2004; Siemer et al., 2007). For example, anxiety, the most commonly studied emotion in cognition, neuroscience, and SLA, has been widely defined by feelings of nervousness and dread, as well as physical reactions such as increased heartrate, body sweats, and trembles (Reeve, 2009). Though other emotions of negative valence (e.g., anger, fear, sadness) are often treated as one entity and believed to have the same inhibitive effects as anxiety, discrete emotion models suggest specific and uniquely differentiated effects of discrete emotions of the same valence, such as anxiety, anger, and fear, on learning, processing, and judgment (Fredrickson, 2001, 2003, 2006; LeBlanc et al., 2015). Simply put, emotions of the same dimension (e.g., different discrete negative emotions) would not necessarily have the same effect on individuals’ responses, and even emotions that are comparable on more than one dimension are predicted to result in different responses under discrete models. For example, although both fear and anger are considered negative emotions of high arousal, fear is linked with higher levels of perceived risk and lower levels of perceived certainty and power, while anger is linked with lower perceptions of risk and higher certainty and power (LeBlanc et al., 2015; Lerner, Gonzalez, Small, & Fischhoff, 2003). Furthermore, discrete models also support different effects on memory for
emotional events. Negative emotions are associated with greater memory of central, as opposed to peripheral, details, yet individuals are found to remember more peripheral details of events that elicit fear in comparison to events eliciting anger (Talarico et al., 2009), though dimensional models would not differentiate between the two.

2.2.3 The Positive Turn in Emotion Research: Are Positive Emotions Always Good?

Nearly two decades ago, Seligman and Csikszentmihalyi (2000) inspired the positive psychology movement, which decidedly concentrated on human strengths and well-being. This move was a concerted effort to combat human weaknesses by directly preventing the onset of traumatic episodes, rather than developing last resort methods for post-trauma healing (Gregersen, 2013; Oxford, 2016). Scholars carrying the movement forward do not deny negative occurrences within the human experience but rather focus their efforts on how humans succeed and what activities effectively promote positive outcomes. Now repeated by many, the three central pillars of positive psychology as described by Seligman and Csikszentmihalyi (2000) – positive character traits, positive emotions, and positive institutions – may also be seen as fundamental within the field of SLA (see MacIntyre et al., 2016) and have allowed researchers to integrate the concepts, principles, and actions of positive psychology into work on language learning and acquisition (MacIntyre & Mercer, 2014), a topic which is reviewed later in this chapter. Thus, negative emotions have no doubt driven a majority of the research across fields, but thanks to the positive psychology turn, recent years have seen increased attention to positive emotions across the board.

As perhaps the most influential theory in positive psychology, Fredrickson’s (2001, 2003, 2006) broaden-and-build theory, similar to the valence theory, establishes a clear distinction between positive and negative valence emotions. Prior to this theory, positive emotions were treated more as a neutral baseline that had no effects or implications for cognitive processing; in
other words, feeling positive emotions was equated with reaching homeostasis and with feeling no emotion. Under this new approach, however, emotions were categorized as either positive (e.g., love, enjoyment, satisfaction) or negative (e.g., hate, anxiety, fear) and viewed as two separate dimensions to one experience, with emotions of the same valence having similar effects on learners’ thought-action responses. Rather than conceptualizing positive emotion as the mere absence of negative emotion or positive and negative emotions as opposite sides to the same coin, scholars in positive psychology began and continue to view these as holding different roles within a learners’ experiences (Dewaele & MacIntyre, 2014). The issue, however, is that, while different discrete negative emotions result in different cognitive (e.g., Reeve, 2009) and autonomic (Ekman, Levenson, & Friesen, 1983) responses, different positive emotions do not lead to distinguishable responses (Ekman et al., 1983), which may additionally explain why positive emotions were so under-studied until the positive psychology turn. Fredrickson’s treatment of positive emotions as similar phenomena that lead to the same result and negative emotions as unique experiences that lead to varied responses is what separates her theory from the discrete and valence models of emotion.

As the “broaden-and-build” name suggests, positive emotions under Fredrickson’s theory are believed to broaden our experiences and build enduring resources that can be used in the future to combat adversity and offset the detrimental effects of negative emotions (Fredrickson, 2001, 2003). As learners broaden their thoughts and actions dynamically through positive affective experiences, they also develop facilitative traits in coping and resiliency that can remain long after the positive emotion has passed (MacIntyre & Gregersen, 2012b). Additionally, Fredrickson proposes the “undoing hypothesis” and suggests that the ability of positive emotions to broaden and build may extend to the physiological domain as well by reducing “damage” done on the
cardiovascular system by experiencing negative emotions (Fredrickson, 2000; Fredrickson & Joiner, 2002; Fredrickson & Levenson, 1998; Fredrickson, Tugade, Waugh, & Larkin, 2003). In contrast, and much like the discrete model and valence models, negative emotions are posited to have a narrowing effect on learners’ thought processing and actions, resulting in reduced learner-learner interaction and participation. Unlike positive emotions, which are predicted to affect task performance, interlocutor interactions, and physiological reactions in the same way (Fredrickson & Branigan, 2005 in cognitive science; Gregersen et al., 2014 in SLA), distinct negative emotions are equated with specific reaction tendencies. For example, fear triggers increased blood flow to the main muscle groups to facilitate a fight or an escape, but shame would instigate a different physiological response. According to Fredrickson, all positive emotions, such as love, pride, and joy, though perceptually distinct, function to broaden attention and processing, instigate learning, and trigger beneficial reactions to stressful episodes, thereby reversing, or “undoing,” the effects of negative emotions. Positive experiences foster environments in which learners can build techniques that support them in adapting their thoughts, feelings, and actions according to any situation, whether positive or negative.

Within psychology, some studies do point to the benefits of positive affect, specifically on learners’ task performance (Butler, 2017). In a study of 36 six- and seven-year old children randomly assigned to positive, negative, and neutral affect conditions, Rader and Hughes (2005) demonstrated that positive affect led children to more efficient problem-solving as well as higher scores in a block design task. In a study of 104 college-age students Fredrickson and Branigan (2005) found that amusement and contentment resulted in a broader scope of attention and expanded thought-action repertoires to be playful and social as compared to neutral conditions. Though fundamentally distinct, these two positive emotional states of amusement and contentment
were each seen to momentarily expand students’ information processing. Alternatively, negative emotions of anger and disgust led to narrowed thought-action urges, such as increased urges to be antisocial.

The work done on positive and negative emotions within cognitive science and psychology, both before and since the positive psychology turn, has inspired researchers in SLA to consider the implications that affective features may have for the language learning experience and its outcomes, demonstrated by an increasing trend in emotion studies, on both distinct and positive emotions, within the field as detailed below.

2.2.4 Emotion in Second Language Acquisition

Within the realm of SLA, researchers have recently expressed an increased interest in the role of emotion, with many now identifying emotion as a cornerstone of cognition and learning (Dewaele, 2010a; Fredrickson, 2003; LeBlanc et al., 2015; MacIntyre & Gregersen, 2012a, 2012b; Swain, 2013). Much like studies in cognitive science, up until recently a large portion of studies on emotion in SLA traditionally investigated negative emotions exclusively, with most focusing specifically on anxiety. Because anxiety was largely associated with restrictions on learners’ attention, memory, task performance, and problem-solving abilities that inhibit language learning (Butler, 2017; Dewaele & MacIntyre, 2014; Gregersen et al., 2014), its relation to language acquisition was investigated with the expectation of finding inhibitory or detrimental effects (e.g., Dewaele, 2010b; Gregersen et al., 2014; MacIntyre & Gregersen, 2012a; Sevinç & Dewaele, 2018). In line with the positive psychology turn in cognition, many of these same scholars have served as initiators of the movement to reorient research towards positive emotions in SLA.

Much like negative emotions outside of anxiety, positive valence emotions have also taken the sidelines in SLA research (MacIntyre & Gregersen, 2012b) and have only recently been
emphasized by scholars as pivotal to producing positive learning outcomes (Dewaele, Chen, Padilla, & Lake, 2019; MacIntyre, Gregersen, & Meza, 2016). Most recently, a positive psychology movement in SLA has further led to an interest in the differences between the effects of positive and negative emotions in foreign language acquisition (Dewaele & Alfawzan, 2018; Dewaele & MacIntyre, 2014, 2016; MacIntyre et al., 2016). In one influential study, Dewaele and MacIntyre (2014) implemented an online questionnaire to investigate foreign language enjoyment (FLE) and foreign language classroom anxiety (FLCA) in a study including 1,746 FL learners of various languages and proficiencies. In order to explore FLE and FLCA, they combined 8 FLCA items taken from the Foreign Language Classroom Anxiety Scale (FLCAS) – a 33-item battery developed by Horwitz, Horwitz, and Cope (1986), originally validated by Horwitz (1986), and traditionally cited in SLA literature on anxiety – with a FLE scale they developed, which consisted of 21 items and implemented Likert ratings to reflect the positive emotions learners held with respect to the learning experience, peers, and teacher. In addition to this quantitative data, Dewaele and McIntyre took a layered approach (King & Mackey, 2016) and collected qualitative data through an open-ended question asking for a short essay on an enjoyable moment they experienced in their FL classroom. What they found was that advanced students, in addition to those with higher levels of multilingualism and perceived-proficiency as compared to their peers, scored significantly lower on anxiety and higher on enjoyment than those demonstrating lower actual and perceived proficiencies. Perhaps most importantly, and in agreement with the cognitive science literature (e.g., Fredrickson, 2006) they found that, though FLE and FLCA showed a significant negative correlation, the two dimensions shared only a small amount of their variance and showed two very different score distributions. This empirical evidence supports the contention that, while enjoyment and anxiety appear to be negatively related, the two emotions should be considered as
independent from one another and not as opposing ends of a spectrum, as previously implied in SLA. Later (Dewaele & MacIntyre, 2016), they further explored the topic of FLE and FLCA in a follow-up study by using a Principal Components Analysis to explore the same dataset. Their analysis once again supported the separation of FLE and FLCA as two dimensions and additionally highlighted two independent aspects to FLE: (1) a social dimension, relating to the positive interactions of a FL classroom, and (2) a private dimension, pertaining to a learner’s internal feelings during a positive FL experience, such as pride at achieving a language goal. While these two studies provide compelling evidence for treating positive and negative emotions as separate entities and open the door for exploration of further emotions within SLA, it is important to note that majority of their respondents were female, well-educated, and experienced learners mostly from Europe. This raises the question of whether the same results would be found in a more representative sample of learners or in learners from other ethnolinguistic, socioeconomic, and demographic backgrounds. These are factors that the current study aims to consider by investigating affective variables for both HLLs and FLLs from different geographic and institutional settings.

The effects of enjoyment and anxiety were again explored through use of two online questionnaires by Dewaele and Alfawzan (2018) in the first holistic study inquiring into the combined effects of positive and negative emotions on FL performance. Analyses of feedback from two separate studies, the first with 189 London-based FL students aged 12 to 18 years old and a second with 152 adult English learners between 18 and 40 years old in Saudi Arabia, showed that positive effects of FLE were significantly stronger than FLCA on FL performance in both the adolescent and adult learners. While their results are in line with previous findings showing a positive relationship between enjoyment and FL ability and self-assessment (e.g., Brantmeier,
2005) and confirm the negative correlation between FL anxiety and achievement seen in other studies (e.g., Horwitz, 2010; MacIntyre, 2017), the correlational design they use prevents any conclusions as to the level or direction of causality between FL performance and emotion. Nevertheless, the study does address the call for a greater focus on positive emotion (e.g., Dewaele, 2017) by being the first to explore the effects of enjoyment in the FL classroom and acts as a steppingstone for further studies on other positive emotions, such as fun, interest, pride and creativity, which may all be included under the umbrella of enjoyment (e.g., Dewaele & MacIntyre, 2014). Research in the area of positive emotion in SLA still remains scarce, with enjoyment being perhaps the most popular of the few positive emotions investigated thus far.

Outside of anxiety and enjoyment, research in SLA has greatly ignored the potential role of other positive and negative emotions, such as shame, guilt, or pride, in task performance, learning, perception, memory, and reasoning (Butler, 2017; LeBlanc et al., 2015; Teimouri, 2017, 2018). Shame may be the next best studied emotion in instructed SLA, with three studies that will be reviewed below. (In addition, Teimouri [2017, 2018] has also investigated shame, but in relation to language motivation; this further study is reviewed in the section below on Motivation.)

In a mixed-design dissertation study, Cook (2006) explored the influence of shame and anxiety on learning and speaking English as a second language (ESL) among 30 ESL college students in the U.S. The two surveys used in the study, the Test of Self-Conscious Affect, Version 3 (TOSCA-3, Tangney, Dearing, Wagner, & Gramzow, 2000) and the commonly used FLCAS, revealed shame and anxiety, respectively, as emotions experienced in the classroom. However, a correlational analysis showed the two as independent and unrelated emotions. Interview data unveiled multiple instances of shame while learning and using English, and pointed to students’ perceived deficiencies in English as the main trigger of shame. Furthermore, a fear of feeling
shame was seen to result in L2 avoidance behaviors, such as failure to fully invest in learning activities and avoidance of L2 interactions, suggesting a direct relationship between shame and L2 motivation. Cook also found that some students expressed unconstructive anger following instances of shame, which he suggested may point to the implementation of anger as a possible defense mechanism. As perhaps the first example of research on shame in SLA, Cook’s study pointed to a need for further exploration on emotions as discrete functions, more in line with discrete models than dimensional models (cf. Table 2), and also planted the seed for research on other emotions in SLA.

In a master’s thesis study, Wang (2016) also investigated shame using a mixed-methods approach with a group of 143 Chinese college learners of English in China. Student responses to the Achievement Emotion Questionnaire (AEQ, Pekrun, Goetz, & Perry, 2005), in addition to interview data, showed that shame was experienced to significant degrees in class, specifically during learning and during assessments, with learning-related settings eliciting the highest levels of shame among learners. Wang also explored positive emotion in various academic settings and found that learners experienced positive feelings of enjoyment and hope more often than negative emotions in class-related, learning-related, and test-related settings. She also suggests that results point to a positive association between experiences of shame and feelings of hopelessness in the L2 classroom and a negative correlation between students’ positive and negative emotions. However, if emotions are to be understood as independent of each other, then the correlational findings cannot be taken as characteristics of the emotions studied (i.e., shame, hopelessness, enjoyment, and hope) and are not expected to hold with other populations or in different research or educational settings. Nevertheless, the study does highlight the complexity of emotion and adds
to the literature by exploring negative emotions besides anxiety, in addition to exploring positive emotions as well.

Finally, the results of a study conducted by Galmiche (2018) revealed that shame was the most reported negative emotion during interviews with 30 L2 learners of English in France, having a detrimental effect on students’ sense of identity, self-esteem, and L2 confidence. Interview data revealed that personality traits, “poor” pronunciation as perceived by learners, vocabulary and grammatical inaccuracies, and a fear of failure were among the most influential learner-internal sources of shame. Learners also reported that teachers’ corrective feedback, language assessments, and beliefs about and interactions with students also acted as strong sources of FL shame. Frustration and anxiety were also reported as common feelings during L2 learning, with students who expressed greater levels of shame also reporting more anxiety and increased L2 avoidance behavior, again showing a relationship between emotion and motivation and in agreement with Cook (2006). The study acts as an excellent expansion to our understanding of shame in the SLA setting by exploring and inquiring into the teacher’s potential role in eliciting emotions in the FL classroom.

The three studies reviewed above demonstrate the influential effects that shame may have on various language learning experiences and suggest that multiple aspects of the FL classroom can be altered to reduce shame in learners (e.g., when and how to provide corrective feedback). Of course, this raises the question of what other emotions are seen in the FL classroom, if and how they influence linguistic outcomes, and whether or not they can be governed by classroom practices. What has left to be seen in the literature on discrete emotions, a topic that will be addressed in the current study, is how classroom content can provoke or affect feelings of negative emotions widely investigated such as anxiety, positive emotions increasingly included in studies,
such as enjoyment, and less-researched emotions such as shame and guilt, in addition to other emotions not yet investigated. The inclusion of a range of both positive and negative emotions into empirical investigations within SLA will improve the explanatory power of existing models in emotion research and will add to pedagogic methods that aim to support social, emotional, and linguistic achievement in the FL classroom.

2.2.5 Emotion in Minority Populations

Though SLA scholars have taken an interest in the implications of emotional factors on FL achievement, only a small number of studies has been carried out on emotion in minority or HL populations. Some studies do explore emotion in these populations within the context of HLE or the language classroom setting in general, while others go outside of these settings to explore emotion at a social level with individuals from a wide range of ethnoracial, cultural, and linguistic backgrounds. In what follows, I review studies both inside and outside the classroom in order to gain a more global understanding of the potential relationship between identity and emotion.

2.2.5.1 Emotion in the Classroom Setting: Still Focusing on Anxiety

While an increased interest in emotion has been seen within the realm of SLA, studies addressing emotion specifically within HLE remain scarce and no studies have yet been known to explicitly explore emotions besides anxiety within the context of HLE or mixed classroom designs. Still, considering the bulk of recent work on language anxiety within instructed SLA, scholars have now begun to question whether anxiety affects HLLs and FLLs similarly—whether in traditional FL, HL, or mixed classroom designs—given the linguistic, historical, sociocultural, and ethnic differences between these populations. The majority of these studies focus on anxiety specifically as it relates to learners’ language skills, including writing, speaking, reading, and listening. On the whole, this research finds that HLLs tend to experience lower levels of general
FL anxiety than their L2 learner counterparts but higher levels of FL writing anxiety because of the assumed lack of comfort with literacy in the home language (e.g., Jee, 2016; Levine, 2003; Tallon, 2009, 2011; Xiao & Wong, 2014). For example, Tallon (2009) used the FLCAS—now adapted by multiple scholars to study the language anxieties of heritage and non-heritage speakers, alike (e.g., Jee, 2016; MacIntyre, 2017; Tallon, 2009; Xiao & Wong, 2014)—to investigate levels of foreign language classroom anxiety for 209 Spanish HLLs as compared to 204 non-HLLs. The questionnaire results showed that, though language anxiety did exist within the HLL pool, these students reported feeling lower levels of general anxiety than their non-HLL peers at earlier levels, findings that were later corroborated by a future study as well (Tallon, 2011). HLLs in more advanced courses, however, expressed higher levels of anxiety than L2 learner (Tallon, 2009), a finding which Tallon attributes to course style. The more advanced courses were seen to follow a lecture style of teaching, where students’ oral production – a skill with which more HLLs than L2s are comfortable – was limited. In addition, these courses required students to learn more technical vocabulary and words less common in everyday conversation. Tallon (2009) suggests that new vocabulary requirements may pose greater challenges for HLLs and lead to higher HLL anxiety, because FLLs are accustomed to studying vocabulary from the earliest levels, while HLLs are often already familiar with introductory vocabulary.

Prada, Guerrero-Rodriguez, and Pascual y Cabo (2020) also explored language anxiety among 30 heritage speakers of Spanish enrolled in traditional university FL curriculum (i.e., a mixed classroom) compared to heritage Spanish courses. Taking a mixed methods approach, the authors implemented an adapted version of Dewaele and MacIntyre’s (2014) FLCAS as a quantitative measure of anxiety triangulated with participants’ responses from individual interviews. Results showed that HLLs enrolled in the mixed FL class reported higher levels of
anxiety than those in the HL class. Common themes from interview findings suggested that the teacher’s personality, classroom language policies (e.g., use of translanguaging practices, expectations of monolingual behavior), students’ sense of culturally and linguistically being ingroup versus outgroup members, the amount of explicit focus on grammar, and, of exceptional relevance to the present study, the topics covered in course materials and discussions were particularly influential factors in the anxiety HLLs felt in the Spanish FL classroom. These findings suggest the influence that classroom content can have on HLLs’ emotional states and attitudes (i.e., trait emotions) with respect to studying the heritage language, a factor which the present study aims to explore.

In a study investigating language anxiety in Chinese HLLs, Xiao and Wong (2014) looked at 87 first-year students of Mandarin background enrolled in two first-semester Chinese heritage courses in the U.S. Comparing the four skill-based language anxieties (i.e., writing, speaking, reading, and listening) and exploring the causes and effects of these anxieties, they found that, while the Chinese HLLs displayed lower mean scores on the FLCAS than non-heritage students, they did experience language anxiety in response to classroom activities, particularly in response to writing and reading as measured by adapted versions of the Second Language Writing Anxiety Inventory (SLWAI, Cheng, 2004) and the Foreign Language Reading Anxiety Scale (FLRAS, Saito, Horwitz, & Garza, 1999), respectively. The results from a six-item Preliminary Heritage Language Anxiety (PHLA) scale, originally adapted from Tallon (2006), that explored the anxiety of Spanish HLLs, showed a significant correlation between somatic anxiety (i.e., items related to physiological manifestations of anxiety), cognitive anxiety (i.e., items addressing the thought processes brought about by anxiety), and avoidance behavior (i.e., items pertaining to the avoidance of HL writing due to anxiety), which were the three sub-components of writing anxiety.
identified in the study. Of the three, avoidance behavior was the strongest indicator of writing anxiety, suggesting that writing anxiety most often led HLLs to avoid future writing tasks altogether. Finally, they found that preliminary HL anxiety held the strongest weight in explaining HL participants’ writing anxiety, followed by the requirement to retrieve lexical and grammatical forms during writing and the brainstorming and organization of ideas during composition planning. While Xiao and Wong’s results imply that composition planning and linguistic retrieval are factors that induce anxiety in HLLs, the finding perhaps most relevant to the current study was these researchers’ suggestion that the high level of preliminary HL anxieties during writing activities could point to a strong potential for heritage identity as a significant contributor to feelings of anxiety in the HL classroom. Thus, sociocultural variables as well as learner backgrounds and language experiences may be essential for understanding the effects and trends of emotion that are seen in the FL classroom. Important to note, however, is that the authors made efforts to obtain a group of participants that was “as homogenous as possible” (p. 594) with regards to linguistic proficiency, implementing a placement test that ensured that all participants held elementary oral skills in Mandarin, and excluded any participants “exclusively from a dialect background” (p. 595). Since this study points to the influence that learner background may have on emotion, related research can be strengthened by considering the diverse linguistic, ethnic, racial, and social backgrounds and experiences of HLLs. The present study, therefore, aims to explore HL and FL emotions and motivation by recruiting Spanish HLLs and FLLs from private as well as state university backgrounds and will explore participants’ linguistic and social experiences through an exit questionnaire that solicited open-ended written comments as well as a background questionnaire on individuals’ linguistic, social, and academic characteristics and experiences.
Similar studies carried out with HLLs of other languages express similar findings on language anxieties. For example, studying 61 Korean HLLs enrolled in a second-semester heritage-track course in the U.S., Jee (2016) also found evidence for low to moderate levels of foreign language and reading anxieties and high levels of writing anxiety, as measured through a questionnaire incorporating classroom, reading, and writing versions of the FLCAS. She discovered high, positive correlations among the three anxieties and a negative correlation between these anxieties and student achievement, indicating that those with high foreign language anxiety demonstrated higher reading and writing anxieties and lower grades in the course. Taking into account quantitative and qualitative studies that link ethnic identity to HL maintenance (e.g., Cho, 2000; Kang & Kim, 2012; Lee, 2002), she also set forth to investigate the relationship between language anxiety and perceived cultural ethnicity (i.e., identifying as Korean versus American). The analysis uncovered significant differences in the heritage track course with respect to ethnic identity, showing lower levels of anxiety and higher grades for Korean HL students who identified as Korean than those who self-identified as American. This study offers early evidence suggesting a relationship between language anxiety and identity for HLLs and, though strictly quantitative, offers a foundation for the use of a mixed methods approach in future investigations.

A study conducted by Sánchez-Muñoz (2016) did implement mixed methods in order to determine if a university course specifically designed to meet HLLs’ needs had a positive effect on students’ perceptions of themselves as Latinx Spanish speakers. At the beginning of the academic year, 50 Latinxs between the ages of 18 and 23 completed an anonymous questionnaire on their Spanish language use, self-perceived Spanish language skills, including written and oral production as well as listening and reading comprehension, in addition to rating their linguistic confidence for each of these skills. About halfway through the year, individual interviews were
conducted in order to allow students to expand on their motivations for having taken the HLL course, their feelings with respect to HL use, their connection to the Spanish language, and their sense of Latinx identity, among other topics. At the end of the academic year, students completed another questionnaire, where they judged whether each of their linguistic skills had improved as a result of having taken the HLL course and whether any change or negotiation in perceived ethnic identity had taken place in relation to their language abilities. The qualitative data collected through the open-ended questions and interviews revealed that students perceived a strong connection between their Spanish HL and Latinx ethnicity, and many viewed their HL as inadequate and of little value within U.S. society. Quantitative results showed an increase in students’ confidence levels and perceived ability for all linguistic skillsets with the most notable increase in writing, the skill identified by most students as their main motivation for having enrolled in the HLL course. Results showed that many students completed the course with more positive beliefs about their knowledge and command of Spanish and a desire to take more advanced language courses. Furthermore, the course appeared to help students overcome an emotion meeting the description of shame that they had originally felt in using Spanish.

Though not directly addressed by the author, the study by Sánchez-Muñoz (2016) offers perhaps the first connection between emotion, motivation, and language development for HLLs. While these variables are not addressed by name, students were seen to feel more positive emotions than they had felt at the course onset towards their HL and a motivation to continue studying Spanish by the end of the HL course. Students also believed that they finished the semester with stronger abilities in their oral, listening, reading, and writing skills. While the results point to the strong potential for future studies within the realm of affect and language learning, the analyses and conclusions were based off of students’ perceived abilities and improvements, and no actual
proficiency test was reported to have been administered at any point during the study. While students may have felt more positive toward their HL use by the end of the course and believed to have improved their Spanish skills, there is no evidence that determines if improvements were seen in their actual language abilities or the influence of affect on HL performance. Future studies should incorporate tests for language proficiency and for learning, as proposed for the current study, in addition to batteries for measuring emotion and motivations, in order to explore the possible connection between these variables. Furthermore, much like Xiao and Wong (2014), Sánchez-Muñoz also gathered a “homogenous group” for her participant pool, though it remains unclear whether this refers to linguistic as well as ethnic homogeneity. The majority of participants were of Mexican descent, which was meant to “mimic the makeup of the local Latina/o community outside university campus where most of the population is of Mexican descent” (p. 210). While this particular HL course led to positive results for Mexican-American students, predictions about the success of the course and its materials for students of other Latinx backgrounds cannot be made, nor can the same outcomes be expected for mixed HLL-FLL classes of different proficiencies, which are the norm at many universities.

**2.2.5.2 Emotion Outside the Classroom**

Recently, Sevinç and Dewaele (2018) have expanded research on HL anxiety beyond the classroom by studying both the majority (i.e., Dutch) and heritage (i.e., Turkish) languages in three generations of Turkish immigrants in the Netherlands. Implementing a Likert-based questionnaire, they investigated Turkish and Dutch language anxieties of 116 participants in three distinct social contexts, namely, when speaking with family, with friends, and with native speakers of both languages, in order to explore the potential relationship between immigrants’ language anxiety levels and sociobiographical and linguistic factors. The results of the questionnaire revealed that
across all three of the social contexts first- and second-generation immigrants experienced greater anxiety in the majority language, while third-generation immigrants expressed higher levels of anxiety in the HL. They found that language background variables such as age of onset, self-perceived proficiency and frequency of HL and majority language use could not explain language anxieties without a joint consideration of sociocultural, economic, and political issues. Still, they propose that identity, linguistic and social inequalities, and acceptance into the ethnic or majority community are all closely linked to majority language anxiety. Ultimately, they call for work on HL anxiety that incorporates interdisciplinary methods from sociolinguistics and applied linguistics, particularly qualitative analyses that approach HL anxiety from a dynamic perspective that can account for psychological, social, and cultural phenomena. The current study acknowledges, if in a small way, the suggestions made by Sevinç and Dewaele (2018) and echoed across other similar studies (reviewed below), by eliciting self-reports of state emotions at three points during a reading task and exploring trait emotions towards Spanish as a minority/heritage language. In addition, the present study also elicited qualitative evidence that helps explore the social and cultural backgrounds and experiences of individuals and how they may relate to affective variables in language learning.

2.2.5.3 Linguistic Insecurity

One language-specific emotion that has been recently suggested as a topic of interest and importance within the context of endangered languages (Abtahian & Quinn, 2017) and multilingualism (Ortega, 2019) is linguistic insecurity. The topic has seen very little recognition in SLA. The emotion is defined as a language-specific relative of anxiety that expressly invokes feelings of inadequacy brought on by speaking a non-standard variety (Abtahian & Quinn, 2017; Labov, 1966) and, therefore, directly relevant to HL research. The first to define the term, Labov
(1966) recognized linguistic insecurity as a discrepancy between the language that speakers perceive as ideal or “standard” and their actual language abilities. Linguistic insecurity arises when speakers feel that their own variety is “inferior, ugly, or bad” (Meyerhoff, 2006, p. 292), making them self-conscious about their own language use, which they consider to be non-standard (Abtahian & Quinn, 2017). Related to this idea of “good” versus “bad” varieties, van Compernolle (2016) explores the relationship between multilingualism and attitudes toward linguistic variation and, in a later study (2017), the relationship between multilingualism and preference for informal language. Though these two studies do not address linguistic insecurity per se, they do suggest a potential relationship between the feelings that learners have towards their own HL or FL language variety, their language learning emotions and motivations, and their success as language learners.

Foo and Tan (2019) list three conditions that classify linguistic insecurity, namely including a speaker’s perception of inferiority with respect to: (1) their own language abilities (Meyerhoff, 2006), (2) language community members’ language abilities (Hall, Smith, & Wicaksono, 2011), and (3) the local variety of their speech community (Mooney & Evans, 2015). In addition, three types of personal linguistic insecurity are outlined by Abtahian & Quinn (2017), which they claim correspond to feelings of shame and embarrassment: (1) insecurity by those punished for speaking their L1 (Reyhner, 2004), (2) insecurity by young speakers who are criticized by older generations for speaking “incorrectly” (Lee, 2009; Zentz, 2014), and (3) insecurity of non-speakers or speakers of lower proficiencies whose identity and cultural authenticity are questioned due to their lack of linguistic competence in the heritage language (Wyman, 2009). Scholars note that these feelings of linguistic insecurity can result in a number of detrimental effects for speakers including fear of making mistakes in the language (Smith-Hefner, 2009; Zentz, 2014) or of being judged by older generations, avoidance of higher speech registers,
denial of any knowledge at all of the language (Grinevald & Bert, 2011), avoidance of speaking with native or advanced speakers, or incomplete connections to their ethnic, national, or family heritage (Abtahian & Quinn, 2017). Within the context of multilingualism, Ortega (2019) suggests that linguistic insecurity is introduced and cultivated by language ideologies that imagine a “monolingual-likeness as the finish line for L2 learning” (p. 28). While these same fears and ideologies exist within HL communities and are bound to lead to linguistic insecurity in HLLs, to the best of my knowledge only one qualitative study has offered insight on this emotion for the HL community.

In a study with 145 learners from a college-level course for HLLs of Spanish on the U.S.-Mexico border, Martínez and Petrucci (2004) took qualitative accounts of learners’ confidence levels in both English and Spanish. Results showed that learners with lower proficiency in English demonstrated linguistic insecurity in both English and Spanish, while learners with higher proficiency in English expressed linguistic insecurity only in Spanish. Given the ambiguity with respect to participant characteristics and methods used, in addition to the qualitative nature of the study, further research with well-defined objectives and using robust and mixed methods are still needed. Nonetheless, this study provided evidence for the presence of linguistic insecurity in HLLs, laying the foundation for future work. For example, narrative accounts collected from individuals within the Latinx community in the U.S. have shown instances of linguistic insecurity in third-generation (Goble, 2016) and later-generation Spanish HLLs (Tseng, 2020).

Even within the greater context of SLA, in other words, outside of the HL literature, research on linguistic insecurity has been limited. Foo and Tan (2019) recruited 287 adult native Chinese speakers with advanced L2 English proficiency in order to investigate linguistic insecurity in the Chinese community in Singapore. An instrument containing 37 Likert-scale questions on
individuals’ attitudes towards English use, variety, and policies in Singapore, as well as confidence levels for completing certain tasks in L2 English (e.g., ordering food in a restaurant) was used as a measure of linguistic insecurity. Results showed that younger respondents were more secure in their English, which the authors suggest may be related to the evolution of language policies in Singapore. While the study discusses linguistic insecurity across generations, it is important to note that questionnaire items do not inquire into feelings of anxiety, fear, or insecurity brought about by speaking English but instead address individuals’ confidence in successfully completing various activities and tasks in English. Therefore, given that the study does not directly explore linguistic insecurity, the results must be taken with great caution.

Still, though these studies all provide strong support suggesting the implications of linguistic insecurity on both the HLL and L2 communities, none provides a concrete method or instrument for studying this emotion explicitly within the context of instructed SLA. The present study aims to fill this gap by developing a new questionnaire that measures linguistic insecurity and by exploring linguistic insecurity in both HLLs and FLLs as well as investigating the potential relationship it has with linguistic outcomes and emotion.

2.2.5.4 A Connection between Ethnoracial Identity and Emotion

Albeit with students from diverse backgrounds and not only limited to HLLs, the work of some scholars outside of SLA does suggest the affective influence that issues of ethnic and racial identity may have on an individual (e.g., Bogdanowska-Jakubowska, 2017; Carter, 2007), which is important to consider given the relationship between linguistic, ethnoracial, and social aspects of identity and heritage. In one case study, Bogdanowska-Jakubowska (2017) employs critical discourse analysis (CDA) to discuss racial identity as a sensitive issue within the context of the Black community in the U.S. She discusses how questions of national, racial, and ethnic identities
can evoke strong positive or negative emotions depending on the social implications of both self-
identifying and being identified as a member of one group or another. The character of inclusion
and exclusion from ethnic and racial groups is also addressed by Bogdanowska-Jakubowska.
Wodak and Weiss (2005) mark inclusion and exclusion as non-static categories that may be
redefined throughout time by group members, though it is often a society’s laws and ideologies
that ultimately decide who can claim majority group status. Bogdanowska-Jakubowska (2017)
elaborates that inclusion or exclusion from a group may not be dynamic in nature for ethnic or
racial minorities who are labeled and denied access once-and-for-all by the privileged majority.
Notwithstanding, as can be seen in HL research, HLLs can certainly experience greater or reduced
levels of “Americanness” depending on the context in which they find themselves (Jing-Schmidt,
Chen, & Zhang, 2016), which does suggest a dynamic nature for minorities’ perceptions of their
own identity and sense-of-self. Ultimately, Bogdanowska-Jakubowska (2017) highlights the
negative emotions, namely anger, along with resentment and worry, expressed by the Black
population in her study when faced with threats to their sense of identity and self-worth, themes
which may be expected to surface in response to sensitive Spanish language classroom topics and
within other minority communities as well, including the Spanish HLL community. Of course, the
complex, as well as dynamic, nature of ethnicity and race only allow for potential trends to be
highlighted and great generalizations should be made only with great caution if at all.

Within the realm of education, Kernahan and Davis (2007) studied changes in White
students’ racial awareness and emotion as a result of completing a university course on diversity.
Their results suggested increases in students’ awareness of White privilege and feelings of racial
guilt in response to racist scenarios, pointing to potential developments in learner emotions and
motivations to continue learning about the topic at hand as a result of being exposed to issues of
race and ethnicity. Torres, Yznaga, and Moore (2011) later examined the moderating effect of ethnic identity on the psychological distress of Latinx adults, primarily U.S.-born students, in the U.S. They found that those who explored their own ethnic identity (e.g., researching resources such as Latinx social networks) in work, academic, or public settings with low instances of discrimination experienced lower levels of stress than those exploring their ethnic identity in settings of high perceived-discrimination, where resources and networks for minorities may not be readily accessible. They suggest that any uncertainty surrounding ethnic group membership may be exacerbated in instances of microaggressions or insulting ethnic interactions and potentially lead to a stressful process of self-evaluation. Alternatively, ethnic identity commitment and a deeper sense of belonging to the ethnic group appeared to act as a cultural resource, providing coping skills against discrimination. In order to improve the emotional responses and mental health of the Latinx community, they propose interventions that focus on Latinxs’ “knowledge and sense of attachment to the ethnic group” (p. 532). Themes that center on sensitive issues that are faced by the Latinx community may act to motivate Spanish learners to continue learning the language in order to take action in response to feelings of guilt or anger, among other emotions, though more research is needed on the topic, a central motivation for the current study.

Though these studies do not all address HLL communities directly, they suggest that students of both linguistic and ethnoracial minority status likely experience emotional reactions to materials that address identity in the classroom. Spanish classroom content, often touching on themes similar to the ethnoracial, cultural, and social topics mentioned above, may be expected to affect Spanish HLLs’ and FLLs’ emotional and motivational reactions, and therefore potentially their language development, in distinct ways, though research remains to be seen in this light. The current study aims to explore both positive and negative emotions beyond anxiety and in both HL
and FL learner profiles. In addition, with the studies reviewed as a foundation, it offers insight into how diverse learner backgrounds and experiences along a number of complex contextual and liminal factors may have an effect on how sensitive content is received and processed in HL and mixed classrooms.

2.3 Capturing Fluctuating Emotions and Interactions with Multiple Systems during Language Learning

Few human phenomena are more intuitively dynamic than emotions, as it is commonly acknowledged that emotions fluctuate. For example, as we saw in Section 2.2.2.4, the goal relevance model of emotion (Kaplan, Van Damme, & Levine, 2012; Levine & Edelstein, 2010) stipulates fluctuations along the axis of time and predicts differences between emotions of the same name, depending on whether they are felt before or after reaching a goal, such that as one moves closer or farther away from attaining the given goal, various emotions may arise that may modify certain cognitive processes, such as perception, decision making, and attention, differently. Within the field of SLA, Complex Dynamic Systems theory (Cameron & Larsen-Freeman, 2007; Larsen-Freeman & Cameron, 2008) appears to be ideally positioned as an approach to investigate dynamic, fluctuating emotions in L2 learning. MacIntyre (2012, 2017) has taken up this challenge in his Dynamic Approach, which has allowed scholars to explore the changing nature of one emotion, namely anxiety, in the L2 classroom and to consider the dynamic interactions between anxiety and linguistic abilities and learning context, among others. The prime focus of the method is variability within the individual as an event or task unfolds (MacIntyre, 2012). The approach has been used by scholars to investigate fluctuations in anxiety in L2 students and explore the role and interactions of gender, culture, and language of use during L2 communication processes (Gregersen et al., 2014; MacIntyre, 2012; MacIntyre & Serroul, 2015). No studies have yet
addressed other emotions, such as shame and enjoyment, using the dynamic approach nor have they explored the interactions between emotion and other variables in other contexts, such as the HL classroom or among multilingual language learners. Furthermore, because Dynamic Systems Theory has also been applied to research in language learning motivation (Thompson, 2017a, 2017b), it opens the door for use of this approach across a range of studies in affect and to consider both the fluctuating nature of emotions and the mutual interrelations with a host of other factors and systems in language learning. Thus, in what follows I offer a review of the approaches that have been used to study anxiety, leading to the present interest in the Dynamic Approach, as a way to lay the foundation for investigation into emotions beyond anxiety as well as related factors, such as motivation, comprehension, and willingness-to-communicate, to name a few.

2.3.1 Anxiety in Historical Perspective

MacIntyre (2017) argues that, ultimately, the research on language anxiety can be described by two initial approaches, the Confounded Approach and the Specialized Approach (described below), which have led to a third method that underscores the complexity of anxiety as situated within a dynamic language learning experience. This third phase of research, pioneered by MacIntyre, is known as the Dynamic Approach. In an early review of the literature, Scovel (1978) noted the opposing views held by scholars with respect to language anxiety:

The research into the relationship of anxiety to foreign language learning has provided mixed and confusing results, immediately suggesting that anxiety itself is neither a simple nor well-understood psychological construct and that it is perhaps premature to attempt to relate it to the global and comprehensive task of language acquisition. (p. 132)

MacIntyre (2017) has labelled this first approach to language anxiety research, characterized by the difficulties in conceptualizing anxiety specifically as related to language learning that Scovel
captured in the quote above, as the Confounded Phase. The name highlights the mixture of physiological and behavioral methods, as well as self-report questionnaires, used during this phase to measure anxiety outside of context, which generated “mixed and confusing” findings (p. 1). At the time, in an attempt to reason inconsistent results in the field, Scovel (1978) established a distinction between facilitating and debilitating anxiety, in addition to state versus trait anxiety. Notwithstanding, many leading scholars in emotion (e.g., Fredrickson, 2001, 2003, 2006; Seligman, 2011 in cognitive science; MacIntyre, 2017; MacIntyre & Gardner, 1991 in SLA) later disregarded the facilitating/debilitating dichotomy in FL anxiety as a distinction that was of little use to SLA researchers, accepting the contrast between trait and state anxiety as conceptually strong.

In response to Gardner’s (1985) call for a construct that would allow scholars to conceptualize and measure anxiety specifically within the context of language acquisition, Horwitz, Horwitz, and Cope (1986) developed the Foreign Language Classroom Anxiety Scale (FLCAS), a 33-item measure initially validated by Horwitz (1986) among Spanish learners and again by Aida (1994) with students of Japanese. The scale drew upon the French Classroom Anxiety and French Use Anxiety scales, developed by Gardner (1985) as subparts of the AMTB and designed to focus on language attitudes and motivation within the socio-educational model. The 1986 FLCAS study initiated what MacIntyre (2017) calls the Specialized Approach. Others too (e.g., Dewaele, 2002) have highlighted that, in clear opposition to the previous Confounded Approach, the development of these situation-specific batteries marked a turning point in the research, because various types of anxiety could be now differentiated. This new conceptualization of language anxiety opened the door for scholars to explore the potential correlations between various factors of anxiety, including general and communicative anxieties (MacIntyre & Gardner,
1989) as well as general/social-evaluative, state, and language anxieties (MacIntyre & Gardner, 1991). MacIntyre and Gardner (1994a) later arranged 29 measures of L1 and L2 performance across three stages of cognitive processing and developed three scales of language-related anxiety in order to analyze the types of anxiety experienced during language input, language processing and interpretation, and language output.

Once scholars began to explore anxiety specifically within the context of SLA, special attention was given to anxiety as related to individual language skills, including reading (Ismail, 2015; Saito, Horwitz, & Garza, 1999), writing (Cheng, 2004; Cheng, Horwitz, & Schallert, 1999; Han & Hiver, 2018; Sheen, 2008), speaking (Ahmed, 2016; Cheng et al., 1999; Rassaei, 2015; Sheen, 2008; Vincze & MacIntyre, 2017), and listening (Bekleyen, 2009; Elkhafaifi, 2005; Zhang, 2013). As correlations between language ability and anxiety continued to be established, many scholars came to assume anxiety as a cause of language difficulties (MacIntyre, 2017). This idea was questioned, however, by scholars who proposed anxiety as a reaction to or consequence of problems in language coding and aptitude (e.g., Sparks & Ganschow, 1995; Young, 1986). The cause-or-effect debate on language anxiety continued unanswered due to the correlational nature of a majority of the research. Even when a correlation between anxiety and language achievement could be displayed, MacIntyre (2017) notes, questions remained as to which variable was the causal factor or if some third variable led to similar patterns in both anxiety and aptitude.

Given the uncertainty in the field with respect to the direction of causation between language anxiety and other variables, scholars are now calling for an approach that takes into account the multiple interactions that are constantly at play during language acquisition. In response, a third phase of language anxiety research has begun to emerge, initiated by MacIntyre’s idiodynamic method (2012). This Dynamic Approach uses the complexity and dynamic systems
theory to look at the many interacting facets of a complex system in order to explore holistically how a system (e.g., an emotional system) reacts as well as how it interacts with the outside factors of its environment (Larsen-Freeman & Cameron, 2008).

MacIntyre (2017) emphasizes how the Dynamic Approach allows researchers to contextualize anxiety and to dynamically situate it among other elements, including physiological reactions, linguistic abilities, learning context, and content under discussion, among others. Unlike previous approaches, dynamic methods underscore the continuously changing and complex interactions that take place between anxiety and other factors to affect language learning and development on a range of timescales from years or months down to minutes or even seconds (MacIntyre, 2017). Gregersen, MacIntyre, and Meza (2014) implemented this Dynamic Approach by using heartrate monitors to study the fluctuations in anxiety that six students experienced while giving a presentation in their L2 Spanish. Immediately following, each participant viewed a video of his or her presentation using the idiodynamic procedure (MacIntyre, 2012), where continuous changes in anxiety are shown in real time. Interviews revealed that spikes in anxiety occurred when speakers forgot a word or lost their train of thought, and participants characterized by the FLCAS as highly anxious experienced more spikes in anxiety throughout their presentations.

Another study by MacIntyre and Serroul (2015) investigated dynamic interactions between L2 communication anxiety and multiple components of motivation, including the ought-to self (see below, Dörnyei, 2005), willingness to communicate, and what MacIntyre refers to as avoidance motivation (e.g., 2017). As anxiety increases, it activates an inhibition system that draws attention away from communication and instead highlights the decreasing expectations of the ought-to self. This, in turn, increases anxiety by focusing the speaker’s attention to difficulties in language production, which continues the cycle of decreasing motivation and willingness to
communicate and increasing anxiety. By showing these shifts in motivation and anxiety, the Dynamic Approach uncovers the progression leading to an intensification of cognitive, emotional, and linguistic difficulties that end at physiological reactions, such as sweaty palms, racing heart, and shaky hands, and complete termination of communication (Dewaele, 2017; MacIntyre, 2017).

Taking a dynamic perspective to language learning, Boudreau, MacIntyre, and Dewaele (2018) implemented MacIntyre’s idiodynamic method to investigate the dynamic relationship between anxiety and enjoyment in 10 English-speaking L2 students of university French while completing two different oral tasks in their FL French. Rather than analyzing the average second-by-second emotional intensity for all participants together, the authors explored the dynamic relationship between the two target emotions individually for all 10 participants. Results showed that anxiety and enjoyment could be negatively correlated, positively correlated, or show no correlation at different points in time and for different individuals. While the findings cannot be used to make any generalizations pertaining to anxiety or enjoyment, the study does highlight the importance of research that address the complex and dynamic nature of emotion.

2.3.2 The Implications of Emotional Fluctuation from a Psychological Perspective

Studies in psychology also suggest the implications of amount of emotional fluctuation itself on individuals’ cognitive processes and psychological experiences, though with mixed results. Some research, for example, has shown that greater changes in negative emotions may be a sign of psychological distress and instability (Kashdan & Rottenberg, 2010; Waugh, Thompson, & Gotlib, 2011), which implies increased cognitive load and more difficulties processing novel information. Similarly, Gruber, Kogan, Quoidbach, and Mauss (2013) found that excessive fluctuation in positive emotion may also be associated with poor psychological health, including greater levels of general anxiety, which would also be expected to lead to cognitive challenges.
Other work in psychology has pointed to contrasting results. Two separate studies by Mikolajcak et al. (2010) and Waugh et al. (2011) found that greater emotional fluctuation demonstrated an increased ability to adapt emotionally to emotional contexts, suggesting better resilience to emotional triggers and enhanced psychological adjustment. In addition, research has shown that greater variability in positive emotion may also intensify the overall levels of enjoyment of an experience (Nelson & Meyvis, 2008). Taken in unison with findings from psycholinguistics and SLA that highlight the benefits of emotional resilience and overall positive emotion, these studies suggest that more volatile emotions may be indicative of increased levels of processing and greater ability to attain learning objectives. Still, given the mixed findings, scholars encourage research that continues to explore beyond measured average levels of positive or negative emotions in order to investigate the implications of emotional fluctuation (Gruber et al., 2013). To the best of my knowledge, studies have yet to examine the effects of volatile versus stable emotion in SLA. The current study aims to address the question of emotional volatility or stability among its objectives.

2.4 Motivation

A majority of researchers in emotion identify emotions as a type of motive across an array of contexts (Reeve, 2009), with some having suggested that emotions represent the principal motivational system (Izard, 1991; MacIntyre & Vincze, 2017; Oxford, 2016; Tomkins, 1962, 1963, 1984). Motivation to learn a FL – the driving force related to effort, desire, and affect that leads learners to pursue and sustain language learning throughout the language-learning experience (Gardner, 2001) – has become perhaps the most extensively investigated affective variable (Saito, Dewaele, Abe, & In’ Nami, 2018). In the past, several models and theories have been considered to specifically assess FL, or L2, motivation, including Gardner’s (1985, 2001) socioeducational
model, the L2 motivational self system (Dörnyei, 2005, 2009), and activity theory (Allen, 2010; Engeström, 1999), among others. Gardner proposed the first influential model, under which he developed the Attitude/Motivation Test Battery (AMTB, Gardner, 1985) to measure integrativeness and attitudes toward the learning situation. This battery dominated research in L2 motivation until the 1990s, when Dörnyei (1990; 2005) proposed the L2 motivational self system, consisting of three motivational components: (1) the ideal L2 self – the learner’s vision of the L2 self they want to become; (2) the ought-to L2 self – the learner’s perception of the attributes they “ought to” possess in the future; and (3) the L2 learning experience – the learner’s attitudes towards and experiences with the learning environment inside and outside the classroom. Later, Dörnyei (2009) incorporated learners’ intended learning efforts into the model, eliciting the efforts students plan to make toward their language achievement. In this past decade, the L2 motivational self system has dominated the research landscape of L2 motivation (Boo, Dörnyei, & Ryan, 2015).

The L2 motivational self system offers us insight into the pedagogical implications of motivation (Lamb, 2017) and has been validated by multiple studies in the field, with both L2 learners (Dörnyei & Ushioda, 2009; Kim, 2009; Lamb, 2012; Moskovsky, Assulaimani, Racheva, & Harkins, 2016; Taguchi, Magid, & Papi, 2009), HLLs (Xie, 2014), and multilinguals (Thompson, 2017b). As noted by Xie (2014), the ideal L2 self has been shown to hold a significant relationship with integrativeness (Taguchi et al., 2009) and willingness-to-communicate (Yashima, 2009) and has seen to be a strong predictor of motivation. Kim (2009) has also suggested that instrumentality and integrativeness can be incorporated as components of the L2 self. Now, several scholars within SLA have furthermore begun to call for more research considering emotional state as another underlying variable in L2 motivation (e.g., Dörnyei &
2.4.1 Considering the Connection between Motivation and Emotion in Second Language Acquisition

Teimouri (2017) explored shame, joy, and anxiety in relation to language motivations, namely L2 future self-guides, in a study situated within Dörnyei’s L2 motivational self system (Dörnyei, 2009; see further discussion below). A total of 524 intermediate learners of English as a foreign language (EFL) between the ages of 12 and 18 in Iran completed the study. Participants completed a 56-item questionnaire, which included motivational variables adapted from the L2 self system (Lockwood, Jordan, & Kunda, 2002; Taguchi et al., 2009; Yashima, 2002), in addition to items adopted from Taguchi et al. (2009) to measure L2 anxiety as well as items developed by Teimouri specifically to assess feelings of joy and shame as related to language learning and use. An analysis of the questionnaire results revealed key insights for all three emotions and their relation to motivation. L2 anxiety was associated with an increased feeling of personal and social obligation to learn English (considered the ought-to L2 self), while, in contrast, joy was found to be associated with learners’ aspirations, desires, and ideals with respect to language learning (known as the ideal L2 self). On the other hand, all L2 learners, regardless of the subcomponent of motivation primarily driving their learning efforts, were susceptible to feelings of shame in the L2 classroom. In addressing not only language learners’ negative feelings (i.e., anxiety and shame) within the context of instructed SLA, but also positive emotions (i.e., joy) that are often overlooked in the research, the study adds to the growing body of knowledge on various emotions that may arise in the classroom. The batteries developed for shame and joy provide further resources for researchers in the field and provide a strong methodology to guide future studies. Furthermore, the
study highlights not only the potential but also the necessity to broaden our understanding of the association between emotion and language learners’ motivations, with a specific call for methods exploring the non-static nature of both of these variables.

Teimouri (2018) again investigated shame, but this time in conjunction with another negative emotion from social psychology, guilt, to examine their roles within the language learning experience. With the aim of exploring the presence of shame and guilt in L2 settings and their effects on L2 learners’ motivations and language achievement, Teimouri first developed the Second Language Test of Shame and Guilt Affect (L2-TOSGA) and then validated it as a measure of L2 learners’ individual differences in regards to the tendencies to feel these two emotions during L2 learning. As a first step in the development of the L2-TOSGA, Teimouri conducted a qualitative analysis of elicited accounts of negative L2 learning experiences from 198 L2 English learners. The results of these qualitative data revealed that shame- and guilt-inducing events were quite common in students’ L2 learning settings. With respect to motivation, the main quantitative data gleaned from the L2-TOSGA revealed that shame negatively predicted both L2 learners’ willingness-to-communicate in the L2 and their attention in the L2 classroom, and thus was also negatively correlated with healthy levels of motivation. Guilt was also found to be a strong predictor of all forms of L2 motivation. However, unlike shame, guilt was seen to be positively associated with motivation. Furthermore, no negative effects were found for guilt on students’ language achievement. In fact, feelings of guilt appeared to lead to a small improvement in students’ Grammar course grade. As some scholars in psychology explain, guilt prompts a learner to focus on his or her own behavior and, as a result, can act to motivate corrective behavior (Tangney & Dearing, 2003). Teimouri thus suggests that feelings of tension, remorse, and regret – all part of feeling guilt – may inadvertently motivate learners to invest more in classroom tasks,
willingly use the L2, and be mentally present during class, which would likely have a positive effect on L2 achievement. The study offers a new battery for the measurement of emotions to be adapted and used within instructed SLA and addresses the association between motivation, namely intended effort (Taguchi et al., 2009), L2 willingness-to-communicate (Yashima, 2002), attention in class, and shame and guilt, previously unexplored with the SLA context. Though the association between shame, guilt, and language achievement was investigated in this study, scholars should take caution when extending the results to other learner populations, such as the HLL community. In addition, because achievement was measured by final English course grades and GPAs, which may be unreliable measures due to the potential effects on these measures of outside factors, including other course grades, grade inflation, and socioeconomic status, among other influencers, a replication of study results using a validated measure of proficiency would strengthen the findings. This calls for studies that implement tests to directly assess learners’ language abilities as well as improvements with relation to emotion and motivation instruments. Ultimately, the study lays a strong foundation for investigating further negative and positive emotions, such as anger and pride, within SLA, and opens the door for research methods that take into account the changing nature of emotions and levels of motivation in the L2 classroom.

2.4.2 Heritage Language Learner Motivation

While the past two decades have seen an influx of interest in HLLs (Beaudrie & Fairclough, 2012; Valdés, 2005; Wiley et al., 2014), many studies focus on identity (Bailey, 2000; He, 2006; Leeman, 2015; Park, 2011) and instruction and curriculum design within the HL framework (Bale, 2014; Beaudrie et al., 2014; Fairclough & Beaudrie, 2016; Leeman, Rabin, Román-Mendoza, 2011). Few studies investigate HLLs’ motivations to study their HL and even fewer specifically assess the development of this motivation.
Many of the studies that do address HL motivation highlight a divide between integrative and instrumental motivation, following application of the dichotomous socioeducational model developed by Gardner and Lambert (1972). As Torres and Turner (2017) found, those HLLs with an integrative motivation wish to be seen as members of the target language community and carry positive attitudes toward the native speakers and culture of the language; alternatively, HLLs demonstrating instrumental motivations cite pragmatic or practical interests for learning the language, such as meeting professional goals and traveling. While these points are relatively-well stated in the literature and reflect similar patterns seen for FLLs, studies on HLLs’ motivations rarely explore beyond a superficial description of these interests, and they have tended to reveal strong integrative motivations for learning a HL. Still, studies to date have neglected the application of the dominant model of L2 motivation (the L2 self system first proposed by Dörnyei; see Boo et al., 2015), an approach which the current study aims to incorporate.

As mentioned, HLLs often display strong integrative motivations for learning a HL. Within the integrative motivational drives, many HLLs report studying their HLs in the hopes of understanding their ethnic identity and heritage background. In addition, Wen (2011) found, through a mixed-methods approach, that Chinese HLLs at various levels often selected language courses in order to become proficient enough to interact with family and community members in the HL. In his multiple regression analyses, he found that positive learning attitudes and experience were the strongest predictors for motivated engagement in learning for HLLs. In a rare study that had the goal of validating Dörnyei’s (2005) L2 motivational self system (L2MSS) with Chinese HLLs, Xie (2014) also implemented regression procedures and found that HLLs’ motivations related to issues of identity development and heritage culture in order to connect with the Chinese community. By contrast, non-HLLs were motivated to learn the language further to make career
connections and obtain employment, which are typical staples of instrumental motivation. Studies using a variety of theoretical lenses on HL motivation to learn German (Noels, 2005), Russian (Geisherik, 2004), Arabic (Seymour-Jorn, 2004), and Japanese (Kondo-Brown, 2001) also highlight integrative motivations, such as language maintenance and contact with the HL community, as central to HLLs’ reasons for studying their HL.

Though integrative motivations appear to have a strong influence on HLLs, the orientation of teaching methods towards HLLs’ specific goals may be the ultimate factor in determining HL motivation and success. Berardi-Wiltshire (2018) used in-depth interviews and classroom observations to investigate the development of motivation of Italian HL learners’ in New Zealand. She found that learners’ motivations to learn Italian were rooted in their desire to deepen their connections to Italian families and communities, resonating with the traditional, well-established integrative motivation of other studies, but this only partially explained learners’ motivations. Analyzing qualitatively the intensity and characteristics of students’ motivation, she discovered that a mismatch in the teaching methods and objectives of the language course with the learning and identity goals of the students may have led to negative impacts on level of motivation and, ultimately, to a desire to abandon language studies. Alternatively, meaningful interactions with the HL community, such as family ties and student awards in culture or language, led to an intensified motivation to learn Italian. Those who established personal and affective connections to the HL, aided by the school or teacher, expressed motivational maintenance throughout the HL course.

Though not addressing motivation by name, Henderson, Wilson, and Woods (2020) also anchored themselves on the instrumental/integrative dichotomy to explore the interaction between attitudes towards Spanish, identity, course level, and gender for HLLs of Spanish in New Mexico. They found that female HLLs and HLLs at higher proficiency expressed more positive language
attitudes towards Spanish. In addition, individuals who identified as “Latino/a”, but not “Hispanic,” also held positive language attitudes, while those identifying as “American” showed more negative attitudes with respect to their Spanish use. This study highlights the need for research that explores the connection between linguistic and cultural heritage and language motivation.

While these studies (Berardi-Wiltshire, 2018; Henderson et al., 2020; Wen, 2011; Xie, 2014) draw attention to the understudied topic of HLL motivation and highlight some factors that may increase (e.g., community involvement, proficiency) or decrease (e.g. course design) language motivations for these learners, they touch only on an under-theorized concept of motivation. The common claim that HLLs study the HL for integrative purposes and that non-HLLs do so for instrumental reasons is a great oversimplification of the complex construct of motivation. In the current study, the choice of Dörnyei’s (2005) L2MSS is intended to provide a proper contemporary theoretical framework within which to study HL motivation, and the mixed-methods approach adopted aims to explore the complexities of learner motivations.

2.4.2.1 Motivation in Heritage Language Learners of Spanish

Research focusing on the motivations of Spanish HLLs specifically again identifies integrative, as well as instrumental, reasons for studying the HL (Carreira & Kagan, 2011). In her qualitative investigation rooted in Gardner and Lambert’s (1972) model, Mikulski (2006) implemented questionnaires, observations, and interviews to explore HLLs’ integrative and instrumental motivations. She concluded that Spanish HL students’ central motivations were attributed not only to interactions with their HL community and maintaining the language but to intentions for career preparation as well. Still, many studies underscore integrative motivations and desires to connect with the HL community as most influential for HLLs. For example, Yanguas
(2010) identified integrativeness as a significant predictor of language-learning motivation and used a modified version of the AMTB (Gardner, 1985), still commonly used at the time, to perform a quantitative analysis that identified integrativeness as a significant predictor of language-learning motivation. Oh and Nash (2014) also adapted the AMTB to compare attitudes and motivations between HLL and L2 learners, noting higher levels of integrative motivation for HLLs.

In addition to the problems that arise in HL motivation research due to many scholars’ dependence on solely quantitative measures as well as an outdated theory of motivation, a third issue can be highlighted with respect to this branch of research. Though many studies highlight students’ desires to connect with their HL community as a central motivation for taking HL courses, they fail to consider the heterogenous nature of HL student groups of any language. HLL is difficult to characterize in a general fashion, and it is particularly complicated for Spanish HLLs, who represent a wide array of races, ethnicities, language variations and backgrounds, as well as social roles. Motivations for HLLs are surely as complex as the community that they describe, yet this observation has largely gone overlooked. The research fails to capture the tensions and hesitancies that are inherent in language motivations for HLLs that rarely claim just one identity. The integrative/instrumental approach to motivation adopted in so many studies echoes not only the pressure that is placed on many HLLs by family to connect to “the” HL community but also the expectations from outsiders and society as a whole that forces HLLs to identify as Latinx or American, but not both. Though the heterogeneity of HLL communities has been neglected, mixed methods approaches, like the one employed by the current study, can allow HLLs to express possible dual memberships and identities and expose scholars to the complexities of HLL communities and motivations. Additionally, while motivation is said to play a strong role in language development and maintenance for the HLL community (Sánchez-Muñoz, 2016),
research in this field has also yet to provide empirical evidence in support of this claim. Though there is some support to show what some of the motivations are that drive HLE, we must continue to look at the characteristics and development of these motivations and explore how they are influenced and influence language learning in the HL and mixed classrooms, another challenge which the present study sets forth to address, if in a modest way, by including vocabulary learning as a variable of interest.

2.5 Vocabulary Development

2.5.1 Vocabulary Development in Second Language Acquisition

Vocabulary development is a foundational pillar of language acquisition (Laufer & Goldstein, 2004; Meara, & Miralpeix, 2016; Nation, 2014; Polinsky, 2007; Schmitt, 2014; Webb, 2018) and a phenomenon that occurs throughout the lifespan (Brysbaert, Stevens, Mandera, & Keuleers, 2016). Within the realm of SLA specifically, those with a larger vocabulary in the FL often show greater comprehension of written and audio texts than those with smaller vocabularies (Hu & Nation, 2000; Laufer & Ravenhorst-Kalovski, 2010; Noreillie, Kestemont, Heylen, Desmet, & Peters, 2018; Schmitt, Jiang, & Grabe, 2011; Stæhr, 2009), making it clear that vocabulary acquisition is indeed integral to FL learning. Still, setting a specific goal for FL learners in terms of ideal vocabulary size has proven difficult to define.

Researchers, educators, and language learners continue to question how many words are required to perform various language tasks, such as writing an academic paper or reading a newspaper at different levels in the FL. Though predictions as to vocabulary size, known as vocabulary breadth, may differ according to the target language or the distance and cognate overlap between the target language and languages already in the learner’s repertoire (Allen, 2018; Helms-Park & Dronjic, 2016; Rabinovich, Tsvetkov, & Wintner, 2018; Rosselli, Ardila, Jurado, &
scholars suggest that educated native speakers know anywhere from 17,000 to 20,000 word families (D’Anna, Zechmeister, & Hall, 1991; Goulden, Nation, & Read, 1990; Nation & Waring, 1997). They also claim that a receptive knowledge of 10,000 words or more is necessary for academic FL performance and academic FL reading proficiency for languages such as Dutch and English (e.g., Hazenberg & Hulstijn, 1992; Nation, 2006; Nation & Chung, 2009).

Though reaching native speaker proficiency was once traditionally seen as an appropriate goal for FL learners, this objective, apart from being unrealistic for many, is still quite unclear. Factors including age, education, profession, and multilingualism can all lead to variability in lexical knowledge among native speakers (Biemiller & Slonim, 2001; Keuleers, Stevens, Mandera, & Brysbaert, 2015; Mulder & Hulstijn, 2011), which raises the question as to whom the representative native speaker should be for FL learner comparison. As a result, frequency-based studies have acted as better predictors for the number of words needed for FL comprehension and production, with this research almost invariably looking at English as the target language. At the lower end, some research shows that with a knowledge of between 3,000 and 4,000 word families – including headwords and their inflected and derived forms (Nation, 1982, 2013) – FL learners can reach 95% understanding of a text, which may be enough for some texts (van Zeeland & Schmitt, 2013). However, most scholars suggest 98% coverage as a more sensible goal for FL learning (Hu & Nation, 2000; Nation, 2013; Schmitt et al., 2011), which requires a lexical knowledge of between 6,000 and 9,000 word families for adequate comprehension of films, novels, newspapers, and spoken language (Laufer & Ravenhorst-Kalovski, 2010; Nation, 2006).

In terms of how lexical knowledge is conceptualized in the literature, studies on vocabulary acquisition often look at individual aspects of either receptive or productive word knowledge.
Nation (2013) provides a comprehensive list of nine different components that fall under three central characteristics of knowledge: form, meaning, and use. These components are shown in Table 4. Given the complexity of measuring multiple components at once (González-Fernández & Schmitt, 2019), many researchers opt to focus on one individual component at a time, though many scholars now encourage investigations that address various components simultaneously (González-Fernández & Schmitt, 2019; Schmitt, 2010; Webb, 2005). The current study explores receptive word knowledge, namely through elicitation of knowledge of written form as well as the form-meaning link for a target list of novel vocabulary items.

**Table 4. Component parts of word knowledge (Nation, 2013, p. 49)**

<table>
<thead>
<tr>
<th>Form</th>
<th>spoken</th>
<th>R</th>
<th>What does the word sound like?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>How is the word pronounced?</td>
</tr>
<tr>
<td>written</td>
<td>R</td>
<td>What does the word look like?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>How is the word written and spelled?</td>
</tr>
<tr>
<td>word parts</td>
<td>R</td>
<td>What parts are recognizable in this word?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What word parts are needed to express the meaning?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Meaning</th>
<th>form and meaning</th>
<th>R</th>
<th>What meaning does this word form signal?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What word form can be used to express this meaning?</td>
</tr>
<tr>
<td>concept &amp; referents</td>
<td>R</td>
<td>What is included in the concept?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What items can the concept refer to?</td>
</tr>
<tr>
<td>associations</td>
<td>R</td>
<td>What other words does this make us think of?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What other words could we use instead of this one?</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Use</th>
<th>grammatical functions</th>
<th>R</th>
<th>In what patterns does the word occur?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>In what patterns must we use this word?</td>
</tr>
<tr>
<td>collocations</td>
<td>R</td>
<td>What words or types of words occur with this one?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>What words or types of words must we use with this one?</td>
</tr>
<tr>
<td>constraints and use</td>
<td>R</td>
<td>Where, when and how often would we expect to meet this word?</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>P</td>
<td>Where, when, and how often can we use this word?</td>
</tr>
</tbody>
</table>

Note: R = receptive knowledge; P = productive knowledge
Regardless, however, of the components that are highlighted or tested in any given study, one question still remains essential for scholars and educators alike: What is the quickest and most effective way to build a vocabulary of substantial size and depth? If certain that a vocabulary of considerable size is necessary for successful FL communication, the optimal method for acquisition remains a point of discussion and debate among scholars. Nation (2013) outlines some of the key benefits of both incidental and intentional vocabulary acquisition, basing his comparison on both first and second language acquisition. Central to the discussion in favor of incidental learning, whereby new words are learned from context indirectly and without intention (Barcroft, 2009), he cites the reduced time and effort required for teaching vocabulary incidentally and the increased potential benefits for the learner. He notes that, while incidental learning may be less effective for individual words, the impact of indirect methods on vocabulary learning can still be quite influential on the whole, given the increased opportunity for learning a large number and various aspects of a word through written and oral activities.

Scholars working specifically within the SLA framework also cite incidental learning as an important method for increasing vocabulary size (Nagy, 1997). Research shows that mere exposure to the FL through not only novels and extensive reading (e.g., Horst, Cobb, & Meara, 1998; Pellicer-Sánchez & Schmitt, 2010; Webb & Chang, 2015a, 2015b; Zahar, Cobb, & Spada, 2001) but even shorter texts (e.g., Chen & Truscott, 2010; Pellicer-Sánchez, 2016; Webb, 2007) and audio-visual input (Rodgers & Webb, 2011; Webb & Rodgers, 2009a, 2009b) can have positive effects on vocabulary learning. Above all, indirect methods can make multiple properties of a word available to learners, giving them to access morphological, syntactic, sociolinguistic, and even pragmatic properties for a more comprehensive understanding of each novel item (Barcroft, 2009).
Like with most learning methods, incidental learning has also been critiqued as less appropriate or effective in certain contexts. Nation (2013) draws attention to the differences between L1 and L2 acquisition in order to expand on some of the benefits of intentional vocabulary acquisition, specifically with L2 or FL learners. The main advantages of implementing intentional methods for vocabulary acquisition center around a question of efficiency. Given that FL learners rarely have the same amount and richness of input nor great opportunities for output as native speakers, direct vocabulary learning gives FL learners a practical way to build up vocabulary quickly. This especially applies to high-frequency words, which are particularly essential for language use and for building a proficiency level that supports language learning from natural or unsimplified input, including further vocabulary learning through incidental approaches.

Perhaps the most-cited comparison of incidental versus intentional vocabulary learning comes from Hulstijn (1992). In one of the five experiments conducted, non-native learners of Dutch were tasked with meaning tests for the low-frequency target vocabulary items encountered incidentally and intentionally in a reading and under separate conditions. For the incidental learning condition, participants were not told that they would be tested on target word meanings after reading a text and were provided word meanings explicitly (i.e., through synonyms) and implicitly (i.e., meaning inferred from context). A second test was then administered for the intentional learning condition, after participants had been told that they would be tested on target vocabulary items and given the opportunity to read the text again with meanings once more provided in the two different formats. When participants were not aware that they would later be tested on word meaning, in the incidental condition, retention was found to be higher for words where meaning needed to be inferred from context than for words where the meaning was provided. Hulstijn posited that the greater mental effort associated with inferring meaning may
explain higher retention rates under those circumstances. More importantly, Hulstijn found that retention of meaning was significantly higher in the intentional condition, with no significant difference between inferred and given circumstances.

Though it may not be reasonable to depend only on intentional learning to build a large vocabulary, Hulstijn’s (1992) study has acted as an anchor for those promoting deliberate learning methods as a complement to incidental vocabulary learning (Nation, 2013). In fact, prior vocabulary knowledge has been shown to have a positive effect on incidental vocabulary acquisition through the use of both written (Peters, Heynen, & Puimège, 2016; Webb & Chang, 2015a) and audio materials (Peters & Webb, 2018). As a result, a wide vocabulary knowledge, acquired through both intentional as well as incidental methods, has been seen to contribute to oral proficiency, reading ability and comprehension, and overall academic achievement (Gathercole & Thomas, 1992; Gathercole, Thomas, & Hughes, 2008; Tabors, Páez, & López, 2003; Vermeer, 2001), thus paving the foundation for later incidental vocabulary learning and sparking a continuous cycle of vocabulary acquisition and language development.

In exploring best methods for vocabulary learning, some scholars prefer to view the many and varied approaches that have been proposed as part of a continuum, ranging from purely incidental at one extreme to intentional at the other (Barcroft, 2004; Coady, 1997). For example, reading for meaning while also attending to new words in a text –as in the current study– or working with a list of new vocabulary items within the context of a communicative task may not be viewed as completely direct nor entirely indirect (Barcroft, 2009), thus falling between the incidental and intentional ends of the continuum. The conceptualization of vocabulary learning has, therefore, become less dichotomous in nature (Barcroft, 2009). With multiple aspects and
strategies to explore, research in vocabulary learning is quite complex, even before psychological or social factors are introduced.

2.5.2 Vocabulary Development and Emotion

Though vocabulary is seen as essential for comprehension and achievement across multiple fields (Laufer & Nation, 2012; Ardasheva, Carbonneau, Roo, & Wang, 2018), few scholars consider the effects that emotion and motivation within the L2 language classroom may have on any aspect of language achievement (e.g., MacIntyre & Gardner, 1994b; MacIntyre & Gregersen, 2012a; Negari & Rezaabadi, 2012; Teimouri, 2018), let alone vocabulary development in particular. Given the consensus among SLA researchers as much as language educators about the importance of vocabulary development in the FL classroom, the need for research investigating the effects that various emotions have on FL vocabulary learning seems obvious, if educators are to maximize this development within instructed SLA.

Still, the relationship between L2 emotions and vocabulary learning has attracted little sustained attention from SLA researchers. In an early study on the effects of emotion on language achievement, MacIntyre and Gardner (1994a), mentioned above, examined the effects of anxiety arousal on vocabulary learning in 72 students of first-year French. As a way to arouse anxiety, they introduced a video camera to record individuals during three stages of vocabulary learning – initial exposure, meaning learning, and word production – and found that anxiety ratings were highest immediately after anxiety was induced. Participants’ performance was significantly reduced for the stage at which the camera was introduced (i.e., anxiety arousal). Individuals were eventually able to cope with the induced anxiety, as demonstrated by drops in anxiety ratings during intervening tasks between learning stages. Still, cognitive deficits were only overcome when individuals could repeat the input or processing stages of learning, where they were able to
recover information that had been poorly processed or missed completely during instances of anxiety arousal. Based on this finding, the MacIntyre and Gardner suggest that anxiety reduction alone may not suffice to compensate for the cognitive deficiencies that can be generated by anxiety and mention, if only briefly, skills training as a possible guard against the detrimental effects of anxiety. The positive psychology turn in SLA since the publication of this study may point to the induction of positive emotions as another method for combatting against cognitive deficits in response to anxiety, though empirical work is needed to explore this possibility. Since MacIntyre and Gardner’s (1994a) study, very few scholars have continued to explore the effects of anxiety on vocabulary learning and none have investigated the effects of other emotions beyond anxiety, whether positive or negative, on vocabulary development in FL learners. Similarly, very few studies acknowledge the connection between emotions and motivation to inquire into the interactions between these two variables and how the effect they have on vocabulary learning (e.g., Hasegawa, Koshino, & Ban, 2015), leaving a wide gap in the literature on FL achievement as related to affect.

Though research on the relationship between emotional context and learning is limited, slightly more work has been conducted on the connection between emotional words and recall. Scholars have largely found through work with both monolinguals (e.g., Altarriba & Bauer, 2004; Jay, Caldwell-Harris, & King, 2008; Talmi & Moscovitch, 2004) and bilinguals (e.g., Ayçiçegi & Harris, 2004; Ayçiçegi-Dinn & Caldwell-Harris, 2009; Ferré, García, Fraga, Sánchez-Casas, & Molero, 2010) that emotional stimuli result in processing advantages over neutral stimuli. In a canonical study on emotional words and recall, Ayçiçegi-Dinn and Caldwell-Harris (2009) recruited 59 late, advanced Turkish-English bilinguals to explore differences in memory attributes of five categories of emotional words, including taboo, negative, positive, and neutral words, and
reprimands. Results indicated that taboo and positive words both demonstrated higher recall outcomes in both L1 Turkish and L2 English than neutral and, unexpectedly (given previous work finding advantages for emotional words), negative words. Ferré et al. (2010) later found an advantage for positive and negative emotional words relative to neutral words for adult early Spanish-Catalan bilinguals of various Catalan proficiencies and adult late Spanish-English bilinguals. While these studies show strong support for the advantage of emotional words over neutral words, there is also research suggesting that these benefits may be specific to the L1 (e.g., Kazanas & Altarriba, 2016), which points to a need for further research on the topic of emotional words and recall. Furthermore, given the increasing community of HLLs and the status of a HL as neither a L1 nor L2, studies that specifically address emotional words in a HL are needed before any definitive generalizations can be proposed.

2.5.2.1 The Relationship between Emotion and Memory

In addition to the work done on vocabulary and emotion, there have been studies, albeit still very few in number, in psychology on the relationship between emotion and memory, which may lead to certain expectations for language learning, given the connection between memory and learning achievement.

Though the literature on the connection between emotion and memory is made up of many contradictory studies, there now appears to be general agreement among scholars that emotional material enhances the duration and accuracy of memory of target stimuli (i.e., Buchanan, Etzel, Adolphs, & Tranel, 2006; Frances, De Bruin, & Doñabeitia, 2019; Kensinger & Schacter, 2008; Kern, Libkuman, Otani, & Holmes, 2005; Kern, Libkuman, & Otani, 2002; Libkuman, Stabler, & Otani, 2004; Mizrak & Öztekin, 2016), a proposal initially put forth by Christianson (1992). However less agreement can be found as to what quality of emotion is more favorable for duration
and accuracy of memory of words with respect to valence or arousal. In one two-experiment study, Kern et al. (2005) explored the effects of both valence (i.e., positive vs. negative vs. neutral) and arousal (i.e., activating vs. deactivating) with 128 undergraduate students of psychology. Using slides with pictures validated to elicit neutral and low arousal (i.e., a box of tissues), high negative arousal (i.e., a snake), and high positive arousal (i.e., cash), they found that individuals in the high negative-arousing condition recalled more slides than participants in the neutral and high positive-arousing conditions. In addition, participants’ descriptive memories of the slides were more detailed and more accurate for the high negative-arousing stimuli. Given the benefit of high negative-arousal over high-positive arousal, the authors propose that emotional valence, such as whether an item is positive (e.g., puppy) or negative (e.g., prison), may be more important in predicting memory outcomes than arousal, or whether an item is activating (e.g., murder) or deactivating (e.g., sleep).

Still, parallel to the research on emotion in SLA, studies on emotion and memory also predominantly explore the effects of negative valence emotion over positive valence emotion. For example, the finding that negative emotion could be beneficial for memory was later corroborated by a study conducted by Mizrek and Öztekin (2016) with 16 undergraduate and graduate students in Turkey. Also using slides to elicit high negative arousal and neutral emotions, Mizrek and Öztekin found that emotion again aided in the amount and accuracy of recall by reducing the effects of interfering material meant to distract participants from the target stimuli. Taken together, these studies suggest a facilitative effect of negative emotion on memory retrieval, which, though not yet explored, may have implications for language learning and learning in general. Given the relationship between memory and language learning, content that elicits negative emotions that activate a physiological response might actually be expected to lead to improved language learning.
achievement. This, however, contradicts the SLA predictions that could be made following MacIntyre & Gardner’s (1994a) findings on the detrimental effects of anxiety (i.e., an emotion of high negative arousal) on language learning outcomes. Still, important to keep in mind is that a lack of research on positive emotion and memory prevents scholars from proposing theories that acknowledge the complexity of positive vs. negative and activating vs. deactivating emotions in order to predict any outcomes with respect to cognitive processing or learning.

In one study with 76 advanced proficiency, late Spanish-English bilinguals, Frances et al. (2019) did explore the effects of positive versus neutral semantic contexts on content learning in both the native language (NL) and FL. Using positive and neutral audio descriptions of four invented countries to elicit emotional responses, the researchers tested participants on their recall of content details through a 50-item multiple choice exam. Results showed that all participants, in both the NL and FL condition, remembered facts learned in the positive semantic context better than those from the neutral context. These findings are more aligned with the expectations supported by MacIntyre and Gardner (1994a) than by those presented in psychology and suggest that, like negative emotion, positive emotion may also lead to advantageous outcomes for content learning. Simply put, emotional contexts, whether negative or positive, may be more beneficial for learning than neutral contexts, though the potential differences between positive and negative are still understudied. Furthermore, whether these effects can be replicated and generalized with the context of SLA and, more specifically, for FL vocabulary learning is yet unknown. Studies exploring questions of emotional words’ valence and arousal and word learning in SLA are therefore essential in working towards a fuller understanding of the relationship between emotion and learning success.
2.5.3 Vocabulary Development in Heritage Language Learners

While vocabulary development has been well-studied for English within the context of L1 acquisition (e.g., Hammer, Davison, Lawrence, & Miccio, 2009) and within SLA (e.g., Pellicer-Sánchez, 2016), particularly few studies have examined vocabulary learning for HLLs. One study carried out by Kaushanskaya and Marian (2009) gives insight into vocabulary learning for HLLs. Though the authors do not identify their participants as HLLs, their description is characteristic of a HL linguistic profile. The study included 60 university student participants in total: 20 monolingual English speakers, 20 English-Spanish bilinguals, and 20 English-Mandarin bilinguals. All bilingual participants were described as early bilinguals (with the average age of onset of 5.44 years and 2.21 years, respectively) and, more importantly, individuals who highlighted family exposure, as opposed to formal education, as the main contributor in the “L2” acquisition. Thus, given these characteristics, it is fair to consider this a study of HLLs. Participants in the study were tasked with learning 48 pseudowords, constructed each of one English and one artificial, non-English phoneme, which were individually presented both aurally and in writing. Kaushanskaya and Marian found that both bilingual groups showed an advantage over the monolingual group on vocabulary posttests that was maintained in the long-term. The study is the first to demonstrate a bilingual advantage for vocabulary acquisition specifically for bilinguals who acquired both of their languages early and in naturalistic settings (i.e., heritage speakers). Kaushanskaya (2018) confirmed this bilingual advantage in novel word learning for a mixed group of bilinguals that included late bilinguals and HLLs. While these studies were essential in expanding the proposal of a bilingual advantage for vocabulary learning to the HLL population, they did not address the potential differences between different profiles of bilingual, namely, HLLs and FLLs.
While no research has yet been seen to explore target language vocabulary learning for HLLs versus FLLs, two studies in particular offer insight on the topic. With the aim of exploring the facilitative effects of early exposure to the target language on word-knowledge development and lexical inferencing ability, Zhang and Koda (2018) recruited 37 Chinese HLLs and 25 Chinese FLLs from intermediate-level college Chinese courses. Results showed that, while HLLs demonstrated stronger oral vocabulary knowledge than their FLL counterparts, both groups showed a similar ability to infer meaning of unknown words from context. Thus, while the authors propose that their findings suggest that oral vocabulary knowledge might act as a foundation for the development of morphological awareness, written vocabulary knowledge, and lexical inferencing, which could all point to an advantage for HLLs for vocabulary learning, the study results do not provide definitive evidence of any vocabulary learning benefit for either linguistic profile, a question that is addressed in the current study.

A second study looking into HL vocabulary development is by Dixon, Zhao, Quiroz, and Shin (2012), which explored the influence of home and community factors in predicting HL, which they refer to as “ethnic language,” vocabulary for Singaporean kindergartners of Chinese, Malay, and Tamil heritage. They suggest community factors, namely culture and ethnicity, as key elements of impact that create language opportunities for bilingual children and assist in enhancing use, and therefore achievement, in the HL. The social profile of a minority language as well as its status among the minority and broad population are believed to affect the perceived value of learning and maintaining the language for the HLL, with some cultures and communities placing greater importance on HL acquisition and maintenance and offering more support to HLLs than others. Dixon et al. (2012) collected data from 282 children of Chinese, Malay, and Tamil heritage and found that the Malay children showed higher levels of HL vocabulary than the Chinese and
Tamil pupils. The results support their claims about the relationship between identity and vocabulary development, as Malay culture, language, and religion are held in high esteem within the Singaporean Malay community, a population that considers the Malay language essential for maintaining Malay identity, ethnic values, and cross-generational connections (Kamsiah & Ayyub, 1998). Though the HL vocabulary measures used had not been previously validated and were based on batteries designed for monolingual individuals, the study suggests that the positive portrayal of a minority community and language may act as a motivating factor for HLLs and result in improved HL vocabulary development, potentially leading to further language development and academic achievement. The study may also point to the influence that wider hierarchies of language have on the chances of development of a minority language. That is, minority languages differ not only in their structures and functions but also, socially, in how they are perceived and treated by society as a whole. This could imply that the more prestigious minority language – Malay in the case of the Singaporean community – is more successful, so to speak, in linguistic outcome. Though Dixon et al. (2012) do not explore this possibility in their study, future studies, the current study included, may implement mixed methods approaches that include open-ended questions and interviews to gain insight into the potential connection between societal language ideologies and hierarchies and language development.

In her review of current issues in HL acquisition, Montrul (2010) calls for more studies investigating specifically the lexical knowledge of HLLs. Though these speakers may comprehend and even produce many words in their HL, they are often only use vocabulary from their childhood and words related to common household items. This can leave them with large gaps in their vocabulary and difficulties in retrieving less frequently used words. Focusing on Russian HLLs, Kagan and Dillon (2001) also discuss the pedagogical and vocabulary needs of HLLs and highlight
the need for age appropriate, literary, academic, and formal vocabulary development for these speakers. While L1 speakers commonly acquire a full range of sociolinguistic and sociocultural abilities in their native language, HLLs are more likely to be lacking in these competencies to some degree due to the contact they have with an often very limited community of speakers of the HL in comparison to L1 speakers. This is often seen even when HLLs have access to a large HL community, due to the education system, language ideologies, and cultural norms of the majority language. Kagan and Dillon suggest the motivational influence that a culture and content-based curriculum may have on HLLs, claiming that the students themselves identify literature, history, as well as other cultural domains, as main motivators for their interest in studying their HL. Though these topics may certainly motivate lexical development in the HL, this question has yet to be explored empirically in instructed SLA.

2.6 Research Questions

Motivated by previous work in emotion, motivation, and vocabulary acquisition, and taking into account the wide diversity of issues that modulate the classroom learning experience of HL and FL learners, the following research questions drive a study that implements a comprehensive approach to investigate affect and language learning within instructed Spanish SLA. Specifically, the study explores the interactions between positive and negative state (e.g., curiosity, interest, anxiety, boredom, etc.) and trait emotions (anxiety, guilt, interest, joy, and shame), linguistic insecurity, motivation, and vocabulary learning, as mediated by exposure to educational materials—readings, specifically—that address sensitive issues. Given the lack of research on the potential effects on HLLs of educational materials that address sensitive themes, such as identity, ethnicity, and race, in both positive and negative lights, the one main goal is to understand how various emotion-laden texts (positive, negative, and neutral) anchored in these
topics affect HLLs emotionally, motivationally, and linguistically, in comparison to FLLs. A final objective of the present study is to explore via elicited open-ended comments at the end of the study what connections learners make between the texts presented and their own linguistic, ethnoracial, and heritage backgrounds and experiences and how these connections influence the three variables under investigation (e.g., emotion, motivation, and vocabulary learning). Accordingly, the following research questions are posed:

1) What emotions will participants report feeling while reading three texts about positive, neutral, and negative topics, and will the Spanish HL and FL learners’ emotional states differ?

2) How well will participants learn 18 pseudowords embedded in three emotion-laden (positive, neutral, and negative) texts, immediately after the reading and one week later?

3) How will participants’ emotional predispositions towards Spanish, in general (i.e., their trait emotions, and their felt linguistic insecurity), and their reported emotions while reading, specifically (i.e., their state emotions), influence their vocabulary learning, immediately after reading and one week later?

4) How will participants’ motivation to learn Spanish, as measured by the L2MSS model, influence their vocabulary learning, immediately after reading and one week later?

5) What other learner characteristics beyond HLL vs. FLL linguistic profile may contribute to explaining the findings?
CHAPTER 3: RESEARCH DESIGN AND METHODOLOGY

The current chapter begins with statement of four modifications to the design of the present dissertation study that were decided based on a pilot study conducted in order to determine the appropriateness and feasibility of research questions, batteries, and materials. In the remainder of the chapter, I present the research methodology that was implemented in the main study to explore the relationships between the independent variables, including trait and state emotions, linguistic insecurity, L2 motivation, and HL vs. FL linguistic profile, and the two dependent variables: state emotion and receptive vocabulary learning.

3.1 Modifications Based on the Pilot Study

A small-scale pilot study was conducted with 28 participants (6 HLLs and 22 FLLs) in order to test the validity of materials initially developed for the dissertation study, determine the time frame required for each task and session, and explore the potential for uncovering meaningful findings in the main study. The procedure and materials for the pilot study matched those of the main study in most ways. However, observations made during the pilot lead to four principal changes to be made for improvement in the main study.

First, the emotion-laden texts implemented in the pilot proved more time-consuming than originally anticipated. In order to prevent participants from feeling mentally drained or entering cognitive overload and to ensure that all participants would complete the reading of three texts within the first session in the allotted hour, the texts were further edited and reduced in length and presented as described below in Section 3.8. Moreover, participants in the pilot were tasked with rating their emotions on the State Emotion Questionnaire (SEQ) (see Section 3.3.4) three times during and once immediately after reading each text (positive, negative, neutral), for a total of four times. Due to the reduction in text length, the main study procedure calls on participants to rate
emotions on the SEQ just twice during and once immediately after reading each text, for a total of three times.

Second, the batteries for trait emotion, linguistic insecurity, and motivation were administered in the pilot study three times, once after each of the three texts. The rationale was, as a safeguard to construct validity, to be able to inspect whether the instruments were measuring stable traits, as intended, which would not be greatly affected by the emotional states incited by each text. However, this part of the pilot procedure also proved rather taxing and time-consuming for participants. Because the pilot results did not point to significant differences in responses to these instruments when repeated after each of the three emotion-laden texts, the three questionnaires after each text were removed from the procedure for the main study. Instead, in the main study participants responded to the trait emotion, linguistic insecurity, and motivation questionnaires just once after reading all three texts in Session 1, and they were asked to complete the same battery again in Session 2 when they returned for the delayed vocabulary post-test one week later (for details, see Section 3.7). This way it was still possible to inspect the evidence for stable, trait responses to these instruments.

The most significant change made in response to insight provided by the pilot was in the linguistic skill that would be targeted in the main study. My original plan was to inquire into the effects of emotions on reading comprehension in HLLs and FLLs. Accordingly, the pilot required participants immediately after reading each text to provide a summary of the text in the form of free-recall and complete five comprehension questions. An initial analysis of the participants’ summaries revealed that, despite all of them being at relatively similar high levels of proficiency, the length of the summaries varied widely, with some participants writing as few as 40 words and others as many as 250 words. With such a large difference, a comparison between participants and
groups was not feasible. Because a clear picture of reading comprehension would not be provided by the multiple-choice battery alone (Kintsch & Kintsch, 2005), reading comprehension was removed as a point of interest in the main study. A closer look at the literature in linguistic development in HLLs and FLLs uncovered vocabulary learning as a skill with established batteries and coding methods for exploring learning as well as a theme largely missing from the research in HLE (see Section 2.5.3). In addition, the connection made between words and emotional ratings by previous research (e.g., Ayçiceği & Harris, 2004; Pavlenko, 2008) made vocabulary learning an ideal prime target for the current study. This resulted in the incorporation into the texts of the emotion-laden (positive, negative, neutral) vocabulary items that are described below in Section 3.5.2.

Finally, in terms of qualitative data elicitation, the pilot study briefly elicited open-ended written responses to a pilot exit questionnaire in the second session. The results suggested that this addition would be revealing and beneficial to the main study. Thus, two qualitative written exit questionnaires were added for implementation in the main study, one after each session. This allowed for analyses from a layered perspective (King & Mackey, 2016) and enhance the potential for meaningful results with real-world, pedagogical implications.

3.2 Participants

A total of 131 participants were recruited for the study, representing two profiles of adult language learners: (1) 67 Spanish HLLs and (2) 64 Spanish FLLs. Participants were recruited from four public ($N = 63$) and three private ($N = 58$) U.S. East Coast universities. Those of Latinx descent who grew up in a Spanish-speaking home and received a majority of their formal education in English in the U.S. make up the Spanish HLL group. All self-reported English-Spanish bi- and multilingual speakers who reported to have learned their Spanish mainly through formal
instruction are considered FL speakers of Spanish. Nine participants were excluded due to failure to complete the entirety of the first and second sessions. One more HLL participant of Spanish heritage originally from Spain was excluded, given that (1) the materials designed for the study, described below, largely center around issues concerning the Latinx community in the U.S. specifically, (2) all other HLLs recruited were of Latinx descent, and (3) Spain and Latin America and their Spanishes differ greatly with respect to sociopolitical, ethnic, and ideological factors. Notably, one participant did share that an autism spectrum disorder created difficulty at times for her to recognize and distinguish between different emotions – potential criteria for exclusion given emotion as a main variable of interest in the current study. However, none of this participant’s data points were extreme outliers, and she is included in the final participant count.

The final sample included 121 participants: 64 HLLs (50 female, 14 male) and 57 FLLs (37 female, 20 male) between 18 and 25 years old ($M = 19.98$ years, $SD = 1.44$). Participants provided additional information on language background, learning, and use, as well as on social variables, including ethnicity and race, among other factors, using a modified-Language and Social Background Questionnaire (LSBQ; Luk & Bialystok, 2013). They all also took a Spanish proficiency test – an elicited imitation task (EIT; Bowden, 2016; originally developed by Ortega, Iwashita, Rabie, & Norris, 1999). A summary of HLL and FLL participant characteristics is presented in Table 5.

Of the HLLs, 21 participants were born in a Spanish-speaking country, with an average of arrival to the U.S. of 8.52 years ($SD = 4.98$). The HLL group represented a diversity of Latinx heritage, with first-, second-, and third-generation individuals with heritage roots in Mexico ($N = 17$), El Salvador ($N = 12$), Dominican Republic ($N = 7$), Colombia ($N = 6$), Ecuador ($N = 6$), Guatemala ($N = 4$), Bolivia ($N = 3$), Nicaragua ($N = 3$), Venezuela ($N = 3$), Honduras ($N = 2$),
Table 5. Participant background data across HLL and FLL groups

<table>
<thead>
<tr>
<th></th>
<th>HLL</th>
<th>FLL</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(n = 64)</td>
<td>(n = 57)</td>
<td>(n = 121)</td>
</tr>
<tr>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
<td><strong>M</strong></td>
<td><strong>SD</strong></td>
</tr>
<tr>
<td>Age</td>
<td>20.25</td>
<td>1.65</td>
<td>19.68</td>
</tr>
<tr>
<td>Age of onset of Spanish</td>
<td>N/A</td>
<td>N/A</td>
<td>11.37</td>
</tr>
<tr>
<td>Years of formal education</td>
<td>5.35</td>
<td>3.82</td>
<td>6.71</td>
</tr>
<tr>
<td>EIT</td>
<td>106.76</td>
<td>12.02</td>
<td>84.68</td>
</tr>
</tbody>
</table>

*Note.* Age is expressed in years; EIT = Elicited Imitation Test, scores out of a maximum 120.

Argentina (N = 1), Peru (N = 1), and Puerto Rico (N = 1), including six participants with mixed Latinx heritage and two who preferred not to specify their heritage country. Within the group of Spanish FLLs, 17 participants (30% of the FLL group) identified as HL (N = 11) or native speakers (N = 6) of a language other than English, including Albanian, Bahasa Malayu, Bengali, Cantonese, Flemish, French, German, Haitian Creole, Hebrew, Hindi, Italian, Mandarin, Nepal Bhasa, Polish, Punjabi, Tagalog, Telugu, Tibetan, and Vietnamese, 6 of whom were born outside of the U.S. (India, N = 4; Nepal, N = 1; South Korea, N = 1). Thus, both the HLL and FLL groups were heterogenous in nature with respect to linguistic and cultural background. FLLs’ age of onset for L2 Spanish ranged from 2 to 19 years of age (M = 11.37 years, SD = 3.61). Eight FLLs had previous study abroad experiences of at least three months in Spanish-speaking countries, including Argentina, Colombia, Ecuador, Peru, and Spain. HLLs had between 3 months and 16 years of formal education in Spanish (M = 5.35 years, SD = 3.82), and FLLs held between 1.5 and 15 years of formal education in L2 Spanish (M = 6.71 years, SD = 2.34). In order to ensure high and comparable levels of Spanish across the two groups, as well as a proficiency high enough to comprehend the content presented in the texts, all participants were either currently enrolled in or had completed a university-level heritage or advanced language Spanish course. Additionally, all
participants scored at an advanced level on the EIT administered (see Table 5). Crossgroup comparisons revealed differences in proficiency between the two linguistic profiles, and the factor is discussed as a potential predictor of dependent variable (emotion, motivation, and receptive vocabulary learning) results in later chapters.

Upon completion of Session 2, participants in the current study received $15 cash and signed a receipt of payment. The study was approved by Georgetown University’s IRB (IRB ID: MODCR00000913).

3.3 Instruments

The batteries described in this section were used to collect data on participants’ L2 trait emotions (joy, interest, anxiety, guilt, shame) and linguistic insecurity, as well as state emotions while completing each task, L2 motivations, EIT as proficiency measure, and a biographical questionnaire inquiring into learner profiles. The study also implemented mixed methods in order to allow participants to expand on the emotions they felt during the tasks and provide insight into where their emotions may have been grounded.

3.3.1 Trait Emotion Questionnaire

A Trait Emotion Questionnaire (TEQ) was designed to measure five trait emotions widely measured in the psychological literature, but related to foreign language learning and use in the present study. Three were negative and two were positive trait emotions: foreign language classroom anxiety, guilt, shame, joy, and interest. It should be noted that within the SLA studies that address positive emotion, the Foreign Language Enjoyment Scale (FLES, Dewaele & MacIntyre, 2014) is often used as a measure of foreign language enjoyment. However, the general literature in cognition identifies joy and interest both as subcomponents of enjoyment (Reeve, 2009). For this reason, joy and interest were measured separately in the present study.
Each of the five individual emotion components was based on items extracted from a number of scales commonly used in SLA and psychology. Six items were adapted from the Foreign Language Classroom Anxiety Scale (FLCAS, Dewaele & MacIntyre, 2014) to measure participants’ anxiety (reliability with the present study sample of \(N = 121\) was \(\alpha = .91\)), and another six items each to measure guilt (reliability with the present sample was \(\alpha = .90\)) and shame (\(\alpha = .88\)) were adapted from the L2 Test of Shame and Guilt Affect (L2-TOSGA), designed by Teimouri (2018). Six items were adapted from Teimouri (2017) to measure joy (scale reliability with the present sample was \(\alpha = .85\)), and seven items were adapted from the Intrinsic Motivation Inventory (IMI; Ryan, 1982; Ryan, Mims, & Koestner, 1983) – the same scale used by Dewaele and MacIntyre (2014) to design the FLES – to measure interest (reliability with the present sample was \(\alpha = .73\)).

Altogether, a total of six items were adapted or created for each emotion, for a total of 31 items presented in randomized order. Participants rated their level of agreement with each item on a 7-point Likert scale, from 1 = *Strongly disagree* to 7 = *Strongly agree*. All items presented in the TEQ can be found in Appendix A.

### 3.3.2 Linguistic Insecurity Questionnaire

A questionnaire measuring participants’ linguistic insecurity was designed to measure this language-specific emotion for the first time with HLLs and FLLs in the current study. The items were developed based on three main sources: (1) the key characteristics expanded on by Abtahian and Quinn (2017) to describe linguistic insecurity, (2) HLLs’ narratives relating to their reluctance to use “improper” Spanish, as recounted by Coryell, Clark, and Pomerantz (2010), and (3) the Critical Language Awareness Questionnaire developed by Beaudrie, Amezcua, and Loza (2019) on ideologies relating to issues of bilingualism, language variation, and language maintenance.
specifically for HLLs. A total of 20 items presented in randomized order made up the final version of the instrument, which participants rated on a 7-point Likert scale (from 1 = *Strongly disagree* to 7 = *Strongly agree*) with the additional option to select “not applicable.” This response option was made available particularly for FLLs, who may not have emotionally related to some items given their more socially-limited experience with Spanish. The Cronbach alpha reliability coefficient for the scale was $\alpha = .92$. The questionnaire can be found in Appendix B.

### 3.3.3 L2 Motivation Self System

A modified version of the L2 Motivation Self System (L2MSS, Dörnyei, 2005, 2010) was developed based on versions of the same instrument used in previous studies from Dörnyei (2005, 2010) and Dörnyei and Ushioda (2009) as a measure of HL and FL learner motivations. The instrument includes seven subcomponents – *ideal L2 self/own, ideal L2 self/other, ought-to L2 self/own, ought-to L2 self/other, L2 learning experience, willingness-to-communicate*, and *intended effort* – for a total of 40 items presented in randomized order.

A total of seven items represented the *ideal L2 self/own*, six captured the *ideal L2 self/other*, and another five items each represented the *ought-to L2 self/own* and *ought-to L2 self/other*, all adapted from the original instrument by Dörnyei (2009) and the 2 x 2 model by Papi, Bondarenko, Mansouri, Feng, and Jiang (2019), which describes the further own-other distinction for the ideal and ought-to selves. Five items adapted from Dörnyei (2009) captured the subcomponent *willingness-to-communicate*. Items for measuring *intended effort* included seven statements adapted from Ryan’s (2009) items on *intended learning effort* and Papi et al.’s (2019) items describing *motivated behavior*. Finally, five items were created for the *L2 learning experience* construct based on Dörnyei and Ryan’s (2015) characterization of this subcomponent as “the impact of the L2 teacher, the curriculum, the peer group, and the experience of success” (p. 88) on
the L2 learner. Participants rated their level of agreement with each item on a 7-point Likert scale, from 1 = \textit{Strongly disagree} to 7 = \textit{Strongly agree}. Appendix C presents the L2MSS implemented in the current study. The reliability for the full items with the present study sample was $\alpha = .91$.

3.3.4 State Emotion Questionnaire

A State Emotion Questionnaire (shown in Appendix D), consisting of 12 items, was developed to treat emotion as a dynamic variable and explore changes in learners’ multiple state emotions as motivation during each reading task. The use of a three-time repeated instrument—two while reading and one immediately after reading—was influenced by software developed by MacIntyre (2012), which was designed to record dynamic measures of one emotion, specifically anxiety, at a time. The battery used in the present study employs nine items—anxiety, boredom, confusion, curiosity, excitement, frustration, interest, joy, surprise—from the Epistemically-Related Emotion Scales (EES; Pekrun, Vogl, Muis, & Sinatra, 2017), a scale developed in epistemic psychology for the purpose of tracking changes in dynamic discrete emotions during learning activities. In order to address the dynamic or state form of all of the trait emotions explored in this study, guilt and shame, as well as motivation were additionally included in the questionnaire, for a total of 12 state emotions. Each of the twelve emotions—six positive and six negative in nature—was rated on a 5-point Likert scale, which allowed participants to make dynamic ratings quickly while completing a task, such as reading a text as in the current study.

3.3.5 Elicited Imitation Task

An adapted version of the Spanish Elicited Imitation Task (EIT) by Bowden (2016) was used as a measure of Spanish proficiency in the current study. The EIT, an oral imitation test originally developed by Ortega, Iwashita, Rabie, and Norris (1999), includes 30 sentences of increasing length and complexity and prompts individuals to listen to each sentence once and
orally repeat each sentence as accurately as possible. Learners wore a headset with a microphone and completed the test in a quiet space. The entire test, including instructions and a 3-minute imitation practice portion in English, takes under 10 minutes. The test has been validated as a global measure of Spanish proficiency (Bowden, 2016) and can be accessed through the IRIS Digital Repository (Marsden, Mackey, & Plonsky, 2016).

3.3.6 Background Questionnaire

A modified version of the Language and Social Background Questionnaire (LSBQ, Luk & Bialystok, 2013) was used to collect information on participants’ linguistic, social, and family backgrounds and experiences. The questionnaire comprised 18 required questions and 6 optional questions for a total of 24 items in both multiple choice and free answer format. Questionnaire items can be found in Appendix E.

3.3.7 Exit Questionnaires

For the study of both emotion and motivation, mixed-methods designs have been called on to provide evidence on the development and interaction of these variables, an approach which is adapted in the present dissertation study. A novel advantage of dynamic methods (e.g., MacIntyre, 2012), for example, is that bulks of quantitative data can be linked with qualitative interpretations. Data elicitation techniques in emotion and motivation research that incorporate traditional questionnaires, such as the FLCAS and the L2MSS, in addition to qualitative methods, including exit questionnaires, can offer an enhanced view of these factors with respect to language learning (Hulstijn et al., 2014) and are implemented in the current study.

Therefore, two unique open-ended exit questionnaires were designed to elicit additional information on participants’ reactions to the texts. Due to the potentially sensitive nature of some of the questions, all exit questionnaire items were optional for all participants. The first exit
questionnaire, presented at the end of the first session, consisted of two questions inquiring into any connections participants may have made between the themes covered in any of the texts, their own life experiences, and their emotional reactions to any of the readings. The prompt was:

“\textit{You are about to see some questions relating to your identity. If you are not comfortable answering a question, you are not obligated to provide an answer. If you feel that a question doesn't apply to you or that you don't have a response, you do not need to answer. In these cases, please write N/A in the space provided and move on to the next question. Thank you!}”

A second exit questionnaire at the end of the second session posed four additional questions exploring participants’ identities, social and academic experiences, and emotional connections to any of the texts. Exit questionnaire items can be found in Appendix F.

\textbf{3.4 Stimuli}

\textbf{3.4.1 Emotion-Laden Texts}

Emotional responses, as measured by the SEQ described above, were elicited through three texts: two emotionally-laden texts centered on positive and negative portrayals of common Spanish classroom topics and one neutral text of a similar theme. All three texts were adapted from Marqués (2012) and Potowski (2011 & 2017) and relate to the Latinx population in the United States, namely addressing themes pertaining to ethnicity, race, identity, and language policies and ideologies in the U.S. The texts are all between 1100 and 1200 words ($M = 1146; SD = 26.25$) in length to allow ample opportunity for affective reactions. In an effort to minimize the effects of order of emotional content, the order of the three texts (positive, negative, and neutral) was counterbalanced across participants.
The positive emotionally-laden text discussed the social, economic, and cultural contributions of the Latinx community in the U.S. and is composed of 1122 words and was indeed rated as positive in the emotionality rating by 93% of all participants. It was adapted from readings in *La lengua que heredamos* (*The language we inherit*; Marqués, 2012) and *Conversaciones escritas: Lectura y redacción en contexto* (*Written conversations: Reading and composition in context*; Potowski, 2011), two Spanish textbooks designed for the Spanish heritage classroom. The negative emotionally-laden text discussed the author’s stance against immigration, namely against the Latinx community, and suggests, in his view, the detrimental effects of immigration on the U.S. economy, society, and culture and is 1143 words in length. It was adapted from a reading in Potowski (2011) and was rated as negative in nature by 88% of participants. The neutral text offered a brief description and review of various types bilingual programs used around the U.S. and is 1187 words in length. It was adapted from a reading in the Second Edition of *Conversaciones escritas: Lectura y redacción en contexto* (Potowski, 2017), and 54% of all participants rated it as neutral (33% rated the text as positive and 13% rated it as negative). All emotion-laden texts, including the embedded pseudoword vocabulary target items (see below) are presented in Appendix G.

### 3.4.2 Target Items

In order to explore receptive vocabulary learning in relation to emotion, six different pseudowords were embedded within each emotion-laden text (positive, negative, neutral), such that participants were asked to learn a 18 total target items in form and meaning. They were 18 bisyllabic Spanish pseudowords, adapted from a list of Spanish pseudowords by Carreiras and Perea (2004). Each target pseudoword item was presented in bold in the text, and the English translation that participants were asked to learn for each item was provided in parentheses.
immediately following the pseudoword. The words are shown in their text in Appendix G. Table 6 shows the lexical characteristics of the neutral and emotion-laden English translation words. A full list of the English translations and pseudoword target items can be found in Appendix H.

Because syllable frequency has been seen to have a potential effect on lexical decision and recognition tasks (Carreiras & Perea, 2004), the pseudowords elected for the current study all have an initial syllable of high frequency, which is expected to facilitate pronunciation and lexical identification as compared to initial syllables of low frequency. Pseudowords are approximately 5.94 letters in length and appeared mid-sentence. The emotional valence of the words was manipulated as follows.

As many researchers have found a connection between emotion and certain words or phrases, including reprimands and taboo words (Ayçiçeği & Harris, 2004; Caldwell-Harris & Ayçiçeği-Dinn, 2009; Dewaele, 2004a, 2004b; Harris, Ayçiçeği, & Gleason, 2003; Pavlenko, 2008), in each of the three texts two pseudowords with English translations had a positive connotation, two had a negative connotation, and two had a neutral connotation. One verb and one noun of each valence (positive, negative, neutral) were included in each text. For example, the positive text on the contributions of the Latinx community to the U.S. included one verb and one noun rated as positive, one verb and one noun rated as negative, and one verb and one noun rated neutral. This equates to a total of 6 positive (3 verbs and 3 nouns), 6 negative (3 verbs and 3 nouns), and 6 neutral (3 verbs and 3 nouns) target items that participants were tasked with learning, for a total of 18 pseudoword vocabulary items to be learned.
Table 6. Mean lexical characteristics for emotion-laden English translation words

<table>
<thead>
<tr>
<th></th>
<th>Positive (k = 6)</th>
<th>Neutral (k = 6)</th>
<th>Negative (k = 6)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Valence</td>
<td>7.80</td>
<td>0.24</td>
<td>5.53</td>
</tr>
<tr>
<td>Arousal</td>
<td>5.91</td>
<td>0.35</td>
<td>4.20</td>
</tr>
<tr>
<td>Dominance</td>
<td>6.61</td>
<td>0.29</td>
<td>5.21</td>
</tr>
<tr>
<td>Length (letters)</td>
<td>6.83</td>
<td>1.77</td>
<td>5.17</td>
</tr>
<tr>
<td>Word Frequency</td>
<td>68.8</td>
<td>56.5</td>
<td>225</td>
</tr>
</tbody>
</table>


The valence, or connotation, for the English translations shown in Table 6, and therefore for the target pseudowords, was provided by the Affective Norms for English Words database (ANEW: Bradley & Lang, 1999), a database developed in psychology that includes the valence, arousal, and dominance ratings for a set of approximately 600 English words. Valance rating indicates the emotional association for each word (i.e., positive, neutral, or negative). Within the database, a high rating indicates a strong positive valence association, a low rating indicates a strong negative association, and a moderate rating indicates a weak or no emotional association (neutral). All positive emotion-laden words have a rating in the ANEW database above a 7.25 ($M = 7.80, SD = 0.24$) on the 9-point valence scale, all neutral words have a rating between 5 and 5.75 ($M = 5.53, SD = 0.29$), and negative emotion-laden words have a rating between 1 and 2 ($M = 1.80, SD = 0.13$) on the same scale.

3.5 Vocabulary Assessment

Two well established facts in vocabulary research are that brief vocabulary exposure is insufficient for productive learning (Barcroft, 2004, 2009), and that vocabulary learning is incremental rather than categorical (Wesche & Paribakht, 1996). Therefore, only receptive
vocabulary knowledge was tested, and three test formats were used to assess learning of the 18 target pseudowords (see Appendix I): form recognition, translation, and multiple choice. The three response formats were completed in this sequence in order to minimize any one subtest affecting the answers of the next. Form recognition targeted pure recognition of the pseudo form without probing memory of the English meaning. The translation and multiple-choice response formats both targeted memory of both form and meaning. Participants had as much time as needed to complete each subtest.

First, the form-recognition subtest (Chen & Truscott, 2010; Malone, 2018; Webb, 2007) was administered to measure participants’ ability to recognize the form of the new pseudoword target vocabulary items included in the texts. The subtest included a randomized list of the 18 pseudoword target items, as well as 18 distractor items, and participants were instructed to circle the words they recognized from any of the three texts read. Distractors were two-syllable Spanish pseudo nouns and verbs that were not presented in any of the texts but were similar in form to the target items. All target items were coded as correct or incorrect for a possible score of 18.

Next, the translation subtest was administered to measure participants’ receptive knowledge of vocabulary meaning and form (Chen & Truscott, 2010; Webb, 2007). A list of the same 18 target items were presented in randomized order followed by a blank, and participants were asked to provide the English translation. Direct translations and their synonyms, as well as words falling within those word families, were scored as correct. The total possible score for this subtest was 18.

Lastly, the multiple-choice test was used as another measure of receptive knowledge of meaning and form (Chen & Truscott, 2010; Webb, 2007). In this test, the same 18 target pseudowords were presented in randomized order, and participants were instructed to choose
which of four options – the English translation glossed in the text along with three distractors – was the correct meaning of the target pseudoword. Distractors were of the same part of speech as the target item and had a related meaning. For example, for the target word meaning ‘to teach’, distractor items included ‘to study’, ‘to coach’, and ‘to prepare’. The total possible score for the multiple choice test was 18, bringing the maximum for the total vocabulary score from all three tests to 54.

3.6 Equipment

The equipment used for the main study included: (1) Mac and PC laptop and desktop computers with internet access, (2) Georgetown University’s Qualtrics website (http://georgetown.az1.qualtrics.com), (3) headsets with audio and microphone in order to administer the EIT, and (4) QuickTime, in order to record EIT responses.

3.7 Procedure

The present study took place in two sessions held one week apart in each of seven university sites. A visual representation of the two-session procedure can be found in Figure 1. Both sessions were administered by the researcher, who collected the data from each individual participant or in small groups of up to 6 students at any given time. With the permission of department heads in each site, instructors of heritage, advanced, and content-level Spanish courses were sent information about the current study to share with their students.

Students who choose to participate in the study reported to a language lab for the first session of one hour. After reading a brief introduction to the study and completing an IRB-approved consent form, participants completed, the TEQ, the linguistic insecurity questionnaire, the L2 motivation self system, and the initial SEQ. Next, participants were given task instructions in English, informed that they would be quizzed on reading comprehension and bolded vocabulary
items after reading, and told that they were not permitted to take notes on any reading content or vocabulary. They then read each of the three emotion-laden texts, in counterbalanced order, where they were tasked with learning the form and meaning of 6 distinct pseudoword vocabulary items per text. As they read, participants rated their emotions through the SEQ at three equally-spaced intervals in the text (i.e., two separate points during each reading and once immediately upon completing each text). Immediately after reading each of the three texts, participants completed a short, 3-question multiple-choice reading comprehension test and an emotionality rating where they rated the text as positive, negative, or neutral in character. Participants repeated this same sequence for the remaining two texts. As mentioned, the order of texts (positive, negative, neutral) was counterbalanced across participants. Upon completion of all three texts, participants completed the vocabulary test containing the 18 pseudoword target items embedded in the readings, responding to each subtest following the same fixed sequence (form recognition, translation, multiple choice). Finally, each participant was invited to take a short, two-question exit questionnaire, which was optional. Participants were then scheduled to return to the lab 6-8 days later for the second session. This completed Session 1.

The second session, lasting approximately forty-five minutes, was conducted through Qualtrics one week later in the same laboratory setting. Participants again completed the L2MSS, the TEQ, the linguistic insecurity questionnaire, the SEQ, and a delayed posttest that included the same three vocabulary subtests from Session 1. Participants then completed the Spanish EIT as a measure of proficiency, which took approximately 10 minutes. Finally, participants filled out the background questionnaire (LSBQ), prompted after all quantitative questionnaires in order to avoid order effects (Chiang, Jhangiani, & Price, 2015). Finally, optionally, they answered the exit questionnaire items. With the exception of the consent form and proficiency test, all
questionnaires, texts, and tests for Sessions 1 and 2 were administered online through Qualtrics. The EIT was administered through the QuickTime application.

**Figure 1.** Procedure for main study

**3.8 Statistical Analyses**

To address Research Question 1, which asked what emotions participants would report feeling while reading the three texts and whether emotional states would differ between linguistic profiles, a series of omnibus tests including various MANOVAs and ANOVAs with post hoc analyses was conducted. To address Research Questions 2 through 5, all of which inquired about the best predictors of vocabulary learning and retention, a mixed effects model approach was taken.
The analyses were conducted with the lme4 package (version 1.1-7) (Bates, Maechler, Bolker, & Walker, 2014) in R (version 3.1.1) for logistic multilevel modeling using the “bobyqa” optimizer.

In mixed effects models, independent variables are fixed effects variables, whereas participants are a random effects variable, and test items can also be made into a random effects variable. Thus, mixed effects models offer a superior alternative to the more traditional regression models because they allow for the simultaneous consideration of participant and item as random sources of variation (Linck & Cunnings, 2015; Meteyard & Davies, 2020). Given the main objective to uncover best predictors for vocabulary learning in Research Questions 2–5, this statistical approach therefore appropriately addresses all possible effects of and interactions between language learner background and affective variables, improving the validity of results by accounting for multiple variables and random variability at once. However, mixed effects modeling is designed to highlight the best-fitting model for a given dataset, and the models must base themselves off of one reference level, or baseline, for each effect. For example, in the present study the FLL linguistic profile, the positive text, and positive words were all baselines for comparison. This meant that many of the variables of interest in Research Question 1 would only be answered for one reference, or baseline, linguistic profile, and differences between profiles and contexts would be overlooked. Research Question 1 would, therefore, not be best served by having to choose a reference or baseline. Instead, traditional multivariate analyses, where no reference or baseline is needed, was judged to be the best choice of statistical analysis for Research Question 1.
CHAPTER 4: RESULTS

This chapter presents the results of the quantitative and qualitative analyses conducted to address the five research questions posed in the dissertation. The chapter first offers a brief description of the main characteristics of the two linguistic profiles in the study: HLLs and FLLs. This is followed by the results of each research question. The chapter closes with a summary outlining central findings.

4.0 Main Characteristics of Heritage Language Learners and Foreign Language Learners

Before addressing the research questions that drive the present study, this section offers a brief characterization of the two linguistic profiles at the center of the study: HLLs and FLLs (see also section 3.2). Table 7 shows the means and standard deviations for both linguistic profiles in terms of their Spanish proficiency, the emotions they reported feeling towards the learning of Spanish (joy, interest, anxiety, shame, and guilt), the linguistic insecurity they reported feeling towards their competence in Spanish, as well as their motivation to learn Spanish, overall and across seven motivational subcomponents. The Table also shows the results of independent t-tests carried out with Benjamini-Hochberg corrections (Hochberg & Benjamini, 1990) to compare the two groups, as well as the magnitude of these differences expressed in Cohen’s $d$ effect sizes.

A number of key observations can be made to characterize the two groups in the study. First, in terms of proficiency level, the results of the Spanish Elicited Imitation Task (Bowden, 2016; Ortega, Iwashita, Rabie, & Norris, 2002) show that both groups demonstrated high Spanish proficiency, with mean scores (106.77 for HLLs and 84.68 for FLLs, out of 120) that represented 89% and 71% of the score band, respectively. However, HLLs had significantly higher proficiency than FLLs, and the difference was very large ($d = 1.42$). A comparison of the present mean EIT performances to the means reported for high proficiency levels by researchers previously using the
same L2 Spanish EIT suggests that the HLLs performed similarly to the highest-scoring group (m=109.3) reported by Bowden (2016) and the two highest-scoring groups reported by Solon, Park, Henderson, and Dehghan-Chaleshtori (2019) (m=108.21 and 108.71, respectively), whereas the FLLs performed better than Solon et al.’s next-highest scoring group (m=80.15), who had been recruited from 300- and 400-level courses, but not as well as Bowden’s second-highest scoring group (m=96.50), who comprised students with an average of 6.7 semesters of university-level Spanish and one to two semesters of immersion experience.

Table 7. Main characteristics of the two linguistic profiles

<table>
<thead>
<tr>
<th></th>
<th>HLLs (n = 64)</th>
<th>FLLs (n = 57)</th>
<th>t</th>
<th>p</th>
<th>d</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish Proficiency</td>
<td>106.77</td>
<td>84.68</td>
<td>-7.7*</td>
<td>.000</td>
<td>1.42</td>
</tr>
<tr>
<td>Trait Emotions</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Joy</td>
<td>6.14</td>
<td>5.74</td>
<td>-2.7*</td>
<td>.008</td>
<td>.50</td>
</tr>
<tr>
<td>Interest</td>
<td>6.09</td>
<td>5.78</td>
<td>-2.7*</td>
<td>.008</td>
<td>.49</td>
</tr>
<tr>
<td>Anxiety</td>
<td>3.38</td>
<td>4.20</td>
<td>3.0*</td>
<td>.003</td>
<td>-.54</td>
</tr>
<tr>
<td>Shame</td>
<td>4.13</td>
<td>4.62</td>
<td>2.0</td>
<td>.052</td>
<td>-.36</td>
</tr>
<tr>
<td>Guilt</td>
<td>4.42</td>
<td>4.84</td>
<td>1.6</td>
<td>.107</td>
<td>-.29</td>
</tr>
<tr>
<td>Linguistic Insecurity</td>
<td>3.13</td>
<td>3.49</td>
<td>1.7</td>
<td>.092</td>
<td>-.31</td>
</tr>
<tr>
<td>Motivation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intended Effort</td>
<td>38.18</td>
<td>33.32</td>
<td>-6.0*</td>
<td>.000</td>
<td>1.10</td>
</tr>
<tr>
<td>Ideal L2 Self/Own</td>
<td>5.38</td>
<td>5.42</td>
<td>3</td>
<td>.798</td>
<td>-.05</td>
</tr>
<tr>
<td>Ideal L2 Self/Other</td>
<td>6.40</td>
<td>5.64</td>
<td>-6.0*</td>
<td>.000</td>
<td>1.11</td>
</tr>
<tr>
<td>Ought-to L2 Self/Own</td>
<td>5.55</td>
<td>4.87</td>
<td>-3.6*</td>
<td>.000</td>
<td>.67</td>
</tr>
<tr>
<td>Ought-to L2 Self/Other</td>
<td>4.90</td>
<td>3.84</td>
<td>-5.2*</td>
<td>.000</td>
<td>.95</td>
</tr>
<tr>
<td>Willingness-to-Communicate</td>
<td>4.38</td>
<td>2.96</td>
<td>-7.5*</td>
<td>.000</td>
<td>1.36</td>
</tr>
<tr>
<td>Learning Experience</td>
<td>5.87</td>
<td>5.34</td>
<td>-2.6*</td>
<td>.010</td>
<td>.47</td>
</tr>
</tbody>
</table>

Note. The maximum score for Spanish Proficiency is 120. The maximum for Motivation is 49. All other scores are out of a maximum 7 (Likert scale 1 = Strongly disagree, 7 = Strongly agree). *T-tests values which survived a Benjamini-Hochberg correction and thus retained significance.
With respect to their trait emotions towards studying Spanish, both groups were seen to feel high levels of joy and interest, both hovering at the mean of 6 out of 7, relatively low levels in negative trait emotions, with means all around 3 or 4 out of 7. Both groups also showed low levels of linguistic insecurity in the ballpark of 3 out of 7. Statistically significant, modest differences between the two profiles were found, in that the HLLs reported moderately higher levels of joy ($d = .50$) and interest ($d = .49$) and somewhat lower levels of anxiety ($d = -.54$) than FLLs. HLLs and FLLs did not differ with respect to feelings of shame or guilt towards studying Spanish. Perhaps unexpectedly, they also did not differ in linguistic insecurity in Spanish in any sizeable way ($d = -.31$).

In regards to L2 motivation, both groups were similarly committed to expend effort and time into learning Spanish, as shown in the very similar means self-reported for intended effort (both above 5 out of 7, $d = -.05$), but HLLs’ overall motivation exceeded that of FLLs by a large magnitude ($d = 1.10$). The HLL motivational advantage can be attributed to their considerably higher levels of ought-to L2 self/other ($d = 1.36$), ideal L2 self/own ($d = 1.11$), and ought-to L2 self/own ($d = .95$), with some moderate contributions also from the ideal L2 self/other ($d = .67$), learning experience ($d = .62$), and willingness-to-communicate ($d = .47$).

In short, the two participant groups representing the two linguistic profiles at the center of the present dissertation can be characterized as advanced in their language proficiency, positive in their affect towards studying Spanish, linguistically confident, and highly motivated to study Spanish. However, trustworthy and sizeable differences were at play, mostly in favor of HLLs, who had higher Spanish proficiency, expressed more positive feelings and less negative feelings towards Spanish, and showed greater motivation for studying Spanish than FLLs.
4.1 Research Question 1: Emotional States While Reading

Research Question 1 asked: *What emotions will participants report feeling while reading three texts about positive, neutral, and negative topics, and will the Spanish HL and FL learners’ emotional states differ?* In other words, of interest was to ascertain the range of emotions felt in response to reading three texts about positive, neutral, and negative topics, with the goal ultimately being to understand if the Spanish HL and FL learners’ emotional states differed in any patterned ways. The question is important not only to understand the emotional state of participants while reading each of the three texts, but also in order to gauge the effectiveness of the manipulation of emotional valence of the three texts (via the choice of a positive, neutral, and negative topic).

4.1.1 Effect of Time at which Emotional Responses Were Elicited While Reading

First, I inspected whether the self-reported emotions changed across the three elicitation times: Time 1 and Time 2, during reading, and Time 3 immediately after reading the given text. In order to answer this question, a mixed measures MANOVA was conducted on the emotion ratings, after checking that the main assumptions for parametric tests of normality (i.e., skewness and kurtosis), linearity, homoscedasticity, and multicollinearity were met. The 12 discrete emotions (i.e., six positive: surprise, curiosity, joy, excitement, interest, motivation; and six negative: shame, confusion, anxiety, frustration, guilt, and boredom) served as dependent variables. The within-subjects variables were Time (i.e., Times 1, 2, and 3) and Text (i.e., positive, neutral, and negative), and the between-subjects variable was Linguistic profile group (i.e., HLLs and FLLs). While significant differences were found based on Linguistic profile ($F (12, 1060) = 10.93, p < 0.001$; Wilks’ $\Lambda = 0.89$, partial $\eta^2 = 0.11$) and Text ($F (24, 2120) = 12.86, p < 0.001$; Wilks’ $\Lambda = 0.76$, partial $\eta^2 = 0.13$), no statistically significant differences were found based on Time ($F (24, 2120) = 0.834, p = 0.70$; Wilks’ $\Lambda = 0.98$, partial $\eta^2 = 0.01$), nor any interactions
between time and any of the other independent variables. It can be observed, therefore, that the point in time at which the emotion rating was elicited while reading (Time 1, right after one third of a text was read; Time 2 after a second third, and Time 3 right after the last sentence was read) did not lead to substantial differences. Consequently, and for the sake of simplicity, the subsequent analyses are reported for the average intensity of state emotions, calculated separately for the positive, neutral, and negative texts by taking the mean Likert rating for each emotion between Times 1, 2, and 3 in each context. However, answers to Research Question 1 will conclude with a more fine-tuned analysis comparing T1, T2, and T3 in order to explore the potential for emotional volatility.

4.1.2 Responses across 12 Emotion Types

Descriptive statistics for the ratings on the 12 state emotions averaged across the three times are shown in Table 8, with mean Likert ratings ranging from 1=Not at all to 5=Very strong gauging the intensity of each discrete emotional response. Table 8 also shows which of the 12 trait emotions exhibited a statistically significant difference between the two linguistic profiles, as indicated by independent t-tests with a Benjamini-Hochberg correction to ameliorate the possibility of Type I errors (i.e., falsely rejecting the null hypothesis due to the increase of spurious results when multiple t-tests are run). Figures 2 and 3 display the same descriptive information visually, for each linguistic profile, respectively. An inspection of the descriptive results shown in Table 8 and Figures 2 and 3 reveals some preliminary patterns.
Table 8. Average ratings for 12 state emotions by text

<table>
<thead>
<tr>
<th></th>
<th>HLLs n=64</th>
<th></th>
<th>FLLs n=57</th>
<th></th>
<th>All n=121</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>[+]</td>
<td>[ø]</td>
<td>[-]</td>
<td>[+]</td>
<td>[-]</td>
</tr>
<tr>
<td>Guilty</td>
<td>1.15</td>
<td>1.27</td>
<td>1.27</td>
<td>1.21</td>
<td>1.47</td>
</tr>
<tr>
<td></td>
<td>(0.40)</td>
<td>(0.56)</td>
<td>(0.41)</td>
<td>(0.57)</td>
<td>(0.63)</td>
</tr>
<tr>
<td>Ashamed</td>
<td>1.16</td>
<td>1.48</td>
<td>1.25</td>
<td>1.37</td>
<td>1.75</td>
</tr>
<tr>
<td></td>
<td>(0.38)</td>
<td>(0.82)</td>
<td>(0.52)</td>
<td>(0.69)</td>
<td>(0.86)</td>
</tr>
<tr>
<td>Frustrated</td>
<td>1.45</td>
<td>2.79</td>
<td>1.53</td>
<td>1.74</td>
<td>2.51</td>
</tr>
<tr>
<td></td>
<td>(0.81)</td>
<td>(1.36)</td>
<td>(0.77)</td>
<td>(0.91)</td>
<td>(1.03)</td>
</tr>
<tr>
<td>Confused</td>
<td>1.46</td>
<td>2.16</td>
<td>1.61</td>
<td>1.78</td>
<td>2.00</td>
</tr>
<tr>
<td></td>
<td>(0.79)</td>
<td>(1.14)</td>
<td>(0.68)</td>
<td>(0.80)</td>
<td>(0.80)</td>
</tr>
<tr>
<td>Anxious</td>
<td>1.50</td>
<td>1.86</td>
<td>1.71</td>
<td>1.75</td>
<td>1.98</td>
</tr>
<tr>
<td></td>
<td>(0.82)</td>
<td>(1.11)</td>
<td>(0.87)</td>
<td>(0.87)</td>
<td>(0.86)</td>
</tr>
<tr>
<td>Bored</td>
<td>1.60*</td>
<td>1.75</td>
<td>2.17</td>
<td>2.20</td>
<td>2.14</td>
</tr>
<tr>
<td></td>
<td>(0.78)</td>
<td>(0.98)</td>
<td>(0.87)</td>
<td>(1.01)</td>
<td>(0.98)</td>
</tr>
<tr>
<td>Total negative</td>
<td>8.31</td>
<td>11.31</td>
<td>9.49</td>
<td>10.09</td>
<td>11.84</td>
</tr>
<tr>
<td></td>
<td>(2.87)</td>
<td>(4.09)</td>
<td>(3.04)</td>
<td>(3.64)</td>
<td>(3.40)</td>
</tr>
<tr>
<td>Surprised</td>
<td>2.46*</td>
<td>2.38</td>
<td>1.79</td>
<td>1.78</td>
<td>2.19</td>
</tr>
<tr>
<td></td>
<td>(1.05)</td>
<td>(1.24)</td>
<td>(0.72)</td>
<td>(0.74)</td>
<td>(0.96)</td>
</tr>
<tr>
<td>Excited</td>
<td>2.61*</td>
<td>2.08</td>
<td>2.04</td>
<td>1.77</td>
<td>2.36</td>
</tr>
<tr>
<td></td>
<td>(1.24)</td>
<td>(0.95)</td>
<td>(1.04)</td>
<td>(0.94)</td>
<td>(0.77)</td>
</tr>
<tr>
<td>Joyful</td>
<td>2.70*</td>
<td>2.18</td>
<td>2.05</td>
<td>1.71</td>
<td>2.45</td>
</tr>
<tr>
<td></td>
<td>(1.16)</td>
<td>(0.87)</td>
<td>(1.06)</td>
<td>(0.75)</td>
<td>(1.14)</td>
</tr>
<tr>
<td>Motivated</td>
<td>2.91</td>
<td>2.40</td>
<td>2.61</td>
<td>2.46</td>
<td>2.67</td>
</tr>
<tr>
<td></td>
<td>(1.30)</td>
<td>(1.11)</td>
<td>(1.00)</td>
<td>(1.03)</td>
<td>(1.19)</td>
</tr>
<tr>
<td>Curious</td>
<td>3.10</td>
<td>2.73</td>
<td>2.81</td>
<td>2.84</td>
<td>2.92</td>
</tr>
<tr>
<td></td>
<td>(1.16)</td>
<td>(1.15)</td>
<td>(0.88)</td>
<td>(0.88)</td>
<td>(0.95)</td>
</tr>
<tr>
<td>Interested</td>
<td>3.35</td>
<td>2.98</td>
<td>3.04</td>
<td>2.90</td>
<td>3.18</td>
</tr>
<tr>
<td></td>
<td>(1.12)</td>
<td>(0.88)</td>
<td>(0.87)</td>
<td>(0.96)</td>
<td>(1.03)</td>
</tr>
<tr>
<td>Total positive</td>
<td>17.14*</td>
<td>16.49</td>
<td>13.97</td>
<td>14.16</td>
<td>14.33</td>
</tr>
<tr>
<td></td>
<td>(6.09)</td>
<td>(4.99)</td>
<td>(4.53)</td>
<td>(4.54)</td>
<td>(4.39)</td>
</tr>
</tbody>
</table>

Note. [+] = positive text; [ø] = neutral text; [-] = negative text. Responses were on a Likert scale from 1=Not at all to 5=Very strong. Emotions are listed in increasing order of intensity for HLLs in the positive text. Standard deviations are given in parenthesis.

*T-tests values showing a significant difference between HLLs and FLLs of \( p < \) individual Benjamini-Hochberg correction critical values.
Figure 2. Average emotion ratings by text for HLL group (Bars: ±1 SD)

Figure 3. Average emotion ratings by text for FLL group (Bars: ±1 SD)
The first pattern, looking at individual emotions for all 121 participants together, is a predominance of total positive emotion over negative emotion in every reading context. The positive emotions of interest and curiosity were consistently rated as the most-felt emotions across all three emotion-laden texts, suggesting all three readings were engaging. On the other hand, the negative emotion of guilt showed the weakest ratings across all contexts, indicating that this emotion may have been irrelevant during the reading regardless of text type.

The second pattern afforded by the eye-ballling of descriptive results is that, as predicted, the positive text led to higher ratings of intensity for the six positive emotions (i.e., surprise, excitement, joy, motivation, curiosity, and interest), which ranged for all 121 participants from 2.15 to 3.18, than for the six negative state emotions (i.e., guilt, shame, frustration, confusion, anxiety, and boredom), which ranged from 1.18 to 1.87. Somewhat unexpectedly, the same pattern was true of the neutral text, whose ratings ranged from 2.09 to 3.23 for positive emotions and from 1.23 to 1.90 for negative emotions. For the negative text, there was no clear pattern of prevalence of negative over positive emotions. Instead, a mixture of positive and negative emotions was reported, in that the ratings ranges overlapped: from 1.77 to 2.94 for positive emotions and from 1.36 to 2.66 for negative emotions. Indeed, the most dominant emotions elicited by the negative topic reading were a mixture: interest (M = 2.94; SD = 1.02) and curiosity (M = 2.83; SD = 1.06), two positive state emotions, were followed by heightened feelings of the negative emotion of frustration (M = 2.66; SD = 1.22) and the positive emotion of motivation (M = 2.41; SD = 1.07).

Still, an inspection along the positive-neutral-negative text cline in Table 8 for all participants together shows the expected pattern across text type of increasing ratings for all six negative emotions, and the expected decrease in ratings for all six positive emotions, with the exception of surprise, which was higher for the negative text than the other two texts, and curiosity, which was
higher for the neutral text over the positive or negative text. Additionally, as expected, the positive reading gave way to the lowest intensity score for each of the six negative emotions. Taken together, these findings support the characterization of each text as positive, neutral, or negative with respect to emotional valence. They also suggest, however, that the emotional reactions to the positive and neutral reading patterned together and were different from the emotional reactions to the negative text.

The third noteworthy descriptive pattern is that HLLs’ self-reported emotions covered a wider range (from a lowest of 1.15 for guilt in the negative text up to a highest of 3.40 for interest in the neutral text) than those expressed by FLLs (from a lowest of 1.21 for guilt in the negative text to a highest of 3.04 for interest in the neutral text). Moreover, HLLs were more engaged (i.e., less bored) in the positive and neutral contexts and responded better to the positive text than FLLs, as indicated by the significant p-values that survived a Benjamini-Hochberg correction in the series of independent t-tests (see asterisked values in Table 8): HLLs expressed significantly less boredom and more surprise than FLLs in response to the positive (p < .001, d = -.68; p < .001, d = .75) and neutral readings (p < .001, d = -.65; p < .001, d = .63); and they also showed greater levels of excitement (p < .05, d = .47) and joy (p < .05, d = .47) than FLLs, contributing to HLLs feeling significantly more total positive emotion than FLLs in the positive text (p < .01, d = .55).

4.1.3 From Individual Emotion Types to Positive versus Negative Emotions

In order to simplify the data for statistical analyses and comparisons between the three texts (positive, neutral, and negative) and the two linguistic profiles (HLLs and FLLs), a series of principal component analyses (PCA) were then conducted to motivate the combination of emotions into broad affect groupings. In essence, this move follows the conceptual logic of
dimensional theories of emotion, and particularly the valence approach/model (see Section 2.2.2.1 and Table 2).

First, two PCAs with Varimax rotation for the positive and neutral texts, respectively, yielded two factors: positive emotion (surprise, excitement, joy, motivation, curiosity, and interest; positive text $\alpha = .93$, neutral text $\alpha = .92$) and negative emotion (shame, confusion, anxiety, frustration, guilt, and boredom; positive text $\alpha = .81$, neutral text $\alpha = .85$). In contrast, a principal component analysis with Direct Oblimin rotation for the negative text resulted in four affect scales: positive (surprise, excitement, joy, motivation, curiosity, and interest; positive text $\alpha = .88$), anxious (anxious, confused, frustrated; $\alpha = .79$), guilty (guilty, ashamed; $\alpha = .80$), and bored. The results of the PCA thus show a clear qualitative difference between the positive and neutral texts on one side versus the negative text on the other. In order to allow for a statistical comparison between all three texts, the prevalent pattern for the positive and negative texts was adopted for all three text types. This is also the pattern supported by valence theory models (Fredrickson & Branigan, 2005; Gasper & Clore, 2002). Combining all negative emotions into a single scale for the negative text still demonstrated high reliability ($\alpha = .75$).

Having established that the variable of time at which emotions were reported while reading did not make a fundamental difference, and having characterized through the descriptive and t-test comparisons just presented how much of 12 different emotion types were felt during the three readings by the two groups, we can now proceed to answer Research Question 1, using for the construct of state emotions two variables suggested by the PCA analyses, one combining all self-reported positive emotions and another combining all negative emotions. In the remainder of Section 7.1, therefore, at stake is to understand the emotional state of participants while reading.
three texts about positive, neutral, and negative topics, and whether the Spanish HL and FL learners’ emotional states differ.

4.1.4 Effects of Text Type on Valence of Emotion Felt While Reading: Same or Different for Heritage Language Learners and Foreign Language Learners?

First, three one-way MANOVAs were conducted to test the hypothesis that there would be mean differences in positive and negative emotions between linguistic profiles (HLL, FLL) for each of the three texts (positive, neutral, negative). All assumptions for multivariate normality and multicollinearity were met, and the multivariate effect sizes were all estimated at .2. A statistically significant MANOVA effect was obtained for the positive text, Pillais’ Trace = .09, $F(2, 118) = 5.8, p < .01$, where in response to the positive reading HLLs expressed significantly higher positive emotions, $F(1, 119) = 9.1, p < .01$, and significantly lower negative emotions, $F(1, 119) = 4.8, p < .05$, than the FLL group. A statistically significant MANOVA effect was also found for the neutral text, Pillais’ Trace = .07, $F(2, 118) = 4.4, p < .05$, with HLLs again expressing significantly higher positive emotions than the FLL group, $F(1, 119) = 5.7, p < .05$, whereas the tendency for lower negative emotions by the HLLs compared to the FLLs only approached significance, $F(1, 119) = 3.9, p = .051$. In contrast, no significant MANOVA effect was obtained for the negative text (Pillais’ Trace = .01, $F(2, 118) = .31, p = .735$), implying that there were no differences between HLLs and FLLs with respect to positive or negative emotions for this text type. In sum, significant differences between participant groups were found only in the positive and neutral texts, where HLLs felt significantly more positive emotions and tended to feel less negative emotions than FLLs.

Next, a series of ANOVAs were carried out to explore whether within the HLLs and FLLs groups any differences between texts could be seen with respect to positive and negative emotions.
First, the homogeneity of variance assumption was checked and found to be satisfied, based on a series of Levene’s F tests.

For the HLL group, significant ANOVA effects were found for positive emotions with sphericity assumed, \( F(2, 138) = 24.9, p < .001 \), and for negative emotions where Mauchly’s Test of Sphericity indicated that the assumption of sphericity had been violated, \( \chi^2(2) = 45.9, p < .001 \), and a Greenhouse-Geisser correction was used, \( F(2, 138) = 45.9, p < .001 \). Post hoc mean comparisons showed significant differences within the HLL group for the positive emotions displayed between the positive and negative texts (\( t(69) = 6.7, p < .001 \)) and between the neutral and negative texts (\( t(69) = -5.5, p < .001 \)). With respect to negative emotions reported by the HLLs, post hoc comparisons showed significant differences between all texts. Negative emotions were seen to be significantly higher in the negative texts than in either the positive (\( t(69) = -7.3, p < .001 \)) or neutral (\( t(69) = -7.8, p < .001 \)) texts, and significantly lower in the positive text than in the neutral text (\( t(69) = -2.3, p < .05 \)). Essentially, and as expected, HLLs’ emotions aligned with each reading context, feeling the greatest amount of positive emotion and least amount of negative emotion in the positive text and vice versa in the negative reading context.

For the FLL group, the ANOVA and post hoc comparisons paralleled the results for the HLL group only for negative emotions. Namely, no significant ANOVA effects were found between texts for positive emotions (sphericity assumed), \( F(2, 112) = .63, p = .533 \), but for negative emotions the ANOVA analysis was significant, \( F(2, 112) = 20.5, p < .001 \), sphericity assumed. Post hoc comparisons revealed significant differences again between all texts: negative emotions were seen to be significantly higher in the negative texts than in either the positive (\( t(56) = -5.5, p < .001 \)) or neutral (\( t(56) = -4.0, p < .001 \)) texts, and significantly lower in the positive text than in the neutral text (\( t(56) = -2.4, p < .05 \)).
In short, the analyses just presented revealed that HLLs expressed significantly higher positive emotions in the positive and neutral texts than in the negative texts, while FLLs expressed similar levels of positive emotion in all three texts. Still, HLLs and FLLs both felt the most amount of negative emotion in the negative text and the least in the positive text, as expected.

A more direct means comparison of overall positive and overall negative responses to the three text types between HLL and FLL groups, using independent t-tests, also confirms the results of the ANOVAs and post hoc analyses. They showed that HLLs experienced significantly more positive emotion ($t(119) = -3.0, p < .01$) and significantly less negative emotion than FLLs in the positive text ($t(119) = 2.2, p < .05$). Comparisons between the two groups for the neutral text revealed that HLLs again expressed significantly more positive emotion than FLLs in response to the neutral reading ($t(119) = -2.4, p < .05$), and that less negative emotional responses by the HLLs than FLLs only approached significance ($t(119) = 2.0, p = .051$). In contrast, the negative text did not affect the two participant groups differently: no significant differences between the two linguistic profiles were found with respect to either positive ($t(119) = -.1, p = .915$) or negative emotion ($t(119) = .8, p = .449$), which confirms that the negative text resulted in more mixed emotions for participants.

4.1.5 Emotional Intensity Felt

In order to explore differences of intensity in total emotion felt, thus putting aside any effects of positive vs. negative valence, the sum of all 12 state emotions was first calculated. A two-way repeated measures ANOVA to explore any differences between linguistic profiles and texts in total emotion was significant, $F(2, 238) = 3.8, p < .05$, sphericity assumed. Post hoc analyses revealed no significant differences between HLLs’ and FLLs’ total emotions in the neutral and negative texts ($ts > .05$), and a difference only approaching significance for the positive
text ($t(119) = -1.8, p = .08$), with more intense emotions displayed by HLLs. While follow-up one-way ANOVAs conducted on total emotion revealed no significant difference between HLLs’ levels of total emotion in the three texts ($F(2, 138) = .02, p = .983$), a significant difference was uncovered for FLLs’ overall emotions between the texts, $F(2, 112) = 10.4, p < .001$. Post hoc tests showed that FLLs expressed higher intensity of overall emotion in the negative text than in the neutral text ($t(56) = -2.6, p < .05$) and more emotion in the neutral text than in the positive text ($t(56) = -2.0, p < .05$). Ultimately, HLLs expressed high total emotion in response to every text, while FLLs’ emotions dipped in the positive reading.

### 4.1.6 Emotional Fluctuation while Reading

I started the analyses addressing Research Question 1 with a mixed MANOVA that suggested no statistically significant differences were seen in emotional intensity between Times 1, 2, and 3 in any text (Section 4.1). It was for this reason that the rest of findings reported for Research Question 1 have been based on the emotion ratings averaged across Time 1, 2, and 3. However, in response to perspectives in the study of emotions in SLA that emphasize the dynamicity of affect (MacIntyre, 2012), it is important to inspect closely whether either group of participants experienced any relative degree of stability versus volatility during any of the three reading conditions and/or for some of the individual emotions. Emotional volatility, if experienced even to a moderate degree, may help explain whatever amounts of new vocabulary learning may be seen when we examine Research Question 2. As will be seen in this section, the analysis of fluctuations in self-reported emotions while reading (i.e., changes across Times 1, 2, and 3) did uncover differences between text types that are small but noteworthy.

First, the following formula was created to calculate the mean fluctuation for each state emotion across three times within the positive, neutral, and negative readings, where total
fluctuation ($F$), is equal to the sum of the absolute differences in emotional intensity ($E$) between times $T_1$ and $T_2$ and $T_2$ and $T_3$, respectively, for each state emotion ($i$): \[ F_i = |E_{i,T2} - E_{i,T1}| + |E_{i,T3} - E_{i,T2}| \]

This was repeated a total of three times for each emotion, once for each text. A maximum value of 8 would indicate the greatest change, and thus extreme volatility, and a minimum value of 0 would indicate no change, or complete stability. Given that values are calculated from self-ratings, which only captures the emotions that individuals are conscious of, any values of 1 or above can be taken as indication of some volatility. The results are graphed in Figure 4 for the HLL group and Figure 5 for the FLL group.

Inspection of descriptive fluctuations in the self-report of discrete emotions, shown in Figures 4 and 5, reveals a number of noteworthy observations for the state emotions for both groups. Guilt – the weakest felt emotion – was also one of the most stagnant emotions for both HLLs and FLLs in nearly every reading condition, showing the lowest fluctuation values across the board (a range of .20 to .44). Both groups also showed little fluctuation in anxiety, shame, and boredom. However, other emotions instead suggested some volatility. Frustration, for example, appeared to be particularly volatile for both groups during the negative reading (e.g., fluctuation mean of 1.2 for both Figures 4 and 5), and HLLs levels of confusion also oscillated more in the negative text than in the other two reading contexts (mean 1.2). With respect to positive emotions, surprise saw greater levels of change for all learners across time in all three texts (e.g., with large fluctuation values of 1.5, 1.2, and 1.1 in Figure 4), and both HLLs and FLLs alike experienced changing levels of curiosity throughout the negative text in particular (e.g., mean fluctuations of 1.4 and 1.2). Interest also appeared to oscillate more in the positive and negative reading contexts for both learner profiles. Notably, HLLs’ levels of joy and motivation changed to a greater extent.
Figure 4. Fluctuation in state emotions by text for HLL group over three times.

Figure 5. Fluctuation in state emotions by text for FLL group over three times.
In the positive text, while the two emotions remained relatively stable for FLLs, regardless of context.

In order to uncover more specific patterns in the fluctuation of emotions, emotions were grouped according to the same PCA described in Section 4.1.3. Therefore, the sum the fluctuations for the 6 positive and 6 negative emotions, respectively, was calculated, resulting in two separate fluctuation scales: positive emotion fluctuation and negative emotion fluctuation. First, a two-way repeated measures multivariate analysis of variance (MANOVA) was carried out to reveal any significant differences in the changes seen in positive and negative emotions between the three texts and two learner profiles. There was a statistically significant difference in the positive and negative emotion fluctuations experienced by HLLs and FLLs, $F(4, 476) = 12.1, p < .001$; Wilks’ $\Lambda = .819$, partial $\eta^2 = .10$. Three follow-up one-way MANOVAs were conducted to test the hypothesis that there would be mean differences in positive and negative emotions between linguistic profiles (HLL, FLL) for each of the three texts (positive, neutral, negative). All assumptions for multivariate normality and multicollinearity were met, and the multivariate effect sizes were all estimated at .2. No statistically significant MANOVA effects were seen for the positive text, Pillais’ Trace $= .02$, $F(2, 118) = 1.4, p = .261$, or negative texts, Pillais’ Trace $= .002$, $F(2, 118) = .1, p = .908$, signifying that no differences were seen between HLLs and FLLs with respect to the volatility in their positive or negative emotions in either of these two texts. A statistically significant MANOVA effect was found, however, for the neutral text, Pillais’ Trace $= .07$, $F(2, 118) = 4.5, p < .05$, with HLLs expressing significantly higher fluctuation in their positive emotions, $F(1, 119) = 6.7, p < .05$, than the FLL group, whereas no significant difference was found in negative emotion volatility between the two groups in the neutral text, $F(1, 119) = .5, p = .479$. In sum, a significant difference between participant groups was found only in the neutral
text, where HLLs’ positive emotions fluctuated significantly more than fluctuations expressed by FLLs.

Next, a series of ANOVAs were conducted to explore whether within HLLs and FLLs any differences between texts would appear with respect to fluctuation in positive and negative emotions, after checking that the homogeneity of variance assumption was satisfied based on a series of Levene’s $F$ tests. Within HLLs, significant ANOVA effects were found for positive emotion volatility where Mauchly’s Test of Sphericity indicated that the assumption of sphericity had been violated, $\chi^2(2) = .80, p < .001$, and a Greenhouse-Geisser correction was used, $F(2, 130) = 3.8, p < .05$, as well as for negative emotion volatility, $F(2, 130) = 16.3, p < .001$, sphericity assumed. Post hoc mean comparisons showed significant differences in the HLL group for the fluctuations in positive emotions between the positive and neutral texts ($t(65) = -2.2, p < .05$) and between the neutral and negative texts ($t(65) = 2.1, p < .05$), with HLLs’ positive emotions fluctuating most in the neutral text. With respect to negative emotion volatility for HLLs, post hoc comparisons showed significant differences between all texts. Negative emotions were seen to fluctuate significantly more in the negative text than in either the positive ($t(65) = -5.6, p < .001$) or neutral ($t(65) = -2.8, p < .01$) texts, and significantly more in the neutral text than in the positive text ($t(65) = -2.9, p < .01$). Simply put, HLLs’ negative emotions fluctuated the most in the negative text and the least in the positive text.

With respect to fluctuations within FLLs’ emotions, no significant ANOVA effects were found between texts for positive emotion volatility, $F(2, 116) = .96, p = .388$, sphericity assumed, but were revealed for negative emotion volatility, $F(2, 116) = 9.6, p < .001$, sphericity assumed. Post hoc comparisons showed that FLLs’ negative emotions fluctuated significantly less in the positive text than in the negative ($t(58) = -4.4, p < .001$) or neutral texts ($t(58) = -2.6, p < .05$). A
comparison between negative emotion fluctuations in the negative and neutral texts revealed that the negative text led to greater volatility in negative emotions, though only to an extent approaching significance ($t(58) = -1.8, p = .082$). In other words, FLLs’ negative emotions also fluctuated most in the negative text and least in the positive text.

In order to explore how emotions changed overall, in other words ignoring the dichotomy between positive and negative emotions, the sum of the fluctuations in all 12 state emotions was first calculated. A two-way repeated measures ANOVA to explore any differences between linguistic profiles and texts in total emotion was significant, $F(4, 476) = 12.1, p < .001$, sphericity, homogeneity, and normality assumed. Post hoc analyses revealed no significant differences between HLLs’ and FLLs’ overall fluctuation in emotion in any of the three texts ($t_s > .05$). Follow-up one-way ANOVAs conducted on total emotion did, however, reveal a significant difference in HLLs’ fluctuation in overall emotion between the three texts where Mauchly’s Test of Sphericity indicated that the assumption of sphericity had been violated, $\chi^2(2) = .9, p < .05$, and a Greenhouse-Geisser correction was used, $F(2, 130) = 6.2, p < .01$. Post hoc analyses uncovered significant differences in the overall volatility in emotion for HLLs between the positive and negative texts ($t(65) = -3.5, p < .01$) and the positive and neutral texts ($t(65) = -3.1, p < .01$), showing that HLLs’ overall emotions were most stable in the positive text. A significant difference was also uncovered for FLLs’ overall emotion fluctuations between the texts, $F(2, 116) = 7.6, p < .01$: FLLs’ emotions fluctuated significantly more in the negative text than in the positive text ($t(58) = -4.2, p < .001$). The positive text gave way to the least amount of changes in emotion overall, though differences between the positive and neutral texts ($t(58) = -1.9, p = .056$) and between the negative and neutral texts ($t(58) = -1.8, p = .074$) only approached significance. In
other words, the negative reading context resulted in greater changes in overall emotion for both linguistic profiles.

In sum, fluctuation in both negative emotion and overall emotional intensity generally paralleled the characterization of each text, showing the most volatility in the negative text and the most stability in the positive text. This pattern of text-emotion congruent fluctuation was particularly pronounced for the HLLs.

4.1.7 Summary of Findings for Research Question 1

In summary, several key findings can be highlighted as a result of the analyses presented in this section in answer to Research Question 1. The findings are important to understand in order to gauge the effectiveness of the manipulation of emotional valence of the three texts (via the choice of a positive, neutral, and negative topic) and to make sense of the emotional state of participants while reading each of the three texts.

First, the overall increase in positive emotions and decrease in negative emotions along the negative-neutral-positive text cline shows that the representative emotions intended for each text were generally reported by readers. By and large, all texts sparked considerable feelings of interest and curiosity for all participants, though HLLs experienced more positive emotions overall than FLLs, regardless of reading context, and responded emotionally in line with every text. The negative valence, whether in texts or in emotions, was associated with more responsiveness in readers overall: The negative text led to higher negative emotion and lower positive emotion for all, and it was negative emotion that changed according to reading context (more during the negative text and less in response to the positive text) for both HLLs and FLLs. Ultimately, these differences in emotion led to a stability in the total emotion that HLLs expressed in every reading. Generally speaking, HLLs also responded more negatively in the negative reading and more
positively in the positive reading than FLLs. Finally, HLLs expressed emotions of a wider range of emotional intensity, as well as lower levels of boredom and a greater depth of fluctuation in general. Taken together, these results suggest that the FLL group was less sensitive to the topic differences in the readings, emotionally responding to all three texts more uniformly than the HLL group, who was more receptive to the themes and emotional triggers that were intended to characterize each of the three readings.

4.2 Research Question 2: The Influence of Emotion-laden Texts and Words on Vocabulary Learning and Retention

Research Question 2 asked: How well will participants learn 18 pseudowords embedded in three emotion-laden (positive, neutral, and negative) texts, immediately after the reading and one week later? This question is really at the heart of the present study, as it tests the theoretical prediction that emotions can either support or get in the way of effective learning. Specifically, we may side with SLA researchers and predict that high negative affect consumes cognitive resources and detracts from attention, memory, and learning achievement (Dewaele & MacIntyre, 2014). Alternatively, it may be that the results align better with psychologists who predict that emotional materials, whether positive or negative in nature, enhance memory (Frances et al., 2019) and, therefore, may be expected to facilitate language learning outcomes.

Participants’ answers for all 18 target pseudowords on the vocabulary test (elicited in three response formats: form recognition, translation, and multiple choice) were coded for correctness. All target pseudowords that participants marked as “recognizable” were given a score of 1 in the form recognition test. For example, marking torbir (to write), which appeared in the positive text, was given a 1; marking tuches, which was not present in any text, was scored a 0. For the translation subtest, all words and synonyms from the same word family as the English translations
presented in the texts for each pseudoword were scored 1, and all other answers were scored 0. Examples of answers coded as 1 included *poor* for *poverty* (sombal); examples of answers coded as 0 included *places* for *jails* (lenfes). For the multiple choice subtest, only one of the four multiple choice options for each pseudoword matched the English translation given in the text and was given a score of 1. To illustrate, the word *funtir* had a response of (a) *to study*, (b) *to teach*, (c) *to coach*, and (d) *to prepare*. If a participant chose (b) *to teach*, the answer was awarded a 1. To increase reliability of the mixed effects analysis, the total vocabulary scores summed up across the three subtests and response formats were used as dependent variables. That is, these total vocabulary test scores were calculated for each word by adding the scores of the three individual scores for form recognition, translation, and multiple choice. Because two of each type of emotion word were included in each text, the maximum score for each word type within each text is 6 (with 2 points possible for each of the three vocabulary tests). The maximum score for these simple scores (i.e., without nesting) is 18.

The average score for each type of word (positive, negative, neutral) separately within each text is presented in Table 9 for the immediate post-test, separately for HLLs and FLLs, as well as for all participants. The Table also shows in bold the average score for each text (when word type is not considered) and in italics the average score for each word type (when emotion text is not considered). As it can be seen, the means remain very low, judging from the values in bold and italics between 6.28 and 9.14 out of 18. This means that learning the 18 pseudowords encountered during the reading of the three passages was difficult for all participants. Table 10 shows the same data for the delayed post-test, one week after the reading took place. It can be seen there that participants’ memory of the pseudowords deteriorates slightly, though retention is only slightly
Table 9. Average immediate posttest scores by text and word type

<table>
<thead>
<tr>
<th></th>
<th>HLLs (n=64)</th>
<th>FLLs (n=57)</th>
<th>All (n=121)</th>
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<td>M</td>
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Note. The maximum for scores in bold and italics is 18; all other scores are out of a maximum 6.

Table 10. Average delayed posttest scores by text and word type

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<th>HLLs (n=64)</th>
<th>FLLs (n=57)</th>
<th>All (n=121)</th>
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Note. The maximum for scores in bold and italics is 18; all other scores are out of a maximum 6.
weaker as shown in marginally lower values than on the immediate post-test, between 5.34 and 8.42 in bold and italics (out of 18).

All inferential analyses were performed independently for post- and delayed posttest scores using mixed-effects models with random effects for participants using the lme4 package (version 1.1-7) of R (version 3.1.1). First, for the immediate posttest model, the dependent variable was defined as the total immediate posttest vocabulary score. The analysis was conducted with contrast coding, with one level for each variable specified as a reference level. Coefficients therefore represent the difference from the reference level, or baseline, which is indicated in what follows by underlining. The simple fixed effects were linguistic profile (FLL, HLL), text (positive, neutral, negative), and word type (positive, neutral, negative), and included a full factorial design, with all interaction terms linguistic profile × text × word type. The random effects structure included participants. Models were fit using a technique of maximum likelihood. Fixed effects with an absolute value of the t statistic greater than or equal to 2.0 were considered significant (Gelman & Hill, 2007).

Table 11 reports the results of the best-fitting model for vocabulary learning on the immediate posttest. The simple effects of linguistic profile, text, and word type were significant. With FLLs defined as the baseline, the negative estimate for profile signifies that a higher total score is predicted on the immediate posttest for FLLs (β = -.39; SE = .16; t = -2.4) than for HLLs. Text was also found to be a significant predictor, with FLLs predicted to perform better on target words presented in the neutral and negative texts than in the positive text. Finally, a significant main effect was also found for word type: FLLs were more likely to perform better on neutral words than on positive emotion words. No other main effects or interactions were significant (all ts < 1.5), indicating that the prediction for HLLs paralleled that of the FLLs, with a greater
likelihood for a better score in the neutral and negative texts and for neutral words overall. Additionally, the absence of any interactions also signifies that no participants would be expected to have an advantage for learning any specific emotion word type (positive, neutral, or negative) within any given text (positive, neutral, negative).

Table 11. Best-fitting model for Research Question 2 immediate posttest data

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<th>$t$</th>
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| Random Effects                |                   |     |         |     |      |          |
| Participant***                |                   |     |         |     |      | < .001  62 |

Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.

Table 12. Best-fitting model for Research Question 2 delayed posttest data

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<tr>
<td>Neutral Text***</td>
<td>.30</td>
<td>.09</td>
<td>3.5</td>
<td>964</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>Negative Text*</td>
<td>.19</td>
<td>.09</td>
<td>2.2</td>
<td>964</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Neutral Word Type***</td>
<td>.58</td>
<td>.09</td>
<td>6.8</td>
<td>964</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>Negative Word Type</td>
<td>.13</td>
<td>.09</td>
<td>1.5</td>
<td>964</td>
<td>.134</td>
<td></td>
</tr>
</tbody>
</table>

| Random Effects                |                   |     |         |     |      |          |
| Participant                  |                   |     |         |     |      | < .001  65 |

Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.
The best-fitting model for vocabulary learning on the delayed posttest (see Table 12) corresponds with the predictions estimated for the immediate posttest, where higher scores are again predicted for FLLs ($\beta = -0.39; SE = 0.16; t = -2.4$). All participants are also predicted to retain neutral vocabulary target items best and to hold better knowledge of target items presented in the neutral and negative texts.

In sum, it can be concluded from the results of these two mixed effects models that FLLs outperformed HLLs and learned the pseudowords better than the HLLs in every text type. Still, all learners performed best on target items encountered in the neutral and negative reading contexts and learned neutral words best overall both immediately as well as one week later in the delayed posttest.

4.3 The Influence of Affect on Vocabulary Learning and Retention

Research Question 3 asked: How will participants’ emotional predispositions towards Spanish, in general (i.e., their trait emotions, and their felt linguistic insecurity), and their reported emotions while reading, specifically (i.e., their state emotions), influence their vocabulary learning, immediately after reading and one week later?

First, average scores for each of the five trait emotions towards learning Spanish (joy, interest, anxiety, shame, and guilt) and for the construct of linguistic insecurity, measured for the first time for HLLs and FLLs in the present study, were calculated both for the full sample as well as independently for the two linguistic profiles, the HLL and FLL groups. The score for each of the five trait emotions and linguistic insecurity was calculated separately for each week (from Sessions 1 and 2, respectively). The scores submitted to analysis were then the averages for each of the five trait emotions and linguistic insecurity between the two weeks (for example, the final score for trait guilt would be the average of the two scores for guilt from Session 1 and Session 2,
respectively). This was done to account for other random factors that could affect participants’ perceptions of their trait emotions and linguistic insecurity (e.g., receiving a poor grade just before participating in the study, fatigue, hunger, stress about an upcoming midterm or work schedule, etc.) and to increase the reliability of the scores. The maximum for each variable is 7, with a higher number signifying stronger feelings of a given trait emotion (i.e., stronger feelings of joy, anxiety, etc. towards Spanish) or stronger levels of linguistic insecurity. Averages for each variable are presented in Table 13.

Table 13. Average ratings for 5 trait emotions and linguistic insecurity

<table>
<thead>
<tr>
<th></th>
<th>HLLs (n=64)</th>
<th>FLLs (n=57)</th>
<th>All (n=121)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td>Joy*</td>
<td>6.14</td>
<td>0.68</td>
<td>5.74</td>
</tr>
<tr>
<td>Interest*</td>
<td>6.09</td>
<td>0.64</td>
<td>5.78</td>
</tr>
<tr>
<td>Guilt</td>
<td>4.42</td>
<td>1.50</td>
<td>4.84</td>
</tr>
<tr>
<td>Shame</td>
<td>4.13</td>
<td>1.41</td>
<td>4.62</td>
</tr>
<tr>
<td>Anxiety*</td>
<td>3.38</td>
<td>1.51</td>
<td>4.20</td>
</tr>
<tr>
<td>Linguistic Insecurity</td>
<td>3.13</td>
<td>1.30</td>
<td>3.49</td>
</tr>
</tbody>
</table>

Note. All scores are out of a maximum 7 (1 = Strongly disagree, 7 = Strongly agree). *Statistically significant difference according to t-test comparisons with Benjamini-Hochberg correction (see also Section 4.1).

As can be seen in Table 13, all participants, regardless of linguistic profile, expressed high levels of positive emotions towards studying Spanish (joy, interest), which were also stronger than negative emotions towards Spanish (guilt, shame, anxiety). As reported in the t-tests in Section 4.0, HLLs exhibited moderately higher levels of joy (d = .50) and interest (d = .49) and somewhat lower levels of anxiety (d = -.54) than FLLs. The negative emotion of anxiety as well as linguistic insecurity were the two least felt, particularly for the HLL group (3.38 and 3.13, respectively).
Notably, HLLs expressed more intense positive emotions and less intense negative emotions and linguistic insecurity than FLLs towards Spanish. The dividing gap between positive and negative affective trait predispositions towards Spanish was greater for HLLs (a 1.67 difference between guilt and interest) than for FLLs (a difference of only .9 between guilt and joy). In addition, HLLs’ emotions covered a wider range (from 3.13 linguistic insecurity to 6.14 joy) than FLLs’ (from 3.49 linguistic insecurity to 5.78 interest). In sum, all the descriptive evidence points to the conclusion that HLLs showed a stronger tendency towards positive feelings and less negativity towards their HL studies, but rather similar levels of linguistic confidence when it comes to their Spanish use, than FLLs, as previously reported also in Section 4.0.

Statistical analyses for models of best-fit were conducted independently for post- and delayed posttest vocabulary scores using the same mixed-effects models approach with random effects for participants as described for the previous two research questions. For both the immediate and delayed posttest models, the dependent variables were again defined as the total immediate and delayed posttest vocabulary scores, respectively. Individual models for the simple fixed effects of guilt, shame, anxiety, and linguistic insecurity showed no significant predictors for either post- or delayed posttest scores. Thus, the simple fixed effects (i.e., all negative trait emotions and linguistic insecurity) and their interactions were removed in order to arrive at the best models for the post- and delayed posttests, and only joy and interest towards Spanish, two positive trait emotions, were retained. The analysis was conducted with contrast coding, and the following underlined groups act as reference levels. Simple fixed effects were linguistic profile (FLL, HLL), joy, interest, text (positive, neutral, negative), and word type (positive, neutral, negative), including a full factorial design with all interaction terms linguistic profile × joy × interest × text × word type. The random effects structure included participants. Models were fit
using maximum likelihood techniques, and an absolute value for the $t$ statistic of greater than or equal to 2.0 implied significance for a fixed effect (Gelman & Hill, 2007).

Table 14 reports the results of the best-fitting model for the immediate posttest. *Interest* was a significant simple predictor for the immediate posttest, meaning that those with higher interest in Spanish were more likely to obtain a higher total score on the immediate posttest ($\beta = .87; SE = .27; t = 3.2$). As presented above in 4.2, *linguistic profile* retained significance, meaning that, when affect is taken into account, FLLs are still predicted to outperform HLLs on vocabulary learning. However, unlike the analyses for all previous research questions, *text* and *word type* are not part in the best model of best for this research question. The significant interaction between profile and interest indicates that the model predicts FLLs, but not HLLs, with higher interest in Spanish to perform better on the immediate posttest ($\beta = .07; SE = .03; t = 2.5$). It is noteworthy that *joy* was not a meaningful effect in the best-fitting model.

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate ($\beta$)</th>
<th>$SE$</th>
<th>$t$</th>
<th>df</th>
<th>$p$</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.14</td>
<td>.73</td>
<td>1.6</td>
<td>118</td>
<td>.118</td>
<td></td>
</tr>
<tr>
<td>Profile**</td>
<td>-.48</td>
<td>.16</td>
<td>-2.9</td>
<td>118</td>
<td>&lt; .01</td>
<td></td>
</tr>
<tr>
<td>Interest*</td>
<td>.28</td>
<td>.12</td>
<td>2.3</td>
<td>118</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Profile x Interest*</td>
<td>.07</td>
<td>.03</td>
<td>2.5</td>
<td>119</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td><strong>Random Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt; .001</td>
<td>.62</td>
</tr>
</tbody>
</table>

Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.

The data for delayed posttest scores were analyzed using mixed models and the same fixed and random effects as for the immediate posttest described above. Table 15 shows the best-fitting model for the delayed posttest. Tests of the fixed effects showed that, while the interaction between
linguistic profile and interest remained a significant predictor ($\beta = .07; SE = .03; t = 2.5$), the simple effect of interest was no longer a significant predictor for vocabulary score ($\beta = .21; SE = .13; t = 1.6$). This means that FLLs with increased levels of interest towards Spanish are predicted to retain vocabulary knowledge after a week better than FLLs with lower interest, but that interest does not predict the durability of vocabulary learning for the HLLs.

**Table 15.** Best-fitting model for Research Question 3 delayed posttest trait emotions data

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate ($\beta$)</th>
<th>SE</th>
<th>$t$</th>
<th>$df$</th>
<th>$p$</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fixed Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept</td>
<td>1.24</td>
<td>.75</td>
<td>1.7</td>
<td>118</td>
<td>.099</td>
<td></td>
</tr>
<tr>
<td>Profile**</td>
<td>-.45</td>
<td>.17</td>
<td>-2.7</td>
<td>118</td>
<td>&lt; .01</td>
<td></td>
</tr>
<tr>
<td>Interest</td>
<td>.21</td>
<td>.13</td>
<td>1.6</td>
<td>118</td>
<td>.110</td>
<td></td>
</tr>
<tr>
<td>Profile x Interest*</td>
<td>.07</td>
<td>.03</td>
<td>2.5</td>
<td>119</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td><strong>Random Effects</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>&lt; .001</td>
<td>.64</td>
</tr>
</tbody>
</table>

Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.

With respect to the 12 state emotions reported during the readings, Table 8 (presented earlier in Section 4.1) showed the average level felt of each emotion for both groups and in each of the three readings (positive, neutral, negative). In order to reduce the number of variables entered for the mixed effects models to be parsimonious, the sum of the six positive state emotions (surprise, curiosity, excitement, joy, interest, and motivation) and the sum of the six negative state emotions (shame, guilt, anxiety, confusion, frustration, and boredom) were, respectively, chosen to represent participants’ state emotions for Research Question 3. Models of best-fit were established independently for post- and delayed posttest scores using again a mixed-effects models approach with random effects for participants. For both the immediate and delayed posttest models, the dependent variables were again defined as the total immediate and delayed posttest
vocabulary scores, respectively. The analysis was conducted with contrast coding, and the following underlined groups act as reference levels. Simple fixed effects were linguistic profile (FLL, HLL), text (positive, neutral, negative), word type (positive, neutral, negative), positive emotion, and negative emotion, including a full factorial design with all interaction terms linguistic profile × text × word type × positive emotion × negative emotion, with participants as the random effect. Models were fit using maximum likelihood techniques, and an absolute value for the t statistic of greater than or equal to 2.0 implied significance for a fixed effect (Gelman & Hill, 2007).

Tables 16 and 17 show the results of the best-fitting models for the immediate and delayed posttests, respectively. Unlike models for previous research questions, the best-fitting models did not include linguistic profile as a meaningful effect. Text, Positive Emotion, and Negative Emotion were all significant predictors of both sets of posttest scores. Most notably, the significance of both types of state emotion (positive and negative) as negative predictors in both models signifies that participants who experience more emotion, whether positive or negative, while completing the readings are more likely to score lower on the vocabulary tests, both immediately and one week later. However, of those experiencing high levels of positive emotion, those who also experienced higher negative emotions were slightly yet significantly more likely to perform well on vocabulary posttests, which is implied by significant positive emotion × negative emotion interactions (immediate: β = .01; SE = .004; t = 2.9; delayed: β = .01; SE = .004; t = 2.9). In other words, individuals who reported strong positive emotions while reading are predicted to benefit, albeit to a small degree, in vocabulary learning and retention from feeling concurrent negative emotions. Thus, a mixed of both positive and negative emotions is expected to be advantageous for vocabulary outcomes. The significant interactions between the negative text and both positive and
Table 16. Best-fitting model for Research Question 3 immediate posttest state emotions data

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate (β)</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept***</td>
<td>3.82</td>
<td>.65</td>
<td>5.8</td>
<td>890.5</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>Neutral Text</td>
<td>-.30</td>
<td>.78</td>
<td>-.4</td>
<td>990.8</td>
<td>.701</td>
<td></td>
</tr>
<tr>
<td>Negative Text*</td>
<td>-1.63</td>
<td>.82</td>
<td>-2.0</td>
<td>1020</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Positive (Emotion)*</td>
<td>-.10</td>
<td>.04</td>
<td>-2.4</td>
<td>1013</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Negative (Emotion)**</td>
<td>-.12</td>
<td>.07</td>
<td>-2.9</td>
<td>992.1</td>
<td>&lt; .01</td>
<td></td>
</tr>
<tr>
<td>Neutral Text × Positive</td>
<td>.02</td>
<td>.05</td>
<td>.4</td>
<td>995.2</td>
<td>.696</td>
<td></td>
</tr>
<tr>
<td>Negative Text × Positive*</td>
<td>.14</td>
<td>.06</td>
<td>2.5</td>
<td>1047</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Neutral Text × Negative</td>
<td>.07</td>
<td>.08</td>
<td>.9</td>
<td>993.8</td>
<td>.343</td>
<td></td>
</tr>
<tr>
<td>Negative Text × Negative*</td>
<td>.19</td>
<td>.08</td>
<td>2.6</td>
<td>1040</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Positive × Negative**</td>
<td>.01</td>
<td>.004</td>
<td>2.9</td>
<td>1038</td>
<td>&lt; .01</td>
<td></td>
</tr>
</tbody>
</table>

Random Effects
| Participant***                      | < .001       | .58 |

Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.

Table 17. Best-fitting model for Research Question 3 delayed posttest state emotions data

<table>
<thead>
<tr>
<th>Effect</th>
<th>Estimate (β)</th>
<th>SE</th>
<th>t</th>
<th>df</th>
<th>p</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixed Effects</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intercept***</td>
<td>3.34</td>
<td>.64</td>
<td>5.2</td>
<td>899</td>
<td>&lt; .001</td>
<td></td>
</tr>
<tr>
<td>Neutral Text</td>
<td>-1.91</td>
<td>.80</td>
<td>-2.4</td>
<td>1027</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Negative Text*</td>
<td>-.11</td>
<td>.04</td>
<td>-2.7</td>
<td>1020</td>
<td>&lt; .01</td>
<td></td>
</tr>
<tr>
<td>Positive (Emotion)**</td>
<td>-.14</td>
<td>.06</td>
<td>-2.3</td>
<td>999.8</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Neutral Text × Positive</td>
<td>.06</td>
<td>.05</td>
<td>1.3</td>
<td>994.7</td>
<td>.212</td>
<td></td>
</tr>
<tr>
<td>Negative Text × Positive**</td>
<td>.16</td>
<td>.05</td>
<td>3.1</td>
<td>1045</td>
<td>&lt; .01</td>
<td></td>
</tr>
<tr>
<td>Neutral Text × Negative</td>
<td>.10</td>
<td>.08</td>
<td>1.4</td>
<td>993.3</td>
<td>.173</td>
<td></td>
</tr>
<tr>
<td>Negative Text × Negative*</td>
<td>.16</td>
<td>.07</td>
<td>2.1</td>
<td>1038</td>
<td>&lt; .05</td>
<td></td>
</tr>
<tr>
<td>Positive × Negative**</td>
<td>.01</td>
<td>.004</td>
<td>2.9</td>
<td>1044</td>
<td>&lt; .01</td>
<td></td>
</tr>
</tbody>
</table>

Random Effects
| Participant***                      | < .001       | .62 |

Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.

Negative emotions mean that participants who during the negative reading experienced more overall positive or negative emotion were more likely to score higher on both vocabulary posttests.
The same predicted benefit of increased emotion was not seen for positive or neutral texts, as demonstrated by the lack of significant interactions.

In sum, FLLs with lower levels of interest in studying Spanish are predicted to learn vocabulary worse than FLLs with higher levels of interest. HLLs, on the other hand, are not seen to be affected by decreases in this trait emotion. In general, greater levels of positive or negative state emotion, particularly in the negative reading context, lead to reduced success in vocabulary learning. However, for those learners who tend to feel greater positive emotion, regardless of reading context or word type, their vocabulary learning can actually benefit from additional and more diverse feelings if they are negative in nature.

4.4 The Influence of Motivation on Vocabulary Learning and Retention

Research Question 4 asked: *How will participants’ motivation to learn Spanish, as measured by the L2MSS model, influence their vocabulary learning, immediately after reading and one week later?*

First, scores on the individual items that represent each of the seven subcomponents of the L2 Motivation Self System – intended effort, ideal L2 self/own, ideal L2 self/other, ought-to self/own, ought-to self/other, willingness to communicate, and learning experience – were averaged for each participant in order to provide one score for each of the seven constructs. Scores range from 1, for subcomponents contributing very little to participants’ L2 motivation, to 7, for subcomponents representing a great amount of L2 motivation. An overall score for total L2 motivation was also calculated by taking the sum of all subcomponent scores for each participant, with a possible maximum of 49. Again, the average between scores from Session 1 and Session 2, respectively, was taken as the definitive L2 motivation score for each participant (see Section 4.3).
Table 18 shows the average for each of the seven constructs, in addition to total motivation (in bold), for both HLLs and FLLs, as well as in general for all participants.

**Table 18.** Average ratings for motivation and its subcomponents

<table>
<thead>
<tr>
<th></th>
<th>HLLs (n=64)</th>
<th>FLLs (n=57)</th>
<th>All (n=121)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
<td>M</td>
</tr>
<tr>
<td><strong>Motivation</strong>*</td>
<td>38.18</td>
<td>4.11</td>
<td>33.32</td>
</tr>
<tr>
<td>Intended Effort</td>
<td>5.38</td>
<td>0.84</td>
<td>5.42</td>
</tr>
<tr>
<td>Ideal L2 Self/Own*</td>
<td>6.40</td>
<td>0.51</td>
<td>5.64</td>
</tr>
<tr>
<td>Ideal L2 Self/Other*</td>
<td>5.55</td>
<td>0.99</td>
<td>4.88</td>
</tr>
<tr>
<td>Ought-to L2 Self/Own*</td>
<td>4.90</td>
<td>1.07</td>
<td>3.84</td>
</tr>
<tr>
<td>Ought-to L2 Self/Other*</td>
<td>4.38</td>
<td>1.13</td>
<td>2.96</td>
</tr>
<tr>
<td>Willingness to Communicate*</td>
<td>5.87</td>
<td>1.03</td>
<td>5.34</td>
</tr>
<tr>
<td>Learning Experience*</td>
<td>5.70</td>
<td>0.70</td>
<td>5.24</td>
</tr>
</tbody>
</table>

*Note. The maximum for scores in bold is 49; all other scores are out of a maximum 7 (Likert scale 1 = *Strongly disagree*, 7 = *Strongly agree*). *Statistically significant difference in favor of HLLs, according to *t*-test comparisons with Benjamini-Hochberg correction (see also Section 4.1).*

As an inspection of the descriptive statistics in Table 18 reveals, and as already reported in Section 4.0, both groups were similarly committed to expend effort and time into learning Spanish, as shown in equivalent means self-reported for intended effort (both above 5 out of 7, *d* = -.05), but FLLs reported lower levels than HLLs for every other subcomponent of motivation. While the various constructs almost all average above 4 for both groups (with the exception of *outright*-to L2 *self*/other, which is markedly low for FLLs: 2.96 out of 7), the range in motivation for each linguistic profile suggests consistently high L2 motivation for HLLs. Notably, FLLs rate the *outright*-to L2 *self*/own and *other* as particularly uninfluential to their L2 motivation (2.96 and 3.84, respectively). By comparison, while still rated the lowest by HLLs, the two constructs appear to have a greater impact on this group’s general L2 motivation (rated at 4.38 and 4.90). With respect to the most influential construct, *ideal L2 self*/own saw the highest ratings for both groups, though
to a larger degree for HLLs (rated a 6.40 compared to the next most influential HLL subcomponent, willingness to communicate at a 5.87) than for FLLs (at a 5.64 compared to the second most influential subcomponent, 5.42 for intended effort). The pattern for overall motivation (i.e., expressed as the sum of all subcomponent scores for each participant, with a possible maximum of 49) generally matched the patterns for individual subcomponents. In fact, as already reported in Section 4.0, HLL had considerably higher levels than FLLs on ought-to L2 self/other \((d = 1.36)\), ideal L2 self/own \((d = 1.11)\), and ought-to L2 self/own \((d = .95)\), whereas the two groups were less far apart, but still favoring HLLs, on the ideal L2 self/other \((d = .67)\), learning experience \((d = .62)\), and willingness-to-communicate \((d = .47)\). The same overwhelming picture of superior motivation for the HLLs over the FLLs is seen in overall motivation \((m = 38.18 \text{ vs. } 33.32 \text{ out of } 49, \ d = 1.10)\). Given this parallel, and in an effort to be parsimonious in the number of variables entered into mixed effects models, so as to simplify the interpretation of potential effects, overall motivation was taken to represent participants’ L2 motivation in all analyses conducted to answer Research Question 4.

Analyses were conducted independently for post- and delayed posttest vocabulary scores using the same mixed-effects models approach with random effects for participants as described previously for Research Question 2. For the immediate and delayed posttest models, the dependent variables were again defined as the total immediate and delayed posttest vocabulary scores, respectively. The analysis was again conducted with contrast coding, and the underlined groups act as reference, or baseline, levels. The simple fixed effects were motivation, linguistic profile (FLL, HLL), text (positive, neutral, negative), and word type (positive, neutral, negative), including a full factorial design with all interaction terms motivation \(\times\) linguistic profile \(\times\) text \(\times\) word type. The random effects structure included participants. Significance is reported with
respect to the reference case of the relationship between FLLs’ motivation and scores for positive word type in the positive text. As with the analyses for the previous research question, models were fit using maximum likelihood techniques, and an absolute value of greater than or equal to 2.0 for the $t$ statistic indicated significance for any fixed effect (Gelman & Hill, 2007).

Table 19 reports the results of the best-fitting model for the immediate posttest. The simple effect of motivation was significant for the immediate posttest: those with higher L2 motivation were more likely to obtain a higher total score on the immediate posttest ($\beta = .04; SE = .02; t = 2.0$). Echoing the results for Research Question 2 (see Section 4.2), linguistic profile, text, and word type retained significance, meaning that, when motivation is taken into account, these three effects remain as significant predictors of vocabulary learning outcome. No other main effects or interactions were significant (all $ts < 1.1$), indicating that all participants with high motivation, regardless of linguistic profile, were more likely to achieve a better immediate posttest score, irrespective of where the word appeared (whether in the positive, neutral, or negative text) or of word type (whether positive, neutral, or negative in valence). In other words, those with higher motivation were predicted to learn all target items and in all reading contexts better than those with lower motivation.

For the delayed posttest model, the dependent variable was total delayed posttest vocabulary score. The simple fixed and random effects were the same as in the immediate posttest model, again with all interaction terms. Table 20 reports the results of the best-fitting model for the delayed posttest. In contrast to the immediate posttest, the analysis for delayed posttest did not reveal any significant effect for motivation, meaning that participants with high L2 motivation were not predicted to show better retention of knowledge of target vocabulary items after a week than those with low motivation ($\beta = .03; SE = .02; t = 1.4$). Linguistic profile, text, and word type
again retained significance, meaning that, when motivation was included in the model for retention one week later, these effects retained significance as predictors for vocabulary learning achievement. No other main effects or interactions were significant (all ts < 1.5).

Table 19. Best-fitting model for Research Question 4 immediate posttest data

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<tr>
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<td>.09</td>
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<td>.689</td>
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Random Effects

Participant*** < .001 .60

Note. |t| ≥ 2.0, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * p < .05; ** p < .01; *** p < .001; • p < .1, approaching significance.

Table 20. Best-fitting model for Research Question 4 delayed posttest data

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Random Effects

Participant*** < .001 .62

Note. |t| ≥ 2.0, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * p < .05; ** p < .01; *** p < .001; • p < .1, approaching significance.

In sum, based on these results it can be concluded that learners with higher motivation, whether HLL or FLL, initially learn vocabulary items better than those with lower motivation.
However, this benefit is predicted to be short-lived: higher motivation does not imply better retention of vocabulary items learned one week prior.

4.5 The Influence of Learning Characteristics on Vocabulary Learning and Retention

Research Question 5 asked: What other learner characteristics beyond HLL vs. FLL linguistic profile may contribute to explaining the findings?

Of the many learner demographics collected through the background questionnaire and EIT, I chose to investigate three learner characteristics likely to be important. Proficiency is an obvious learner variable of interest, since vocabulary learning can be moderated by proficiency (Lee & Pulido, 2017), and given that the range of emotions, insecurities, and motivation felt by language learners can greatly vary depending on their proficiency levels (see review in Section 2.2), I also chose university experience, that is, whether the participant was recruited into the study from a public or a private university, which can affect the socioeconomic and family background as well as curricular-educational experiences students brought to the study as participants. Finally, gender was also selected for examination in Research Question 5, for several reasons. The myth that women may be more successful language learners than men occasionally finds some empirical support (Davies, 2004; Graham, 1995; Van der Slik, Van Hout, & Schepens, 2015), and males are found to be disproportionately weary of studying foreign languages (Chaffee, Lou, Noels, & Katz, 2020; Schmenk, 2004; Wucherer & Reiterer, 2018). Moreover, the SLA literature has suggested some affective differences related to gender in language classrooms (Becirovic, 2017; Dewaele, MacIntyre, Boudreau, & Dewaele, 2016; and in HLE, Henderson et al., 2020), and psychological emotion literature also occasionally posits that females are more emotion-prone and emotionally impressionable than males (Brebner, 2003; Lithari et al., 2010; Ward & King, 2018).
To test whether proficiency, university experience, and gender might predict vocabulary scores, a mixed-effects model was fit for the immediate and delayed posttest scores independently. The dependent variables for each analysis were defined as the total immediate and delayed posttest vocabulary scores, respectively. Predictor variables for all models included the fixed effect factors profile (FLL, HLL), Spanish proficiency (as measured by an EIT), university experience (public, private), and gender, as well as linguistic profile x learner characteristic (proficiency, university experience, gender) interactions, with underlined groups acting as the baseline levels. Random intercepts were included for participants. Tables 21 and 22 show the best-fitting models for immediate and delayed posttests, respectively.

Neither university experience nor gender appeared in the best-fitting models as a meaningful effect. The analyses for both the immediate and delayed posttest revealed a significant main effect of linguistic profile, as previously stated for Research Question 2, but no main effect of proficiency. This implies that no general prediction could be made for all participants together with respect to their level of Spanish proficiency. An interaction, however, was found in both models for linguistic profile x proficiency, suggesting better immediate vocabulary learning and retention for FLLs with more advanced proficiency levels. That is, the predictive power of proficiency for vocabulary learning, both immediate and one week later, is at work for FLLs but not for HLLs. No other learner characteristics or interactions were significant ($t < 1.2$).
Table 21. Best-fitting model for Research Question 5 immediate posttest data

<table>
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<tr>
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<td>.2</td>
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</tr>
</tbody>
</table>

**Random Effects**

| Participant***        | < .001             | .62 |

*Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.*

Table 22. Best-fitting model for Research Question 5 delayed posttest data

<table>
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<th>Effect</th>
<th>Estimate ($\beta$)</th>
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<td>118</td>
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**Random Effects**

| Participant***        | < .001             | .64 |

*Note. $|t| \geq 2.0$, indicating a significant effect (Gelman & Hill, 2007). Degree of significance is indicated as: * $p < .05$; ** $p < .01$; *** $p < .001$; • $p < .1$, approaching significance.*

In sum, neither university experience nor gender are expected to affect vocabulary learning for any learners in this study. High Spanish proficiency also does not predict better vocabulary learning for HLLs. However, a higher proficiency in Spanish does predict greater success in vocabulary learning and retention for FLLs.

4.6 The Open-Ended Responses on Two Exit Questionnaires: Qualitative Insights

In understanding the research questions driving the current study, it is helpful to complement the quantitative insights gleaned through the Research Questions of the study with qualitative responses that were elicited via two open-ended exit questionnaires. It will be
remembered that the present study incorporated an element of mixed-methods research frequently recommended (Mackey & Gass, 2005) but less frequently implemented in studies on affect, individual differences, and language learning. Namely, the participants were invited to voluntarily write responses to these open-ended probes: (1) at the end of the first session, which gave each participant the opportunity to comment on any of the three readings, after having completed the numerical ratings vocabulary tests for all three, and (2) one week later, when they returned for the delayed post-test. In this final section of the Results chapter, I discuss these open-ended responses and argue that they offer triangulating evidence that helps understand and interpret the main findings.

The qualitative results of exit questionnaires offer further evidence of the quantitative finding that FLL felt a low level of connection with the positive reading, which discussed the benefits of the Latinx community to the U.S. Given the opportunity to comment on any of the three readings, only 5% of FLL participants ($N = 3$) reflected on the emotions they felt during the positive reading and only 7% ($N = 4$) highlighted it as memorable or influential one week later. One FLL shared,

(1) “The positive texts [sic] about immigration stood out most to me because I hope to work in immigration policy one day.” (P016, FLL)

This comment is representative of FLLs’ reflections on the positive reading: The few FLLs who commented on the positive text do cite their support of immigrant communities and link the text’s themes to their own beliefs, but their statements are generally absent of any mention of emotional connection to the texts’ themes and indicative of low-arousal. On the other hand, 13% of HLLs ($N = 8$) emphasized the positive text in their reflections. This is still a small number, particularly if we consider that, as per the quantitative results for Research Question 1, HLLs did self-rate their
emotions as more positive in their quantitative ratings to the reading. Nevertheless, those few HLLs who chose to mention the positive reading in their open-ended comments referred to positive emotions brought up by the text:

(2) “The [positive reading] made me realize that us Hispanic [sic] do make a big difference in this country and that I should feel proud of my family's roots.” (P004, HLL)

(3) “The [positive] reading made me feel the most joyous because it talked about how the latinx [sic] community has benefitted our country so much, and that makes me proud.” (P054-HLL)

(4) “The [positive reading] had me feeling proud of my Latinx background, as I know that our contributions are essential to this country.” (P113-HLL)

In examples 2 – 4, HLLs show that the pride they felt upon reading about their community in a positive light led to positive emotions, such as joy, while reading. Noticeable too is the use of first-person pronouns signaling a sense of affiliation with the U.S. Latinx communities: us Hispanic, my family’s roots, my Latinx background. One week later, 19% of HLLs (N = 12) recalled the positive text in their exit questionnaire responses but now no mentions of pride, joy, or other positive emotions are made by name:

(5) “[The positive text] stood out because it talked about the positive impact of Latinos in the US and the importance of the Spanish language and culture.” (P032-HLL)

This example, representative of the comments about the positive texts made after a one-week delay by a few HLLs in their exit questionnaires, suggests that, while HLLs quantitatively reported positive emotions during the positive text, the intensity of these emotions and the emotional connection with the reading were not long-lasting. Moreover, the relative lack of emotional
fluctuation by both groups further suggests that, though positively received, overall the positive
text may have had little emotional impact on participants and low states of arousal. Inciting low
negative emotion for all and high positive emotion for the HLL group from the start, as per the
quantitative results, the central theme of the positive text—the benefits of the Latinx community
to the U.S.—seems to have led to stable emotions for both groups and little reflection or connection
to the reading in comparison to the neutral and negative readings, as will be seen below.

The quantitative findings (see Section 4.1) revealed that the neutral text, which was about
the state of bilingual education in the USA, was received by participants much like the positive
text. The results from the two open-ended exit questionnaires augment this finding by further
revealing that, regardless of linguistic profile, participants’ emotional involvement with the neutral
reading might have been even more pronounced and longer lasting than with the positive text.
Upon completing all three texts, on the exit questionnaire for Session 1, 23% of HLLs \( (N = 15) \)
and 24% of FLLs \( (N = 13) \) chose to highlight the neutral reading as noteworthy. Examples 6 – 9
demonstrate that both FLLs and HLLs related the neutral reading’s theme of bilingualism to their
own lives, though in different ways:

(6) “It did not make me think of anything related to myself in particular, but many of
my friends and coworkers grew up in the ESL programs at my school, which was
discussed extensively in the [neutral] reading. Additionally, I used to be a peer tutor
at my high school, and we would tutor foreign students. It was interesting to
consider how their skills could have developed better or worse if our school’s ESL
program were formatted only a little bit differently.” (P015-FLL)

(7) “I work at a bilingual school and thus the [neutral] text about this was interesting
to me.” (P049-FLL)
(8) “I feel it [sic] so frustrating the early education system of dual lingual programs, or ESL programs. I learned how to read [and] write in English in 5th grade, because I knew how to speak English but not write or read... but it went well.” (P037-HLL)

(9) “The [neutral] text of bilingualism resigned [sic] with me because I learned English as a second language after I immigrated from El Salvador. I remembered the difficulty of learning English in my early teen years, but that exposure of struggling learning a new language make [sic] me see the world through different lenses from different languages.” (P110-HLL)

(10) “The text that I related was with being bilingual because I lived in Bolivia for some years and when I entered high school in the US I had to relearn English and I was placed in an ESL program. I strongly believe that being bilingual es very beneficial.” (P021-HLL)

FLLs (Examples 6 and 7) mark the neutral text as interesting and make connections to their work or to experiences that peers and colleagues have shared with them about ESL programs. FLLs do not relate to the text through personally lived or intensely emotional experiences but, instead, vicariously through others, which shines through in the perhaps matter-of-fact way they recall the reading. In contrast, HLLs did make connections between the neutral text and their own language learning biographies, some highlighting negative emotionality, by recalling feelings of frustration with their own ESL experience (Example 8) or the struggles they had to overcome to learn English (Example 9). Still, even those who were reminded by the neutral text of the challenges they met during their own language learning endeavors noted the overall benefit and positive outcome of the experience (Examples 8 – 10).
As reported in Section 3.2, while the present study classified participants into HLLs and FLLs, based on their linguistic background with regard to Spanish, the FLL group included 17 participants who grew up at home being exposed to a language other than English (or Spanish). In other words, these were HLLs of languages other than Spanish, and they made up 30% of the so-called FLL group. Upon qualitative inspection, many reflections on the neutral reading made by non-Spanish HLLs turned out to closely parallel Spanish HLLs’ responses:

(11) “The third article, which dealt with language acquisition and national sentiments towards bilingualism relates directly to my life, as I am a first-generation American citizen. My entire family is bilingual and supports the prospect of being able to speak more than one language. Members of my family and I have all experienced moments of nativism in the United States. Thus, I had quite a bit of personal investment in the material I was reading.” (P108-FLL, HLL of Albanian)

(12) “ESL and immersion curricula are close to home. Although I learned English as a native language, I had relatives who immigrated to the US and had to go through confusing school curriculum. […] Also, my parents made sure to teach me our mother tongue (Mandarin) in conjunction with English, so we are familiar with speaking a second language and bilingualism.” (P053-FLL, HLL of Mandarin)

Examples 11 and 12 demonstrate that HLLs of other languages, who made up nearly one third of the FLL group, also recalled positive and negative experiences of their own bilingualism in response to the neutral reading, just as the Spanish HLLs did. One week later, the comments that focused on the neutral text increased, and now 38% or 24 HLLs and 32% or 18 FLLs (of them, 4 non-Spanish HLLs) again highlighted the neutral reading as memorable and meaningful to their
own lives, whether vicariously by witnessing others for the English L1 FLLs or biographically for the Spanish and non-Spanish HLLs.

These qualitative results suggest that the topic that may have had a greater than expected emotional influence on learners was one that incited more memories of past experiences and deeper personal investment in participants whose life experiences resonated with the reading content: both HLLs of Spanish, and, unexpectedly, FLLs who were HLLs of other languages. This happened to be the topic of the state of bilingual education in the USA, which was designated by the researcher as the neutral text and indeed was characterized as neutral by the majority of participants in their holistic emotionality rating of the text, yet was quantitatively more similar than dissimilar in emotional character to the positive text.

Thus far, I have argued that the analysis of qualitative responses helped unearth an unexpected but important insight: the neutral topic may have elicited emotions that were more similar than dissimilar to those elicited by the negative text, and perhaps more intensely felt overall than expected. However, as I discuss next, although FLLs’ and HLLs’ self-ratings of emotion place the effects of the neutral text in line with those of the positive text, a careful review of participants’ exit questionnaire answers both immediately after reading and one week later, actually reveals some similarities as well between the neutral and the negative text, once again grounded in personal biographical recounts on linguistic, academic, and social experiences that connected these participants to the text.

In contrast to both the neutral and positive reading contexts, the negative text, which dealt with immigration as a problem, was quantitatively seen to generally lead to low levels of self-rated positive emotion and increased intensity of negative emotion for all participants, as expected (see Section 4.2). Little emotional fluctuation in overall positive emotion showed that both HLLs and
FLLs experienced low levels of positive emotion throughout the entirety of the reading, while higher levels of change in negative emotions imply a steady increase in overall negative emotion for all learners in response to the reading (4.1.6). Open-ended responses support these findings and further flesh out the negative feelings elicited by the text for both FLLs (Examples 13–14) and HLLs (Examples 15–16):

(13) “The first [negative] text made me extremely angry because I have family members who think that way about illegal immigrants. Especially with recent events regarding ICE and the camps immigrants are being put into, the mindset behind that reading made me frustrated.” (P031-FLL)

(14) “The idea that illegal immigrants bring crime and are detrimental to the United States is painful and frustrating to me as I have witnessed firsthand the importance and helpfulness of immigrants in my community and in the nation at large.” (P064-FLL)

(15) “I am frustrated with immigrants being considered a drain to this country. I see how it affect me and my family on a daily bases [sic].” (P126-HLL)

(16) “This made it more frustrating to read the [negative] reading selection because it reminded me of the arguments that I have to face from people that opposed immigration and want to limit opportunities for those who are undocumented. Those people are my family and friends, so anyone that refers to them as illegal will look bad to me.” (P046-HLL)

Feelings of anger and frustration, both negative emotions described in the literature as activating and arousing (Russell, 1980), were mentioned repeatedly as central emotions elicited by the negative text, with 35% (N = 20) of FLLs and 30% (N = 19) of HLLs commenting on the reading.
immediately after finishing the three texts. Much like the neutral text, this reading, which outlined the author’s negative opinions on U.S. immigration, led participants to reflect on their own experiences related to the topic in their comments, though once again, in slightly different lights for FLLs and HLLs. As demonstrated by Examples 13 and 14, FLLs often recounted strained and frustrating relationships with racist family members and the traumatic immigration experiences of classmates and friends. HLLs, however, highlighted their family and own personal immigration biographies, and emotional experiences as victims of micro-aggressions, social injustices, and racist actions, as shown in Examples 17–20:

(17) “Once I went to the DMV [Department of Motor Vehicles] waiting to get an ID, when I was next on line at the booth someone asked for my green card and working papers. I did not know what they were so I said I did not have any. The worker asked how was I here in the country [sic]. I was confused and pulled out my passport (it a USA passport [sic]) and asked if that was okay to use and the worker was in shock that I had one. They apologized. Before I left I saw the worker attend another customer (they were white) and asked for their us [sic] passport and the customer gave them a green card. I was 16 at that time so I did not understand what went on but I know look back and I feel bad about myself for not speaking up.” (P004-HLL)

(18) “For all 4 years that I was in high-school I was the only Latino in the school, so I got made fun of a bit. People would ask how I crossed the border, or if I could mow their lawn and myriad of other things.” (P057-HLL)

(19) “Whenever my parents go outside of the household, they do sometimes get judge [sic] for not speaking English properly or for looking "foreign". I remember one
time a woman told my dad that she is [sic] going to call ICE on him for no particular reason.” (P045-HLL)

“(20) My mom was verbally attacked at work because her coworker couldn't understand her. My mom has a tough time with English and I guess someone got frustrated with it. I had to go to her job and talk to her employer and write down everything she said to me from spanish to english [sic]. My dad was beaten up/jumped at a bus station by black people, they told him not to say anything and [that] if he did, the police would probably deport him.” (P118-HLL)

Again, HLLs of other languages also expressed their frustration and annoyance with the negative reading themes based on the own social experiences, in parallel to HLLs of Spanish: 6 or 35% of non-Spanish HLLs, making up 30% of the 20 comments from FLLs. Some FLLs expressed difficulty concentrating, reduced motivation, and general resistance to taking in new information as a result of their negative responses to the text’s themes (Examples 21 and 22), a finding which reflects Tatum’s (1992) discovery on the potential detriments of sensitive topics on learners’ motivation, engagement, and cognitive processing:

“(21) The [negative] article made me feel exasperated because I've read these kinds of narratives too many times before, I'm tired of them, to be honest. It just made me want to move past them more.” (P014-FLL)

“(22) I felt more frustrated by the [negative] story since I have personal connections with immigrant stories. It honestly made me read it all less in depth because I felt that the message was so disagreeable.” (P053-FLL, heritage speaker of Mandarin)
Still, open-ended comments also uncovered positive feelings for both groups in response to the negative text, corroborating the mixed emotions seen in the quantitative SEQ findings. These positive feelings were particularly voiced by HLLs of both Spanish and other languages:

(23) “This text definitely let me more motivated to prove my point to people who don't believe in the power of immigrants...” (P052-FLL, heritage speaker of Polish)

(24) “[The negative text] made me a little frustrated because these issues are continuous [sic] and it feels like there is nothing being done to stop them. However, it also made me more interested and curious because I want to learn more, and motivated because I want to be a better person and accomplish so many things.” (P069-HLL)

(25) “The [negative] article had me frustrated particularly due to the ignorance in the context of the actual article. However, it didn't surprise me as I've been exposed to different environments where people have different viewpoints (and experiences) than myself. Overall, this just serves as a reminded [sic] that marginalized communities must continue striving for progress and empower our own communities.” (P113-HLL)

(26) “After reading the [negative] text I felt more interested in learning more of [sic] the impacts that immigrants that come to the US has [sic] in this country.” (P021-HLL)

As seen in Examples 23–26, in addition to negative and potentially activating feelings of intense frustration, confusion, and anger, the negative reading also led many HLLs to greater curiosity in different existing points of view, stronger motivation to work against harmful immigration concepts and policies, and peaked interest in educating themselves more on the reading’s central theme, all positive emotions that have been seen to combat the effects of negative feelings by building resiliency to endure challenging events (Fredrickson, 2003). Thus, those with a HL
background may have been more emotionally aware of the arguments put forth in the negative text, leading to lower levels of discomfort and a better chance of engaging and taking interest in the reading (Tatum, 1992). One week after reading the text, 56% of FLLs \((N = 32)\) and 34% of HLLs \((N = 22)\) still responded strongly to the negative text with emotional reactions and connections to personal experiences. Thus, similar to the neutral reading, the negative text instigated personal responses and mixed emotional reactions from both groups suggestive of an arousing experience, and it triggered exceptionally emotional memories particularly for Spanish and non-Spanish HLLs.

I hope to have shown that the analysis of qualitative responses helped unearth novel insights that are important for the full interpretation of study results. First, the neutral topic may have elicited emotions that were more similar to those felt in the negative text, and perhaps more intensely felt overall than expected, whereas the positive text appeared to result in less emotional arousal than either of the other two readings. Second, within the FLLs group the affective responses of those who were HLLs of other languages (making up 30% of FLLs) proved to resonate with the responses captured in the HLL group, and this similarity seems to be rooted in shared family experiences of immigration and awareness of belonging to culturally and ethnolinguistically minoritized communities. Third, the qualitative evidence revealed the emotional arousing potential of a topic is connected to its resonance with people’s biographical and personal memories.
The current chapter discusses the results of the present dissertation and situates the findings within the greater context of affect and vocabulary learning in heritage and second language acquisition. First, I discuss participants’ emotional states during and as a result of the three emotion-laden readings used in the present work. Next, I examine the emotionality of reading condition (positive, neutral, negative) and word valence (positive, neutral, negative) as predictors of vocabulary learning outcomes, as well as the implications of learner affective variables and linguistic and social backgrounds for predictions of successful vocabulary learning. Finally, I conclude with limitations of the current study, followed by suggestions for future research in both heritage language education and second language acquisition with regards to affect, pedagogical implications for HL, FL, and mixed classrooms.

5.1 Summary of Main Dissertation Findings

The present study sought to investigate the emotions felt by two learner groups differentiated in their linguistic profiles, heritage language learners and foreign language learners, when sensitive topics are introduced in the language classroom for pedagogical purposes, and whether the emotions felt as well as a number of other affective and learner factors would impact the two groups’ vocabulary learning. A precursory comparison between the HLL and FLL groups revealed some worthy differences. In addition to exhibiting higher Spanish proficiency, with respect to their Spanish studies HLLs in the present study also exhibited higher levels of joy, interest, and motivation, and, corroborating previous studies (e.g., Tallon, 2009, 2011), lower anxiety than the FLL group. These patterns suggest that HLLs find particular connection and engagement with the Spanish language, which is to be expected given the central role of the language in their home and social lives. Results for Research Question 1, quantitatively obtained
from the 64 HLLs’ and 57 FLLs’ emotional ratings on the state emotion questionnaire (SEQ) during the reading of the three texts and triangulated with qualitative open-ended responses collected at the end of the two study sessions, revealed the emotional effects of each reading. While the quantitative analyses of state emotionality ratings made by all participants confirmed the broad characterization of each text as either positive, neutral, or negative, the emotional reactions expressed by both groups showed that the neutral text was experienced more similarly to the positive text, positioning the two separate from the negative text. For HLL and FLL groups both, greater independent levels of positive or negative emotion predicted lower vocabulary scores in the positive and neutral texts both immediately and one week later. The opposite, however, was true in the negative text: HLLs and FLLs who expressed greater positive or negative emotion were actually predicted to benefit in vocabulary scores for target items presented in the negative reading immediately and after a delay. Noteworthy was that in all three texts and for both linguistic profiles, individuals who felt greater positive emotions accompanied by higher levels of negative emotion were more successful in vocabulary post- and delayed posttests. Results for Research Questions 2–5 revealed the effects of various affective, linguistic, and social variables on vocabulary learning outcomes. In regards to words and texts, words presented in the neutral and negative readings were learned and retained best by all participants, regardless of linguistic profile, and neutral words led to particular success for all learners, both initially and one week later, in all three texts. In regards to state emotions while reading, learners, whether HLL or FLL, who felt either intense positive or intense negative emotion in the positive and neutral readings were likely to have less success learning and retaining vocabulary items overall, but the opposite was true in the negative reading context: More intense positive or negative emotion instead predicted better vocabulary scores in the negative reading condition. Nevertheless, regardless of reading context,
the greater the amount of positive emotion felt, the more beneficial it was for learners to also feel accompanying negative emotions. In other words, for those with already high levels of positive emotion, feeling a mix of emotions was actually advantageous for learning and retaining novel items. In regards to individual differences, motivation and interest in Spanish were both positive predictors for success in initial vocabulary learning, though, for retention, of the two variables only interest was seen as advantageous and only for FLLs. Neither linguistic insecurity nor any other trait emotion towards studying Spanish of the ones measured (anxiety, guilt, shame, and joy) held any predictive power in terms of vocabulary learning outcomes. Lastly, results showed that greater Spanish proficiency was predictive of more successful vocabulary learning and retention, though only for the FLL group, who actually outperformed HLLs in learning and retention of novel vocabulary items in all three reading contexts.

5.2 Emotional Reactions in Response to Learning Content

The first research question sought to characterize the emotionality of each text and understand the emotional effect each text had on participant groups. Answering this question was a necessary step prior to posing the rest of the research questions, which explored how learners’ emotions and motivations might influence learning outcomes and what the implications of emotional learning content are for vocabulary learning by HLLs and FLLs.

A state emotion questionnaire (SEQ) adapted from the Epistemically-Related Emotion Scales (EES; Pekrun et al., 2017) in educational psychology provided a method for assessing a broad spectrum of emotional reaction during the three readings featured in the study, which contrasted the emotionality of three topics: positive (benefits of the Latinx community to the U.S.), neutral (the state of bilingual education in the USA), and negative (immigration as a problem). The SEQ included both positive and negative valence discrete emotions. While the quantitative
analyses of state emotionality ratings made by all participants confirmed the broad characterization of each text as either positive, neutral, or negative, the emotional reactions expressed by both groups showed that the neutral text was experienced more similarly to the positive text, positioning the two separate from the negative text. This suggests that, while emotionally neutral contexts may be developed to be impassive in theory, in practice, all contexts are likely to elicit emotional responses from learners of all backgrounds. In particular, high levels of curiosity and interest—both emotions with connections to learning novel or complex concepts and with orientations towards the future (Lake, 2016)—demonstrated learners’ consistent engagement with each reading in all three contexts, and the predominance of overall positive emotion in every text implies that participants maintained general positivity throughout all three readings.

Generally speaking, the combined quantitative and qualitative evidence converges into support for the conclusion that HLLs, with stable average levels of overall self-rated emotion for all three texts, were more responsive than FLLs to the themes presented in each reading, which supports previous evidence revealing that emotional reactions to emotional or sensitive content are reduced in a FL/L2 (Caldwell-Harris-Ayçiçegi-Dinn, 2009; Iacozza et al., 2017). However, it is by taking the qualitative and quantitative evidence in concert that levels of emotional intensity and arousal not reflected by the quantitative ratings elicited on the SEQ alone can be gleaned.

The triangulated findings for emotional states during reading afforded insights that not only explained or augmented the quantitative answers to Research Question 1 but also put a spotlight on novel insights that would have been otherwise missed, had the study not included this mixed-methods element. Participants’ self-ratings of emotion showed that the neutral and positive texts were both received positively by both groups, suggesting that the neutral text was defined more by positive, as opposed to neutral, emotions. Greater emotional fluctuation during the neutral text,
along with the results of the qualitative data, suggested that the neutral text resulted in longer-lasting positive emotions and higher levels of emotional arousal, implying that, though not intended, the positive text may have actually led to more neutral emotional responses than the intended neutral text. Though emotional ratings were, as expected, still positive in response to the positive reading, the qualitative evidence suggests that these emotions may have been more superficial and fleeting for all participants than expected of a positive reading condition. This opens up a question for future research to elucidate, namely, whether investigating the impact of emotion on learning outcomes may be as much a question of the lingering emotional memories elicited by a reading as one of online emotional response. Additionally, participants’ self-ratings and qualitative comments showed that the negative text elicited a mix of emotions, including both negative and positive feelings, and potentially incited high levels of emotional arousal, much like the neutral reading. The dimension of emotional arousal (i.e., physiologically activating vs. deactivating) may, therefore, have equal, if not greater, implications than emotional valence (i.e., positive vs. negative) alone for ISLA, though more research is required on the topic.

Another important, as well as unexpected, finding from the qualitative evidence of emotional states during reading is that, within the FLL group, the affective responses of those who were HLLs of other languages (17 in total, equating to 30% of FLLs) proved to resonate with the responses captured in the HLL group, a similarity which appeared to be rooted in shared family experiences of immigration and awareness of belonging to culturally and ethnolinguistically minoritized communities. This insight uniquely suggests that the emotional arousing potential of a topic is connected to its resonance with an individual’s sociobiographical and personal memories. While this connection is not addressed yet in the SLA research on emotion, the linkage found through the qualitative evidence between personal experience and emotional response is supported
by the literature on emotion and literary fiction (Bal & Veltkamp, 2013; Busselle & Bilandzic, 2009; Green, 2004; Mar, Oatley, Djikic, & Mullin, 2011; Oatley, 2002; Wirth, 2006). For example, Mar et al. (2011) suggest that narratives, even if fictional, can arouse and transform emotions during and long after reading by taking readers back to emotion-filled and personal memories, which many participants in the current study appear to have experienced during the neutral and negative texts and still one week later. Similarly, Bal and Veltkamp (2013) found that only readers who interpreted a story emotionally, often based on their own lived experiences and real-world problems, and who were emotionally transported into the story, demonstrated greater empathy after reading, suggesting that greater personal connection to a text may also imply stronger emotional outcomes. Thus, a wide array of linguistic and sociobiographical factors might potentially play a role in how a text is emotionally received by readers. This highlights the importance for scholars in ISLA and emotion of taking into account the diversity not only of HLLs but also of so-called L2 or FL learners and echoes the call from those in support of a multilingual turn in SLA for research that acknowledges the complex multilingual and multicultural repertoires of speakers and learners (May, 2014).

5.3 The Association between Emotion-Laden Texts and Words and Vocabulary Learning

The current study supports a dimensional view for the study of emotion proposed by some theoretical models in psychology (e.g., Russell, 1980, 2003). This support comes from the dichotomies uncovered between positive vs. negative and activating/arousing vs. deactivating emotional reactions in the quantitative analyses of state emotions, as well as the influence of valence and arousal demonstrated in the mixed effects modeling analyses in regards to reading topics and target vocabulary items. Considering previous research, the results of the vocabulary tests across the three emotion-laden reading contexts in the current study generally support the
findings that both emotional valence (Frances et al., 2019; Kern et al., 2019) and emotional arousal (Kern et al., 2019) influence learning and retention outcomes.

Given that target vocabulary items were presented only once during the main reading task and multiple exposures are expected to be necessary for robust vocabulary learning (Webb, 2007) and that the study took place in a laboratory setting, it is not surprising that participants showed low levels of vocabulary learning and retention overall. Still, the neutral and negative readings were predicted as the best contexts for vocabulary learning for both FLLs and HLLs. Keeping in mind that the neutral text was equally, if not more, positive and qualitatively more memorable and arousing than the positive text and that the neutral and negative readings both conjured stronger, enduring, and, for HLLs, more personal emotions, these results corroborate previous findings in SLA (e.g., Frances et al., 2019) that suggest the benefit of positive semantic contexts for language learning, as well as findings in psychology (Kensinger, 2009) that both negative and positive events are more memorable than nonemotional, or neutral, events.

The present results also resonate with previous research in psychology (e.g., Cahill & McGaugh, 1995; Kensinger, 2004; McGaugh, 2018; Steidl, Mohi-Uddin, & Anderson, 2006) that suggests an association between enhanced memory and emotional arousal before, during, or even shortly after learning. It is important to note, however, that the literature on positive psychology and positive emotion within SLA (e.g., Fredrickson, 2003; Fredrickson & Branigan, 2005; MacIntyre & Gregersen, 2012b; MacIntyre et al., 2016) emphasizes the advantages of positive emotions and contexts over negative emotions for language achievement. Studies also exist within psychology noting in some cases the detriment of negative emotional content on memory (e.g., Bisby, Horner, Bush, & Burgess, 2018) and in others the benefits of negative stimuli on recall (Kern et al., 2005). In other words, not all negative emotionality will always result in a learning
detriment, and it would be premature to assume so. Together, this implies that additional research is needed on the implications of emotional contexts, specifically on negative emotion, for cognitive processes including memory and learning. In addition, the current study appears to be the first specifically within SLA to further suggest that emotionally-arousing contexts, regardless of valence, may have a positive effect on vocabulary learning, which also highlights the need for continuing investigation into the multiple dimensions of emotion and their effects on vocabulary achievement.

The results of the mixed effects modeling on the learning outcomes for emotion-laden words revealed that participants in the current study were predicted to recall neutral words better than either positive- or negative-laden items. This generally supports prior studies in psychology, carried out with monolingual (e.g., Altarriba & Bauer, 2004; Jay et al., 2008; Talmi & Moscovitch, 2004) and bilingual (e.g., Ayçiçegi & Harris, 2004; Ayçiçegi-Dinn & Caldwell-Harris, 2009; Ferré et al., 2010) participants, which mark a contrast between emotion-laden and neutral words. However, the current study contradicts previous research in psycholinguistics (e.g., Altarriba & Bauer, 2004; Ayçiçegi & Harris, 2004; El-Dakhs & Altarriba, 2019; Kazanas & Altarriba, 2015a, 2015b; Talmi & Moscovitch, 2004) and psychology (e.g., Hadley & MacKay, 2006; Jay et al., 2008; Kensinger & Corkin, 2003; MacKay & Ahmetzanov, 2005; MacKay, Shafto, Taylor, Marian, Abrams, & Dyer, 2004) on learning and memory enhancement—carried out with both monolingual and bilingual speakers—which largely show that emotion (e.g., love, hate), emotion-laden (e.g., puppy, jail), and taboo words (e.g., reproductive organs, expletives) are recalled more successfully than neutral words. It is important to note that all these previous studies presented target word items in list form, as opposed to within a context, as in the current study. This may help explain the present converse finding that neutral words led to better recall. Specifically, word
learning in the context of emotional readings may have been different from word list learning. As already shown, participants did respond emotionally to all three readings. The added emotionality and arousal potentially brought on by the emotion-laden (i.e., positive and negative) vocabulary items may have maximized cognitive strain for participants and drawn cognitive resources away from learning these positive or negative word items. In contrast, neutral words, by not adding any additional emotional, and therefore cognitive, burden for leaners, may have been more accessible for cognitive processing and recall than positive and negative words (Fraser, Ma, Teteris, Baxter, Wright, & McLaughlin, 2012). It is also worth considering that, since emotion vocabulary makes up only a very small portion of all vocabulary words that are presented in second language textbooks (Dewaele, 2010a), learners’ experiences with explicit and intentional vocabulary learning are largely with neutral words. This suggests that language learners may do better learning neutral words as a result of increased familiarity and comfort with these items. However, further research will be needed to explore these possibilities.

5.4 The Implications of Emotional State on Vocabulary Learning

With respect to learners’ emotional states during reading, the finding that, independently, negative emotions in the present study were a hinderance to vocabulary learning largely in positive and neutral contexts supports previous research on negative emotion, particularly anxiety, that shows the detrimental effects of negative emotion on language learning achievement (MacIntyre, 2017). Participants themselves noted in their qualitative comments that negative emotions often incited additional feelings of stress and exasperation, as well as greater levels of distraction, while reading, which would pose challenges for task performance. In contrast, the benefits of negative emotions in the negative reading context may suggest an interaction between learning context and
learner response. Here, more intense negative emotions in response to the reading likely signify greater engagement with the text, given the match between emotional response and context.

More surprising was the finding that positive emotions, again when considered independently, were also detrimental to vocabulary learning outcomes in both the positive and negative reading contexts. Positive psychology, defined by research in positive emotion and motivation and anchored in findings from both psychology (e.g., Fredrickson & Branigan, 2005; Lopez & Snyder, 2009; Seligman, 2011; Seligman & Csikszentmihalyi, 2000) and SLA (e.g., Gabryś-Barker & Gałajda, 2016; MacIntyre & Gregersen, 2014; MacIntyre, Gregersen, & Mercer, 2016, 2019; Strambi & Rubino, 2017), centers itself around the notion that positive emotions, including happiness, optimism, and hope (Lopez & Snyder, 2009), facilitate learning by promoting increased attention and cognitive processing. However, studies addressing positive emotion in SLA have largely focused specifically on foreign language enjoyment (e.g., Dewaele & Alfawzan, 2018; Dewaele & MacIntyre, 2014; Dewaele et al., 2019) and treat emotion as a trait describing learners’ general and stable feelings towards language learning. State emotions, on the other hand, are particularly dynamic in nature (Boudreau et al., 2018) and fluctuate in response to content for all learners, not only for those characterized by any specific trait emotion. For example, while high foreign language enjoyment might imply more positive reactions to a learning task itself (e.g., reading, writing, speaking, listening), it does not necessarily guarantee that an individual will respond more positively to the content or themes of a task (e.g., immigration, race, cultural traditions). Thus, the current finding that positive emotions alone predict lower achievement in the positive and neutral texts may suggest that positive state emotions have different implications for language learning than positive trait emotions.
As scholars in positive psychology note (e.g., Fredrickson, 1998, 2003, 2006; MacIntyre & Gregersen, 2012), positive emotions broaden individuals’ attention and thinking, prompting exploration and discovery of new ideas. Judging from the qualitative comments, this appears to have been the case in the negative text, where some felt positive emotions were in direct opposition to the text’s themes, thus offering learners relief from the reading’s topics enough to focus their attention on the task at hand. Greater levels of both positive and negative emotion in the negative text, in identifying learners with greater coping mechanisms (for positive emotions) or greater involvement with the text (for negative emotions), would also predict better learning outcomes. However, in more positive contexts, positive emotions alone may excessively broaden learners’ focus to the big picture, causing them to overlook the smaller details that are essential for specific tasks (i.e., vocabulary learning). Simply put, the detrimental findings for positive state emotion in the positive and neutral reading contexts may reflect the well-known adage “too much of a good thing.” This concept is further supported by the finding from the mixed effects models that participants who expressed greater positive emotions benefitted from feeling accompanying negative emotions during the reading tasks.

Conversely, negative emotions may have led to a narrowed focus on specific details by instigating withdrawal from the bigger picture, a cognitive response that is accompanied by physiological responses (e.g., increased heart rate and blood flow) that are normally triggered to prepare an individual for any imminent problem or threat (Damasio, 1996; Gasper & Clore, 2002). These responses, as has already been amply shown, can have a negative effect on learning achievement in certain settings (Dewaele & MacIntyre, 2014; Galmiche, 2018). However, given that positive emotions also largely function to undo the effects of negative stimulation and build resilience to negative or stressful events (Burgdorf & Panksepp, 2006; Fredrickson, 2003), a mix
of positive and negative emotions may define the ideal setting for learning achievement: positive
trait or state emotions to (1) broaden learners’ view, (2) increase attention, (3) build intellectual
resources, and (4) act as a foundation for warding off the effects of negative emotional arousal and
improving recovery from stressful reactions (MacIntyre & Gregersen, 2012), and negative state
emotions to fine-tune attention specifically to task-relevant details (D’Mello, Lehman, Pekrun, &
Graesser, 2014), with adverse effects inhibited by concurrent positive emotions.

Together, the results on state emotions suggest that the best context for vocabulary learning
may actually be one where learners feel a range of emotions that both broaden their thinking
enough to open them up to new information but also direct them to narrow in on more precise
details. More research will be needed to explore the implications of complex state emotions in
SLA (MacIntyre, 2012; MacIntyre & Gregersen, 2012), particularly with respect to the interplay
between dynamic positive and negative emotions, which has been explored to some extent within
mainstream psychology (e.g., Gruber et al., 2013; Kashdan & Rottenberg, 2010; Waugh et al.,
2011). In addition, further exploration into discrete emotions, for example curiosity and confusion
(Vogl, Pekrun, Murayama, & Loderer, 2020), which were, respectively, highlighted as beneficially
and detrimentally influential in task completion by both HLL and FLL participants’ in their exit
questionnaire responses, will help shed light on the nuanced effects of positive and negative state
emotions, alone and when mixed, in FL achievement and learning in general.

5.5 Explaining the Limited Impact of Trait Emotions and Linguistic Insecurity on
Vocabulary Learning in the Present Study

In the present study, the findings were mixed for affective individual differences as
modulators of learning. No negative trait emotions (i.e., anxiety, shame, and guilt) had any bearing
on vocabulary learning outcomes in the present study, nor was linguistic insecurity a predictor for
vocabulary achievement for either group. Among the positive trait emotions, only interest acted as a positive predictor of immediate vocabulary learning in the current study.

The finding that negative trait emotions did not exert any impact on vocabulary learning outcomes may not be surprising, if one considers that the ratings for trait guilt, shame, or anxiety were very low in the present study sample. This may be a function of the focus on advanced learners, as it is less likely that individuals who experience setbacks in language learning due to feelings of FL guilt, shame, or anxiety would continue their language studies into upper-level courses, a pre-requisite for participation in the current study. Even if some participants in the current study may have in actuality presented greater levels of these negative trait emotions than other peers, it is fair to assume that they may have coping mechanisms in place, including the high levels of trait interest and joy seen for both groups, for preventing detrimental effects on their language learning experience.

Similarly, the lack of any predictive power of linguistic insecurity for vocabulary achievement for either group is likely related to the generally low levels of insecurity shared by all participants and a resiliency to any feelings of insecurity that may sporadically arise. Still, it is worth noting that, though HLLs and FLLs exhibited similar levels of linguistic insecurity overall, the disparity between groups with respect to certain items does suggest that this emotion may indeed look different for each linguistic profile. For example, out of 20 items presented, FLLs expressed higher insecurity (defined as at least one Likert point higher than HLLs on the 7-point scale) for the following seven items:

- I don’t consider myself a fluent Spanish speaker because of the mistakes I make and the Spanish I don’t know.
• Sometimes I don’t want to talk to other Spanish speakers because I’m afraid of sounding dumb.

• I am often afraid that other Spanish-speakers won’t understand what I’m saying because of the way that I speak Spanish.

• I often get nervous when I have to call or speak in Spanish-speaking restaurants, shops, and other businesses because I worry they won’t understand me or I won’t understand them.

• I am afraid of sounding dumb compared to other Spanish students because of the way that I speak.

• I feel like other students judge me when I speak Spanish in class.

• I worry about not meeting my Spanish instructor’s expectations because of the Spanish that I speak.

The results of these items show that FLLs do feel greater linguistic insecurity at times, mostly with respect to fears of not being understood or being received as unintelligent by others. HLLs, in contrast, scored at least one Likert point higher than the FLLs and thus showed higher levels of linguistic insecurity in only one instance:

• There are times when I feel as if I learned neither Spanish nor English the right way.

These differences suggest that FLLs’ insecurity may be more closely related to the negative effects that their self-perceived limited FL ability could have on future academic and social events, while HLLs’ linguistic insecurity appears to be more anchored in the past and in their already-lived language experiences. Though in the present study linguistic insecurity was not a predictor of vocabulary learning success for these advanced learners, further research will be essential in
exploring the intricacies of this emotion and the potential effects on achievement for learners of various linguistic backgrounds and proficiencies.

With respect to the only positive trait emotion found to be a predictor of vocabulary learning, interest, SLA readers may find it noteworthy that it should be interest, but not joy, that acted as a positive predictor of immediate vocabulary learning in the current study. This may fly in the face of the current research attention to classroom enjoyment since Dewaele and MacIntyre (2014) and the fact that interest has received practically no attention as an emotion construct in SLA (although it is a factor considered in L2 reading research, e.g., Lee & Pulido, 2017). However, this result supports reports from psychology and psycholinguistics (e.g., Ainley, 2006; Alexander, Jetton, & Kulikowich, 1995; Ely, Ainley, & Pearce, 2013; Gardner, 1985, 2009; Renninger & Hidi, 2011; Rotgans & Schmidt, 2017; Springer, Dole, & Hacker, 2017; Thoman, Smith, & Silvia, 2011) that link interest with greater student engagement and achievement. Fredrickson’s (2001) description of joy and interest offer an explanation: While joy tends to lead to increased play and creativity, interest supports the urge to explore and absorb information, aligning more with prerequisites to language learning. Furthermore, while HLLs’ interest in Spanish are likely founded in their own linguistic and social background and experience, FLLs presumably hold different motives for their FL interest. Thus, it may be a joint integration of interest and motivation that best explains learning behavior, achievement, and retention, though more research will be needed to investigate this possibility. Notably, while the research in SLA largely centers around FL enjoyment, the present study offers evidence that interest may be a particularly influential component of enjoyment, perhaps more so than FL joy, for language achievement.
5.6 Motivation Does Make a Difference on Vocabulary Learning

Given the connections that have been drawn between interest, motivation, and learning outcomes in psychology (e.g., Krapp, 1999; Lazarides, Gaspard, & Dicke, 2019; Müller & Louw, 2004; Schiefele, 1991), the present finding supporting motivation in parallel with interest as a predictor of immediate vocabulary learning achievement is not surprising. Scholars in SLA have long identified motivation as one of the main predictors of FL achievement (e.g., Dörnyei, 1990; Gardner & Lambert, 1959; MacIntyre et al., 2009; Saito, Dewaele, & Hanzawa, 2017), which is supported by the present findings. Still, motivation in the current study was not seen as influential in retention of vocabulary items as one may have expected. While this could be due to the reduced variability and overall high level of motivation for this sample and the resulting decrease in likelihood of generating significant statistical results, it could also suggest that motivation alone may not lead to enhanced long-term memory of lexical forms. Within the psychology literature, motivation is believed to induce feelings of curiosity (Halamish, Madmon, & Moed, 2019), which are in turn linked to physiological interest in response to novel or surprising stimuli (Tyng et al., 2017), increased exploration, and preparation of the brain to learn and remember new information (Oudeyer, Gottlieb, & Lopes, 2016). Thus, while motivation may benefit learners in the short-term, long-term effects, including retention of novel items, may be reliant on individual interactions between specific trait emotions towards the object of study, such as curiosity, interest, and surprise, and motivation that together promote increased attention and awareness through “enhanced detection, evaluation, and extraction of data for memorization” (Tyng et al., 2017, p. 4), as well as learning and memory retrieval. In order to gain a deeper understanding of the implications of affect within FL learning, future studies will benefit from considering the interplay
between emotion, motivation, and memory during novel learning activities as well as further developing the L2 self system to integrate relationships between emotion and motivation.

5.7 Proficiency also Mattered in Vocabulary Learning

With respect to potential effects of learner characteristics, proficiency was the only predictor of vocabulary learning and retention and only for the FLL group. This finding is in line with previous research on FLLs showing that individuals with higher proficiency, and larger FL lexicons, experience greater ease with learning novel words (Hansen, Umeda, & McKinney, 2002).

Still, if proficiency alone were a significant predictor of vocabulary achievement, HLLs, who showed significantly higher average proficiency than the FLL group, would have been expected to outperform FLLs in vocabulary learning, which was not the case in the present study. HLLs instead generally performed below FLLs. This finding may be better explained by language learning experience and acquired learning strategies than by proficiency. FLLs in the current study had, on average, approximately 1.5 years more ($M = 6.7$ years, $SD = 2.3$) formal Spanish education than HLLs ($M = 5.3$ years, $SD = 3.8$). In addition, while FLLs always listed beginner and intermediate courses as part, if not the bulk, of their Spanish classroom experience, HLLs more often began their Spanish education at an already advanced level, including in AP, advanced literature or grammar courses, or courses for heritage and/or native Spanish speakers. HLLs who did list lower-level language courses as part of their learning background often mentioned that these classes covered “basic grammar and vocabulary,” implying that the content was below their proficiency level. This information suggests that, while HLLs showed higher proficiency than FLLs, the FLL group likely had greater prior experience with instructed vocabulary learning and, therefore, more practice with learning strategies for successful learning and retention of new vocabulary. FLLs also more frequently come across words they do not recognize and are likely
more familiar with the experience than HLLs, who are more likely to be disoriented by repeatedly encountering novel words (Montrul, 2010). It is feasible, then, that these results are a reflection of learning experiences and strategies and not necessarily of language proficiency alone. FLLs who are more familiar with FL learning strategies and better able to implement them during novel language learning tasks are also likely to be more efficient learners, develop more knowledge in the FL, and exhibit higher proficiency levels. In contrast, less reliance on learning strategies for HLLs does not impede the language knowledge they obtain in often more naturalistic settings, nor does it imply lower HL proficiency. Simply put, for HLLs, who acquire a large amount of the HL outside of an instructed setting, greater proficiency does not necessarily equate to enhanced vocabulary learning ability, a proposal that is in line with Zhang and Koda’s (2018) findings that greater oral vocabulary knowledge did not equate with improved Chinese HLLs’ skills in lexical inferencing. Future research might, therefore, consider measures of learning strategy or, perhaps more generally, language aptitude (Carroll, 1981; Wen, Biedroń, & Skehan, 2017) in order to further investigate the factors that differentially affect vocabulary learning achievement for learners with different language backgrounds and experiences, while acknowledging the potential connection between various individual differences, including those explored in the current study.

5.8 Limitations

As with any empirical study, the current dissertation has a number of limitations that should be acknowledged. Though results point to a number of theoretical and practical implications, the study is exploratory in nature and caution must be taken in making any generalizations or in any future attempts at replicating findings.

The first limitation is with respect to the three texts implemented to elicit emotion. This study aimed to observe differences between texts of positive, negative, and neutral emotional
valence; however, while 54% of participants characterized the neutral text as neutral in their emotionality ratings after each reading, the results of emotional ratings show that the neutral text did elicit emotions in all participants. The positive text appeared to be the least emotional of the three texts, but no reading context could be described as completely neutral in emotional valence. Though comparisons were possible based on relative emotionality and arousal, the use of a text with themes received as truly neutral would strengthen the results.

A second and related limitation concerns the use of self-ratings for state emotions. Because cognitive and emotional systems continuously and dynamically regulate each other (MacIntyre & Gregersen, 2012b), participants are not necessarily conscious of the emotions they feel, making the accuracy of self-ratings difficult to evaluate. In addition, emotional self-ratings were completed not exactly while reading but during pauses from reading during each text. Thus, it may be that participants were rating a memory of their emotions while reading upon completing a section, which may or may not have corresponded to actual online emotional responses to the texts. Future studies should consider the use of online measurements of emotion, including, but not limited to, think aloud protocols, and instruments for measuring physiological responses, such heart rate monitors, eye trackers, and pupillometers. For studies that do not allow for online processes, a measurement of emotional intelligence can increase the reliability of emotional self-ratings (Chen & Zhang, 2020; Dewaele, Petrides, & Furnham, 2008).

A third constraint involves the instrument used to evaluate trait emotions. The reliability of the trait emotion instrument was satisfactory for the sample size of 121 in the present study, with all subscales ranging from the highest $\alpha = .91$ for 6 items for anxiety, to the lowest $\alpha = .73$ for 7 items for interest. However, it is important to note that most of the instruments from trait emotion research that were adapted for inclusion in in the present one have not been validated for
use with heritage or multilingual populations. The scenarios presented in each emotion scale by nature do not cover all possible influences on trait emotion, and items may not be applicable for all learners or in all contexts. Similarly, the instrument designed specifically for the present study to measure of linguistic insecurity was of satisfactory reliability for the present sample at $\alpha = .92$, but it included items that apply specifically to HLLs and has not yet been validated.

Fourth, future studies should consider setting a time limit on reading tasks. In the present study, participants were given an unlimited amount of time to complete the readings. Thus, some participants may have taken more time to implement different learning strategies, such as reviewing novel vocabulary items. While learning strategies are likely related to levels of interest, motivation, and past experience, as just discussed, future studies would benefit from controlling for reading and hence exposure time.

A fifth caveat relates to the participant population. A majority of participants in the current study (72% of the total sample, with 78% of HLLs and 65% of FLLs) identified as female, which can be considered a limitation given previous studies suggesting that gender can have an effect on emotional expression, response to emotional experiences, and the evaluation of emotional words (Bauer & Altarriba, 2010; Deng, Chang, Yang, Huo, & Zhou, 2016). In this regard, however, it is interesting to note that gender did not emerge as a significant predictor of vocabulary learning in the mixed effects models. In addition, nearly one-third of FLLs were heritage speakers of other languages, who, based on their qualitative responses, may have reacted differently than other FLLs to the themes of bilingualism (neutral reading) and immigration (negative reading) treated in the texts. This supports the now common acknowledgement that neither FLL nor HLL groups are homogeneous in character (Kagan & Dillon, 2013; Kondo-Brown, 2003; Valdés, 1995). Furthermore, all participants were advanced learners, who in general showed more positive and
less negative trait emotions with less variability than would likely be seen at lower proficiency levels. Thus, results may be specific to the current population of participants and proficiency level, and caution must be taken both in interpreting and extrapolating these results to learners at more intermediate or beginning levels of learning.

Finally, it is important to acknowledge that, while significant differences were found in vocabulary learning and retention in the different texts, the total amount of vocabulary learning was relatively very small in all contexts. Given that items were presented only once during the reading tasks and that tasks were carried out in a laboratory setting, often around students’ busy academic and work schedules, an extensive amount of vocabulary learning was not expected. Thus, caution must be taken in interpreting these findings within the realm of instructed vocabulary acquisition.

5.9 Future Research

The participant population for the present study included a large number of HLLs of other languages who also later decided to learn Spanish as an additional language. Future research should consider exploring the effects of sensitive and emotionally-charged themes on vocabulary learning and other aspects of language learning for multilinguals, including Spanish HLLs and FLLs with other languages in their repertoire as well as HLLs of other languages. In addition, exploring different proficiency levels would be desirable, to ascertain the degree to which the present findings are generalizable to low and intermediate levels of proficiency. Generalizability must also be explored in the future by studying emotions and vocabulary learning while varying other background factors, including amount and type of HL/FL exposure and instruction, multilingualism, or experience with different learning strategies. Researchers interested in individual differences might find it profitable to include emotional intelligence and language
aptitude when designing future studies about the relationship between emotions and L2 achievement. Identity, including influences related to race, ethnicity, and sexuality, were all alluded to in the qualitative questionnaire data and would prove of interest in future research that takes a qualitative perspective on emotions in language learning. With respect to HLLs specifically, researchers might consider learners’ generation in the U.S., experience with the HL community, and immigration experience or family history as potentially influential factors on affective response and learning achievement.

The current study found differences between FL interest and joy, in that interest was seen as a predictor of FLLs’ vocabulary learning, but joy did not predict vocabulary outcomes. These two emotions are traditionally included as two components of FL enjoyment in the SLA literature (e.g., Dewaele & MacIntyre, 2014), and research in SLA should continue to consider the implications of considering the two separately with respect to vocabulary learning. Studies should also consider both trait and state emotions and their independent influences on vocabulary learning experiences and outcomes, as trait and state emotions seemed to play different roles in explaining vocabulary learning success in the present study. Specifically, while anxiety and enjoyment have both been explored briefly as dynamic emotions (e.g., Boudreau et al., 2018), the findings of the present study suggest that other state emotions, such as interest, surprise, and frustration, may also influence online learner processing. Thus, further studies should consider exploring the relationship between additional dynamic emotions, online cognitive processing, and learning on reading and other tasks.

This study also found evidence for differences between valence and arousal, or quality versus activating and deactivating, in regards to emotional elicitation and response. Though a majority of research on emotion in SLA addresses questions of valence (i.e., positive vs. negative),
it will be important to consider the implications of the activating and deactivating emotions of both positive and negative emotional valence that learners may feel during and in response to a classroom tasks, interactions, and the HL/FL learning experience in general. Specifically, the present qualitative findings pointed to the predominance of frustration—a negative emotion leading to high (i.e., activating) physiological responses—and pride—a complex emotion including facets of high and low activation which may be linked to FL enjoyment (Dewaele & MacIntyre, 2016)—during learning activities. In fact, given that pride, shame, and guilt are all characterized as self-conscious emotions (Tracy & Robins, 2007), further research on pride within the context of HLE and SLA in general would complement the recent research done on FL guilt and shame (Teimouri, 2017, 2018), though guilt was not particularly relevant as a state or trait emotion in the present study.

The current study found evidence for linguistic insecurity in both HLLs and FLLs in that both groups, although overall confident, did express linguistic insecurity with respect to certain contexts and items. Thus, future work should continue to explore the intricacies of linguistic insecurity in diverse learner populations. Qualitative findings suggest that, feelings of pride combatted feelings of linguistic insecurity, particularly in HLLs. Like Boudreau, MacIntyre, and Dewaele (2018), who take an idiodynamic approach to explore the connection between enjoyment and anxiety, future research should explore not only different discrete emotions of positive valence but the relationship between various positive vs. negative and activating vs. deactivating emotions to consider emotions under both discretely and more holistically under two-dimension (i.e., circumplex) models (Russell, 1980). Positive psychology bases itself on the benefits of positive emotions, and research looking past one-dimension models of emotion could highlight specific positive emotions for building resiliency or directly combating negative emotions in different
contexts. For example, scholars may consider which of surprise, pride, or enjoyment might act as a more efficient guard or coping mechanism against anxiety, linguistic insecurity, or other emotions individuals generally wish to avoid. They may also explore the connection between, for example, high negative arousal and low positive arousal emotions. This would strengthen theories within positive psychology on positive emotion and point to potential uses of specific positive emotions or groups of emotions with similar qualities within different contexts and in response to distinct negative emotions.

Finally, future studies should consider the connections and interactions between trait motivation and state emotions as well as state motivation and emotion. Research on dynamic affective variables has largely been influenced on the dynamic nature of motivational variables, such as willingness-to-communicate (MacIntyre et al., 2009; MacIntyre & Legatto, 2011), and the relationship between motivation and emotion has been widely acknowledged in SLA. Further work might consider exploring the correlation between various discrete and dynamic emotions and the various subcomponents of motivation (e.g., ideal L2 self, ought-to L2 self, etc.) in order to paint a fuller picture of affective influences in SLA.

5.10 Pedagogical Implications

It is important to keep in mind that the methods used in the present study were not meant to replicate the classroom setting or learning experience, and pedagogical implications should be taken into account in conjunction with other well-established pedagogical methods from SLA for the HL/FL classroom. Still, the present findings have important implications for heritage language education, in particular, and for all learners of diverse backgrounds who participate in second language education, in general.
First, given that both heritage and foreign language learners had emotional reactions and recalled emotional memories in response to all three texts and some of them in their comments recalled emotional memories, educators might consider that even seemingly neutral topics in the language classroom may elicit emotional responses from learners and affect vocabulary learning objectives (Frances et al., 2019). Specifically, content that is likely to elicit personal and vivid memories for learners may better support vocabulary learning, especially if learners are able to call on both positive and negative emotions during the reading task (Kensinger, 2009). This is supported by the present findings that 1) the readings that provoked more arousing recounts from learners also led to higher vocabulary achievement, and 2) feeling a mix of positive and negative emotions could be advantageous for vocabulary learning in any reading context, whether themes are positive, negative, or neutral in connotation. Since this was true for not only HLLs of Spanish, but also some FLLs, especially HLLs of other languages and learners with personal and family immigration stories, educators should consider their own students and the emotions and memories of emotional events that are likely to come up in response to course content in HL, FL with diverse learner backgrounds, and mixed classrooms of HL and FL students. Educators can prepare students to work with emotional readings and guide them through emotional and sensitive topics by engaging students in pre-reading discussions and encouraging reflections and connections with reading themes during and after reading. This could encourage students to be in touch with a fuller range of both positive and negative emotions, which, as the study suggests, may be advantageous for learning success, particularly with respect to vocabulary learning and retention.

For instructors of mixed classrooms where HLLs and FLLs learn together, in particular, the present findings suggest that sensitive classroom content can affect all profiles of learner and lead to varying degrees of language achievement for both HLLs and FLLs. While on average HLLs
showed higher Spanish proficiency than FLLs in the current study, they also felt stronger emotional intensity and performed lower on vocabulary posttests. When utilizing emotional or sensitive readings in the classroom, practitioners should consider that certain themes, including topics on immigration, bilingualism, and ethnoracial identity, might activate stronger emotional responses from some students than others due to family connections and personal memories of emotional events (Prada et al., 2020; Tatum, 1992). Instructors should make sure to allot extra time for these activities in order to ensure that students who might be distracted or frustrated by reading themes that relate to their own linguistic, social, and cultural experiences have enough time to respond emotionally and still return to the content as needed in order to process new target features and forms. For topics that are expected to elicit particularly intense emotions and emotional memories, instructors might consider prefacing content with a trigger warning (see Wyatt, 2016), in order to alert students in advance of the emotion-laden theme and even potentially allow students to opt for individual or alternative study of the content.

The present study suggests that increased motivation and interest towards the target language are beneficial for vocabulary learning for both HLLs and FLLs, as they probably are for better learning in general (Fredrickson, 1998, 2001; Fredrickson & Branigan, 2005; Ryan & Deci, 2009). Thus, classroom discussions and activities that foster students’ general motivation to learn the HL/FL and interest in learning and using the language can have a positive influence on the outcomes of future vocabulary learning objectives. Educators should consider preparing classroom material and activities to feed students’ existing motivations and interests and nurture new ones so as to promote positive feelings towards learning the target language. Methods for engagement will depend on learners’ experiences with the language, their existing knowledge and skills, and their familiarity with the language classroom. Practitioners should, therefore, keep these factors in mind.
when designing and adapting materials and curricula for FL/HL courses, which will all help to achieve the objectives of supporting academic skills, fostering positive attitudes, and developing cultural awareness that are drive efforts for the heritage foreign, and mixed language classrooms.

Given that this dissertation attends to the effects of sensitive HL/FL classroom content on vocabulary learning success and was completed in the midst of the Black Lives Matter movement and the COVID-19 global pandemic, I would be remiss not to highlight the implications of the present study for language learners from ethnoracial and linguistic minority populations, who have been disproportionately affected by the current events and will carry the emotional memories of this time into their future academic, professional, and social lives. Educators must, then, consider that learners’ perception of, response to, and success with classroom content is largely affected by a complex collaboration of social, emotional, ideological, as well as cognitive factors. As the present findings suggest, the instructed language learning environment cannot be seen in ideal isolation, as if learners leave the emotional ups and downs of their everyday lives at the classroom door. As language educators and scholars continue to build online resources and materials for use during this pandemic, and webinars, podcasts, and social media platforms highlight a need to address the issues and challenges our society is now contemplating on race, immigration, and social justice in dual and world language classrooms, it becomes clear that teaching, not just in the middle of a social movement and global pandemic but also going forward, will include sensitive topics in the language classroom. These themes and conversations will no doubt continue to persist and be essential to the language learning experience. Thus, the influence that these topics might have on learning achievement will be particularly important as we move forward, and a considered approach by language educators will be more crucial than ever to support equitable learning inclusive of vulnerable students in our classrooms.
5.11 Conclusion

Traditionally, research on emotion from both psychology and SLA has focused on the implications of negative emotion on cognitive and linguistic processes, with a particular concentration on anxiety. The turn in positive psychology has encouraged a boost in research on positive emotion within SLA, which has uncovered the benefits of positive emotion in the FL language classroom. Still, the research largely neglects to consider the emotionality of the language learning experience and classroom and the implications of emotional response to learning content on language learning outcomes. Furthermore, in its focus specifically on L2 learners, the research has excluded HLLs and has also largely overlooked and even ignored the true diversity that is the language classroom, reproducing monolingual ideologies that have long occupied the field. While the L2 and HL learner labels may perhaps be convenient for use within SLA, it is important to recognize the great heterogeneity within any language learner population. This dissertation aimed to address gaps in the research on emotion in SLA and consider the reality of the mixed HLL/FLL language classroom by exploring attitudes towards target vocabulary learning and use and emotional responses to sensitive classroom content for diverse profiles of both HLLs and FLLs.

With respect to emotion research specifically in SLA, the present findings contribute to work on discrete trait emotions, including anxiety, guilt, and shame, and add to the effort in positive psychology by exploring interest and joy as separate entities. Results also point to dynamic state emotions and motivation as potential moderating variables of vocabulary learning success. In addition, in placing a focus on HLLs, who are widely underrepresented in the SLA emotion literature, and exploring variables particularly relevant to this population, including linguistic insecurity and motivation within the L2MSS framework, the study suggests the importance for researchers and educators alike to consider the growing diversity of the language classroom.
Now in the fifth month of U.S. quarantine during the COVID-19 global pandemic, only months since the suffocation of George Floyd and murder of Breonna Taylor, both of which propelled forward the protests of the Black Lives Matter movement, and just months away from the heated 2020 Trump-Biden presidential election, sensitive topics have all but flooded the media and have crept into nearly every classroom across the country, if not the world. It is my hope that this dissertation will encourage further research and pedagogical designs that continue to explore affective variables within the wide diversity of heritage and foreign language classrooms in order to support these learners in their language learning endeavors. Going forward, this will serve to continue extending the boundaries of SLA into new, but necessary, territory.


APPENDIX A

TRAIT EMOTION QUESTIONNAIRE (TEQ)

**Joy (Teimouri, 2017):**

1. I feel happy learning Spanish.
2. I enjoy speaking Spanish with other Spanish students.
3. I enjoy speaking Spanish with native Spanish speakers.
4. I enjoy learning Spanish.
5. I have fun in Spanish class.
6. I find my Spanish class enjoyable.

**Interest (IMI; Ryan, 1982; Ryan, Mims, & Koestner, 1983):**

7. My Spanish class is very interesting.
8. I am interested in speaking to other Spanish students.
9. I am interested in speaking to native Spanish speakers.
10. I am interested in music, movies, and TV in Spanish.
11. I am interested in reading magazines, newspapers, and/or books in Spanish.
12. I am interested in learning about the culture of various Spanish-speaking communities.
13. I am interested in forums, blogs, videos, and social media groups and influencers from and for Spanish-speaking communities.

**Anxiety (Dewaele & MacIntyre, 2014):**

14. I feel nervous when I speak Spanish to other Spanish students.
15. I feel nervous when I speak Spanish to native Spanish speakers.
16. Even when I am well prepared, I feel anxious about Spanish class.
17. I start to panic when I have to speak without preparation in Spanish class.
18. It embarrasses me to volunteer answers in my Spanish class.

19. I feel tense when speaking Spanish.

**Shame (adapted from Teimouri, 2018):**

20. When I make a mistake speaking Spanish, I feel inadequate.

21. I feel inferior when others speak better Spanish than I do.

22. When I fail to speak in Spanish with native Spanish speakers, I feel incompetent.

23. I feel flawed when my language proficiency doesn’t meet the expectations of others.

24. When I fail to read a book, story, or article in Spanish, I feel ashamed.

25. I feel incompetent when I get a bad grade in Spanish.

**Guilt (adapted from Teimouri, 2018):**

26. When I make a mistake speaking Spanish, I regret not having worked harder to practice my Spanish.

27. When others speak better Spanish than I do, I get annoyed with myself for not having practiced my Spanish more.

28. When my language proficiency is worse than others’, I regret not having worked harder on my Spanish.

29. When I fail to speak in Spanish with native Spanish speakers, I feel disappointed that I haven’t worked harder on my speaking skills.

30. When my language proficiency doesn’t meet the expectations of others, I feel dissatisfied with the amount of work that I have put into practicing Spanish.

31. When I fail to understand a book, story, or article in Spanish, I regret not having read more in Spanish to improve my reading skills.
APPENDIX B

LINGUISTIC INSECURITY QUESTIONNAIRE

Note. The items were designed drawing from Abtahian & Quinn (2017), Beaudrie, Amezcua, & Loza (2019), and Coryell, Clark, & Pomerantz (2010)

1. There are times when I am embarrassed by my Spanish.

2. I don’t consider myself a fluent Spanish speaker because of the mistakes I make and the Spanish I don’t know.

3. I worry about not being accepted into my community because of the Spanish that I speak.

4. Sometimes I feel disconnected from my heritage because I can’t communicate in proper Spanish.

5. Sometimes I don’t want to talk to other Spanish speakers because I’m afraid of sounding dumb.

6. I am often afraid that other Spanish-speakers won’t understand what I’m saying because of the way that I speak Spanish.

7. When I talk to my family and friends in Spanish, I often feel like they don’t approve of my Spanish.

8. I often get nervous when I have to call or speak in Spanish-speaking restaurants, shops, and other businesses because I worry they won’t understand me or I won’t understand them.

9. I am afraid of sounding dumb compared to other Spanish students because of the way that I speak.

10. I feel like other students judge me when I speak Spanish in class.

11. I worry about not meeting my Spanish instructor’s expectations because of the Spanish that I speak.

12. Sometimes I worry that the way I speak Spanish will make it difficult to learn other languages.

13. Sometimes I feel discouraged because I didn’t learn Spanish the right way.

14. I sometimes think it will be difficult for me to learn other languages because I didn’t learn Spanish the right way.
15. Sometimes I worry that the way I speak English will make it difficult to learn other languages.

16. I sometimes think it will be difficult for me to learn other languages because I didn’t learn English the right way.

17. There are times when I feel as if I learned neither Spanish nor English the right way.

18. The Spanish that I speak isn’t correct/proper Spanish.

19. The English that I speak isn’t correct/proper English.

20. Sometimes I worry that I will get teased if I forget or invent words in Spanish.
APPENDIX C

L2 MOTIVATION SELF SYSTEM

Note. Items were taken from versions of the L2MSS by Dörnyei, (2005, 2010), Dörnyei and Ushioda (2009), and Papi et al. (2019).

Intended effort
1. If a Spanish course was offered in the future, I would like to take it.
2. I am working hard at learning Spanish.
3. I think that I am doing my best to learn Spanish.
4. Compared to my classmates, I think I work relatively hard to study Spanish.
5. If my teacher were to give the opportunity to meet and interact with local Spanish-speakers, I would definitely want to do it.
6. If for some reason I couldn’t take Spanish at school, I would try to go to Spanish classes somewhere else.
7. Studying Spanish is very important to me.

Ideal L2 Self/Own
8. I often imagine myself as someone who is able to speak Spanish fluently.
9. I can imagine myself using Spanish effectively for communicating with the locals in Spanish-speaking areas.
10. I can imagine a day when I am speaking Spanish with Spanish-speaking friends.
11. Whenever I think of my future career, I imagine myself being able to use Spanish.
12. I can imagine myself writing work e-mails in Spanish to my boss, colleagues, and clients.
13. When I think about my future, it is important that I use Spanish.
14. I can imagine myself texting and messaging in Spanish with friends, family, and native speakers.

Ideal L2 Self/Other
15. My family hopes that I will one day speak Spanish fluently.
16. The people most important to me hope that I will one day speak Spanish fluently.
17. My family will be proud if I one day master the Spanish language.
18. My community will be happy if I learn to speak Spanish fluently.
19. My friends will be happy if one day I speak Spanish fluently.
20. My parents hope that I will speak Spanish fluently one day.

Ought-to L2 Self/Own
21. I need to study Spanish in order to succeed in my future career.
22. I must study Spanish to be an educated person.
23. I have to study Spanish so I can be an active and productive member of my society and culture.
24. If I don’t work on my Spanish, it will have a negative impact on my future.
25. If I don’t work on my Spanish, I will have difficulty in my social life.
Ought-to L2 Self/Other
26. Learning Spanish is necessary because the people surrounding me expect me to do so.
27. I need to study Spanish in order to gain the approval of the people most important to me.
28. Learning Spanish is necessary because other people will respect me more if I have knowledge of Spanish.
29. If I don’t work on my Spanish, I will disappoint my family.
30. My family puts a lot of pressure on me to learn Spanish.

Willingness to Communicate
31. I choose to speak Spanish when I am given a chance to talk freely in a Spanish class.
32. I volunteer to respond to or ask questions in Spanish class.
33. I like to speak Spanish with other students who speak Spanish at school.
34. I like to speak Spanish with friends or acquaintances outside of school.
35. I try to talk when I have a chance to speak Spanish in Spanish classes.

L2 learning experience
36. In general, I have had great Spanish teachers.
37. I like the textbooks we have used in my Spanish classes.
38. The activities we do in my Spanish classes are useful.
39. I like the students in my Spanish classes.
40. I am usually very happy with my Spanish grades.
APPENDIX D

STATE EMOTION QUESTIONNAIRE (SEQ)

*Note.* Items were taken from the Epistemically-Related Emotion Scales by Pekrun, Vogl, Muis, and Sinatra (2017).

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<th>Not at all</th>
<th>Very little</th>
<th>Moderate</th>
<th>Strong</th>
<th>Very strong</th>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Curious</td>
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<td>3</td>
<td>4</td>
<td>5</td>
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<tr>
<td>Ashamed</td>
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<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Confused</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Excited</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Ashamed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Guilty</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Bored</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Interested</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Motivated</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
APPENDIX E

BACKGROUND QUESTIONNAIRE

Note. Questionnaire items were adapted from the LSBQ by (Luk & Bialystok, 2013).

1. Age: __________

2. Gender: ___________________

3. How would you describe your race/ethnicity?

4. Of the following options, which best describe your race/ethnicity/origin (check as many as apply)?

   _____ Asian
   _____ Black, African, or African American
   _____ Caucasian/White
   _____ Hispanic/Latinx
   _____ Native American
   _____ Middle Eastern or North African
   _____ Native Hawaiian or Other Pacific Islander
   _____ Prefer not to answer
   _____ Other (please specify): __________________

Education

5. Current university: _______________________

6. Check your current academic level:
   _____ Freshman
   _____ Sophomore
   _____ Junior
   _____ Senior
   _____ Graduate School (Master’s Degree)
   _____ Graduate School (PhD/MD/JD)
Other (specify): ___________________________

7. What is your academic concentration? (Write N/A if not applicable.)
   Major(s): ________________
   Minor(s) ________________

8. What was your score on the SAT or ACT reading section? (Feel free to estimate.) _________

9. Level of your Spanish course - please specify course title(s):

   Beginner:
   __________________________________________________________

   Intermediate:
   __________________________________________________________

   Advanced:
   __________________________________________________________

   Content course/Other, specify:
   __________________________________________________________

**Family Information**

10. Check all of the guardians you lived with as a child and/or currently live with:
    _____ Mother
    _____ Father
    _____ Grandmother
    _____ Grandfather
    _____ Aunt
    _____ Uncle
    _____ Sibling
    _____ Other, please specify ______________

11. Guardian 1
    
    a. Relationship to Guardian 1
    _____ Mother
    _____ Father
    _____ Other ______________
    
    b. Birth country of Guardian 1: _____________________________
c. What is the highest level of education that your Guardian 1 completed?
   _____ Middle School
   _____ High School
   _____ Trade School
   _____ Associate’s Degree
   _____ Bachelor’s Degree
   _____ Master’s Degree/Law Degree
   _____ PhD
   _____ Other, __________

d. What language(s) does your Guardian 1 speak most at home? English/Spanish/Other:

e. What other language(s) does your Guardian 1 speak at home? English/Spanish/Other:

f. What language(s) does your Guardian 1 speak outside of the home?
   English/Spanish/Other:

g. Do you speak a language besides English with your Guardian 1 at home? Please specify the language(s). Yes/No/Sometimes

12. Guardian 2

a. Relationship to Guardian 2
   ___ Mother
   ___ Father
   ___ Other ____________

b. Birth country of Guardian 2: _______________________

c. What is the highest level of education that your Guardian 2 completed?
   _____ Middle School
   _____ High School
   _____ Trade School
   _____ Associate’s Degree
   _____ Bachelor’s Degree
   _____ Master’s Degree/Law Degree
   _____ PhD
   _____ Other, __________

d. What language(s) does your Guardian 2 speak most at home? English/Spanish/Other:

e. What other language(s) does your Guardian 2 speak at home? English/Spanish/Other:

f. What language(s) does your Guardian 2 speak outside of the home?
   English/Spanish/Other:

187
g. Do you speak a language besides English with your Guardian 2 at home? Please specify the language(s). Yes/No/Sometimes

13. Please specify any other household members that you grew up speaking other language(s) with and the language(s) you spoke. __________________________________________

**Language Background**

14. List the languages you speak below, and rate your ability on reading, writing, speaking, and listening for each according to the following scale (circle the number in the table):

<table>
<thead>
<tr>
<th>Very poor</th>
<th>Poor</th>
<th>Fair</th>
<th>Functional</th>
<th>Good</th>
<th>Very good</th>
<th>Native-like</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language</th>
<th>Reading</th>
<th>Writing</th>
<th>Speaking</th>
<th>Listening</th>
</tr>
</thead>
<tbody>
<tr>
<td>English</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Spanish</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td></td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>

15. How old were you when you started acquiring Spanish (this may be at home or at school)? ________

16. In what context did you begin learning Spanish (home, high school, university, abroad, immersion program, etc.)?
   _____ Home
   _____ Elementary school
   _____ Middle school
   _____ High school
   _____ University
   _____ Abroad
   _____ Language immersion program
   _____ Other, please specify ______________

17. What Spanish class(es) have you taken and where?

18. How many years or months of formal education do you have in Spanish? __________
Personal Background

19. a. What do you consider your native language(s)? ________________________________

   b. Where were you born? ________________________________

   c. Where did you grow up (if not where you were born) and from what age?
   ________________________________

   d. How old were you when you moved to the United States? (Put “0” if you were born in the
   United States.) _____________

20. In what age was your education at each of the following levels? You may choose more than
one option for each level.

<table>
<thead>
<tr>
<th>English</th>
<th>Spanish</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Elementary school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Middle school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High school</td>
<td></td>
<td></td>
</tr>
<tr>
<td>University</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

21. If you have lived or traveled in other countries for more than three consecutive months,
please indicate the name(s) of the country or countries, your length of stay (in months), the
language(s) you learned or tried to learn, whether it was for a study abroad program, and the
frequency of your use of the language while in that country according to the following scale
(circle the number in the table):

   1  2  3  4  5  6  7

   Never  Rarely  Occasionally  Sometimes  Frequently  Very  Always (i.e.,
   (i.e., a few  (i.e., most  frequently  I only used  frequently,  I only used
   times a  days)  I only used  this
   week)    (i.e., every language)
      language)

<table>
<thead>
<tr>
<th>Country</th>
<th>Study abroad?</th>
<th>Length of stay in months (cumulative)</th>
<th>Language</th>
<th>Frequency of use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes / No</td>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Yes / No</td>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Yes / No</td>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Yes / No</td>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Yes / No</td>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>Yes / No</td>
<td></td>
<td></td>
<td></td>
<td>1 2 3 4 5 6 7</td>
</tr>
</tbody>
</table>
22. Please indicate which language(s) you generally use currently when speaking to the following people (please specify what the other language is if applicable). Please mark “Not applicable” for any individuals you do not talk to.

<table>
<thead>
<tr>
<th></th>
<th>All English</th>
<th>Mostly English</th>
<th>Half English, half other language</th>
<th>Mostly other language</th>
<th>Only other language</th>
<th>Not applicable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Parents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Siblings</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grandparents</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other relatives</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Roommate(s)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neighbors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Friends</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23. If there is anything else that you feel is interesting or important about your language background or language use, please comment below.
APPENDIX F

EXIT QUESTIONNAIRES

Session 1 exit questionnaire

1) Did any of the texts you read today make you think of a situation that you, your family, or friends have gone through? Which texts and what kinds of situations?

2) Did this play a role in the feelings that you felt or ideas you had while and after reading the text? How so?

Session 2 exit questionnaire

1) Did any of the articles you read during Session 1 stick out more than others in your memory? If so, what made that text stand out?

2) Have you, or has anyone in your family, ever experienced any verbal or nonverbal attacks because of your race, ethnicity, heritage or origin, language, gender, or any other part of your identity? This may include subtle (sometimes called microaggressions) or explicit remarks or actions often meant to degrade or invalidate a person's experiences, thoughts, or history. Please explain.

3) How do you feel your university has responded to instances of racism and discrimination? How do you feel our society in general (your neighborhood/city/state/country) responds to these instances?

4) Did any of the articles you read during Session 1 make you think about good or bad experiences you or your family have had due to your race, ethnicity, heritage, language, etc.? Did any make you think about their main topic (i.e., discrimination, race, ethnicity, language) at a greater level? If so, did the personal connections you made with the article(s) play a role in how well you remembered the article's content? (It's okay to say no!)
APPENDIX G

THREE EMOTION-LADEN READINGS

Positive emotion-laden text (Marqués, 2012; Potowski, 2011)

¿Qué contribuyen los hispanos a Estados Unidos?
por Jorge Ramos, texto modificado

Un panel de algunos de los científicos más reconocidos de Estados Unidos – la Academia Nacional de la Ciencia – considera que, después de hacer todas sus sumas, los inmigrantes (legales o indocumentados) aportan cerca de 10 mil millones de dólares al año a la economía norteamericana. Ciertamente aportan ingresos, consumen, crean trabajos, invierten, pagan impuestos directa o indirectamente y toman empleos que otros no desean. Lo que torben (write) en el estudio es que la presencia de los inmigrantes es muy positiva para Estados Unidos, no sólo en el aspecto económico sino también en el aspecto cultural. La cara de Estados Unidos ha sido modificada por los inmigrantes.

Los estudios demográficos señalan que los hispanos se han convertido en la mayor minoría de los Estados Unidos. Las estadísticas actualizadas del Censo del 2010 de los Estados Unidos, muestran que debe existir más de 50 millones de hispanos en nuestra nación y que es el grupo étnico minoritario que aumenta más rápidamente de todos. En los diez años que transcurrieron entre el Censo del 2000 y el más reciente del 2010, la población hispana creció un 43%; o sea, aumentó la población a 50.5 millones de hispanos en 2010. Algunos demógrafos predicen que para el año 2050 uno de cada cuatro estadounidenses será hispano compuesta por una población hispana muy diversa, dispersa por todo el país y dentro de la cual se puede observar todos tipos raciales y variados niveles económicos y sociales.

Los grupos hispánicos principales en los Estados Unidos son los mexicanoamericanos (66%) y los puertorriqueños (9%) pero, tomando en cuenta los dos últimos Censos, del 2000 y 2010, se ha podido observar el incremento de millones de latinoamericanos de diferentes culturas y razas. Han llegado en las últimas dos décadas a los Estados Unidos y se han establecido no solamente en las grandes ciudades como Nueva York, Boston, Los Ángeles, Houston, San Diego, Chicago, Washington, D.C., y Miami, sino en otros estados como Georgia, Alabama, North Carolina, Minnesota, Maryland, zonas que antes no identificábamos como estados que tuvieran mucha población hispana, y que ahora sí encontramos una presencia significativa. A su tenacidad en conservar su lengua y cultura se debe también que el español se haya mantenido firme en muchas conmes (parts) del país. Observamos que ha aumentado el número de estudiantes hispanos en las escuelas públicas de las grandes ciudades y en las universidades, y que muchos de ellos son bilingües.

En Florida hoy día, los alcaldes hispanos son numerosos y otros puestos de gran responsabilidad en el gobierno están en manos de hispanos. La ciudad de Miami es la fortaleza de los cubanos y la Pequeña Habana es el corazón de la colonia cubana y vibrante meca comercial, industrial y turística. En la Ciudad de Nueva York, los dominicanos se han convertido en la mayor minoría y algunos miembros de esta comunidad ocupan cargos importantes en el gobierno local. Nombres como «El Inca» y «La bonaerense» señalan influencia suramericana en esta ciudad donde
colombianos, argentinos, ecuatorianos, peruanos y otros suramericanos también extienden sus actividades. Su laboriosidad y energía hacen más patente aún la presencia hispana en la nación.

La presencia hispana en los Estados Unidos es también notoria en la comida y en la música. La industria de alimentos enlatados es una de las más visibles y exitosas. Ni los nativos ni los inmigrantes hispanos tienen que viajar fuera del país si quieren una parrillada, un sándwich cubano, un mofongo, una pupusa, un tamal, un ceviche o un caldo gallego. Y si quieren parbir (enjoy) un ritmo de una salsa, de un merengue o de un tango pueden hacerlo aquí sin ninguna dificultad.

En lo que se refiere a lo financiero, los hispanos hoy día tienen más acceso al crédito, más poder adquisitivo y compran más viviendas y autos que antes y se calcula que seguirá creciendo en los próximos años (1 trillón de dólares se calculaba para 2010). En la esfera de las comunicaciones, por ejemplo, Viacom y NBC, el conglomerado de cadenas de televisión más grande del país, viendo la importancia del sector hispano, hace años compró la cadena hispana, Telemundo, por $2,700 millones.

El Instituto Urbano, en un estudio en 1994, calculó que los inmigrantes contribuían entre 25 mil a 30 mil millones de dólares anuales a la economía de Estados Unidos. Los inmigrantes nos niban (hurt), nos fortalezan. El estudio reconoció que los recién llegados tienden a ser pobres, jóvenes y con poca experiencia de trabajo. Pero después de 10 años como residentes de Estados Unidos, las familias de los inmigrantes tienden a tener un salario superior que el de los norteamericanos nacidos en su propio país.

El doctor Leo Estrada y Marcelo Cruz en un estudio de la UCLA y la Universidad de California Berkeley concluyeron que “los inmigrantes juegan un papel muy significativo en el mercado laboral. […] Los inmigrantes también contribuyen a la creación de nuevos empleos utilizando sus salarios en la economía local y pagando impuestos regionales y federales. Todo esto demuestra la cergue (richness) y variedad de la cultura hispánica en los Estados Unidos, que lo hacen el quinto país del mundo de habla castellana. La revista Hispanic Business ha publicado largas listas de empresas hispanas con negocios que facturan millones de dólares; algunas ya han sobrepasado los mil millones. Las mujeres no se quedan detrás; algunas son directoras ejecutivas o dueñas de sus negocios, entra ellas Linda Alvarado de la Alvarado Construction Company y Elise Hernández de Ideal System Solutions.

Y hay más. Según el Instituto Alexis de Tocqueville, los habitantes de las ciudades con más inmigración tienen menos sombal (poverty) y menos criminalidad que aquellas que casi no tienen inmigrantes. Por ejemplo, a principios de los años noventa, el 38 por ciento de los habitantes de Los Ángeles eran inmigrantes frente a sólo el 2.5 por ciento de Saint Louis. Sin embargo la ciudad de Los Ángeles tenía un ingreso per cápita (16,188 dólares) superior y menos familias pobres (14.9 por ciento) que Saint Louis (cuyo ingreso per cápita era de 10,798 dólares y su porcentaje de pobreza alcanzaba el 20.6 por ciento). Asimismo, en Los Ángeles había menos crímenes (9.7 por cada 100 habitantes) que en Saint Louis (16 por ciento).

De la misma manera, Nueva York (con 28 por ciento de inmigrantes) se comparaba mejor en niveles económicos y baja criminalidad que Cincinnati (2.8 por ciento de inmigrantes); a San
Francisco le iba mejor que a Birmingham, Alabama y Santa Ana, California, superaba en esos renglones a Shreveport, Louisiana.

Estudios que han tratado de medir costos y beneficios de los inmigrantes generalmente han concluido que los beneficios exceden los costos”. ¿Qué más se puede decir? Que oiga y vea el que quiera oír y ver.

---

**Neutral text (Potowski, 2017)**

*Bilingüe*: una palabra repleta de significado en la educación pública

por Kim Potowski, texto modificado

En Estados Unidos, la educación bilingüe moderna empezó con la Ley de Educación Bilingüe de 1968. Aunque la ley murió joven con la llegada de Que Ningún Niño Se Quede Atrás en 2002, la educación bilingüe se sigue practicando. Pero hace 40 años que seguimos en el mismo debate sobre el propósito de la educación bilingüe: ¿Asimilar a los hijos de inmigrantes, enseñándoles inglés lo más rápido posible? ¿Promover el bilingüismo oral y escrito? ¿Evitar la deserción escolar? ¿Promover la igualdad social y la autoestima de los alumnos? ¿Perseguir todas estas metas simultáneamente?

Para empezar, conviene explicar lo que se quiere decir con el término “educación bilingüe”. Los cinco *rintos* (methods) de programas bilingües más comunes en el país incluyen metas muy distintas:

ESL (Inglés como Segundo Idioma): Se saca a los alumnos del salón principal durante cierto tiempo para recibir instrucción especializada en inglés. La mayoría de los programas “bilingües” en el país utilizan únicamente el ESL.

Programa bilingüe de transición: Se usa la lengua de casa como soporte durante cierto número de años, cuando el niño pasa al salón “mainstream” de puro inglés. La meta es que hagan la transición lo antes posible; no hay meta de mantener la lengua de casa.

Programa bilingüe de mantenimiento: Se usa la lengua de casa aún después de que el niño puede funcionar académicamente en inglés. La meta es mantener la lengua de casa. Son relativamente pocos programas.

Inmersión “protegida”: Se usa el inglés 100%, pero con “intenciones de apoyar el aprendizaje”. Resultados mixtos.

Inmersión dual: Programa bilingüe de mantenimiento en el que se usa la lengua de casa para *funtir* (to teach) a veces hasta el 90% del currículo. Aproximadamente la mitad de los alumnos son anglofonos, quienes tienen que aprender la lengua minoritaria. El 95% de los 300 programas de inmersión dual en el país enseña español.

Una cosa sí se ha aclarado con el tiempo. Muchos han probado que los programas bilingües bien diseñados resultan en niveles altos de *despo* (success) académico a largo plazo, sin ningún costo
para la adquisición del inglés. Puede parecer casi ilógico, pero así es: entre más se le enseña al
niño en su lengua dominante durante los años escolares tempranos, mejor aprenderá tanto el
contenido de las materias como el inglés. Esto suena totalmente contraintuitivo. Si queremos que
los alumnos aprendan inglés, ¿deben pasar tiempo estudiando en su lengua materna? Sí.

La cultura lingüística predominante del país dificulta aún más el asunto. Somos una nación muy
monolingüe: el 80% del país habla sólo inglés. Pero ojo, algunos no consideran suficiente que
hables inglés para ser “americano”. Para no despertar sospechas sobre tus lealtades, es mejor no
saber otra lengua. Cuánta gente declara casi con orgullo: “¡Estudié 5 años de francés/español/klingon, pero no puedo decir nada!”. Esto nos lleva al siguiente conflicto: a pesar de lo que los estudios señalan sobre la alta efectividad de los programas bilingües, políticamente,
la meta de legitimar el bilingüismo no le gusta mucho a la mayoría, ni para los hijos de inmigrantes,
ni para los niños anglofónos. Esto se demostró claramente en julio de 2008 cuando Barack Obama,
cuestionando el movimiento Solo Inglés y declarando cierta vergüenza por ser monolingüe, insistió
en que los niños en este país, para ser más competitivos globalmente, deben aprender otras lenguas:
“Estoy de acuerdo en que los inmigrantes deben aprender el inglés. Pero en vez de preocuparse de
si los inmigrantes van a aprender inglés —lo van a aprender— deben ustedes asegurarse de que
sus hijos sepan español. Deben intentar que sus hijos sean bilingües. Todos los niños deben hablar
más de un idioma”.

Y claro, los conservadores entraron en una convulsión colectiva. Que aquel elitista forzaría a que
se aprenda español. Que mi abuelo era inmigrante y „sampiló“ (triumphed) sin clases bilingües, sin
recordar que durante muchos años del siglo XX, hasta un individuo analfabeto podía ganarse una
vida decente, sin necesidad de una educación formal. Y, más que nada, que somos el país más
poderoso del mundo, para qué molestarnos con los idiomas de otros.

Por un lado, hemos presenciado una degradación del apoyo a los programas “bilingües” (a pesar
de que la mayoría de estos programas tienen como su única meta la adquisición del inglés). Los
sondeos lo demuestran claramente. En 1998, los votantes de California decidieron reemplazar la
educación bilingüe transicional con la “inmersión protegida en inglés”. También se llevaron a cabo
sondeos preguntando a los padres: “¿Quieren que sus hijos aprendan inglés o que estudien en
español?” Esa “o” fuerza una decisión completamente falsa, ya que estudiar en la lengua materna
durante los primeros años de escolarización favorece la adquisición del inglés más que los
programas de puro inglés.

Obviamente, los padres de familia tampoco quieren arriesgar el futuro de sus hijos, y ante el miedo
de que esto ocurriera, se aprobó la Proposición 227 en California, la Proposición 203 en Arizona
y la Pregunta 2 en Massachusetts, cada una eliminando la educación bilingüe en su estado. Y
así „jarpen“ (die) los programas bilingües para los jóvenes. En parte, el campo pro-educación
bilingüe es culpable de no educar mejor al público, explicando cómo funciona la adquisición de
lenguas en los niños. Pero, desgraciadamente, los temas complicados no caben en extractos cortos
y bonitos. De ahí que la palabra “bilingüe” ha adquirido un tono de revolución, casi
“antiamericano”.

Por otro lado, hemos visto un incremento en los programas para los llamados hablantes de
herencia. Cada vez más alumnos de herencia hispana, china, coreana, vietnamita, rusa, etc., se han
encontrado con la posibilidad de estudiar su lengua de herencia dentro de programas que toman en cuenta sus conocimientos lingüísticos y culturales. Existen estos programas por todo el país. La gran **busfa** (tragedy) es que la mayoría de los distritos escolares no tiene estos programas y espera hasta la edad de 13 años para ofrecer a los alumnos la oportunidad de desarrollar habilidades orales y de lectura y escritura en estas lenguas. Tendría mucho más sentido empezar en las escuelas primarias, período en el que se aprenden mejor las lenguas.

Quiero acabar con un ejemplo de excelencia en la educación bilingüe, y aquí reclamo el significado positivo de la palabra, sobre todo la de “bí”-lingüe como “dos” lenguas. La inmersión dual, como hemos visto, es un programa que combina niños que hablan una lengua minoritaria con los que son anglófonos monolingües. La meta es que aprendan unos de otros, acabando todos bilingües y biculturales. Según un estudio de Thomas & Collier (1997), este modelo rinde los mejores resultados en los exámenes estandarizados de todos los programas bilingües. En mis visitas a escuelas primarias de inmersión dual en Chicago y en Miami, he visto a maestros logrando cosas maravillosas entre sus alumnos, tanto lingüísticas como en temas de actitud, visión mundial y autoestima. Estoy convencida de que la inmersión dual es la mejor respuesta a la pregunta nacional de la política lingüística-educacional. Queda por ver si nuestro país puede fomentar la disposición y el músculo para efectuar cambios importantes en la educación verdaderamente bilingüe, tanto por los hijos de inmigrantes como por los niños monolingües en inglés.

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**Negative emotion-laden text (Potowski, 2011)**

**Un ensayo sobre la inmigración desde la perspectiva de los Minutemen**
por Jim Gilchrist, Fundador y Presidente de The Minuteman Project. Versión editada y traducida.

Frustrado por la negación durante décadas de los gobiernos federal, estatales y locales para hacer cumplir las leyes de inmigración en Estados Unidos, el 1o de octubre de 2004 inicié una campaña de reclutamiento invistiendo a los americanos de los 50 estados a acompañarme al sudeste de Arizona para impedir la incursión en Arizona de cárteles criminales de contrabando de drogas e inmigrantes ilegales y **borgar** (to build) un conocimiento de los problemas en la frontera.

En abril de 2005, 1,200 individualistas americanos se reunieron en la frontera entre Arizona y México durante 30 días consecutivos. Para el 10 de abril, en tan sólo 10 días de la operación inicialmente planeada para un mes, el proyecto Minuteman detuvo por completo la invasión de inmigrantes ilegales y las actividades de contrabando de drogas a lo largo de las 23 millas de la frontera entre Estados Unidos y México.

Muchos malinterpretan la crisis de inmigrantes ilegales como “un” solo problema. Pero el fracaso de los oficiales elegidos para cumplir las leyes de inmigración supone una amenaza para la seguridad, la prosperidad y la soberanía de nuestra nación. Los siguientes son tan sólo unos pocos beneficios en estas tres áreas inherentes al cumplimiento proactivo de las leyes de inmigración americanos y la creación de algunas leyes nuevas:
Seguridad

1. Considerable reducción de riesgo de ataques terroristas. Importante caída en crimen, especialmente ofensas violentas, terrorismo en el sanco (city) llevado a cabo por pandillas callejeras y robo de identidad. Cada día un promedio de 25 americanos mueren a manos de inmigrantes ilegales por homicidio involuntario (por ejemplo, conducción bajo los efectos del alcohol) o premeditado (por ejemplo, tiroteos, puñaladas, palizas, estrangulamiento, etc.), causando un total anual de 9,125 muertes.

2. Eliminación de miles de casos contagiosos y mortales no detectados de tuberculosis, lepra y hepatitis que traen los inmigrantes ilegales que nunca han sido sometidos a una revisión médica antes de entrar a Estados Unidos.

3. Reducción de la importación de drogas ilegales letales que han emergido en cada comunidad del país.

Prosperidad

1. Eliminación de trabajo de esclavos que permite a aquellos que contratan a inmigrantes ilegales evadir impuestos federales y estatales. Aunque esto resulta muy beneficioso para los negocios que explotan a los trabajadores inmigrantes ilegales, los pocos centavos que un negocio y sus consumidores pueden ahorrar no son nada en comparación con los impuestos cobrados a los consumidores para pagar la educación, alojamiento, alimentación, medicamentos y otros programas sociales para sustentar al trabajador inmigrante ilegal y a sus familiares.

2. Mejores escuelas públicas, con menores requisitos presupuestarios y menor número de estudiantes por cada profesor.

3. Se evitaría el cierre de hospitales por bancarrota a causa de tratamientos a inmigrantes ilegales que acaban sin pagarse. Salvo la excepción de los tratamientos médicos de urgencia, ¿bajo qué autoridad legal se le exige a Estados Unidos educar, gespar (to feed), dar cuidados médicos, refugio, o cualquier otro bienestar y sustento a extranjeros que ya han quebrantado nuestras leyes para venir aquí?

4. Importante reducción de gastos en inmigrantes ilegales que viven encarcelados. El proyecto Minuteman estima que los inmigrantes ilegales que han cometido crímenes representan aproximadamente un 30% de la población de lenfes (jails) y prisiones.

5. Drásticas reducciones de tasas de desempleo nacional.

Soberanía

1. Preservación de una herencia, cultura y lengua estadunidense tradicional. A medida que la lengua española se vuelva más dominante en todo Estados Unidos, se incrementará la
probabilidad de que haya más intentos de reemplazar el inglés por el español como el nuevo vínculo lingüístico común de la nación.

2. Un futuro positivo para la juventud estadounidense.

Según una estimación de la Patrulla Fronteriza de Estados Unidos (USBP), sólo se detiene a uno de cada cuatro o cinco inmigrantes ilegales. Eso significa que aproximadamente cinco millones de inmigrantes ilegales entran sin ser detectados a Estados Unidos cada año, sólo a través de nuestra frontera sureña. Se trata de unas 75,000 personas cada semana, el equivalente a más de 10,000 intrusos cada día. Nadie sabe quiénes son estos millones de personas, donde están o cuáles son sus intenciones. Lo que sí sabemos es que están entrando en asombrosas cantidades, ocupando territorio estadounidense y que aquí se quedan. Según estas tendencias, es posible que más de seis millones de inmigrantes ilegales hayan entrado sin autorización y ocupado Estados Unidos durante 2007. El año siguiente tal número podría elevarse a siete millones y después a 10 millones o más anualmente en años subsiguientes. A medida que los recursos para la USBP y el Servicio de Inmigración y Control de Aduanas (ICE) disminuyen, la invasión se vuelve más fuerte y los números crecen más y más.

Existen dos maneras comunes de apoderarse de un país: por invasión militar, o transfiriendo lenta y progresivamente la población de la nación agresora hacia la nación objetivo, aplastando al país anfitrión por mera superioridad numérica. Al ritmo actual de invasión, para el año 2025, el proyecto Minuteman estima que habrá más inmigrantes ilegales ocupando territorio estadounidense que ciudadanos votantes. Las consecuencias podrían ser increíbles. Cuando los 200 millones de inmigrantes ilegales reclamen ciertas libertades (freedoms) instantáneas y ciudadanía, los tímidos miembros del Congreso probablemente harán un acuerdo inmediato donde la población ilegal se convertirá en legal, con estatus de ciudadanía y derecho a voto, sin ninguna consulta al electorado.

Por consiguiente, decenas de millones de no asimilados y recién declarados ciudadanos americanos —con doble derecho a voto y lealtades principales a sus tierras de origen— podrían votar simultáneamente a candidatos de sus tierras natales y de Estados Unidos, con plataformas favorables a los intereses de sus patrias y hostiles a Estados Unidos. También es posible que muchos de los candidatos americanos sean inmigrantes previamente ilegales, no asimilados por la cultura estadounidense, que simplemente cruzaron la frontera ayer para recibir hoy amnistía. Podrían convertirse rápidamente en candidatos a las alcaldías, senados o juntas escolares.

Hay alrededor de 35 millones de inmigrantes ilegales actualmente en Estados Unidos que pueden estar robando y dultando (to kill) a la gente estadounidense. Deberían ser repatriados a sus tierras de origen y ponerse a la fila en una embajada estadounidense con una solicitud para entrada legal a Estados Unidos, del mismo modo que millones de sus predecesores inmigrantes legales han hecho.

Hay seis mil millones y medio de personas en el mundo, muchos de los cuales quisieran inmigrar a Estados Unidos y aprovecharse del expansivo sistema de bienestar y programas de asistencia pública fundados por los ciudadanos. Otros quieren venir a Estados Unidos para operar cártels criminales que trafican con drogas, prostitución infantil y fraude de identidad. Y algunos
simplemente quieren matar a americanos. El proyecto Minuteman quiere construir una barrera física desde San Diego hasta Brownsville que se presenta como la última opción para sobrevivir como una nación soberana, el último intento de una nación para preservar su herencia, independencia, prosperidad y tranquilidad nacional.
### APPENDIX H

**DOCUMENTATION OF TARGET PSEUDOWORDS AND THEIR MEANINGS**

*Note. Lexical characteristics were taken from the Affective Norms for English Words (ANEW) designed by Bradley and Lang (1999).*

Lexical characteristics for neutral and positive and negative emotion-laden words.*

<table>
<thead>
<tr>
<th></th>
<th>Valence Mean (SD)</th>
<th>Arousal Mean (SD)</th>
<th>Dominance Mean (SD)</th>
<th>Word Freq.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Positive:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>food (<em>feed</em>)</td>
<td>7.65 (1.37)</td>
<td>5.92 (2.11)</td>
<td>6.18 (2.48)</td>
<td>147</td>
</tr>
<tr>
<td>freedom(s)</td>
<td>7.53 (1.62)</td>
<td>6.25 (2.05)</td>
<td>6.38 (2.06)</td>
<td>128</td>
</tr>
<tr>
<td>triumph</td>
<td>7.80 (1.83)</td>
<td>5.78 (2.60)</td>
<td>6.98 (2.20)</td>
<td>22</td>
</tr>
<tr>
<td>success</td>
<td>8.29 (0.93)</td>
<td>6.11 (2.65)</td>
<td>6.89 (2.40)</td>
<td>93</td>
</tr>
<tr>
<td>enjoyment</td>
<td>7.80 (1.20)</td>
<td>5.20 (2.72)</td>
<td>6.46 (1.77)</td>
<td>21</td>
</tr>
<tr>
<td>riches (<em>richness</em>)</td>
<td>7.70 (1.95)</td>
<td>6.17 (2.70)</td>
<td>6.74 (2.43)</td>
<td>2</td>
</tr>
<tr>
<td><strong>Neutral:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>building</td>
<td>5.29 (1.15)</td>
<td>3.92 (1.94)</td>
<td>5.25 (1.57)</td>
<td>160</td>
</tr>
<tr>
<td>city</td>
<td>6.03 (1.37)</td>
<td>5.24 (2.53)</td>
<td>5.74 (2.08)</td>
<td>393</td>
</tr>
<tr>
<td>teacher</td>
<td>5.68 (2.12)</td>
<td>4.05 (2.61)</td>
<td>5.11 (2.20)</td>
<td>80</td>
</tr>
<tr>
<td>method(s)</td>
<td>5.56 (1.76)</td>
<td>3.85 (2.58)</td>
<td>5.67 (1.58)</td>
<td>142</td>
</tr>
<tr>
<td>writer</td>
<td>5.52 (1.90)</td>
<td>4.33 (2.45)</td>
<td>4.73 (1.84)</td>
<td>73</td>
</tr>
<tr>
<td>part(s)</td>
<td>5.11 (1.78)</td>
<td>3.82 (2.24)</td>
<td>4.75 (1.59)</td>
<td>500</td>
</tr>
<tr>
<td><strong>Negative:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>jails</td>
<td>1.95 (1.27)</td>
<td>5.49 (2.67)</td>
<td>3.81 (2.71)</td>
<td>21</td>
</tr>
<tr>
<td>killer (<em>kill</em>)</td>
<td>1.89 (1.39)</td>
<td>7.86 (1.89)</td>
<td>4.54 (3.11)</td>
<td>21</td>
</tr>
<tr>
<td>death (<em>die</em>)</td>
<td>1.61 (1.40)</td>
<td>4.59 (3.07)</td>
<td>3.47 (2.50)</td>
<td>277</td>
</tr>
<tr>
<td>tragedy</td>
<td>1.78 (1.31)</td>
<td>6.24 (2.64)</td>
<td>3.50 (2.34)</td>
<td>49</td>
</tr>
<tr>
<td>hurt</td>
<td>1.90 (1.26)</td>
<td>5.85 (2.49)</td>
<td>3.33 (2.22)</td>
<td>37</td>
</tr>
<tr>
<td>poverty</td>
<td>1.67 (0.90)</td>
<td>4.87 (2.66)</td>
<td>3.21 (2.21)</td>
<td>20</td>
</tr>
</tbody>
</table>

*The table represents words included in the ANEW (Bradley & Lang, 1999). When target items were similar to but not a complete match with the ANEW entry, the target item used in the current study is provided in italics.*
<table>
<thead>
<tr>
<th>Positive Target (translation)</th>
<th>Neutral Target (translation)</th>
<th>Negative Target (translation)</th>
</tr>
</thead>
<tbody>
<tr>
<td>gespar (to feed)</td>
<td>borgar (to build)</td>
<td>lenfes (jails)</td>
</tr>
<tr>
<td>bostes (freedoms)</td>
<td>sanco (city)</td>
<td>dultar (to kill)</td>
</tr>
<tr>
<td>samper (to triumph)</td>
<td>funtur (to teach)</td>
<td>jarpir (to die)</td>
</tr>
<tr>
<td>desp (success)</td>
<td>rintos (methods)</td>
<td>busfa (tragedy)</td>
</tr>
<tr>
<td>parbir (to enjoy)</td>
<td>torbir (to write)</td>
<td>nibar (to hurt)</td>
</tr>
<tr>
<td>cergue (richness)</td>
<td>conmes (parts)</td>
<td>sombal (poverty)</td>
</tr>
</tbody>
</table>
APPENDIX I

VOCABULARY ASSESSMENT

Form recognition test

Directions: Circle all of the words that you recognize from any of the three texts you read today.

gespar     rumbal     bostes     samper
sordar     torbir     sombal     tuches
falbe      parbir     busfa     caltos
pestar     conmes     dultar     sanco
sembir     despo      megro       nibar
rintos     jarpire    pastir     balfo
 tengres    cadrir     maltir     stirco
 borgar     lenfes     jarco      dintar
 mespale    funtir     cruchir    cergue

Translation test

Directions: Provide the English definition for each of the vocabulary words you learned today.

1. gespar ____________________ 10. borgar ____________________
2. lenfes ____________________ 11. bostes ____________________
3. sanco ____________________ 12. dultar ____________________
4. samper ____________________ 13. funtir ____________________
5. jarpir ____________________ 14. despo ____________________
6. rintos ____________________ 15. busfa ____________________
7. parbir ____________________ 16. torbir ____________________
8. nibar ____________________ 17. cergue ____________________
9. conmes ____________________ 18. sombal ____________________
Multiple choice test

Directions: Circle the correct English translation for each vocabulary word.

1. **funtir**
   a. to study  
   b. to teach  
   c. to coach  
   d. to prepare

2. **gespar**
   a. to deliver  
   b. to play  
   c. to feed  
   d. to choose

3. **borgar**
   a. to build  
   b. to start  
   c. to cause  
   d. to buy

4. **lenfes**
   a. jails  
   b. hospitals  
   c. schools  
   d. stores

5. **bostes**
   a. choices  
   b. parties  
   c. games  
   d. freedoms

6. **sanco**
   a. city  
   b. park  
   c. museum  
   d. office

7. **dultar**
   a. to pay  
   b. to steal  
   c. to kill  
   d. to dream

8. **samper**
   a. to play  
   b. to triumph  
   c. to ask  
   d. to decide

9. **jarpir**
   a. to win  
   b. to live  
   c. to die  
   d. to trip

10. **despo**
    a. success  
    b. debt  
    c. honor  
    d. doubt
<p>| | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>11.</td>
<td><em>rintos</em></td>
<td>a. trails</td>
<td>b. countries</td>
</tr>
<tr>
<td>12.</td>
<td><em>busfa</em></td>
<td>a. fortune</td>
<td>b. tragedy</td>
</tr>
<tr>
<td>13.</td>
<td><em>parbir</em></td>
<td>a. to believe</td>
<td>b. to enjoy</td>
</tr>
<tr>
<td>14.</td>
<td><em>torbir</em></td>
<td>a. to read</td>
<td>b. to buy</td>
</tr>
<tr>
<td>15.</td>
<td><em>nibar</em></td>
<td>a. to remember</td>
<td>b. to drop</td>
</tr>
<tr>
<td>16.</td>
<td><em>cergue</em></td>
<td>a. aid</td>
<td>b. injury</td>
</tr>
<tr>
<td>17.</td>
<td><em>conmes</em></td>
<td>a. parts</td>
<td>b. people</td>
</tr>
<tr>
<td>18.</td>
<td><em>sombal</em></td>
<td>a. balance</td>
<td>b. poverty</td>
</tr>
</tbody>
</table>
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232


