

BRINGING THE PAST TO LIFE: THE EFFECTS
OF HISTORICAL LINGUISTICS INSTRUCTION ON MOTIVATION,
ENJOYMENT, AND IDENTITY IN THE FOREIGN LANGUAGE CLASSROOM

by

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ABSTRACT

For centuries, languages have been changing and evolving in complex, systematic ways. The study of past stages of a linguistic system and the overarching linguistic patterns characterizing the arc of change over time characterize the field of linguistics known as historical linguistics. Historical linguistics serves to illuminate both the sources and earlier phonetic and morphosyntactic features of a given language and the present trajectories and modern features of those same systems. This has implications for Second Language Acquisition. Indeed, existing literature suggests that instruction in various aspects of historical linguistics correlates positively with increased confidence, motivation, global competence, and multicultural identity.

This study explored the effects of introductory historical linguistics exposure on the L2 Motivational Self as defined by Dörnyei (2005) and revisualized for multilingual learners by Ushioda (2017) and Lasagabaster (2014), among others. After a one-week treatment period, qualitative and quantitative data were analyzed to determine if changes could be detected in middle and high school language learners' levels of motivation, enjoyment, and sense of identity in the foreign language classroom. Quantitative results revealed significant results in the areas of self-efficacy and metalinguistic awareness. Qualitative analysis revealed strong support for increased L2 enjoyment, L2 motivation, and self-efficacy, and revealed moderate support for lowered L2 anxiety and higher self-confidence.

Keywords: Historical linguistics, SLA, motivation, enjoyment, L2 self, L2 identity

LIST OF ABBREVIATIONS AND SYMBOLS

A	Agree
ACTFL	The American Council of Teachers of Foreign Languages
AMTB	The Attitude/Motivation Test Battery, developed by Gardner
ANOVA	Analysis of Variance
CALL	Computer-Assisted Language Learning
D	Disagree
df	Degrees of freedom
EFL	English as a Foreign Language
ESL	English as a Second Language
FL	Foreign language—encompasses all non-native linguistic systems: L2, L3, L4, L5, etc.
FLA	Foreign Language Acquisition
HL	Historical linguistics
HLT	Historical Linguistics Treatment – the researcher-created treatment described in this study
IPA	International Phonetic Alphabet
IRB	Internal Review Board
K-12	Kindergarten through 12th grade
L1	First or native language
L2	Second language
L3	Third language
L4	Fourth language

L5	Fifth language
<i>M</i>	Mean
N	Neutral
N=	Number
<i>p</i>	Probability of finding equal or more extreme results when the null hypothesis is true
PIE	Proto-Indoeuropean—refers to reconstructed language and to the people who spoke it
RQ	Research question
SA	Strongly Agree
SD	Strongly Disagree
<i>SD</i>	Standard deviation
SLA	Second Language Acquisition
TL	Target Language

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CHAPTER 1

INTRODUCTION

One of the oldest and most influential sub-fields of linguistics is historical linguistics. Yet what is historical linguistics, exactly? The Encyclopædia Britannica gives the following definition for the field:

"Historical linguistics, also called Diachronic Linguistics, [is] the branch of linguistics concerned with the study of phonological, grammatical, and semantic changes, the reconstruction of earlier stages of languages, and the discovery and application of the methods by which genetic relationships among languages can be demonstrated" ("Historical Linguistics," 2010, online).

The works of some of the earliest linguistics scholars, including Sir William Jones (1746-1794), were based upon study of the histories of influential ancient languages such as Greek, Latin, and Sanskrit, making historical linguistics (HL) arguably the oldest and most deeply rooted linguistic sub-field. However, many things venerable and old may become, seen in another light, outdated and outmoded. Historical linguistics is largely ignored in K-12 (that is, kindergarten through twelfth grade) and even undergraduate language programs, while newer, more popular fields have garnered increased interest in recent decades, among them Second Language Acquisition (SLA), sociolinguistics, and Computer-Assisted Language Learning, more commonly referred to as CALL. With the switch from prescriptive, translation-based pedagogical approaches based on the study of ancient Latin and Greek toward more student-centered, communicative approaches common with modern foreign language (FL) instruction, such a divide began to grow between

historical linguistics and the more modern linguistic fields that, with the removal of classic Latin and Greek from public education, historical linguistics has all but disappeared at the K-12 and even undergraduate levels; it is now often reserved for the elite few enrolled in graduate linguistic programs and never reaches younger, more varied audiences. In their 2008 apology for historical linguistics, Kleparski and Kudla flatly declared that the field is “fighting an uphill battle” (p. 61). Schousboe (1997) also mourned the loss of historical linguistics as part of English, linguistic, and FL departments, blaming the exacting, tedious work traditionally required for scholars in the field before electronic corpora all but eliminated that problem.

Hence the current predicament, where specialists in historical linguistics are scarce at many universities and practically unheard of at the K-12 level. Indeed, in the annual State of Linguistics in Higher Education report published by the Linguistic Society of America, historical linguistics was not listed as a top specialization chosen by graduates at any North American university linguistics program. When it was offered as a specialization area, it was offered most often only at the doctoral level; only seven institutions offered it at the MA level and only one at the bachelors level (Linguistic Society of America, 2017).

Given this, several apologists for the field have felt compelled to speak up, advocating for its continued applicability and relativity to modern linguistics (Campbell, 2004; Kleparski & Kudla, 2008; Laasko, 2015; Lightfoot, 2006; Lightfoot, 2007; Rissanen, 1997; Schousboe, 1997). While today’s burgeoning linguists may reasonably choose to study exciting, modern techniques in the fields of SLA, CALL, or sociocultural linguistics, it seems for the modern linguist, having one foot planted firmly in the historical past and another in modern, progressive fields might be a preferable option. The few studies that have been done on the effect of HL instruction on language acquisition indicate a positive relationship between the two—perhaps the

old assumptions were wrong, and HL is not just something for linguistics graduate students and professors, but a tool for elementary students discovering Latin roots in English words, middle schoolers mastering German vocabulary, high schoolers analyzing French spelling, *and* university students examining language change and its relationship to historical, political, social, and cultural changes at the same time (Arteaga & Herschensohn, 1995; Klepanski & Kudla, 2008).

Certainly not all historical linguists are as doleful about their field's future as Klepanski and Kudla (2008) and Schousboe (1997) seem to be; in his introduction to the *Handbook of Historical Linguistics*, Campbell (2004) was quite animated in his defense of the field and projected a bright future for the field, highlighting its close relationship to the study of language change in general. This study of language change patterns, he posited, allowed students of HL to better understand languages in general: how they work, how they change, how the individual segments contribute to the overall linguistic system, and what they tell us about their speakers. It is certainly difficult to imagine the study of any non-modern literature in French, German, Italian, Spanish, and a host of other languages without an understanding of how these languages have changed. Historical linguistics can enrich the study of many related fields, among them all modern languages, anthropology, history, and sociology. Campbell's enthusiasm for his field is evident throughout the work, but never more so than when he makes this claim:

“Historical linguists study language change. If you were to ask practising historical linguists why they study change in language, they would give you lots of different reasons, but certainly included in their answers would be that it is fun, exciting and intellectually engaging, that it involves some of the hottest topics in linguistics, and that it

has important contributions to make to linguistic theory and to the understanding of human nature” (Campbell, 2004, p. 1).

It is just this hope—the hope that HL instruction can aid and enrich the pursuit of other linguistic goals for students of a far more diverse age range, ability level, and interest range than previously assumed—that fuels this study. Existing literature, while limited in number and scope, suggests there may be a strong positive correlation between HL instruction and several facets of acquisition of modern FLs. These facets include acquisition of vocabulary, morphology, orthography, and cognate priming effects; acquisition of overall linguistic and cultural competence and development of self-concept and identity in the target language and culture; and the effect of affective factors known to influence language acquisition, such as motivation, anxiety, self-efficacy, and self-confidence.

Aside from support in existing literature for the inclusion of HL in beginning language classrooms, the National Standards in Foreign Language Education put forth by the American Council on the Teaching of Foreign Languages, Inc. (ACTFL) recognize the “intellectual challenge and cognitive benefits” (n.d., p. 3) of such language enrichment to learners. These standards stress students’ abilities to make connections within and among languages as well as to use language for “personal enjoyment and enrichment” (p. 4). The ACTFL National Standards are the result of collaboration by 18 national-level language confederations, including representatives of Hindi, Spanish, Portuguese, German, French, and Arabic. Editions of these standards with their 5 *Cs* of communication, culture, connection, comparison, and community, remain the driving force in FL standards of rigor in the United States today (The National Standards Collaborative Board, 2015). Historical linguistics, which can be tied into curriculums for every native and FL in the world, is a natural candidate for language enrichment due to its

inter-disciplinary nature—currently a popular trend in education, and one that is stressed at all K-12 levels (Hayes Jacobs, 2016). The history of language, tied inexorably by its very nature to the history of humans, is a topic flexible enough to suit learners with a variety of interests and motivation levels.

Current standards in education more broadly suggest some inclusion of HL in K-12 curricula. It is in their language arts courses students often learn Latin and Greek affixes, exposing them to basic morphology, phonology, and etymology—topics also vital to HL. This is supported by the literature—Rissanen (1997) spoke of the “central role” that HL should play in language teaching because it answers now only the *how* things happen but also the *why*, adding a new dimension to language learning. Laasko (2015) specifically mentioned the subbranches of historical phonology and etymology as being a particular help to students learning two or more related languages, in his case from the Finno-Ugric branch. Historical morphology is also important, evidenced by the fact that some sort of historical morphological instruction is explicitly called for in the Common Core State Standards for English Language Arts for every grade from first to twelfth (2015). Table 1 below demonstrates the use of historically-related English-language content appropriate for each grade level according to the U.S. Common Core.

Table 1

Historical Linguistic Target Skills Mentioned in the Common Core (2015, 2018)

Grade Level	Greek affixes (prefixes and suffixes)	Greek roots	Latin affixes (prefixes and suffixes)	Latin roots	Root(s)	Etymology
1					X	
2					X	
3			X		X	
4	X	X	X	X	X	
5	X	X	X	X	X	
6	X	X	X	X	X	
7	X	X	X	X	X	
8	X	X	X	X	X	
9						X
10						X
11						X
12						X

To some extent, elements of HL are incorporated into the national standards from primary through secondary school. The above table demonstrates that some types of metacognitive linguistic or morphological awareness skills rooted in HL already exist in the Common Core language arts curriculum at every level. These historical topics often make their way into language arts curricula via study of very basic morphological awareness (e.g. *like, likes, liked, liking*) in early literacy or study of Greco-Latin roots and affixes in English vocabulary (more advanced morphological awareness, e.g. Latin *rect* in *rectangle, erect, resurrect, correct, and misdirection*). However, the Common Core vocabulary certainly indicates some level of historical curricular content should be expected at every level from first grade through twelfth. The vocabulary used in the standards includes such historically-related lexical choices as “roots,” “Greco-Latin roots,” and “etymology.” While the standards for first through eighth grades call for study of either “root words” or “roots,” those for third through eighth grades further clarify that curricula should include Greco-Latin affixes, but only those for fourth through eighth grades

mention Greco-Latin roots. Only the standards for fourth and fifth grades advocate for the study of “morphology” by name, although certainly that should be understood by prior mention of *roots* and *affixes* (Common Core State Standards for English Language Arts, 2015).

The American Council on the Teaching of Foreign Languages (ACTFL) proficiency guidelines include historical linguistic topics. The general language standards indicate that a knowledge of the language’s history has the potential to enhance literacy and support vocabulary building. The Spanish-specific version of the standards mentions the wealth of historical and contemporary documents available to Spanish learners and how familiarity with these can lead learners to grow as historians, linguists, and users of the target language. The ACTFL guidelines of two target languages (Arabic and Chinese) also mention the morphological awareness of roots and etymology as specific skills for listening, one of four skill categories of ACTFL guidelines—speaking, writing, listening, and reading. These language standards stressed the importance of knowledge of target language (TL) morphology to guess novel lexical items encountered while listening (ACTFL Proficiency Guidelines, 2012). It is possible, with empirical support from the literature, other target languages might someday begin to include historical topics in their own guidelines.

The theoretical framework behind each of these aspects will be discussed in Chapter 2: Review of Related Literature. Each aspect was tested via literature-based, researcher-created survey instruments intended to gather both qualitative and quantitative data, as discussed in Chapter 3: Methodology. Then, results and their implications will be discussed in Chapter 4: Results and Discussion, followed by Chapter 5: Conclusion.

Research Questions

The research questions guide both the underlying direction of the study and the selection of data collection methods that should ideally best support the study. This study was designed to fill a gap in the field, as HL is often overlooked and possibly undervalued as an area that might produce positive results for teachers and students (Takayoshi, Tomlinson, & Castillo, 2012). The decision to employ both quantitative and qualitative data collection methods was practical: quantitative data, such as those gathered by surveys, content quizzes or tests, and Likert scales, offer valuable, statistically testable information on the numerical relationships among data; moreover, they provide information on general, overarching patterns in the data group that may be missed by relying on a qualitative approach. On the other hand, while the quantitative data can tell us *what* is happening, only the qualitative can give us insight into *why* it might be happening and can furthermore clarify and enlighten the quantitative results (Rassinger, 2013). Taken together, these two data types gave a clearer picture of how the treatment affected the students' FL identity, concentrating on their motivation and enjoyment in the second language (L2) classroom. Corroborating data from both sources strengthened the final findings, while conflicting evidence revealed potential design weaknesses and may spur further research opportunities. The overarching research questions (RQ), delineated in further detail in Chapter 3: Methodology, are below:

Research question 1: What effect, if any, does exposure to the HL treatment (HLT) described in this study have on students' motivation in the L2 classroom?

Research question 2: What effect, if any, does the HLT have on enjoyment of the L2 subject?

Research question 3: What effect, if any, does the HLT have on *other L2 identity constructs* that contribute to students' L2 ideal selves as global language learners and speakers?

CHAPTER 2

REVIEW OF RELATED LITERATURE

What effect, if any, does instruction in HL have on students' identities as FL learners? To answer this question, a theoretical framework incorporating multifaceted elements of Second Language Acquisition (SLA) and Foreign Language Acquisition (FLA) is required. Prior literature on the subject suggests such instruction has effects on content acquisition and comprehension (Apel & Werfel, 2014; Arteaga & Herschensohn, 1995; Marsrai, 2016; Paiman, Yap Negee, & Chan Mei, 2015); metalinguistic knowledge and awareness (Campbell, 2004; Lightfoot, 2007; Rissanen, 1997; Schousboe, 1997), and learner-specific features such as motivation, enjoyment, and cultural development, among others (see Arteaga & Herschensohn, 1995; Dörnyei, 2005; Lightfoot, 2007; Stranzy, 2005). Language and identity are closely related, as language draws social and political lines, cements regionalism, nationalism, and ethnicity, and contributes to a sense of self: *who I am* as well as *who I am not* (Stranzy, 2005).

This chapter first visits the terminology used in this study and related literature, including SLA, FLA, L2, L3, etc. Next it presents the history and current trends of L2 motivational theory, culminating in Dörnyei's postulation of the L2 Motivational Self System and its implications for FLA, including SLA and multilingual language acquisition. This leads to an overview of the dynamic roles played by various self-constructs in the formation of Dörnyei's ideal L2 or multilingual self. These include motivation, enjoyment, self-efficacy, self-confidence, anxiety, and global competence.

Terminology of Foreign Language Learning and Acquisition

SLA generally refers to the study of a non-native language by an adolescent or adult learner who is past the Critical Age for linguistic attainment, while FLA shares the same definition with the added idea of teaching a language that is not commonly encountered or used in the learner's everyday environment. Therefore, English as a Second Language (ESL) is generally teaching English to non-native speakers who have come to an English-speaking country to learn, while English as a Foreign Language (EFL) is teaching non-native speakers in their own country. Clearly, there is considerable overlap between these two types of teaching, and at times the distinction between SLA and FLA has been all but overlooked.

This difference is important to the present study, as L2 motivational theory is being applied to participants who are not, in fact, studying a second language, but are embarking upon the acquisition of a third or subsequent language. Mitchell and Myles (1998) defined the second language (L2) as “any languages other than the learner's ‘native language’ or ‘mother tongue’” (p. 1), adding further confusion to the issue as they make no distinction among a learner's second, third (L3), fourth (L4), fifth (L5), or subsequent languages, in fact explicitly stating that SLA for them refers to all these potential subsequent languages. Wei (2015), in contrast, defined “language acquisition beyond SLA” (p. 23), or rather, acquisition of a 3rd, 4th, or subsequent language, as third language acquisition, wholly ignoring the diverse ways cross-linguistic transfer from L1, L2, and L3 might be expected to affect the development of subsequent L4, L5, or others. Hammarberg and Williams (2009) echoed the lack of consensus around the term L3 in the literature without attempting to clarify the matter further, while they called L2 any FLs the learners have already studied and L3 the language they are trying to learn *now*. Clearly, no accord can be reached from the literature. Suffice to say that L3+ languages have not

enjoyed the same level of theoretical or empirical scrutiny as their FLA and SLA counterparts (Wei, 2015), but this lack of information should not impede readers from understanding that L3 and subsequent acquisition is an important, nuanced field rich with unexplored possibility. In fact, Aronin and Singleton (2012) reported that, compared to both monolinguals *and bilinguals*, multilinguals often demonstrate unique linguistic skills. These include greater metalinguistic awareness, larger linguistic repertoires, cognitive advantages, increased quantity and use of learning strategies, greater sensitivity to socially accepted language use in a given context, and a more robust array of identities. As many of the participants of this proposed study are in fact already studying Spanish as a third or fourth language rather than a second one, the benefits of HL instruction on *any* language acquisition, and not just SLA, should be explored. In fact, Hammarberg and Williams (2009) stated that “given that humans are potentially multilingual by nature, an adequate theory of language competence, use and acquisition should be able to account for multilingual cases, and preferably take these as the norm” (p. 3). Accordingly, for the purpose of this study, Foreign Language Acquisition (FLA) refers to the acquisition of any non-native language after the ending of the Critical Period, whether it be the learner’s 2nd, 3rd, 4th, or subsequent language. The L2 self governs the identity of the second language learned, while individual selves or an overarching multilingual self may govern the L3, L4, or L5 processes.

Terminology aside, Mitchell and Myles (1998) gave many reasons for the study of the acquisition of non-native languages. Acting as apologists for the field of SLA, they pointed out a teaching style grounded in SLA theory contributes to greater metalinguistic awareness and an understanding of the nature of language as a whole, which has broader applications to the understanding of human learning, intercultural communication, and human cognitive processes.

It should be self-evident that a theoretical grounding in SLA would allow both teachers and researchers to better understand the series of successes and failures inherent to L2 learning.

Theories of Affective Factors and Foreign Language Acquisition

Motivation. Motivation has been a highly investigated idea in SLA since the 1980s and remains a popular area of study today (Denies, Magnus, Desmet, Gielen, Heyvaert, & Janssen, 2016). While they were quick to point out that not all literature supports the idea that motivation increases L2 accuracy, their study of 1,650 Belgian 8th graders learning French as a FL supported the general scholarly consensus that motivation and L2 learning are interconnected. Using a multilevel multiple regression analysis with bootstrapping, Denies et al. demonstrated that L2 motivation does positively impact L2 acquisition; moreover, motivation was proven to be closely related to other important factors such as enjoyment of the subject, liking the teacher, and how useful they found the language, as well as self-confidence and self-efficacy. To better understand FLA theories of motivation and how concepts of L2 enjoyment, identity, and self-concept have emerged as distinct elements that contribute to motivation and overall L2 competence, Denies et al. maintained it is essential to begin with Gardner and his original motivational theories.

Gardner's theories. It was the noted psychologist Dr. Robert C. Gardner who pioneered much of the research on motivation and FL study. Gardner saw the learner's goals, which he called *orientations*, as separate from motivation; Gardner referred to *orientation* as the learner's reasons for L2 study, which he distinguished from *motivation*, which did not necessarily need to be related to orientation (Gardner, 1985). Gardner also popularized motivation as a topic of study for the next several decades and established scientifically sound research methodology and procedures and standardized experimental testing instruments and methods of assessment (Dörnyei, 1994a). Gardner, along with several of his colleagues and collaborators, developed

three major motivational theories that laid the foundation for more recent scholarship. These were the Integrative Motive Theory, the Socio-Educational Model, and the Attitude/Motivation Test Battery (AMTB).

Gardner and his mentor Dr. Wallace Lambert, a psychologist at McGill University, first developed their theory of motivation in 1959. This theory, called the Integrative Motive theory, refers to what the researchers called the language learner's motivational *orientation*. Gardner and Lambert (1959, 1972) defined orientation as the end goal or purpose of learning the TL. In this model, overall language motivation can be categorized into two possible orientations: these orientations are either integrative, meaning the goal is geared toward becoming part of or engaging with the TL community or culture, or instrumental, to fill a functional role. Since then, many researchers have attempted to clarify or extrapolate these ideas: Cho (2013) characterized the two orientations as the integrative motive stemming from a place of personal interest or affinity for the target community, while the instrumental motive functions from an awareness of the TL's practical advantages, while Dörnyei (1994a) described integrativeness as related to a positive attitude toward a TL and culture while instrumentality is concerned solely with pragmatic gains. Johnson (2012) added that while Gardner's instrumental orientation was usually visualized as the realization of educational or career goals, for many immigrant language learners the fact of communicative necessity is an equally, if not more so, pressing concern.

Therefore, under this binary model of motivation, students with a more integrative motivational orientation might be taking a French class because they are interested in French art, books, or movies, or because they want to engage with members of the French-speaking community. On the other hand, students with a more instrumental orientation might be taking the same French class to fulfill a degree requirement or to improve job opportunities. Of course, not

all learners can be expected to exhibit *solely* an integrative or instrumental motive. Many learners would fall instead on a spectrum between the two, and it is the interplay of both integrativeness and instrumentality that defines a language learner's motivation (Gardner, 1985; Gardner & Lambert, 1959; Gardner & Lambert, 1972).

In 1985, Gardner further developed his orientation model in his Sociopsychological Theory by adding the element of learner attitude to the prior motivational theory. This socio-educational model suggested that a learner's attitude affected motivation and, therefore, acquisition; the previous model had omitted any specific mention of attitude as a factor in motivation. A positive attitude toward the TL and community would lead to higher motivation. Therefore, under the Sociopsychological Theory, identification with the TL culture and community is a crucial factor in learner motivation and, by extension, language acquisition.

Gardner clarified that motivation stems from two themes: goal orientation *and* language attitude. Gardner also expounded upon his 1959 model with Lambert to identify four major foundations that affect FLA: sociocultural setting, differences in individual learning styles, educational setting, and context. Within learner-specific individual learning style differences he names four further categories: intelligence, language aptitude, motivation, and anxiety (Gardner, 1985).

Criticisms of Gardner's motivation theory. Not all researchers agreed with Gardner's approach to motivation, however. Au (1988) challenged Gardner's theory, denying the existence of any conclusive empirical evidence for a causal relationship between motivation and FL achievement. Crookes and Schmidt (1991) built upon many of Gardner's ideas and proposed their own framework of motivational theory, identifying four factors that contributed to L2 classroom motivation: interest, relevance, expectancy, and satisfaction. Clément, Dörnyei, and

Noels (1994) attempted to reanalyze motivation with less emphasis on the social element of language learning. Synchronously with his collaboration with Clément et al., Dörnyei (1994a; 1994b) emerged as a theorist who successfully incorporated many fundamental elements of Gardner's theories into his own framework of FLA motivation, the L2 Motivational Self System.

Crookes and Schmidt's theory. Graham Crookes and Richard Schmidt were also critical of Gardner's models' lack of pedagogical practical applications. Like Dörnyei, they were concerned with the apparently over-simplistic bimodality of Gardner's design, stating, "As far as second language acquisition theory is concerned, motivation is typically grouped together with various aspects and personality and emotion—miscellaneous factors which *may* play a role in acquisition" (1991, p. 218).

Building on the work of Gardner and others, Crookes and Schmidt (1991) produced an alternative motivational model that included learner attitudes toward the TL and target culture as well as the learner's eagerness to interact with the target community. This model examined language learning motivation on four levels: micro, classroom, syllabus, and extra-curricular.

First, the *micro level* refers to the often-subconscious cognitive processes involved in language acquisition: registering and responding to stimuli, processing input, and other processes involved in learning. While noticing stimuli may be partly affective, the researchers pointed out it is also motivationally influenced, as learners constantly sift through input and judge its place in the hierarchy or importance; simply put, an alarm may pull students' focus involuntarily (affective), but a classroom incentive may attract them so they *choose* to lend their attention and effort (motivational). Second, the *classroom level* refers to motivation occurring in the class setting rather than in a learner's mind; this may stem from enthusiastic opening remarks made by the teacher, an engaging pre-activity hook, meaningful feedback, interesting texts or materials, or

intellectually invigorating classroom activities. Clearly, instructors can hope to have much more impact on learner motivation at the classroom level than the micro level (Crookes & Schmidt, 1991).

Next, motivation occurs at the *syllabus/curriculum level*. This refers to motivating elements embedded in the design of the course curriculum to create a language program that meets students' language needs and desires. For the researchers, this was clearly related to a thorough analysis of student needs before the curriculum design stage. The final motivational level identified is the *extracurricular level*, or that is to say, informal learning that happens outside the classroom (Crookes & Schmidt, 1991). For students in a FL rather than an L2 setting, this element is inseparable from their language learning, but even in a L2 setting native or non-native speakers can often be found. For many students, true motivation will be evidence outside the classroom setting as well, as they initiate extra study, research, or cultural input on their own.

Clément et al.'s theory. Richard Clément and his colleagues Zoltán Dörnyei and Kimberly Noels examined Hungarian ESL students in 1994. These students had little or no contact with the L2 community or culture and seemingly no desire to engage in said contact, a requisite for Gardner's concept of integrative orientation. This is not to say those students lacked motivation in their pursuit of English, however, revealing substantial flaws in Gardner's earlier theories. In their place, Clément et al. identified a three-pillared concept of FLA motivation: integrativeness, linguistic self-confidence, and appraisal of the classroom environment. They did *not* find that a positive attitude toward the TL or target culture was necessary for motivation (Clément et al., 1991; Nakata, 2006).

For their model, Clément et al. acknowledged the earlier works of Gardner, who had published an article with Clément in 1990, yet also the recent call by Crookes and Schmidt for a

more pedagogical approach to L2 motivational theory. Expounding upon earlier works by Clément, they included personality traits such as self-confidence, positive attitudes, and anxiety as factors that affect L2 motivation, further pointing out that self-confidence in the TL can often determine attitude toward the language, indicating a complex, non-linear relationship among many different affective and integrative factors all contributing to overall motivation (Clément et al., 1991).

The researchers studied 301 Hungarian high school EFL students at various schools around Budapest. They measured students' motivational orientations, attitudes, motivation, and anxiety. In contrast to Gardner's ideas, which championed integrative motives and the socio-psychological need to engage, communicate, and belong, these researchers found that for the Hungarian participants, who were learning English isolated from Anglophones or their culture, instrumental motives were based more on the acquisition of knowledge and the ability to understand English media than Gardner's traditional understanding of instrumental motives that relate to a forced immediacy because of job or location considerations. They also identified group cohesion as a factor closely related to positive classroom environment, reminding instructors everywhere that some motivational (and de-motivational!) factors are out of their control (Clément et al., 1991).

Dörnyei's L2 Motivational Self theory. Building upon his work with Clément et al. (1991), Dörnyei further expounded his ideas about L2 motivation in his L2 Motivational Self System. The system put forth by Dörnyei incorporated the hitherto ignored elements of self, identity, and community into motivational theory. Dörnyei asked how Gardner's orientation could be independent from motivation when integrative orientation was included in integrative motivation. In short, for him, Gardner's definition of motivation was too narrow and not properly

aligned with the already-existing social understanding of the word “motivation” that is often used in other L2 studies (Dörnyei, 1994b). In addition, Dörnyei pointed out that Gardner was a psychologist and not an educator, and that a more pedagogically-based framework was called for (Dörnyei, 1994a).

In 1990, Dörnyei’s study of 134 adult Hungarian beginning and intermediate EFL students showed that, rather than the simple binary model proposed by Gardner, both integrative and instrumental motivation were actually comprised of sub-clusters of related factors, and certain factors could belong to more than one cluster. For instance, he identified 15 instrumental factors that contributed to motivation and 18 integrative factors. The 15 instrumental factors, which Dörnyei termed *language use fields*, are as follows:

1. Doing one’s job/profession
2. Reading English literature
3. Reading English newspapers/magazines
4. Reading English technical literature
5. Writing English articles/lectures
6. Traveling abroad (tourist)
7. Traveling abroad (business/education)
8. Working abroad
9. Making friends with foreigners
10. Communication with foreign acquaintances
11. Communication with foreign colleagues
12. Understanding English film/video
13. Understanding English broadcasting

14. Understanding English music

15. Keeping abreast of current events (adapted from Dörnyei, 1990, p. 53)

He further divided these 15 factors into 4 categories: Instrumental Language Use, Passive Sociocultural Language Use, Communicative Sociocultural Language Use (meaning active language use), and Reading for Nonprofessional Purposes.

Dörnyei further postulated 18 integrative motivational factors, which he called *Motivational/Attitude Variables*:

1. Interest in foreign languages
2. Attitude toward language learning
3. Language to broaden own worldview
4. Belief that Hungarians should learn English
5. Attitudes to English-speaking community
6. Pragmatic benefits of English
7. No need to be perfect in a foreign language
8. Negative opinion of own language aptitude
9. Desire to spend time abroad
10. Negative learning experiences
11. Desire to learn English to get ahead at work
12. English is needed for a high professional reputation
13. Commitment to lifelong learning
14. English as a bridge to other cultures and people
15. English as a new challenge
16. Required to take state language exam

17. Desire to take the state language exam (intermediate)

18. Desire to take state advanced language exam (advanced) (adapted from Dörnyei, 1990, p. 55)

Each of these factors was further divided into the same four categories. While each individual factor can be grouped into a related cluster of factors, Dörnyei pointed out that factors can be a member of more than one cluster. As such, some factors might have stronger relationships to other factors or clusters, and the complex interplay of these factors all contribute to a learner's motivation. For instance, instrumental language use, instrumentality, and desire to spend time abroad clearly belong in the Instrumental Language Use category, but desire to spend time abroad also belongs to another cluster that includes reading for nonprofessional purposes, communicative sociocultural language use, and interest in foreign languages and cultures.

While Dörnyei did find that those learners who demonstrated a predominately instrumental orientation attained an intermediate grasp of English more efficiently than other participants, those participants who exhibited a predominately integrative one were more likely to achieve an advanced level of language acquisition. In essence, both kinds of motivation are important; it is pragmatic reasons and a personal need for achievement that propels learning up to the intermediate stage, but integrative motive is needed for a truly near-native grasp of the TL. Equally important, his findings that instrumental and integrative motivation could and did overlap within a single learner cast serious doubt on Gardner's binary model (Dörnyei, 1990).

These ideas were all instrumental in the creation of Dörnyei's (2005) L2 Motivational Self System. The L2 self envisioned by Dörnyei was comprised of three parts: the ideal L2 self, the ought-to L2 self, and the L2 learning experience. This study is primarily concerned with factors contributing to the ideal L2 self, or who language learners imagine themselves to be. The

L2 learning experience is also of interest to explore relationships between the addition of HL curriculum to the modern FL classroom and the quality of the learning experience—that is, does student enjoyment equate to higher motivation (Dörnyei, 2005)?

Reconceptualizing L2 Motivational Self theory for multilinguals. Dörnyei’s ideal and ought-to L2 selves are related to the future goals and the purpose of the language learner. The ideal self governs students who are internally motivated to connect to a global community or learn a FL (Ushioda, 2017). Others claimed that the self governed not just L2 motivating factors, but also potential L3s, L4s, or beyond. Busse (2017) advocated for plurilinguism, or a plural identity lens applied to Dörnyei’s model, as did Ushioda (2017), who claimed multiculturalism and multilingualism remained strongly connected with students’ ideal self images and yet different languages may well be associated with different L2 self-images for every TL: an L3 identity quite distinct from the L4, for example. This was empirically supported in Dörnyei and Chan (2013), who showed language learners had distinct L2 ideal selves for different target languages but not distinct ought-to selves. In fact, these L2 selves might not just exist in tandem, they may compete: Busse (2017) reported a negative correlation between a highly developed L2 English self and other L2 selves for non-native speakers.

Existing in tandem with Ushioda’s distinct selves, Lasagabaster (2014) identified the *ideal multilingual self*, a construct that encompasses all the languages students speak, use, are learning, or desire to learn. While past research examined the L2 self system one language at a time, Lasagabaster encouraged future studies with a more holistic perspective of interrelated target languages and the selves. This is accordingly addressed in this study, as the treatment population was diversely multilingual and offered unique opportunities for study.

Ultimately, Dörnyei's colleagues advocated to recognize this unextractable interplay among many factors, each contributing to a student's L2 self. Ushioda (2017) recommended a more "holistic... view of language learning in terms of a person's whole linguistic and cultural repertoire" (p. 474) as a lens through which to view motivation. Continuing upon the foundation of Dörnyei's Motivational Self System and his work with MacIntyre and Ushioda, motivational theory is now beginning to consider social contexts, multilingualism, and varied L2 (L3, L4, etc.) ideal and ought-to selves (Duff 2017; Ushioda 2009; Ushioda 2017).

The multilingual self is dynamic and social (Duff 2017), and it is holistic (Busse, 2017; Henry, 2017). It is an L2 self in interaction with learners' communicative and social experiences. This is supported by Ushioda (2017) and Henry (2017). Viewed with this lens, "identities are interrelated, dynamic, complex systems operating... across multiple languages (Duff, 2017, p. 599).

Motivation in the FL classroom remains a popular SLA topic, but more than 70% of published studies on FL motivation has studied language learners who were studying English in an EFL environment. Other foreign languages are present but underrepresented (Ushioda & Dörnyei, 2017). This study fills a need in the field by examining the motivational self in Spanish, French, and German language classes.

Other aspects of L2 identity. Motivation is often viewed together with self and identity (Ushioda & Dörnyei, 2017). The authors describe the reframing of motivation within the context of self and identity as "mainstream in our field" (p. 451). Several constructs of the self have been identified in the literature, each thought to be part of the interplay of Dörnyei's L2 motivational self. The most researched of these are self-efficacy and self-confidence. Enjoyment, anxiety, and global competence were also examined. Recent social cognitive theory, socio-cultural theory,

and self-determination theory have laid the stonework for the more recent concepts of L2 motivation being entwined with each learner's self and identity (Mills, 2014). Current models assume an interconnectivity among the constructs, meaning research on one might well apply to another. Therefore, as the proposed study of HL in a classroom setting as enrichment or fun might be logically hoped to affect L2 motivation under the constructs expounded above, a brief look at its sister concepts is also called for in the name of scientific rigor and thoroughness.

Enjoyment. Enjoyment is clearly linked to motivation (Dörnyei, 2009; Dörnyei & Csizer, 1998; Tort Calvo, 2015). Enjoyment can lead to long-term motivation, and interest in and enjoyment of a task contributes to higher levels of motivation. Those who enjoy language learning are more likely to succeed at language acquisition (Precosky, 2011). Motivation is something educators may reasonably hope to affect, as Tort Calvo (2015) reported a major factor of L2 motivation comes from enjoying the language learning environment. This was supported in Islam, Lamb, and Chambers (2013), who found that positive attitudes toward the L2 and the ideal L2 self were the two strongest predictors of effort in the L2 classroom. Tort Calvo (2015) found an enjoyable L2 learning experience correlated with L2 achievement scores, although the relationship was weaker than that between ideal L2 self and achievement scores. The 10 Commandments for Motivating Language Learners stressed the importance of student enjoyment for motivating students to study longer or harder (Dörnyei & Csizer, 1998). Indeed, enjoyment or pleasure causes a higher intrinsic interest value in the FL task, increasing overall motivation (Dörnyei, 2009).

Students are assumed to enjoy tasks in which they are actively engaged. Engagement is crucial to learning a FL (Dörnyei & Ryan, 2015). It was described as “a concept to describe student behavior, cognition, and emotions while in class, representing the multifaceted intersection

between action and motive” (Oga-Baldwin & Nakata, 2017, p. 151). In their study, Oga-Baldwin and Nakata found that engagement acted as a prime for motivation over the course of a class and was strongly correlated with levels of intrinsic motivation. The reciprocal relationship between motivation and engagement is demonstrated by interest in the material and active, on-task learning, and by visible enjoyment of learning topics (Oga-Baldwin & Nakata, 2017).

Self-efficacy. Related to a learner’s concept of self as a language learner and participant in the target and/or classroom community is self-efficacy. Self-efficacy refers to a language learner’s belief that he has the tools, knowledge, and competence to succeed at a task. It is best summed up as what students believe they “can” do (Pajares & Schunk, 2002). Self-efficacy is related to both student behaviors and motivation. In fact, higher levels of perceived self-efficacy in the content area predict academic achievement more than other motivational constructs (Graham & Weiner, 1996; in Mills, 2014). High self-efficacy often predicts student behaviors as much as or more than actual abilities (Pajares & Schunk, 2002). In contrast, low levels of self-efficacy are often related to high anxiety levels that may impede both motivation and production (Pajares & Schunk, 2001; in Mills, 2014). Higher levels of self-efficacy in secondary language studies correlates to increased likelihood of studying at the university level (Busse, 2017).

Self-confidence. Closely related to the content-based concept of self-efficacy is the socially based one of *self-confidence*. Rather than referring to beliefs that they are capable of efficiently and accurately using target features, linguistic self-confidence is tied to a learner’s auto-evaluated ability to communicate with and identify with the target culture and its community (Dörnyei, 2005). High linguistic self-confidence has been related to identification with the target culture (Noels, Pon, & Clément, 1996), lower levels of linguistic anxiety—which carries the benefits of a lower affective filter (MacIntyre, Noels, & Clément, 1997), and

linguistic acculturation, which refers to the process whereby a learner adopts and/or acquires another culture (Dörnyei, 2005; Mills, 2014).

Anxiety. Anxiety is the final construct of interest in an exploration of the effect of HL instruction. Learner anxiety has been broadly shown in the research to raise students' affective filters, lowering acquisition (MacIntyre & Gregersen, 2012). Among all the affective (emotional, feeling-based) factors that may affect FLA, anxiety is the most well-known and most thoroughly researched. High anxiety has been correlated with lower course grades, higher language course attrition rates, lower uptake of linguistic input, lower participation, and increased avoidance behaviors (MacIntyre & Gregersen, 2012). Anxiety has been shown to affect all four areas of FL content: reading, writing, speaking, and listening. In addition, the link between anxiety and other self-constructs, such as lower levels of self-efficacy, self-confidence, and motivation, is well documented (MacIntyre & Gregersen, 2012; Ushioda, 2012). Papi (2010) found that a strong L2 ideal self and positive L2 learning experience led to less anxiety.

Dewaele and MacIntyre (2014) noted consistently negative correlations between language anxiety and language proficiency, as anxiety impedes both learning and communication (MacIntyre & Gardner, 1994). Females in the Dewaele and MacIntyre study reported higher levels of anxiety and enjoyment than their male counterparts, while European language learners experienced lower enjoyment in tandem with higher anxiety than North Americans.

While the correlation of high levels of anxiety to low motivation and acquisition of language does not imply causality, the evidence of a relationship among this and several other variables to be studied suggests this is an area that should be explored. While the effects of HL instruction on student anxiety have not been explored, if it is possible for such instruction to raise

student enjoyment and self-confidence, it might be expected to synchronously lower anxiety. Confident students are, by definition, not anxious.

Global competence. Another important element of the L2 self is a learner's sense of global competence and global competence. Membership in either the target culture community or the global community is neither a requisite for language learning nor a construct of self or motivation in any of the above models, but it bears examination as HL instruction has specifically been suggested to contribute to a learner's general acculturation, cultural knowledge and sensitivity, and appreciation for cultural diversity (Dill, 2013). Guilherme (2002), who stressed the importance of global competence, described it thus:

Increasing links between nations and the growth in more complex multicultural societies demand the preparation of critical and committed citizens, capable of establishing personal and professional relationship across cultures in the search for individual and collective improvement and empowerment (p. 1).

Globalization. Global competence is important in modern language classrooms due to current trends of globalization. Accordingly, recent years have seen a surge in globalization education. Such programs were often interdisciplinary, with a push for greater emphasis on global competence across many fields for a variety of self-evident reasons, including economy, business, hospitality, the social sciences, literature, and—of course—world languages. Dill (2013) described such programs as being oriented toward better marketability in a global economy, but include such pragmatic concerns as expanded opportunities, better understanding of global economic issues, higher job competitiveness as well as less tangible ones such as contributing to world peace, cultivating mutual knowledge and respect, and creating a better world. Such pedagogy purports to engender a sense of global community and citizenship through

encouraging international thinking. Multicultural awareness and intercommunity outreach are key. Some educators may combine traditional content instruction with service-learning projects, intercultural field trips, or humanitarian work. The driving force behind this educational push speaks to the importance of attaining global competence—endeavoring to produce learners who are able to make morally and ethically sound decisions based on a broad knowledge of and an appreciation of other cultures and ways of life, learners who are socially cognizant, globally minded, and culturally sensitive, and learners who have been socialized with both an individual and collective identity (Dill, 2013). This is especially seen in modern-day European language education, where there is a push to increase linguistic and cultural diversity. In the European context, language education is crucial to maintaining respect and open communication among the member countries of the European Union. Plurilingualism is encouraged (Busse, 2017).

In tandem with other theoretical frameworks discussed, global competence is complex and multidimensional. Learners come to language learning not as one, but as many identities: identities rooted in their race, ethnicity, nationality, religion, gender, sexuality, and a host of other social identities (Gibson, Reysen, & Karzarska-Miller, 2014). Identity here, best understood in its verb form, is a bridge—it is what connects the target community with the individual: *I am Catholic ergo I identify with the Catholic community ergo I identify with individuals within the Catholic community.*

Chen explored globalization and global competence in 2011, when she identified global competence as “having strong interests in global issues, cultivating the understanding and appreciate of diverse values, and enhancing country’s [sic] competitiveness” (p. 1), and she saw it is closely linked to language education. The many benefits of global competence are well-documented in the field and do not bear repeating here, but the theoretical grounding for such

benefits did inform Chen's observations. According to her, world citizenship is necessary under a sociocultural framework informed by Vygotsky, where language's function and purpose are communicative and all language learning happens within a sociocultural context, leading to the popular reliance in language classrooms on group work and collaborative learning.

Encouraging learners to foster a global competence relates to six categories of positive social values, discussed in detail in Gibson et al. (2014). In their work, the authors established six categories of prosocial values, each with specific values grouped thematically. These categories were intergroup empathy and connection, valuing diversity, concern for equality and social justice, environmental awareness, intergroup helping behaviors/desires, and sense of responsibility toward the world. The authors measured the global-citizen-related values of 222 U.S. and Chinese students. The participants were divided into three groups: a control group, which completed a survey; an independent self-construal group, which wrote about their own most meaningful personality traits; and an interdependent self-construal group, which wrote about their most meaningful interpersonal relationships. Results indicated that higher scores on five of the six global awareness measures correlated with an interdependent treatment style: Of the categories, all except global awareness were significantly higher ($p < 0.05$) in the treatment groups compared to the control. However, between the two treatment groups no conclusive distinctions were found, indicating that both self-construal activity aided in increased global competence (Gibson et al., 2014). For educators, this means a sense of global competence and citizenship may be achieved by more than one way.

Intercultural connections. Language learners' sense of global competence and connection has a direct effect on their motivation to study certain languages over others. In Thompson's 2017 study, she found learners in the United States were more likely to learn a language because

of personal or family connections with the language. This differed from participants of other nationalities, who were overwhelmingly studying global English. Thompson concluded participants exhibited higher levels of motivation when they had the freedom to choose their language of study, indicating an intrinsic drive, rather than feeling obligated to take it because of societal expectations or career necessity, operating from an extrinsic motive (Thompson, 2017).

L2 identity as a multidimensional system. All these constructs—self-efficacy, self-confidence, motivating factors, enjoyment, global competence, and attitudes toward the TL—are wrapped up in a learner’s *identity*. Do students see themselves as competent linguistics or drowning swimmers? The elements comprising a student’s L2 identity are multifaceted, dynamic, and interrelated (Dörnyei, 2001; Duff, 2017; Johnson, 2012), working together and influencing each other to create a fluid, holistic sense of L2 self. Elements that affect one construct of L2 identity can create a ripple effect that affects multiple other elements of the L2 self. The overarching purpose of this study is to discover if exposure to HL can affect one or more of these identity constructs, leading to a more fully developed sense of L2 identity and self.

How Historical Linguistics Can Contribute

While HL content has not enjoyed the incorporation into modern FL pedagogy that some of its sister fields have (Linguistic Society of America, 2017), there have been isolated attempts to theoretically and empirically study the effect HL might have on foreign language and culture acquisition, as well as the continued development of language learners’ affective constructs. These served to form a first layer in an otherwise-unexplored area of research. There is evidence that HL instruction has significant positive effects on content acquisition and comprehension (Apel & Werfel, 2014; Arteaga & Herschensohn, 1995; Marsrai, 2016; Paiman, Yap Negee, & Chan Mei, 2015) as well as on metalinguistic competence (Campbell, 2004; Lightfoot, 2007;

Rissanen, 1997; Schousboe, 1997). However, here is to date very little that connects HL instruction with an increased sense of L2 identity, whether through higher levels of motivation, increased enjoyment, or changes to learners' anxiety, self-efficacy, self-confidence, or global competence.

If FLA motivation is to be understood as a dynamic, constantly-evolving system (Dörnyei, 2001; Johnson, 2012) that is affected by a myriad of subconscious and conscious mental processes and factors (Clément et al., 1991; Crookes & Schmidt, 1991; Dörnyei, 1990; Nakata, 2006), where does HL fit into the overarching language acquisition puzzle? Some teachers may be reticent to add yet another specialty item to their already-overloaded curricula without empirical evidence that such instruction can function as a motivating factor for students. The present study will attempt to provide such evidence.

The effect of historical linguistics instruction on L2 self and identity. There is a dearth of empirical research on the effects of historical instruction on non-linguistic aspects of FLA, but some scholars believe that such effects exist and merit further exploration (Arteaga & Herschensohn, 1995; Campbell, 2004; Laasko, 2015; Lightfoot, 2007; Schousboe, 1997). In the face of modern research trends toward more popular fields such as SLA or sociolinguistics, a handful of historical linguists, acting as apologists for their field, have published articles defending the continued use of HL in FL learning, highlighting its potential continued relevance and importance for FLA in general and affective factors such as motivation, self, culture, and identity in particular. While not empirical in nature, the anecdotal evidence from these experts clearly indicates the possibility of a statistically significant effect and the necessity of further study to pursue this possibility. Several areas prove promising for future study, including the

effect of HL on enjoyment, motivation, and the development of linguistic self and identity, as well as its effect on learners' sense of culture and world citizenship.

In the *Handbook of Historical Linguistics*, Campbell (2004) reported that many of the linguists drawn into the field of HL are attracted by the intellectually stimulating work. Historical linguists enjoy their work. In a time when the popular view of HL was of dry, tedious work pouring over old manuscripts, Campbell used the word “fun” (p. 1). Yet this has been the experience of other authors, as well—Lightfoot (2007) anecdotally reported positive responses to historical enrichment from his university German students, and among the pedagogical benefits of HL instruction mentioned by Arteaga and Herschensohn (1995) was the fact that such instruction often takes the form of an enrichment activity, and as such is often perceived by learners as a kind of game, which can increase their interest and motivation.

Of course, enjoyment is closely related to motivation, and as discussed previously, motivation has long been recognized as a key factor in language learning (Dörnyei, 1990; Gardner, 1985) that is closely interconnected with other self-constructs such as self-confidence, self-efficacy, self-esteem, and anxiety. When Arteaga and Herschensohn (1995) reported significant results of historical instruction on French orthography tasks, they further noted students approached the activities as riddles or codes, making a game of breaking the French orthographic “codes”, and that this seemed to increase their motivation for the subject in addition to perceiving such information as a useful tool toward meeting their individual language learning goals. Laasko (2015) suggested that etymological knowledge may add to learning motivation, although he did not venture to specify how, and cautioned that it would only be indirectly affecting the language learning process. Taking the poststructuralist view of language identity and self-concept as fluid processes, he further reasoned such study would

affect the language learners' identities, how the learners view themselves, and how they view their roles in the target community. All these self-constructs (motivation, self-efficacy, self-confidence, anxiety, global competence) are so interconnected that to study one is often to study all, lending credence to the idea that initial empirical study in this area is overdue and much needed.

HL could also correlate to heightened levels of cultural awareness and sensitivity. Culture is a vital component of today's FL classrooms, and study of past texts and linguistic patterns can tell much about the lives and societies of the writers¹. Schousboe (1997) argued that language students benefit from exposure to historical sociolinguistics, which can provide reasons for linguistic changes as well as information on how and why innovative features spread. In his 2007 article, Lightfoot claimed such instruction teaches both the target culture specifically and *culture* as a general concept. Kleparski and Kluda (2008) concurred, emphasizing that the study of ancient words can lead to discussion about those speakers' customs and beliefs, allowing teachers to help students debunk cultural myths, understand past cultures, and appreciate another culture. Rissanen (1997) likewise agreed, claiming analysis of the development of ancient languages related to the TL would strengthen student concepts of social and regional language variation. Such historical-cultural topics would easily lend themselves to interdisciplinary collaboration with other fields such as history, anthropology, sociology, music, geography, education, or politics.

¹ This is the case, for instance, in *La Gran Conquista de Ultramar*, a 13th-century text that chronicles the adventures of the early crusaders, or in *Castigos y Documentos para Bien Vivir*, a text from the same century that records the lives and deeds of the Spanish royalty and members of the Spanish court.

Finally, if HL might be expected to impact language learners' understanding of both the target and global culture, it would logically also affect the related concept of global competence. Remember, Gibson et al. (2014) established six categories of pro-social values that contribute to global competence: intergroup empathy and connection, valuing diversity, concern for equality and social justice, environmental awareness, intergroup helping behaviors/desires, and sense of responsibility toward the world. Dill (2013) stressed multicultural awareness and sensitivity as key factors in developing global consciousness. Historical linguistics, as Lightfoot (2007) pointed out, encourages linguistic tolerance as students come to understand there is not only "one correct" way to speak the TL, and that moreover such a way never existed; this language has been in flux and change since its inception. The same analogy could be applied to the target culture. Schousboe (2016) supported the explicit teaching of historical-sociolinguistics to analyze the social and cultural reasons behind linguistic change and diffusion, contributing to an enhanced multicultural awareness and understanding of world culture. Indeed, Rissanen (1997) stated that to study HL is to study variation, and to study variation is to study what he called *the human factor*. Campbell (2004) agreed, claiming that understanding past and present linguistic and cultural change is "fundamental to understanding our very humanity" (p. 2).

The future of historical linguistics. Despite what some might call the uncertain future of HL in language learning classrooms, it still has its defenders in the field (Campbell, 2004). It has much to contribute to other linguistic fields and can be used in tandem with sociolinguistics or SLA to support a more well-rounded linguistic knowledge in language learners. Many of the authors mentioned above have made vigorous defense for its continued study and use; Rissanen (1997) went so far as claim that university language programs that choose not to address the higher-level *whys* but only the lower, vocational-level *hows* are relegating themselves to

mediocrity. The field has much left to offer, not just to other linguistic subfields but across a wide array of disciplines, including anthropology, culture, music, history, sociology, psychology, business, and education. If HL instruction can be empirically shown to improve FL content acquisition as well as the less tangible, but equally crucial, elements of FL study such as culture, self, or identity, that could prove a revitalizing force in the field, leading to new explorations and pedagogical insights as yet undiscovered.

CHAPTER 3

METHODOLOGY

The aim of this study is to determine if instruction in HL affects the following components of L2 identity: motivation, enjoyment, self-efficacy, self-confidence, anxiety, and global competence. Quantitative analyses will determine whether the treatment has a statistically significant effect on all these FL identity factors. Subsequent qualitative analysis will explore whether changes to learners' L2 ideal selves occurred and attempt to describe patterns in those changes. To this end, the study provides both a quantitative and qualitative examination of several areas of language acquisition that may be affected by exposure to HL.

Theoretical Framework

This study adopts the L2 Motivational Self System put forth by Dörnyei (1994a; 1994b; 2005). Additionally, in keeping with the recognition that many diverse factors interplay and interact to create an individual's motivational system, this study adopts Mercer's (2012) and Ushioda's (2017) assertion that enjoyment, self-concept, self-confidence, motivation, and other affective factors are interconnected and therefore can be too interfused to measure separately. As such, factors that contribute to motivation are also of interest in this study and include enjoyment, self-efficacy, self-confidence, anxiety, metalinguistic awareness, and global competence, which are all understood to contribute to a language learner's identity. According to Strazny (2005), identity is comprised of all these motivational factors as well as language learners' ideas of who they *are* and *are not*. All these theories highlight the complex

interdependent nature of language acquisition and the development of linguistic identity and global competence.

Research Questions and Hypotheses

Bearing in mind the mixed-method design of the study, the research questions and accompanying null hypotheses, followed by applicable alternative hypotheses, are outlined below.

Research Question 1: What effect, if any, does exposure to the HL treatment (HLT) described in this study have on student motivation in the L2 classroom?

Related to this research question is the effect of HL on *motivation* to learn other languages or to continue studying the current TL longer than originally planned, as well as to further study linguistics or another related field such as archeology or history. For the quantitative analysis, the following hypotheses were used:

RQ1-H0: The HLT will have no effect on student motivation in the L2 classroom.

RQ1-H1: The HLT will have a significant effect on student motivation in the L2 classroom.

Research Question 2: What effect, if any, does the HLT have on *enjoyment* of the L2 subject?

Enjoyment of the target language and culture, as well as of the L2 learning environment, is closely related to motivation to continue L2 studies (Dörnyei, 2001; Gardner, 1985). Do students enjoy the HL enrichment unit? Does this affect their desire to learn other languages or to further study linguistics or other related fields? Due to the lack of participant exposure to HL topics prior to treatment, this topic was not included in the pre-test and subsequently omitted from quantitative analysis.

Research Question 3: What effect, if any, does the HLT have on other L2 identity constructs that contribute to students' L2 ideal selves as global language learners and speakers? How, if at all, does this apply to the embedded conceptions of self-efficacy, self-confidence, anxiety, and global competence? For the quantitative analysis, the following hypotheses were used:

RQ3-H0: The HLT will have no effect on other aspects of student L2 identity.

RQ3-H1: The HLT will have a significant effect on student self-confidence.

RQ3-H2: The HLT will have a significant effect on student self-efficacy.

RQ3-H3: The HLT will have a significant effect on student foreign language anxiety.

RQ3-H4: The HLT will have a significant effect on student global competence.

This third research question and its reference to other aspects of L2 identity beyond motivation and enjoyment is not to be construed as indicative of any hierarchical theoretical assumptions that motivation and enjoyment are more important to identity than the other self-systems with which they interact. Rather, motivation and enjoyment are primarily explored here as a result of the researcher's personal prior observations of the effects of HL exposure on 6-12th graders, making the selection of these two constructs for research questions a practical decision rather than a theoretical one. While the primary focus of this study remained L2 motivation and enjoyment, literature suggests there are myriad other aspects of L2 identity that, as discussed in Ch 2, are impossible to completely separate from motivation and enjoyment when attempting to understand the L2 self. These other constructs affect and are affected by motivation, enjoyment, and each other and are therefore crucial to acknowledge in any meaningful exploration of the L2 self. An exhaustive exploration of all the potentially related factors would not fall within the scope of a single study, but there were some constructs mentioned repeatedly in motivational

literature. Hence, the embedded concepts of self-efficacy, self-confidence, anxiety, and global competence were chosen to be included in this study.

Definitions. For the purpose of this study, the following definitions were used, presented here in the order in which they are mentioned in the research questions and hypotheses:

Motivation: A desire or willingness to complete an action or process; drive. Dörnyei and Otto (1998) defined motivation as “arousal...that initiates, directs, coordinates, amplifies ... [how] wishes and desire are selected, prioritized, operationalized, and acted out.” Related words: future plans, drive, ambition, hopes, desires.

Enjoyment: “A heightened state of energy, enthusiasm, or eagerness” (Merriam-Webster, 2017). Related words: interest, fun, pleasure, entertainment. Antonyms: boring, uninteresting, didn’t like.

Self-Confidence: Trust in one’s own general abilities, qualities, or powers (Merriam-Webster, 2017). Related words: self-assurance. Antonyms: High affective filter, anxiety, nervousness.

Self-Efficacy: Students’ beliefs in their ability to successfully complete a specific task. Related words: can do, good at. Antonyms: can’t do, not good at, bad at.

Anxiety: A feeling of nervousness or worry. Related words: nervousness, concern, worry.

Global Competence: Students’ views of themselves as L2 learners, awareness of and value of other cultures and global communities, and the connectedness of their own linguistic identities with other languages and cultures. Related words: multilingualism, multiculturalism, global competence.

Data Type

Both quantitative and qualitative data were collected for this study. This mixed-method study design reflects the belief that quantitative and qualitative data can be compared and triangulated to support each other's findings: quantitative data is numerical in nature and can be used to make graphs, charts, and tables; to statistically test the strength of relationships among variables (e.g., Cresson & McKeowna, 2016), and to show overarching patterns in the data pool, while qualitative data is descriptive in nature and therefore more utile to understand *how* data is interacting and to identify data qualities important to the study's findings (Rassinger, 2013). Integration of both these data types occurred at several stages in the study: data collection, data analysis, and data interpretation.

Study Design and Model

This study was a mixed-method design of a sequential transformative strategy model. According to Creswell (2007), a sequential transformative model may prioritize either qualitative or quantitative method; it may prioritize both equally if sufficient data are present. The results will be integrated during the interpretation phase, rather than in other mixed-method models where the results are kept separate during interpretation and analysis; rather, this study, following its sequential transformative design, will attempt to use both sets of data taken as a whole to test the hypotheses. Creswell adds that this model is guided by a theoretical perspective, appropriate given the decision to prioritize quantitative data, which requires a deductive approach. In this case, the theoretical frameworks support the possibility of the treatment acting as a positive factor in language and culture acquisition. Furthermore, advocacy for the declining field of HL is at the heart of my desire to explore this topic; Creswell stresses that "the aim of

this theoretical perspective, whether it be a conceptual framework, a specific ideology, or advocacy, is more important in guiding the study than the use of methods alone” (2007, p. 213).

Instruments

Qualitative data were gathered in three ways: video recordings of student interactions during the treatment phase, student journals, and oral interviews. Video recordings were transcribed and analyzed for evidence of changes in motivation, enjoyment, and other L2 identity factors, as well as for other emergent themes. Student journals were comprised of open-ended written questions for students to respond to in written form on their own time. Semi-structured oral interviews were conducted with participants the week after treatment ended to gather more evidence of L2 identity changes and to clarify ambiguous findings from the video recordings or student journals.

In the quantitative section of data collection, participants took a survey based on a Likert scale to ascertain the treatment effect on affective factors closely related to language acquisition. This survey was based on similar instruments used in prior research (see Gibson et al., 2014). Prior research on self-concept and related constructs has been done via statistical analysis of fixed-item questionnaires (Mercer, 2012), such as the five-point Likert scale survey used.

Procedures

First, permission was obtained from the school director, the Internal Review Board (IRB) office, the parents/guardians, and the participants, in that order. The treatment was offered as a one-week enrichment course for sixth to twelfth graders enrolled in a FL class. Before the treatment, students completed a researcher-created pre-test Likert scale survey to ascertain baseline self-reported motivation, self-efficacy, anxiety, and global competence identity factors

before the treatment. The survey was comprised of 28 statements with a 5-point scale ranged Strongly Disagree (SD), Disagree (D), Neutral (N), Agree (A), Strongly Agree (SA).

Treatment

Participants were given a pre-test Likert survey with 28 items the week before treatment started. During treatment, which took place Monday-Friday during the school's scheduled FL block, participants reported to the school's library, as it was large enough to accommodate the combined French, German, and Spanish classes. The treatment was divided into five lessons, as described below:

- Treatment Day 1: Introduction to the International Phonetic Alphabet (IPA), what it is, what it represents, and how it is organized. Learn symbols for the sound inventory of English, Spanish, French, and German. Practice identifying phrases and sentences in English, as well as common words in Spanish, French, and German from IPA. Practice writing learner names in IPA. Discuss the possible uses of the IPA for language learners and linguists.
- Treatment Day 2: Review of IPA. Identify words in English, Spanish, French, and German based on their IPA symbols. View Sanskrit, Latin, Greek, and English chart of common cognates (see below) and identify cognate patterns. Learn about Sir William Jones, the father of HL, and his theory of a common ancestor for these languages (see Table 2). Define what a proto-language is. Explain how lost proto-languages are reconstructed. Introduce Proto-Indoeuropean (PIE) and what we know about these people and their language. Given examples of what words they did or did not have, and deduce information about their geographical origin, culture, society, economy, and lifestyles.

- Treatment Day 3: Given a map of PIE language families, try to create a PIE family tree with at least three languages in each major family group (see Appendix A, bottom of p. 124 for an example of this activity and Appendix A, p. 126 for example target responses). As a class, combine this information to create a PIE family tree. Learn Grimm’s Law about how Proto-Germanic suffered sound changes other PIE languages
- Table 2

Examples of Cognates in Proto-Indo-European (PIE) Descendants

English	Sanskrit	Greek	Latin
Two	Dvau	Duo	Duo
Three	Trayas	Treis	Tres
Tooth	Dantam	Edóntos	Dentis
Mother	Matar	Mater	Mater
Me	Ma	Emé	Med
Ewe	Avis	Owis	Ovis

did not, accounting for many opaque cognates. Given several examples of Grimm’s sound changes (e.g., $g > k$ or $d > t$), students brainstorm their own examples.

- Treatment Day 4: Looking at detailed Germanic and Italic family trees, discuss which languages are most closely related. Students guess which FLs would be easiest to learn based on prior L2s, then check against a PIE family tree. Discuss implications for future language learning. View a map of Italic language groups, and have students guess why Romanian is so far geographically removed from the others. Teach some linguistic effects of this displacement. Discuss sound changes in the Italic branch, including softening of intervocalic Latin /t/ and palatalization patterns in French, Spanish, and Portuguese. Learn the historic /s/ missing from many French words with

an *accent circonflexe* (e.g. *â, ê, î, ô, and û*) and guess the English gloss of unfamiliar French words with this symbol.

- Treatment Day 5: Learn about the history of modern English with its Germanic and Italic influences. Discuss the Germanic tribes who migrated to modern-day England and the French influence after William the Conqueror imported Norman French. Discuss the implications of this linguistic diversity on English food terms. In groups of 3-5 participants, play a review game including questions about PIE culture and language, IPA, protolanguages, Grimm's Law, sound changes among French, Spanish, Portuguese, and Latin.

Data Collection and Analysis

Treatment attrition accounted for a lower sample number (N) used for analysis and reporting than reflected in the number of original participants. Guardian consent and participant assent forms were turned in for 31 (N=31) participants. Data collection instruments were a pre- and post-test Likert survey, video recordings of treatment sessions, student journals, and student interviews. The Likert survey (see Appendices A and B) consisted of 28 statements intended to measure self-reported motivation, metalinguistic competence, self-efficacy, self-confidence, anxiety, and global competence. The pre-test was administered before treatment began and collected prior to treatment sessions. Each of the five sessions was video-recorded and transcriptions made of student and teacher discussions and comments during treatment. At the end of treatment, participants were given five open-ended prompts and asked to write their responses in the form of a student journal (Appendix C). The next week, student journals were collected and semi-structured interviews were conducted with participants (Appendix D).

Qualitative data analysis was conducted on the transcripts of videoed treatment sessions, transcripts of student interviews, and written student journal entries. Transcripts and journals were analyzed for themes related to the research questions and subsequently coded into relevant categories and sub-categories using an Excel spreadsheet.

For the quantitative data collected via pre- and post-treatment Likert surveys, participant responses were recorded into a spreadsheet and coded by participant. Participant profiles were also coded to include the following demographic information: current language course, prior language courses taken, number of years studying each FL, L1, gender, age, and level in school (middle or high). Responses for participants who elected to participate only in qualitative data collection (N=1) or who had completed either a pre-treatment or post-treatment survey, but not both (N=6), were removed from the data pool, as were those for participants who had been absent for 4-5 days of the treatment (N=4), leaving a total participant pool of twenty (N=20). Pre- and post-survey data were paired and survey items where respondents had indicated a response for one or the other survey, but not both, were removed. Survey answers were grouped by themes relevant to the research questions and the matching data sets were analyzed for change using a series of two-tailed paired-comparison t-tests. Finally, a series of ANOVA tests were run using IBM SPSS Statistics software (Version 25) to determine which, if any, independent variables interacted to affect the outcome.

Participants

Participants were selected from middle and high school students currently enrolled in a FL program. Those who had been enrolled in the previous scholastic year were also admitted. All students studied one of the three FLs offered at the private K-12 school: Spanish, German, and French. They came from divergent L1s and linguistic backgrounds. The final result was

twenty participants (N=20) for quantitative analyses and twenty-one (N=21) for qualitative; the participants included students across a broad spectrum of academic ability, including one with special needs and another who scored a perfect 36 on the ACT. However, the pool reflected a diverse set of students with varied strengths in their linguistic backgrounds.

The participants were secondary students enrolled in an Alabamian private K-12 school. Respondents represented FL students from sixth grade to twelfth grade and ranged in age from 11 to 16 years old. Thirty-eight percent (38%) were male and sixty-two percent (62%) were female. Although all participants were selected from the upper school, which represents grades 6-12 at the private school, they were categorized as middle or high schoolers to better align with standard school levels. Fifty-eight percent (58%) were middle schoolers and forty-two percent (42%) were high schoolers. The students' families reflect a wide range of economic levels. The majority of the K-12 families would be classified as middle- to upper-level economic levels. However, thirty-five percent (35%) of the secondary students receive scholarships from the State Department of Revenue through the Alabama Accountability Act. This legislation provides tuition paid directly to the private school if the student's family income is below the federal poverty level and the student is zoned to a failing public school. These numbers suggest the sample population face many of the same challenges as traditional public K-12 school populations.

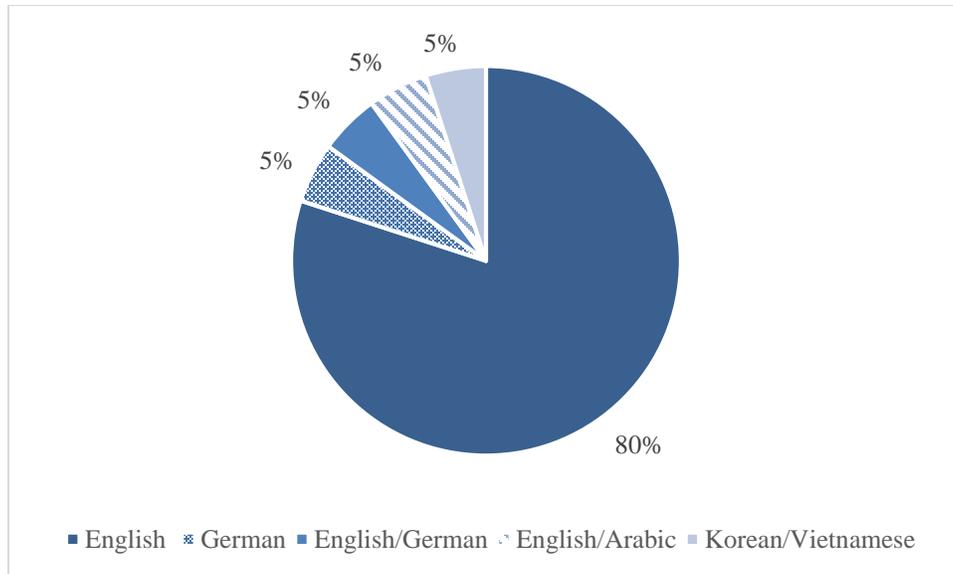


Figure 1: L1 of Participants

The participants reflected a varied linguistic background. As viewed in Figure 1, eighty percent (80%) were English L1s, five percent (5%) were German L1s, and fifteen percent (15%) had been raised bilingual (no true L1, although all three indicated they have a dominant language). The childhood bilinguals represented English-German (5%), English-Arabic (5%), and Korean-Vietnamese bilingualism (5%). A full 100% of respondents had studied at least an L3, mostly due to the school's emphasis on children from the nursery through the upper elementary school taking concurrent Spanish and German, as well as occasional French when an instructor is available and Chinese one semester per year when interns from Taiwan colleges teach Mandarin daily. The L3s represented included Spanish, German, French, Chinese, and Russian. Sixty percent (60%) of respondents also identified an L4. These included French, English, Chinese, Hungarian, Swedish, and Japanese. Some participants had taken French and Chinese in school for a few months or years; Hungarian and English had been attempted when families visited or moved to a new country; Swedish was studied before a summer family trip to Sweden; Japanese and French had been undertaken as a hobby, completely self-taught on Duo

Lingo or another app. Finally, a further 16% of the participants identified experience with an L5, all via self-study, in Russian, Chinese, Czech, and Greek. These were all described by respondents as FLs with low levels of language ability, but all had been undertaken as a self-motivated project, either for fun or due to interest in the language because of a familial connection. The FLs of the population are listed by number of self-reported learners in Figure 2.

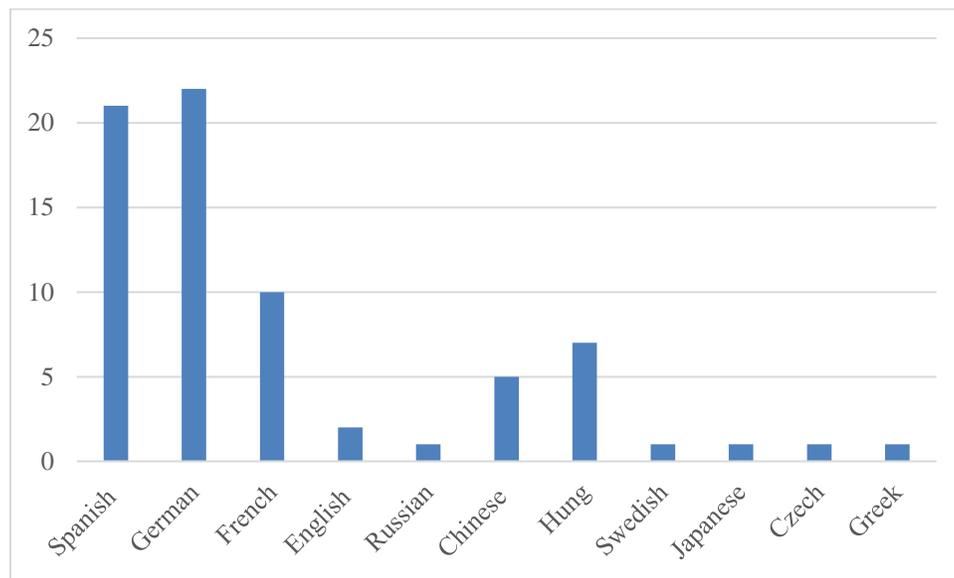


Figure 2: L2s, L3s, L4s, and L5s by Number of Language Learners

These participants, therefore, represented a diverse treatment population in terms of specific L2s and beyond, but they shared a multilingual exposure that had focused on basic written and oral communication in individual modern languages and foreign cultures and lacked an overarching focus on metalinguistic and metacultural awareness and knowledge or any connectivity among their L2+s. Once these respondents had submitted their Likert surveys and student journal and completed their oral interviews, their data were analyzed to empirically ascertain if instruction in HL, with its natural focus on linguistic interconnectivity and shared ancestry, affected the motivation, enjoyment, and self-identity of language learners.

CHAPTER 4

RESULTS

Once the treatment and data collection phases were complete, data were analyzed quantitatively and qualitatively to describe and understand data trends. Quantitative data were collected via pre- and post-test Likert scale survey instruments (Appendices A and B), while qualitative data were analyzed for emergent themes. The two data types offer distinct but harmonic explorations of the data points collected before, during, and after the five-day HL treatment period.

Quantitative Results

Quantitative analyses were run to ascertain statistical differences between student responses on the Likert survey pre-test and post-test.

Participants were asked to complete a researcher-created five-scale Likert survey before treatment began (Appendix A) Students read statements about their language motivation, confidence, self-efficacy, anxiety, and global competence and responded according to whether they agreed or disagreed that the statements applied to them and their identities as FL learners.

Once the Likert pre- and post-treatment survey data were collected, the survey questions were grouped into categories. The first set of questions (questions 3, 4, 5, and 6) was categorized as motivation and grouped together under that label for the purpose of statistical analysis. The second set of questions (questions 7-15) all pertained to statements about learners' metalinguistic awareness, or their recognition of the connections between and among languages. Although not specifically mentioned in the research questions or hypotheses, the data were of interest for the

guidance of future studies, and the set was likewise grouped and labeled metalinguistic competence for analysis via two-tailed paired t-test. The same process was followed, with the subsequent groups of self-efficacy (questions 16-17), self-confidence (question 19), anxiety (questions 22-24) and global competence (questions 25-28). Questions 1, 2, and 18 pertained to enjoyment of HL and were not included in the t-tests, as information about students' enjoyment of HL was not available prior to treatment. However, future studies should consider including general L2 enjoyment-related factors into the pre-test, as the potential exists for changes in overall L2 enjoyment.

Respondents were asked to mark 1 for Strongly Disagree, 2 for Disagree, 3 for Neutral, 4 for Agree, or 5 for Strongly Agree to indicate the best description of their evaluation of the statements. Then, the week after treatment concluded, the post-test Likert survey instrument (Appendix B) was administered to students during their FL class period. The completed surveys were then collected and scores tallied and recorded in an Excel document. Scores were recorded and grouped by question into categories: motivation, metalinguistic competence, self-efficacy, self-confidence, anxiety, and global competence. The number of data points in each group, plus the group's pre- and post-test mean scores (*M*) and standard deviation (*SD*) on a scale of 1-5, are delineated in Table 3. Matched data sets that met the assumptions of validity for t-tests were analyzed for change in means using a parametric two-tailed paired t-test. These included data grouped and labeled as motivation, self-efficacy, and metalinguistic awareness. Those matched data sets that did not meet the requirements for t-test validity were analyzed for changes in mean rank using the non-parametric Wilcoxon signed-rank test. This group included those data sets labeled self-confidence, anxiety, and global competence.

Table 3

Descriptive Statistics for Categories of Quantitative Analysis

	N	Pre		Post	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Motivation	78	3.78	0.92	3.79	0.98
Self-Efficacy	39	3.56	0.99	3.83	0.75
Self-Confidence	20	2.79	1.03	3.37	0.96
Anxiety	55	3.78	1.18	3.71	1.01
Global Competence	79	3.97	1.13	3.91	1.06

The remainder of this chapter is organized with the t-test results reported first, followed by those from the Wilcoxon tests. Finally, ANOVA results explore whether the participants' levels in school affected the changes in any groups that exhibited significant change. Together, these three statistical analyses comprise the quantitative data analysis phase.

T-test results. Paired two-tailed T-tests were run on the average scores for those categories that fulfilled the assumptions for t-test validity. The first category analyzed via paired t-test was motivation. As seen above in Table 3, there were a total of 78 responses grouped under motivation for each the pre-test and the post-test. The pre-test mean on a scale from 1 (Strongly Disagree) to 5 (Strongly Agree) was $M = 3.78$, $SD = 0.92$, while the post-test scores were $M = 3.79$, $SD = 0.98$. Figure 3 below shows the total number of tokens according to whether respondents indicated Strongly Agree (SA), Agree (A), Neutral (N), Disagree (D), or Strongly Disagree (SD) best described their reaction to the survey statements. The figure indicates that there might have been a positive change in self-reported motivation, as more students answered Strongly Agree (SA) or Agree (A) to positively-worded motivational statements in the post-test than in the pre-test. However, this trend was not supported by the mean scores for motivation group of questions from the pre- and post-tests, shown in the comparison of pre- and post-test means in Figure 4. The means of the two groups were very similar, $M = 3.78$ and $M = 3.79$, respectively, as the increase of SA and A responses in the post-test was tempered by the

synchronous increase of D responses.

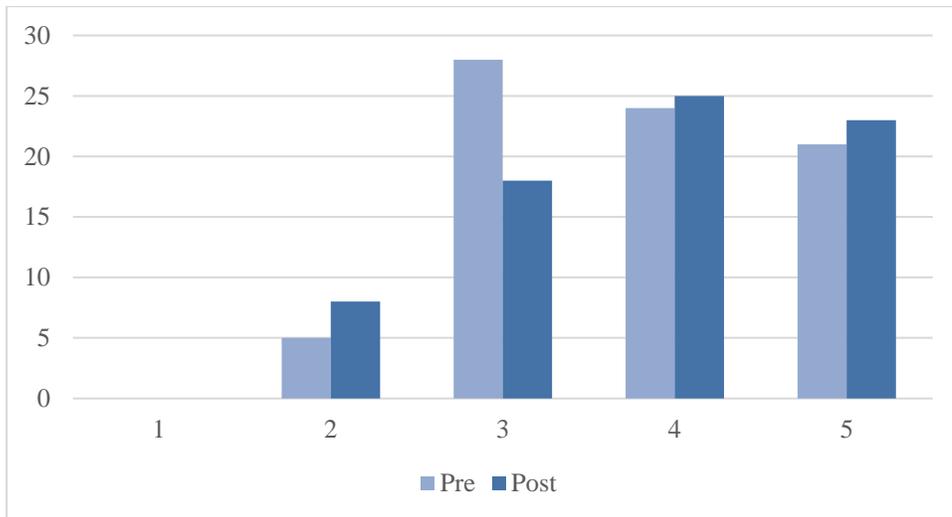


Figure 3: Distribution of Total Tokens of Motivation Scores

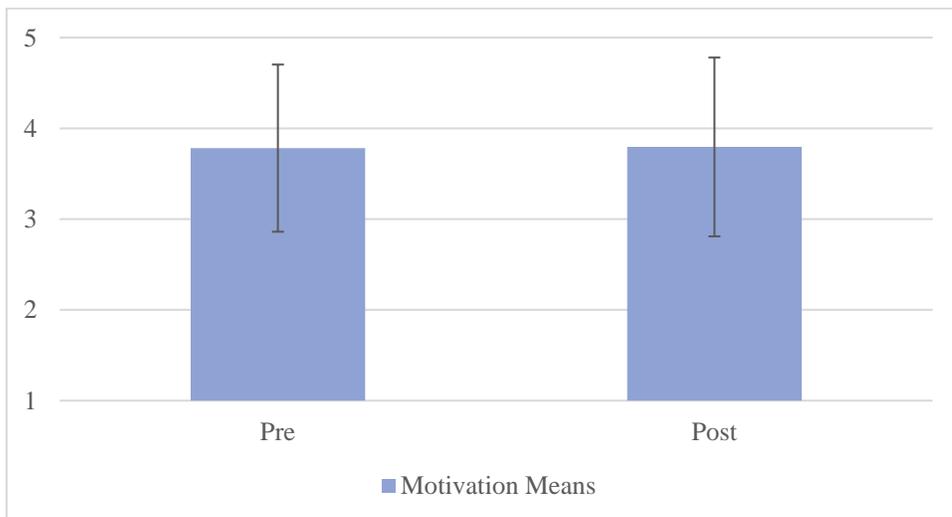


Figure 4: Motivation Pre- and Post-Test Mean Scores with Standard Deviation Bars

Despite the overall gains in self-reported motivation visible in Figure 3, the paired t-test results for motivation did not reveal a significant difference in the pre- and post-test score means

at a $p \leq 0.05$ level of significance, $t(1) = 0.097, p = .923$ for pre- and post-test motivation. This could be due to relatively high levels of motivation already present in the treatment population before treatment began.

Statements related to self-efficacy, on the other hand, did exhibit significant change, $t(1)=2.67, p = .011$. There were 39 data tokens taken from each the pre- and the post-test for questions grouped and labeled as self-efficacy. A shift toward SA, A, and N responses after treatment is visible in Figure 5. Out of the Likert range from 1 to 5, the mean of the pre-test scores related to self-efficacy $M = 3.56, SD = 0.99$, while the post-test mean was $M = 3.83, SD = 0.75$. These are shown in Figure 6.

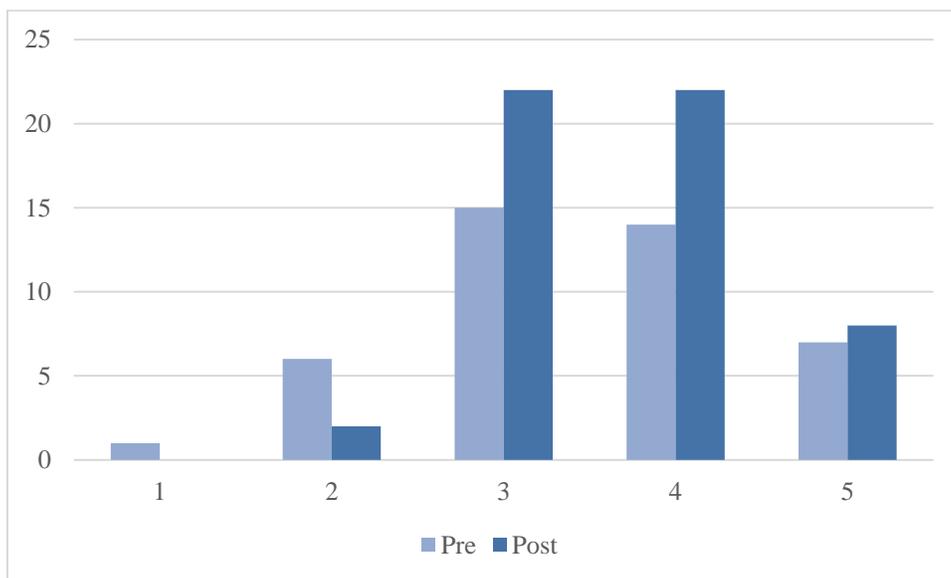


Figure 5: Distribution of Total Tokens of Self-Efficacy Scores

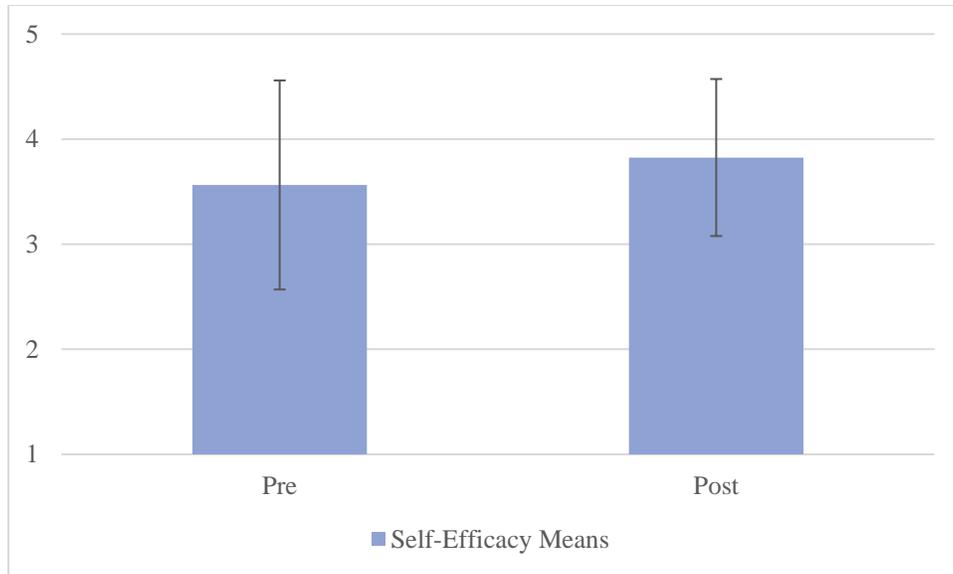


Figure 6: Self-Efficacy Pre- and Post-Test Mean Scores with Standard Deviation Bars

Wilcoxon test results. The next group of questions tested were categorized as Likert statements related to self-confidence, anxiety, and global competence. In these cases, a Wilcoxon signed-rank test was used to determine significant differences between pre- and post-test responses. The Wilcoxon is a non-parametrical statistical hypothesis test that compares two related samples to determine differences in population mean ranks and is an alternative to paired t-tests where the data do not conform to the t-test assumptions for normal distribution of the data due to low sample numbers or non-normal distribution (Glass & Hopkins, 1996). This is the case with the data for self-confidence, anxiety, and global competence, necessitating the use of an alternative to the t-tests. The low sample size of self-confidence (N=20, see Table 3) made the use of a t-test inappropriate for this data set. The lack of normal distribution of scores seen for anxiety and global competence also defied the validity assumptions of a t-test. In all three cases, the Wilcoxon signed-rank test was run instead.

There were 20 data tokens collected for the pre-test self-confidence scores and 20 for the

post-test self-confidence scores. The distribution of the 20 tokens is shown in Figure 7, while Figure 8 subsequently shows the pre- and post-test means for these data sets: $M = 2.79$ and $SD = 1.03$ for the pre-test and $M = 3.37$ and $SD = 0.96$ for the post-test. According to the Wilcoxon signed-rank test, there was not a significant difference between pre- and post-test scores for motivation, $Z = -1.600$, $p = .11$.

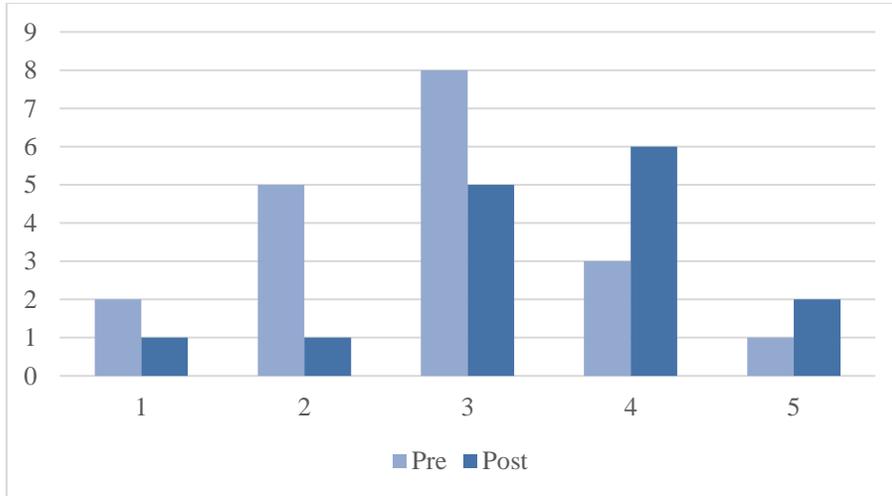


Figure 7: Distribution of Total Tokens of Self-Confidence Scores

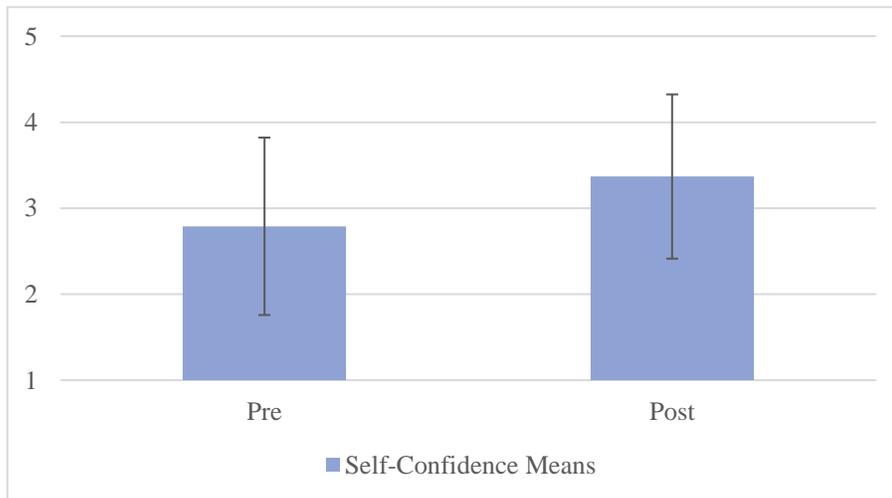


Figure 8: Self-Confidence Pre- and Post-Test Mean Scores with Standard Deviation Bars

Likewise, there were 55 anxiety data tokens collected for each the pre- and post-test analysis. There were lower levels of self-reported L2 anxiety post-treatment, as seen in Figure 9.

The pre-test mean and standard deviation were $M = 3.78$, $SD = 1.18$ while the post-test scores were $M = 3.71$, $SD = 1.01$ (Figure 10). The Wilcoxon test analysis failed to find a statistical significance in changes to L2 anxiety before and after the treatment period, $Z = -0.625$, $p = .53$. In other words, the lowered level of L2 anxiety reported by participants after the treatment period was not empirically significant.

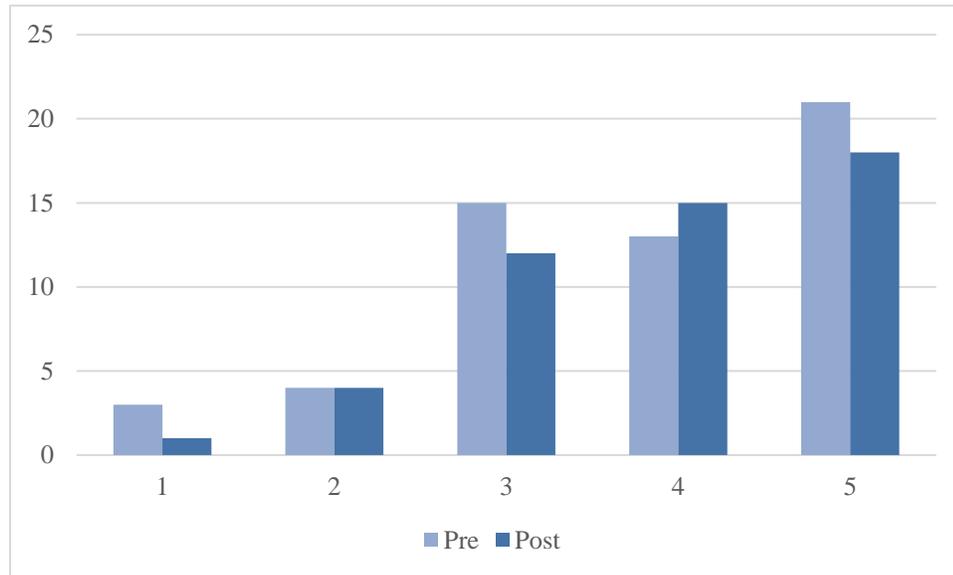


Figure 9: Distribution of Total Tokens of Anxiety Scores

Finally, 79 tokens were gathered from the Likert survey statement responses for both the pre- and the post-tests. The distribution of those tokens is seen below in Figure 11; the pre-test mean was $M = 3.99$, $SD = 1.13$ and the post-test was $M = 3.91$, $SD = 1.06$. The means of the data in Figure 12 display an overall shift away from SA/A answers in the pre-test toward neutrality post treatment, a unexpected pattern. Just like the results for self-competence and anxiety, the data patterns regarding global competence were likewise not significant, $Z = -0.760$, $p = .45$, corresponding to the findings from the qualitative data phase of analysis described later in this chapter; the qualitative data, as well, indicated the least amount of support for changes in self-reported statements of global competence.

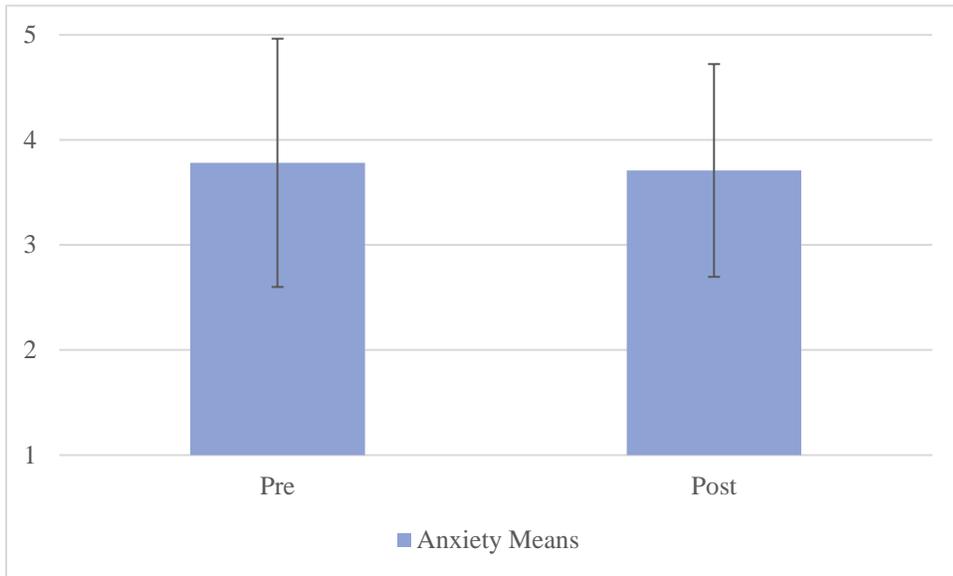


Figure 10: Anxiety Pre- and Post-Test Mean Scores with Standard Deviation Bars

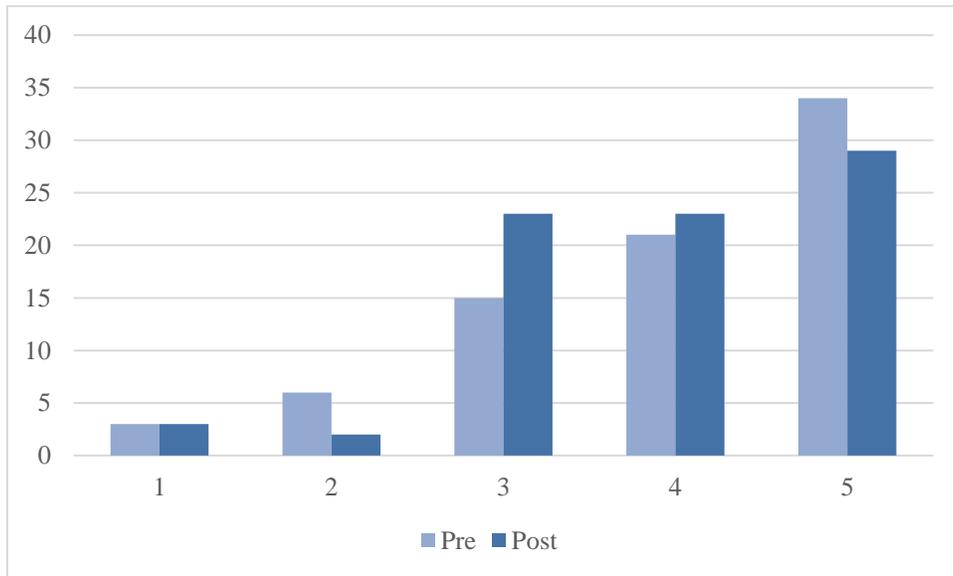


Figure 11: Distribution of Total Tokens of Global Competence Scores

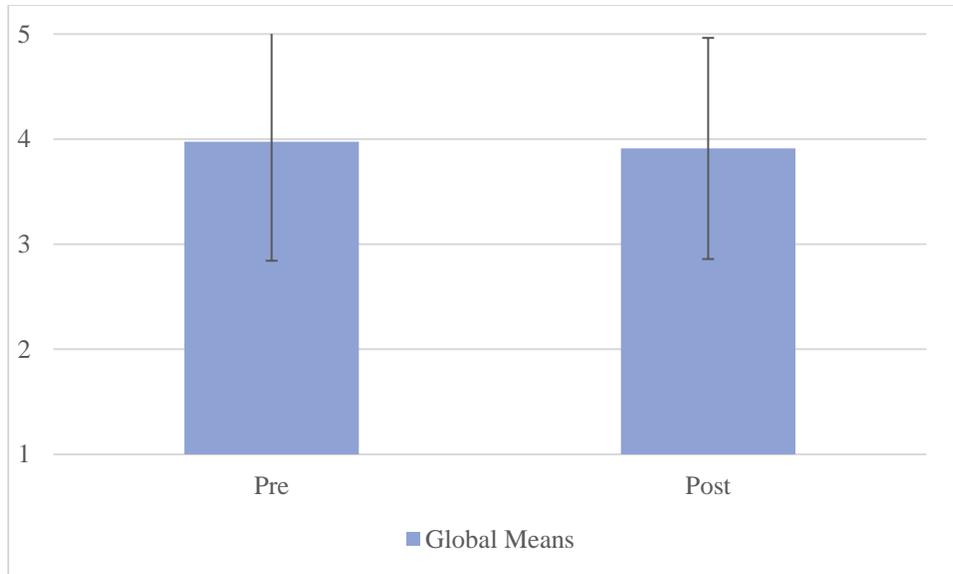


Figure 12: Global Competence Pre- and Post-Test Mean Scores with Standard Deviation Bars

ANOVA results. Once the paired t-tests had determined that questions related to self-efficacy yielded significant differences between the pre- and post-treatment Likert surveys, an analysis of variance (ANOVA) test was performed on the scores from that area to determine if they had been affected by the subjects' level in school (Table 4). While an exploration of the effect of students' gender, L1 monolingual/bilingual status, and number of languages spoken or studied are of interest for future studies, groups within these categories had small sample sizes ($N \leq 8$), making the ANOVA an inappropriate test for these data sets. In addition, although metalinguistic awareness was significant according to the t-test, it was not included in this study's research questions and will not be discussed here. ANOVAs were not run on the areas of motivation, global competence, anxiety, or self-confidence, as the t-tests and Wilcoxon signed-rank tests did not yield significant results for these constructs.

Table 4

Frequencies of Level in School of Participants

Level in School of Participants	Frequency	Percent	Pre-test Scores		Post-test Scores	
			<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Middle School	11	55%	3.87	.88	4.09	.85
High School	9	45%	3.00	.89	3.81	.54
Combined	20	100%	3.56	.99	3.97	.74

Effects of level in school on self-efficacy.

Were the heightened levels of reported self-efficacy experienced differently by high school students than by the middle school? To answer this question, an ANOVA was run to test the effect of ANOVA results show the effect of the HLT on learners' level in school. The result suggested the HL treatment was not significantly different, $F(1, 16) = 0.98, p = .34$, for middle schoolers than for high schoolers, as seen in Table 5. This is encouraging for K-12 teachers and supports the idea that linguistics can be beneficial to younger, beginning-level language learners rather than to the much smaller group of language majors and minors in undergraduate or graduate programs.

Table 5

ANOVA Test of Between-Subjects Effect of Participant Levels in School on Self-Efficacy

Source	Mean Square	df	F	Significance
Intercept	1953.606	1	651.881	.000
Level in School	2.939	1	.981	.337
Error	2.997	16		

Preliminary results on metalinguistic awareness. As an addendum, the survey instrument collected data on learners' self-reported metalinguistic awareness and ability to find

connections among the languages they speak and study. While not relevant to the research questions of this particular study, these data were collected to indicate whether a future exploration of HL treatment might affect actual language acquisition and linguistic knowledge. A total of 136 tokens were collected related to statements of self-reported metalinguistic awareness. The response distribution of pre- and post-test scores is seen below in Figure 13. A t-test compared the pre-test mean score, $M = 3.38$, $SD = 1.43$, with the post-test mean score, $M = 4.04$, $SD = 1.02$. The t-test comparison of pre- and post-test means of scores related to metalinguistic awareness yielded a significant result, $t(1)=5.51$, $p = .00001$, indicating it is an area ripe for future study and exploration.

Then, the data were run again using a Wilcoxon signed-rank test that analyzed differences in pre- and post-test data rank. The Wilcoxon was used in addition to the t-test because the metalinguistic data were normally distributed in the pre-test responses but not in the post-test responses, making the appropriateness of a t-test less straightforward. The Wilcoxon signed-rank test found a significant difference in pre- and post-test score ranks, $Z = -5.037$, $p \leq 0.001$. Both the parametric and non-parametric analyses revealed significant change in self-reported metalinguistic awareness after just one week of the HLT.

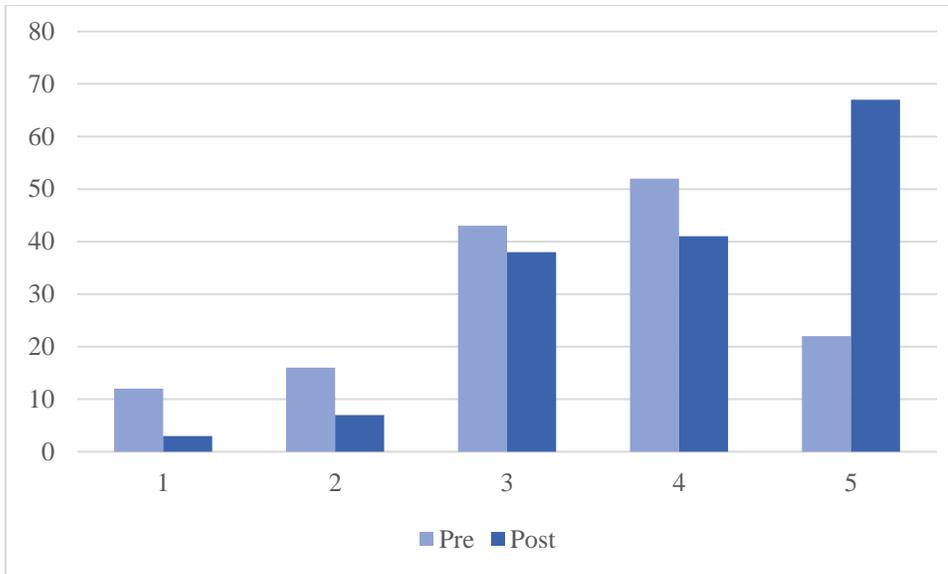


Figure 13: Distribution of Total Tokens of Metalinguistic Awareness

Summary of quantitative findings. The overall data trends show the HLT had a positive impact on many students’ L2 selves, especially in the area of self-efficacy. Preliminary exploration also suggests this would be true for metalinguistic competence. The quantitative results did not support the claim that the HLT significantly affected motivation, self-confidence, or anxiety, although conflicting evidence was discovered in the qualitative data. The quantitative results were likewise unable to verify an effect of the treatment on participants’ global competence. At the conclusion of the quantitative data analysis phase, only self-efficacy and metalinguistic awareness were found to have significantly changed over the treatment time period. These results were then triangulated with the qualitative data findings reported below.

Qualitative Results

Once the student journals, semi-structured student interviews, and video transcripts were coded and tabulated as data in Excel, the data points were analyzed qualitatively. Qualitative data were interpreted and subsequently categorized into themes related to the research questions. Evidence pointed toward a positive effect of the HL treatment on three themes found in the

research questions: motivation, enjoyment, and other aspects of linguistic identity. These other self-identity factors included confidence, anxiety, self-efficacy, and global competence. Data were then sorted into sub-categories and sub-classes within those three research themes. Descriptive analyses of emergent patterns and themes revealed support for HL in three primary areas of interest to this study: motivation, enjoyment, and other affective identity factors. All these areas are strongly related to language learners' ideal linguistic and cultural selves, which in turn shapes their future goals, plans, successes, and failures in an L2+ (Dörnyei, 2009).

Enjoyment. Closely related to motivation is enjoyment (Gardner, 1985; Dörnyei, 2001). Enjoyment primes motivation and ambition and sustains learners through difficult or rigorous tasks (Precosky, 2011). Participants' responses showed several items that were categorized under the broad term "enjoyment" (Figure 14). These included fun/excitement, interest in the topic, and engagement with the topic. Fun, defined in *Merriam-Webster.com* (2017) as anything that provides amusement or enjoyment. Words and phrases that were coded under Fun were its synonyms or near-synonyms *liked, really liked, enjoyed, and had fun*. Antonyms such as *didn't like* were coded as Negative Fun (-Fun). Excitement was coded as either verbal or non-verbal expressions of excitement or enthusiasm. Excitement is defined by *Merriam-Webster.com* (2017) as a "heightened state of energy, enthusiasm, or eagerness." *The Learner's Dictionary* (2017) describes it as "eager enthusiasm and interest." Therefore, it assumes a more positive feeling toward the treatment than the more neutral category of interest, and they were accordingly separated. Interest describes student behaviors geared toward a desire to learn more about or be further involved in the treatment (*Learner's Dictionary, 2017*).

Verbal and nonverbal engagement in the lessons was also observed. Engagement was recorded only if it was student-driven. Voluntary, organic, unprompted engagement in the lesson

was analyzed as support for a strong sense of enjoyment in the lesson. Therefore, a student jumping in to the discussion to answer a question was recorded as engagement, while a student answering a question when called upon by the teacher was not. Self-motivated, autonomous behaviors reflect true engagement with the material for personal enjoyment rather than forced engagement with the material due to teacher-generated pressure or cultural norms.

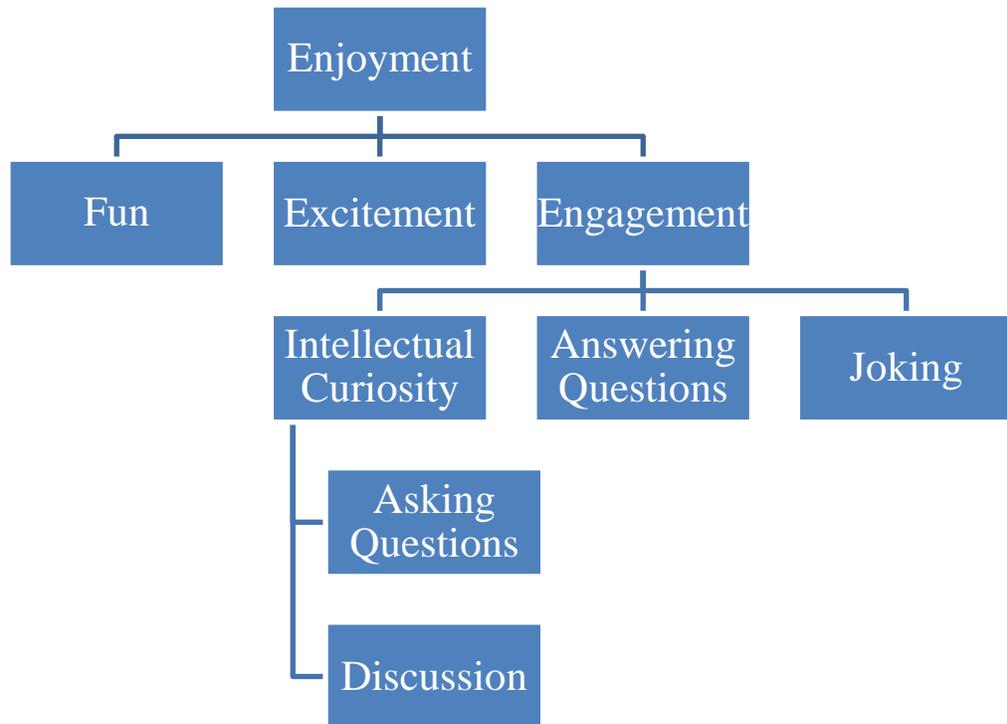


Figure 14: Themes Coded as Evidence of Enjoyment

Three sub-categories of engagement were identified among students' behaviors during the treatment: demonstrating intellectual curiosity about the topic, voluntarily answering researcher or peer questions about the topic, and joking about the topic. Intellectual curiosity seemed to attract many participants to the treatment topic, as they asked questions in an attempt to clarify or review new information, discussed what they were learning with peers, teachers, and family, and they expounded on the information given during treatment to theorize in totally new directions.

Video recordings made each day during treatment were transcribed and analyzed for evidence of enjoyment, motivation, and other miscellaneous L2 identity factors. A clearly emergent theme during treatment was excitement about the topic. Some participants became visibly and audibly excited to discover patterns during the group discussions. For instance, on the second day of the treatment, participants received a list of words and phrases in IPA and were divided into groups to decipher the words symbolized. Students were very active during this phase of treatment, asking each other questions and enthusiastically attempting to decode the meaning of the IPA symbols. Later, groups were asked to write the first names of all group members in IPA symbols. This activity also sparked great enjoyment as students put their heads together. Participants were overheard making the following exclamation:

- “What is ‘eh’?.... Oh oh oh I know what it is! The backwards E!”
- [sounding out] Kran-ken-wag-en! [excitedly] It’s an ambulance! (Gives high five to nearby student).
- Oooo, the answer is pasta! [excited to figure it out]

Engagement was observed even when it could not necessarily be labeled “Excitement.” While some students’ interest waned after the initial excitement of IPA decoding, one group of five was recorded actively engaging with the IPA task for three minutes as they deciphered the code. Two other students, who had not participated much in the group discussions, nonetheless were observed taking meticulous notes on the PIE and IPA portion of the lessons, even getting up from their seats to get closer to the board and viewing the examples up close.

Other forms of engagement observed were intellectual engagement with the topic, voluntarily answering questions during treatment, and making jokes about the topic. Three categories of intellectual engagement were observed, namely asking questions, discussing the

topics with peers or teachers, and expounding on the topic outside of the treatment curriculum. All of the observed tokens had to be voluntary and unprompted to be categorized under enjoyment, as it is possible for students to engage with a topic because of obligation or expectations rather than from inherent enjoyment. In this case, only student-led, voluntary engagement could be categorized as enjoyment.

Several students showed great autonomy in asking questions during treatment, exhibiting a strong desire to know more and to understand more fully. This search for further information was also demonstrated by both language teachers who were observing the treatment; both approached the researcher outside of treatment to clarify or question a topic they had heard, indicating HL treatment may inspire enjoyment and interest in language educators as well as in their students. Some of these example conversations are recorded below.

Participant A: What's Norse?

Participant B: [laughs] Oh my God.

Participant A: [gestures with hands] Seriously!

Participant C: What were the animals [PIE] had?

Participant D: Can we study more about Scandinavian languages? Because my family was from there.

Participant E: [German student, during discussion of palatalization in the word *araña*, Spanish for spider] Wait, so is that supposed to mean arachnid or spider?

Researcher: It's related to arachnid, but it's the word for spider. But it is related to arachnid!

Participant E: Oh!

Teacher A: [approaching researcher after class] So, I'm curious. Where were these people [PIE] from?

Teacher B: [raising hand during class] Excuse me, so, are you saying people no longer speak Persian? It's ancient?

Closely linked to their desire to ask questions was discussion, another sub-category of Intellectual Engagement. Students were given multiple opportunities for group discussion in each treatment session. Many were deeply engrossed in the discussion, even without an authority figure asking them to stay on topic. At one point, even when the group discussion was over and the researcher began to give the correct answers, two students were observed on the video quietly discussing a language family tree themselves, trying to independently figure out the answers. In addition, at the end of each class period, students were asked to discuss in a group some discussion prompts. While most students just packed up their things and left, each day there were one or two groups that lingered after to continue discussing the day's topics. The three activities that seemed to elicit the most student discussion were reconstructing a PIE family tree (seen below with examples), tracing the history of English from Proto-Germanic to modern English, and guessing cognates based on Grimm's Law.

Participant A: [inaudible, asks Participant B a question]

Participant B: No, that's Germanic....

Participant A: Also English... Danish....

Participant B: And Swedish and Icelandic....

Researcher: [overhearing] Russian is Proto-Indoeuropean.

Participant A: It's Slavic.

Participant B: Yeah!

Participant C: Isn't Welsh [unclear]? ... Oh! We have Greek!

Participant D: Hellenic.

Participant E: [decoding French *maître* into English] Maaaa....i....stre...

Researcher: Ooo, you're so close, don't think about the spelling, look at what you have there. Maaas-tre.

Participant E: Mas-tree?

Participant F: Mastery?

Participant G: It's Master!

An additional type of engagement with the topic was observed when students chose to answer researcher questions during treatment. As this treatment was elective, students were not required to participate in any way by either the researcher or the two observing language teachers. One or two, in fact, elected to spend the class period doodling or playing with magnets. The majority, however, seemed engaged and were eager to answer questions and think critically about the topic, as seen below:

Researcher: What else is related to German?

Participant A: Dutch.

Researcher: Dutch! English!

Participant B: Danish.

Researcher: The Proto-IndoEuropeans had words for birch, elm, trout, river, elk, and fish.

[pauses] Did these people live in a desert?

Participants: [in chorus] No!

Researcher: Where did they live?

Participants: [in chorus] A forest!

Participant A: A forest with rivers.

Researcher: So the Proto-IndoEuropeans had the word for father, mother, and child.

Interestingly, they had no word for wife, but they had a word for widow. What does that tell us?

Participant A: So they had families.

Participant B: [at the same time] So no marriage.

Participant C: Also, no mother-in-laws. [laughs]

Finally, a third type of engagement that was not expected from the literature was student attempts to connect with novel information and their peers through a sense of humor. There were repeated instances in the video transcriptions of students making good-natured jokes about the content. These quips were rarely addressed to a specific person but were often uttered quietly without interrupting the flow of the lesson. They seemed to reflect the students processing the information and interacting with it in a humorous, lighthearted way that was meaningful to them. Instances of this were coded under the category of Engagement as Joking. Some examples are included here.

[discussing PIE words for animals and livestock]

Researcher: They [PIE] had a word for pig, but it seemed to be a wild boar, not a domestic animal or a food source.

Participant A: [dryly] I don't think my ancestors lived very long without bacon.
[chuckles]

Researcher: [laughs] Well, at least some of them seem to have made it.

[discussing the lack of a PIE word for fall/autumn and its implication that they were not a strongly agricultural society]

Participant B: [sarcastically] Maybe they tried farming, but they were just really bad at it, and failed every year.

Participant C: They didn't want to remember it. They were so frustrated!

[discussing PIE social structure]

Researcher: You have clan leaders, soldiers, and everyone else.

[class laughter]

Participant D: And everyone else! [laughs] I would be "everyone else."

[discussing the history of modern English]

Researcher: Western Germanic had three branches, Old German, Old Dutch, and something called Anglo-Frisian. From here [points], you had Anglo-Saxon, which as you know became-

Participant B: Represent!

Researcher: -Old English, then Middle English...

Participant E: [murmuring in mysterious voice] What *is* English?

Participant B: Then you've got High English [laughter from peers], Low English...

Researcher: The Anglo-Saxons ate pork.

Participant G: So lots of bacon.

Researcher: Yes, bacon, pork.

Participant G: See, *that's* my ancestors.

[discussing French silent letters]

Participant F: They're just like, "I don't like that letter."

Participant G: They're like, "I already said that letter. I'm not going to say it again!"

Participant F: So when do French people get to learn English? They finally get to see vowels instead of having them fly [inaudible].

The treatment video recordings showed strong support for student enjoyment of the topic during the treatment phase. This enjoyment was demonstrated by intellectual engagement with the topic, including asking questions and discussion, as well as by answering questions and joking during treatment. None of the students discussed how this enjoyment affected their motivation or other identity factors during the class time, but these topics were covered in subsequent data collection and analysis, namely oral interviews and written journals.

The semi-structured oral interviews and written journals were conducted with research participants (N=27) after treatment had concluded. Interviews were conducted after transcripts of treatment video recordings had been written, in order to allow the researcher to ask follow-up or

clarification questions about comments made during treatment. Participants' responses were analyzed according to the three main themes of the research questions: motivation, enjoyment, and other identity factors.

Enjoyment was a major theme found in the interviews and written journals. When asked to describe the treatment, enjoyment of the topic was strongly supported. Words used by participants that were coded as Enjoyment include *cool, fun, liked, loved, and enjoyed*. One question of the oral interviews asked students to identify what they had enjoyed and not enjoyed during the study. Respondents provided a total of 31 answers. Most named one or two topics they had particularly enjoyed, while two identified a particular mode of classroom activity (challenge game, working in groups), and 19% said simply, "Everything."

As viewed in Figure 15, the most popular response to most enjoyed activities was "Everything," (5 tokens), with almost a fifth (19%) of respondents giving that answer. The next most common were learning about the Proto-IndoEuropeans and their language and culture (3), learning and practicing IPA (3), and the very general "learning about languages" (3). Next most popular were learning the history of languages (2), learning about proto-languages (2) and playing the review challenge game (2). Responses mentioned once each were working in groups, learning about proto-languages, looking at maps of world languages, connecting language to history and sociology, learning about Grimm's Law, studying about extinct languages, learning the connections between modern Romance languages, learning about the French *accent circonflexe* (ê), learning about how languages started, using deductive reasoning "like Sherlock

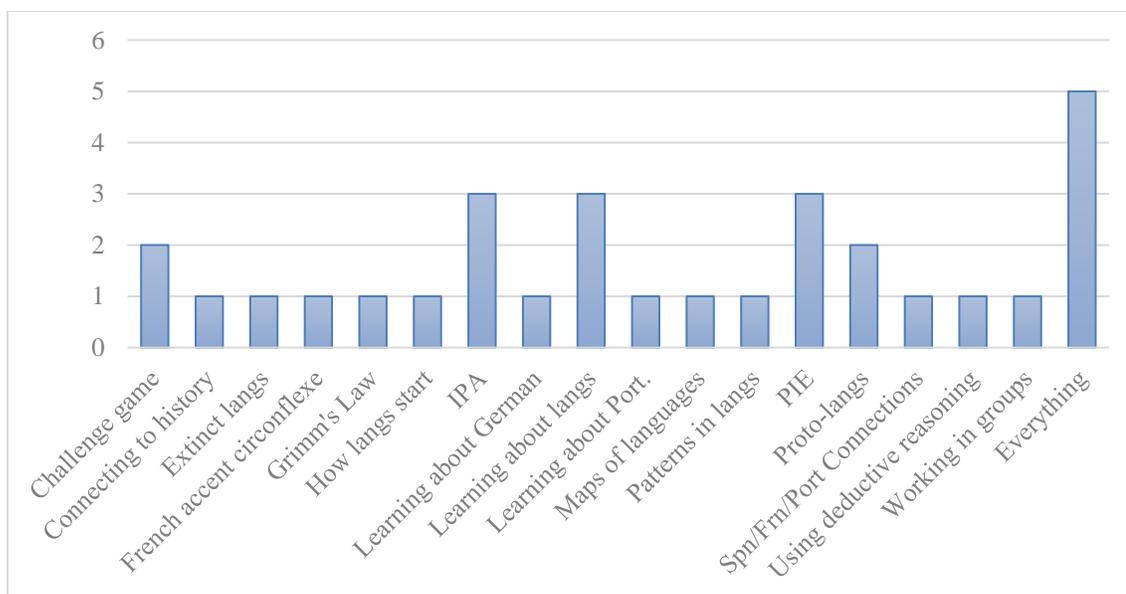


Figure 15: Most Enjoyed Aspects of Treatment by Token Number

Homes”, and learning about language patterns. Five respondents noted learning about languages as enjoyable, but three mentioned languages in general and two mentioned a specific language they liked learning about: both currently enrolled in German, one liked learning about the language she is currently studying and the other liked learning about Portuguese because she has ancestors who were from Portugal.

Clearly, some of these activities are quite specific (“learning to write my name in IPA”, learning about the *accent circonflexe*), while others are much more general (“I liked it all”; “I thought it was cool to learn the history of language”). Students enjoyed the topic of HL as a general topic, as this treatment provided a brief overview of HL, each day specializing in a different aspect of HL. They also enjoyed specific topics enough to mention them by name, especially IPA and PIE.

Some responses from this interview question were also coded as negative enjoyment (-Enj). When asked what they did not enjoy, answers included learning the geography of the PIEs (1) and learning the history of invaders who contributed to the English language (1). A further

two respondents said the unit was too short and they would like more time to go more in-depth on topics or study the topic for a full semester or school year. Eighty-five (85%) said there was no part of the treatment they didn't enjoy. The proportion of responses for aspects not enjoyed is seen in Figure 16.

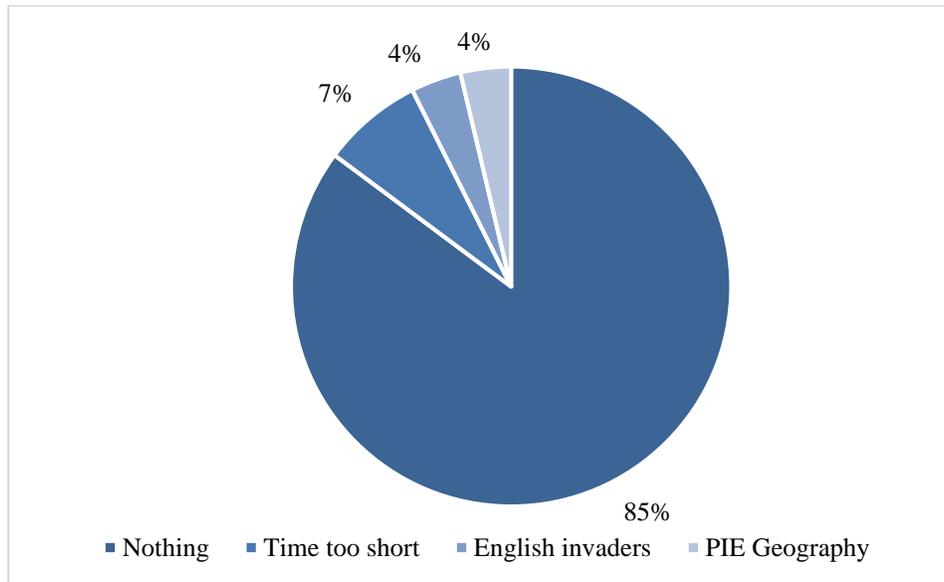


Figure 16: Aspects of Treatment Not Enjoyed by Percentage of Responses

Participants were also asked if any other languages or cultures seemed more interesting after the treatment (Figure 17). As discussed above, interest was categorized as a subset of enjoyment. Of all the responses, 93% of respondents reported that the HL overview provided in the treatment made them feel more interested in one or more languages than they had been previously, while 7% reported they were not more interested in any languages after the treatment (Figure 12). Of the majority who reported increased interest, the most popular responses were directly related to languages touched upon in the treatment: French (8), PIE (5), and Portuguese (4), in order. The next most popular answer was a general “languages overall” or “language in general” (4), followed by Latin (3) and Italian (3), ancient Germanic (2), Romance languages in

general (1), and Yiddish (1). Figure 18 shows the languages reported as target languages of new or increased interest by number of responses.

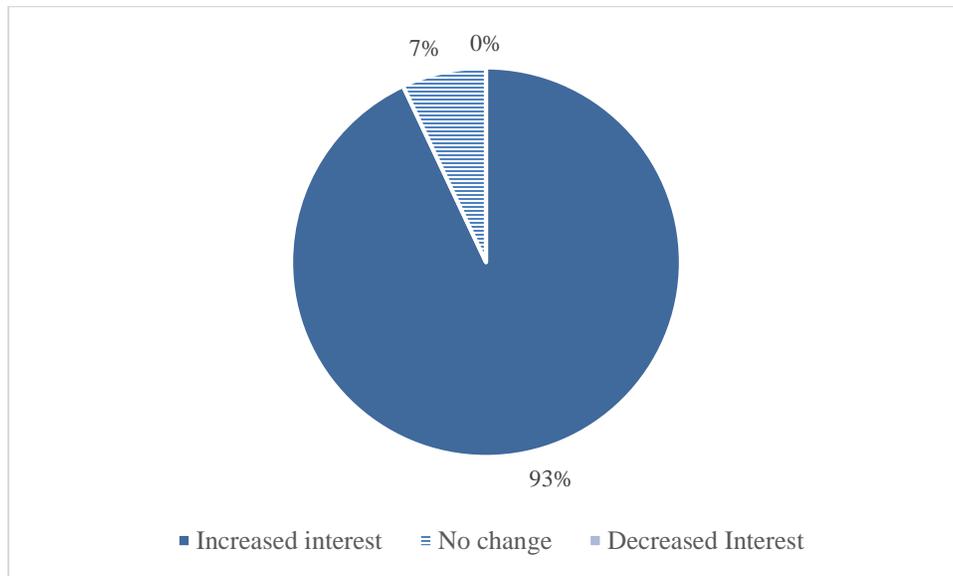


Figure 17: Changes in Interest in New Languages and Cultures by Percentage of Responses

The languages discussed the most during treatment were PIE and those in the Germanic and Italic branches, as the school focuses on Spanish and German for its FL offerings in the upper schools. The treatment content focused on French, Spanish, Portuguese, German, and English, as all students had experience with either Germanic languages, Italic languages, or both. The most popular languages and cultures named by students were French, Proto-Indo-European, and Portuguese, followed by Latin, Italian, Ancient Germanic, Romance

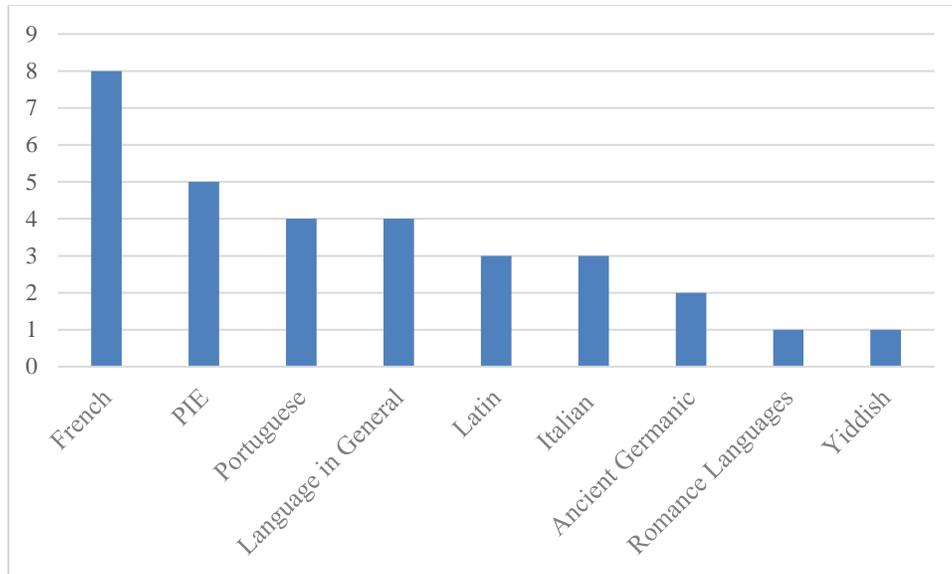


Figure 18: Languages and Cultures of Increased Interest by Number of Tokens

Languages in general, and Yiddish. All of these languages and cultures had been mentioned and worked with during the treatment, and in 93% of the cases even brief exposure garnered interest in a new language or language group.

Engagement was also shown when participants elected to share treatment topics with peers, teachers, or others. To ensure that any extracurricular discussion of the topics was truly internally motivated, no homework or assignments were given during treatment. Students were not asked in any way to engage with the topic outside of treatment time during their regular FL class hour. Nonetheless, in the interviews several reported having engaged with the material in some way outside of the treatment, presumably due to its inherent enjoyment factor. Of the respondents, 12 (50%) had explored a treatment topic further by summarizing, reviewing, teaching, or theorizing about what they would learn that day. This supports the hypothesis that HL exposure can increase enjoyment and thereby affect the linguistic self.

Of the 50% who had voluntarily revisited the material in some way, a surprising pattern emerged of choosing to engage with family members, especially parental figures. The stereotypical teen and pre-teen prefers to discuss and socialize with peers, but most of these students (75%) shared with a family member. One participant went home one afternoon and described how modern languages descended from common ancestors to his mother. One talked to his dad's girlfriend about Grimm's Law. Other family members were sometimes included: one talked to his sisters, another his aunt. One reported about her daily sharing with her parents in the evening, "I was excited, I gave them a summary of each day, like how French doesn't like sounds."

Data analysis revealed a connection between which HL topics students reported enjoying during treatment and chose to revisit outside of treatment. IPA and PIE were again the two most often mentioned. Five (5) participants (42%) discussed writing their name in IPA with their parents, while three (25%) mentioned PIE and language ancestry trees. Most shared with one or both parental figures. Interestingly, they did not always seem to have the linguistic terminology to describe what had interested them. Some students did mention Grimm's Law, PIE, and IPA by name, but others were more vague: "the language family tree, where languages descended from" was categorized as an interest in PIE although the student had not recalled the name of the ancestor language. Some students approximated the term IPA by using the term "symbols" or circumventing the term via description, i.e. "I talked about the letters you'd see in a dictionary with my aunt."

Some of the strongest support for the link between enjoyment and HL was revealed in the consistent mentioned of enjoying IPA and the idea of ancestor and proto-languages. These responses came back again and again in the interviews and the student journals. Below is a

sampling of student data that was coded for enjoyment when students were asked their thoughts about the activities of the past week.

- “Loved them all.”
- “I really liked it [historical linguistics], it was really interesting, I didn’t know language were connected like they are.”
- “IPA was fun. Interesting and fun to study.”
- “I enjoyed learning about different languages and really had fun in the class.”
- “Really interesting, I enjoyed all activities.”
- “I liked everything. I’m interested in the study of languages.”
- “I enjoyed studying new symbols.”
- “I enjoyed learning the IPA system, however I would have liked to study it more.”
- “It was interesting, I liked the history of the people and language.”
- “It was engaging, interesting. Connected lots of stuff in ways I wasn’t expecting. I enjoyed PIE inferences based on the words they did and didn’t have.”
- “I liked the challenge, I wish we had more time to figure things out.”
- “Historical linguistics helped me understand more about various cultures. I know differences between French, Spanish, and Portuguese. I enjoyed every activity but I liked most learning about IPA.”
- “I really enjoyed learning about cultures by the words they did and didn’t have.”
- “I thoroughly enjoyed this. I enjoyed all activities, enjoyed learning how Spanish, Portuguese, and French are related and IPA.”
- “I really liked historical linguistics. I liked when we started writing different words from each language, such as Spanish, French, and Portuguese.”

- “Language is cool. I enjoyed all of it.”

In these responses, learning about Proto-Indo-European culture and IPA are mentioned several times as enjoyable activities. Several students also enjoyed learning cognates and patterns in the Romance languages, although one participant incorrectly remembered the three languages discussed as Spanish, French, and Italian. Participants’ use of the words *enjoy*, *liked*, *cool*, *interesting*, and *fun* denote enjoyment, which contributes to a robust linguistic motivational self-identity (Gardner, 1985; Dörnyei, 2001).

Motivation. As seen in Figure 19, students’ motivation was primarily concerned with their ideal linguistic selves, either as successful students in their current classes and hobbies or the hopes and plans for their future selves. The first motivation type was classified as *Drive for Present Success* and encompassed both the larger-scale hope for language improvement and classroom success in the current school year within the TL classroom and the smaller-scale desire to succeed in the treatment tasks presented immediately before them. Drive for future success, on the other hand, describes participants’ future goals and visions of their future linguistic selves. It is the ambition or drive toward a future self, where future is defined as beyond the scope of one year or one course in school. None of the data collected reflected learners’ L2 ought-to selves as described by Dörnyei.

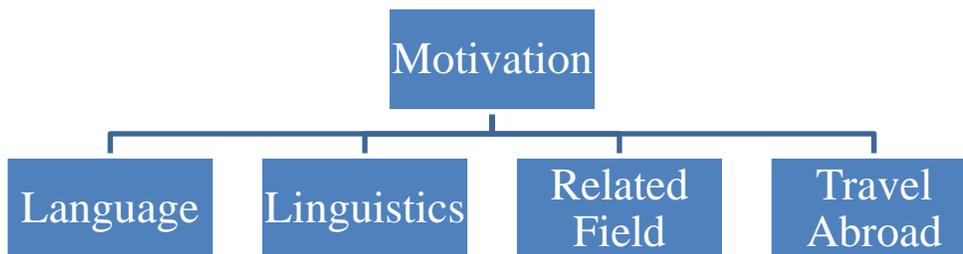


Figure 19: Themes Coded as Evidence of Motivation

Dörnyei's Motivational L2 Self system encompasses all the factors that contribute to language learners' sense of L2+ selves and ultimately drive learners to succeed at or abandon their language studies. While enjoyment, self-efficacy, self-confidence, anxiety, and global competence all contribute to a learner's L2 self, Dörnyei's model is primarily concerned with how these factors affect the motivation—or lack thereof—to continue the process of language acquisition. Does exposure to HL in the language classroom affect students' motivation to continue their FL experiences, either in their current TL or by adding new TLs?

The qualitative data gathered suggested that it can. Students responses revealed two facets of their ideal L2 selves: a short-term ideal, concerned with succeeding at the current language in the current school year, and a long-term ideal, stretching years into the future and often incorporating multiple L2 selves. Some responses revealed a strong sense of a multilingual self, an ideal of a future self who was competently able to navigate in many languages of interest. These two categories were labeled *Motivation: Drive for Present Success* and *Motivation: Drive for Future Success*.

First, participants were asked in the oral interviews if what they had learned during treatment had changed whether they would like to continue or begin study of a language or linguistic-related topic they had been exposed to in the lessons. Their answers showed a strong group desire to learn more world languages and a high value placed on multilingualism. As viewed in Figure 20, of the respondents (N=24), only three (13%) said the treatment had had no effect on their motivation to begin or continue language or linguistic studies. The other twenty-one (87%) exhibited a strong sense of a multilingual self, with respondents envisioning themselves speaking languages inspired during the treatment or by personal interest. This

majority was enthusiastic about their prospects as future multilinguals, exhibiting a strong ideal L2 self.

The majority (87%) of subjects answered that after treatment, they were more motivated to begin or continue studies related to what had been covered during treatment. Of the 87% who reported a change in their drive to study different aspects of languages, linguistics, or a related field, their answers fell into four broad categories: some type of linguistics course, the desire to travel to other countries, the desire to add or further a specific language, or a subject like history,

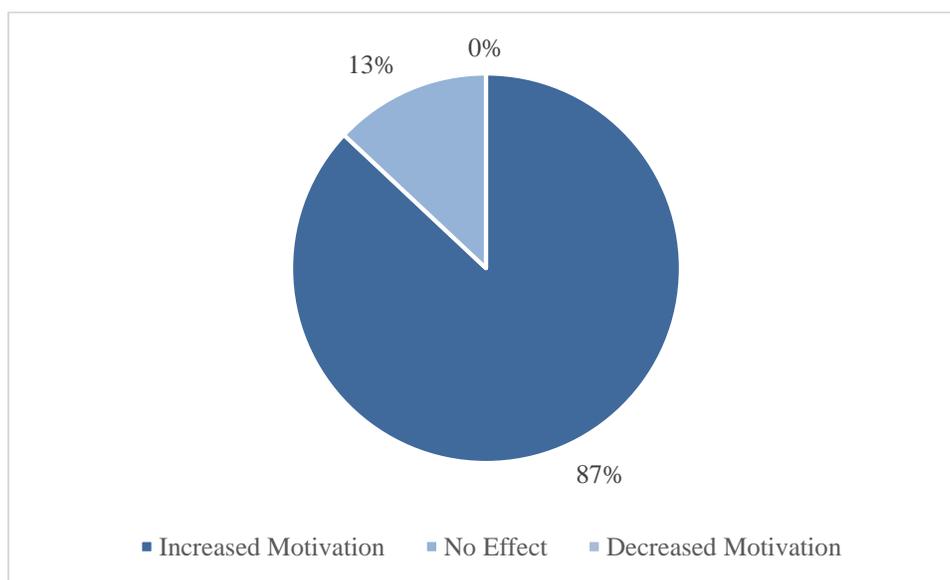


Figure 20: Reported Effect of Treatment on Language Motivation by Percentage of Responses

anthropology, or sociology that is related to HL but not in the same field. These are shown in Figure 21. A majority of subjects (57%) reported increased motivation in a specific language, either to further their current language study or to engage in a new language. The next most common answer was to take some type of linguistic course, either historical or otherwise, at 29%. Twelve percent (12%) said they were now motivated to study a related field with overlap

with HL topics. Finally, only one token area (2%) of increased motivation was for study in a foreign country.

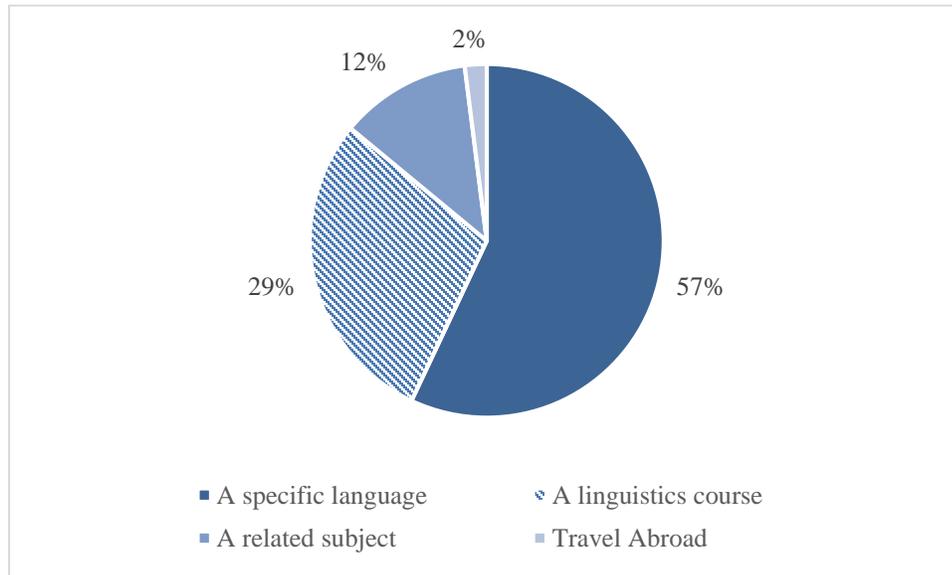


Figure 21: Areas of Increased Desire to Engage in Future Study by Percentage of Responses

Figure 22 shows an even more detailed breakdown of areas in which participants reported higher levels of drive or motivation. Twenty-nine percent (29%) of the given areas of future motivation were a linguistics course, with an overwhelming proportion of that (24%) an interest in HL and 5% in general linguistics. Of the 57% of tokens indicating motivation to take a specific language, the majority of them, totaling 50% of the 57%, indicated a desire to take a language that had been specifically mentioned during the treatment. The other 7% were motivated to take a language of personal interest to them, but one that had not been studied as part of the treatment.

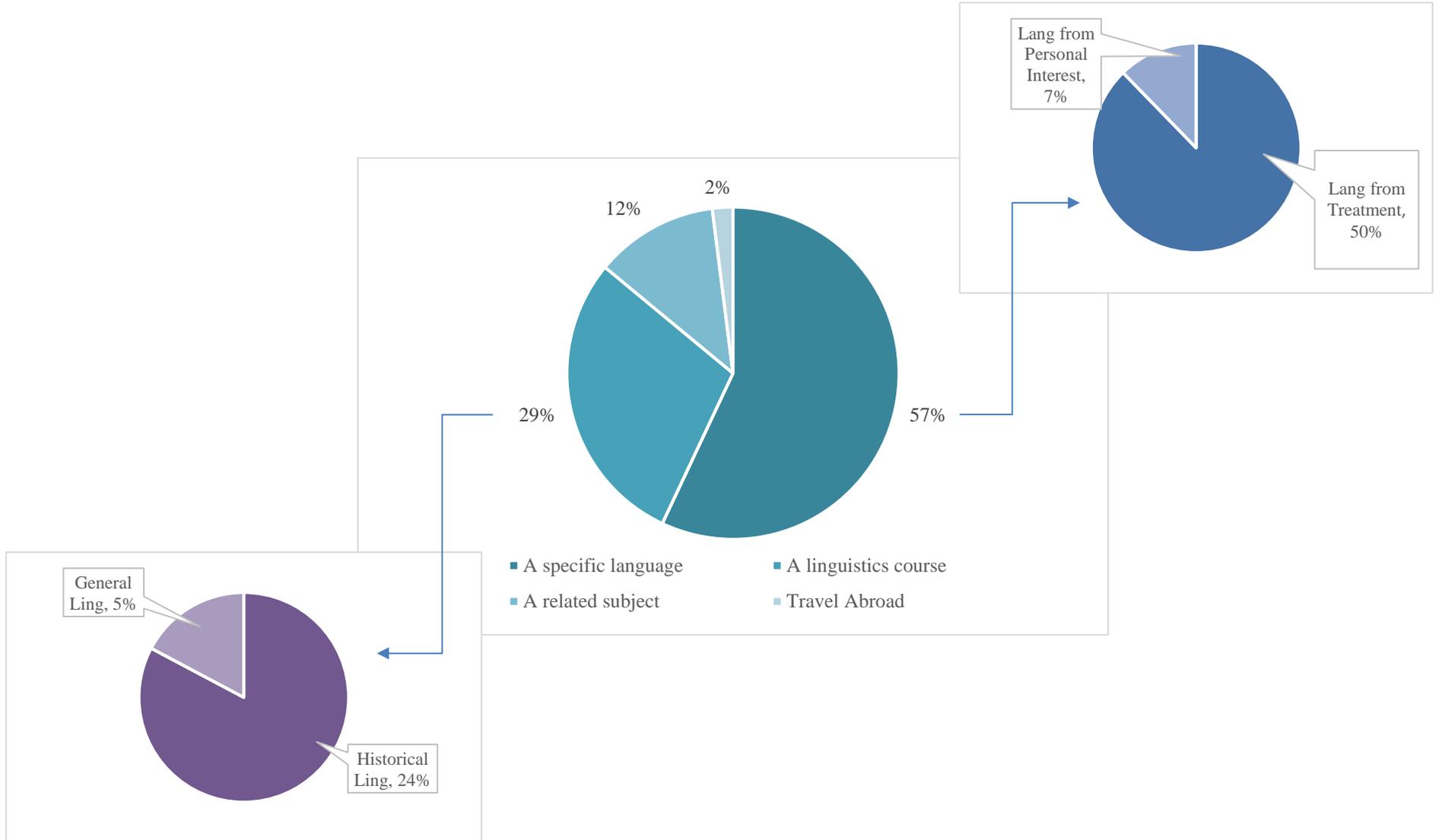


Figure 22: Breakdown of Increased Motivation to Study Linguistics and Languages Post-Treatment by Percentage of Responses

During the treatment, fields other than linguistics with possible content overlap had been mentioned. Twelve percent (12%) of the responses mentioned the desire to further study one of these subjects. As shown below in Figure 23, there were two tokens that mentioned anthropology (40% of tokens within “Related Subjects”) and one each of history (20%), linguistic psychology (20%), and a desire to learn more about languages and cultures in general (20%). Two of these students were high schoolers who had already planned to study in these fields at the university level but were now driven to incorporate HL topics into their chosen field of study, something they indicated in their oral interviews they had not even known was possible before the treatment.

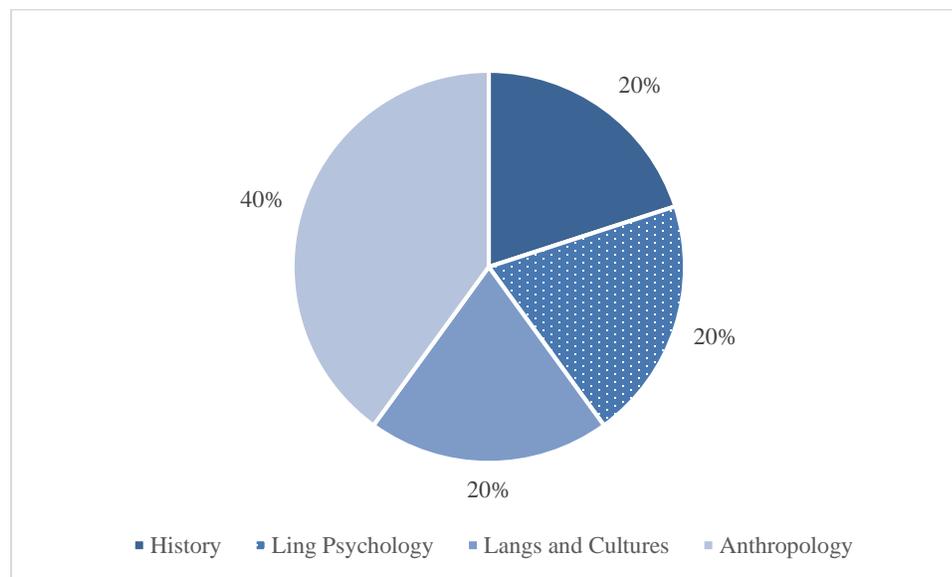


Figure 23: Breakdown of “Related Subjects” by Percentage of Responses

While the treatment did seem to motivate some participants to study linguistics or incorporate linguistics topics into a related field of interest, one of the strongest emergent themes was renewed motivation toward a particular language. In other words, HL treatment did not just motivate participants to learn more about HL or linguistics in general but inspired them to add or continue with a specific modern language. In fact, in Figure 18 above, language learning was the

area of greatest increased motivation; 57% of tokens grouped under “increased motivation” referred to a particular language.

Table 6 delineates the languages mentioned by students during the interview process. Of these, students most often reported feeling increased motivation in those languages included during the treatment: French, Portuguese, Spanish, Latin, Italian, PIE, and German had all been discussed during the study. Students had worked for several days with examples from French, Spanish, and Portuguese. They had also worked for one day with examples from German. Italian, Latin, and PIE had been mentioned briefly and had been part of the language family trees

Table 6

<i>Languages of Reported Increased Motivation</i>		
<u>Language</u>	<u># Tokens</u>	<u>% of Tokens</u>
French	7	29%
Spanish	6	25%
Portuguese	3	13%
Italian	2	8%
Greek	2	8%
Latin	1	4%
PIE	1	4%
German	1	4%
Russian	1	4%

students studied, but students had not actually encountered words from those languages during the study. Finally, Greek and Russian had no part in the treatment but were still mentioned by a few participants. These results indicate that even brief exposure to a language can have a positive impact on learners’ motivation to acquire that language: a few days’ introduction to a language they had never studied, such as French and Portuguese, correlated strongly with increased motivation toward that language, but exposure to linguistic knowledge and discussion about world languages also ignited interest in some languages of personal interest to the students that

had not even been discussed during the study.

In summary, responses revealed four areas of increased motivation after the treatment: language learning, linguistics, study abroad, and study of a linguistics-related field. Results suggested strong support for HL treatment increasing motivation for specific languages, especially those mentioned in the treatment. They revealed moderate support for increased motivation to take a linguistics course, especially HL, and for increased motivation to study linguistic topics in a related field such as history, psychology, or anthropology. Finally, results indicated weaker support for motivation to travel to other countries. Below in Figure 24 is an amalgamation of all topics in which respondents reported increased motivation.

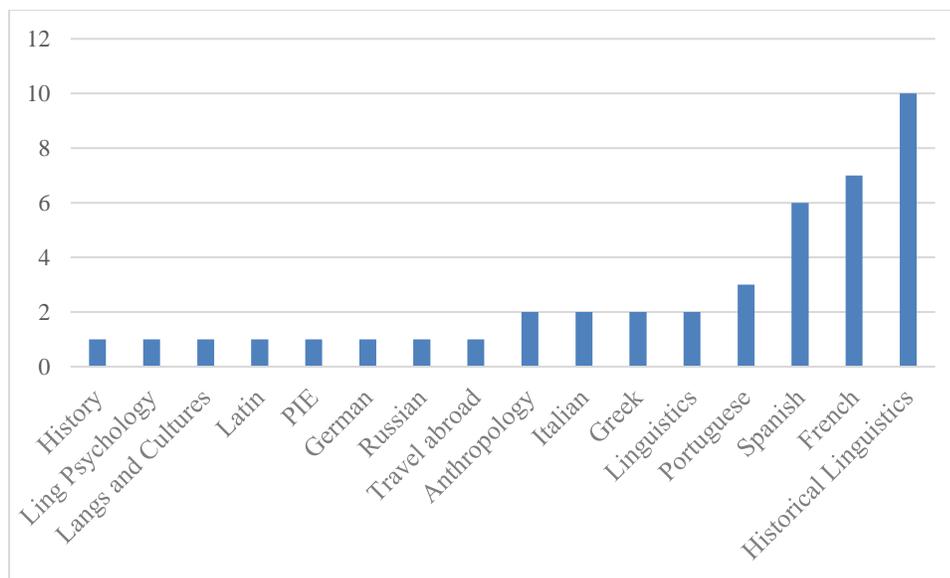


Figure 24: Tokens of Desired Future Study by Number of Tokens

Taken together, the data supports the claim that the treatment increased student motivation to further study linguistic topics. The most common area of increased motivation was a desire to learn more about the history of languages with 10 tokens. Seven tokens referred to a new motivation to take French, and six to motivation in Spanish (one to begin Spanish, and five

to continue their Spanish studies longer than originally planned). Three named Portuguese as a future language of study, and two each named linguistics, Greek, Italian, and anthropology (these two do *not* include the participant who was already planning to study anthropology in college, but refer to two participants with a newfound interest in anthropology). Finally, travel abroad, Russian, German, PIE, Latin, language and culture in general, linguistic psychology, and history each received one token.

- “Yes, I’d take history of languages. I want to learn languages and cultures not taught in school, and make historical linguistics a class here.”
- “I want to take French!”
- “I want to go to other countries and learn about other cultures.”
- “French would be cool, because I already know Spanish.”
- “Portuguese because it’s so similar to Spanish.”
- “I’m now more interested in continuing Spanish.”
- “Yes, PIE.”
- “I don’t like history, but might take linguistics.”
- “I’d never heard of PIE. I’d take a linguistics course, but I don’t like history.”
- “I love other cultures, and now I want to take language and history, and I want the school to add this class.”
- “I want to take history of languages.”
- “I’m more interested in becoming fluent in Spanish now. I’d take a high school class in history of languages but not college, because I want to be a writer.”
- “I’d definitely like to expand but not sure how.”
- “French and Russian. I was already interested in them but now I am more.”

- “Yes, if I had the opportunity, Greek. And Portuguese because I’ve never had it and it’s cool it’s so close to Spanish.”
- “Yes, I already wanted to major in Poli-Sci and Spanish, but now I want to add Italian and all Romance languages. I didn’t realize how easy it would be—not like learning a whole new language, just learning new rules for the language I know.”

These responses reveal that learners are open to adding new languages to their repertoire, especially when they view those languages as being more connected to a language they’ve already studied. Several learners also indicated they would enjoy adding a HL component to their pre-determined plan of study without changing that plan of study, whether their original plan was to study psychology, political science, or anthropology.

Other aspects of L2 self and identity. Many facets of the linguistic self are incorporated in Dörnyei’s L2 Motivational Self model. Primary focus for this study remained on treatment effects on motivation and enjoyment, but the dynamic, integrated nature of other aspects of identity make them logical additions to inquiries viewed through the theoretical lens of Dörnyei’s L2 Self. Upon analysis of the data, identity-related themes (Figure 25) emerged showing changes in how language learners felt about their own abilities in the language or the language classroom; these were coded as anxiety, self-efficacy, self-confidence, or global competence.

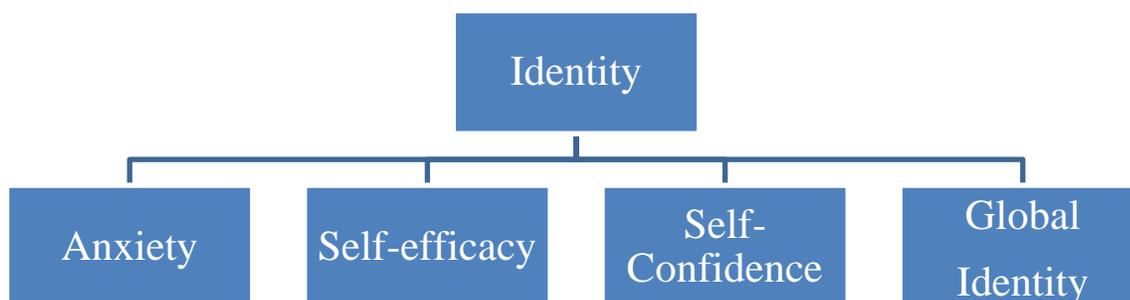


Figure 25: Themes Coded as Evidence of Changes in Identity

Anxiety. Participants were asked about their anxiety in the language classroom to ascertain if the treatment had lowered anxiety toward encountering unknown words or concepts in the TL. The effect of treatment on language anxiety is important because high anxiety is related to lower levels of motivation, self-confidence, and self-efficacy (Ushioda, 2012; MacIntyre & Gregersen, 2012). High anxiety is also related to higher language course drop-out rates and lower participation in the language classroom (MacIntyre & Gregersen, 2012). Finally, it negatively correlates with a positive L2 self-image (Papi, 2010).

Initially, answers were coded as 0 when participants indicated no change in anxiety levels, -1 if the treatment caused them to be more anxious, and +1 if it caused them to be less anxious. Zero participants indicated the treatment had made them more anxious when encountering new words or situations in the classroom, six that there was no difference in their level of anxiety, and 18 that their new knowledge had made them less anxious or nervous. However, upon reflection, the +1 code for less anxiety was divided into two new codes to denote the varying levels of certainty participants revealed. With the new coding system, a positive number meant less anxiety, but a +1 indicated moderate or uncertain change (indicated by the

use of words or phrases such as *maybe, probably, somewhat, and I guess*) and a +2 denoted more certain, specific answers (indicated by words *yes* and *yeah* coupled with the ability to name concrete examples of changes in anxiety. Students who answered yes but were unable to come up with any specific way treatment had lowered their anxiety were coded under moderate or uncertain change. Examples of responses for each code are provided in Table 7.

None of the participants believed the treatment had increased their anxiety or nervousness in the language classroom. As seen below in Table 8, 25% reported no change and 75% reported their anxiety had decreased in at least one area. Thirty-three percent (33%) were definitively able to name specific areas in which they believed they were less anxious post-treatment.

The 10 participants who were able to pinpoint a specific area (or areas) of decreased anxiety together listed 14 areas they felt were affected by the treatment. These 14 tokens were analyzed and grouped into common themes. The most prevalent theme that emerged from the data was pronunciation of foreign words, followed by recognition of new words and patterns in spelling or accents of foreign words. These results are shown below in Figure 26.

Table 7

Reported Changes in Confidence Levels

Code	Examples of Participant Answers
Code 0: No Change	No. Not really, I'm already not nervous. Still no.
Code +1: Moderate or Uncertain Change	I'm probably more confident. Yeah? More confident? Maybe, like using Grimm's Law in German class. Probably in French, not with spelling but with accents. Somewhat. I guess? I'm confident. Yes, but I'm not sure how.
Code +2: Certain, Specific Change	Yes, I'm more confident in German because of Grimm's Law. Yeah, more confident. Helps me recognize new words and pronounce better in Spanish because now I know how it works. Yes, how to say words in German and Spanish and IPA. Yes, learning new words More confident recognizing new words because I have more familiarity with analyzing sound patterns. More confident with pronunciation: IPA and knowing why they're spelled that way, like Portuguese /d/ sound makes a Spanish /th/ sound and is nothing in French.

Note: *This table gives examples of participant answers to the question, "Has anything in the treatment made you more confident or less nervous in [the language] class?"*

Table 8

Number of Coded Responses for Post-Treatment Changes in Anxiety

Code	Description	N	%
-1	More Anxiety	0	0
0	No Change	6	25
+1	Moderately Less Anxiety	10	42
+2	Less Anxiety	8	33

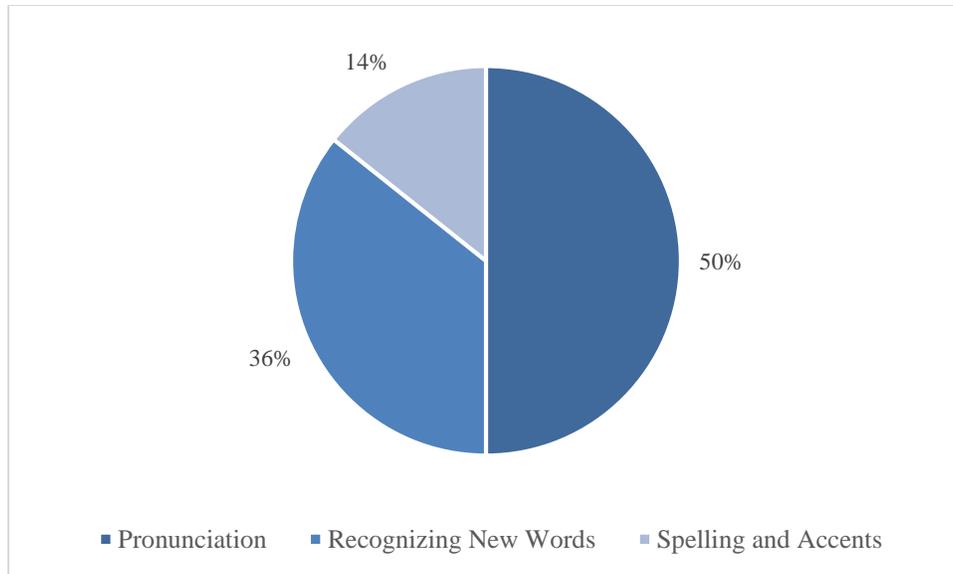


Figure 26: Areas of Reported Lower Levels of Anxiety After Treatment by Percentage of Responses

These three broad categories were further divided into sub-categories. For instance, within the umbrella of *pronunciation*, two tokens pertained to confidence when pronouncing Spanish words, one to German words, and two to foreign words in general. A further two participants believed learning IPA symbols and sounds had lowered their anxiety about foreign pronunciation. Examples of participant responses related to lowered anxiety are listed here.

- “It helps me... pronounce better in Spanish because I know how it [Spanish] works.”
- “Yes, how to say words in German and Spanish.”
- “It helps me pronounce words, like how *cow* changed, if the roots are similar.”
- “I’m more confident with pronunciation: IPA, and knowing why they’re spelled that way.”

Another theme that emerged was nervousness about recognizing new words. Some participants reported feeling less anxious about encountering unfamiliar words in a FL. Of the

five tokens categorized as *recognizing new words*, three specifically mentioned the applicability of Grimm’s Law to decoding opaque cognates from German to English or German to Spanish. After learning the systematic sound changes in the Germanic branch of PIE, they reported less anxiety about encountering unknown words in German now that they could use Grimm’s Law to help them decipher the meaning of new words. Some salient examples are included below.

- “Yes, I’m more confident in German because of Grimm’s Law.”
- “Yes, learning new words.”
- “I’m more confident recognizing new words because I have more familiarity with analyzing sound patterns.”
- “Grimm’s Law [helps] in German class.”

The final theme that emerged was less reported anxiety about foreign orthography. Accents and spelling, often areas that pose difficulty for language learners, were specifically mentioned. One participant, one of the only ones enrolled in French rather than Spanish or German, said she felt less anxious about writing French accents, specifically the *accent circonflexe*. Another, enrolled in Spanish, said learning *why* certain Spanish words were spelled a certain way by tracing them back to the original Latin had helped solidify her confidence in spelling.

Self-confidence. Next, interview and journal responses were analyzed for responses related to self-confidence and self-efficacy. Responses that referred to high levels of general language abilities were coded as self-confidence, while those that referred to abilities in a specific task were coded as self-efficacy. In the student journal prompts, participants were asked whether they believed that the HLT had helped increase any of their language or linguistic abilities. Therefore, it was possible for answers to the same question to be coded as self-

confidence if students wrote about a general ability (e.g. “I feel better in German”) and as self-efficacy if they referred to a specific task (e.g. “I understand spelling and accents better in French”).

Some participants felt the treatment had increased their general language abilities. These were coded as self-confidence. These responses generally alluded to their metalinguistic competence increasing (without using the phrase “metalinguistic competence”). Some examples of general linguistic confidence include:

- “I think most of the languages helped me a lot, even with my native language.”
- “I understand the layout of words in all the languages I study.”
- “I know the base of the language.”

Interestingly, aside from increased confidence in general linguistic competence, several students mentioned understanding how languages are connected had helped their language abilities. For these students, understanding the common roots and connectivity of languages made them feel more confident in their overall grasp of what language is and how languages work.

- Yes, because I learned about how languages are related to each other.”
- “How all the languages we speak today are connected.”
- “How they [words] were related in German and English.”
- “Increased language abilities in Spanish because now I know how the sounds evolved from Latin.”

Self-efficacy. Those who named a specific task they thought had been improved by the treatment were coded as self-efficacy. When asked what abilities had increased, some students were able to name a specific skill:

- “How to translate some words in Spanish to Portuguese and French.”

- “Helped me piece together certain phrases in Spanish.”
- “Yes, it increases my abilities by helping with pronunciation of words in German.”
- “About how to spell things in French.”
- “I’m better able to pronounce and decode French and Portuguese.”
- “Grimm’s Law helps me discover cognates in German.”
- “Yes, I’m better equipped to pronounce words I have never seen, and to translate between Spanish, French, and Portuguese.”

It is noteworthy that all students from all three of the languages reported higher levels of self-efficacy in their particular TL, indicating the treatment had broad applicability to a range of languages rather than appealing only to students of one particular language. One student who was enrolled in Spanish at the time of the study but had previously been enrolled in both German and Spanish claimed learning Grimm’s Law helped her see cognates between the two languages, applying her prior German knowledge to her current Spanish TL acquisition goals.

Global competence. The final area of interest was students’ view of themselves in relation to the larger global community. Did learning about the shared history of many of the world’s languages affect their identities as language learners? When asked in the student journals to remark on their thoughts of world citizenship, many participants exhibited a well-developed global sense of self. The main theme that emerged from the data were students’ sense of mutual responsibility for the world’s citizens. Some of their comments included:

- “The world is a huge, interconnected system, we should use our influence to improve others’ lives. National citizenship is a sub-system of world citizenship but you should always remember the bigger picture.”

- “World citizens look towards helping people in general and making [the] world a better place. I think it is important to get to know people and cultures.”
- “World citizenship is important because it’s what you need to do to help in your community.”
- “It’s being well educated about world affairs, well-informed, knowing about other cultures. It’s more important than national citizenship.”
- “It helps us understand the world much better.”

On the other hand, some responses indicated a more neutral or even weaker sense of global competence in comparison with national citizenship. Those responses are recorded below.

- “World citizenship is broader than national citizenship, but not more or less important.”
- “Too many borders and boundaries for world citizenship. Therefore national citizenship is much more practical and important.”
- “Neither is more important, you should engage with other countries and cultures as much as your own.”

Another interesting theme that emerged in the data was an *incorrect* understanding of common cultural and linguistic ancestors. While students seemed to grasp that PIE was a proto-language and that it was the ancestor of all the languages discussed during treatment, some responses revealed an over-generalization of PIE’s influence. One student, for instance, incorrectly stated that PIE was the first language, although the introduction to PIE had included the information that PIE was 4-6,000 years old and the first human languages were probably 40,000 years old. Another student wrote in his journal that it was useful learning about how all the world’s modern languages are connected. Both these students seemed to be under the

mistaken impression that PIE was the common ancestor to *all* the world's languages and cultures, although this had been specifically negated during treatment. Their comments are below.

- “I never knew how people took a language and worked backwards to find the first language.”
- “All the languages we speak today are connected.”

While the treatment included learning about ancient life and cultures, including PIE, Anglo-Saxon, and Latin, highlighting the shared cultural aspects of the more than 400 living PIE descendants, none of the written student responses indicated that their sense of global competence had changed as a result of the treatment. Likewise, the paired t-tests run on the pre- and post-treatment surveys, which will be discussed below, did not show a significant change in students' global competence before and after treatment. Therefore, while understanding students' sense of self in relation with the larger global linguistic and cultural community is important, these data did not conclusively show that the treatment affected this aspect of their L2+ selves.

Both the qualitative and quantitative analyses revealed a strong connection between the HLT and self-efficacy and metalinguistic competence, regardless of age or gender. Qualitative data also showed strong support for a link between the HLT and L2 enjoyment and motivation. There was a weaker connection between the HLT and global competence, suggesting this is the area least likely to be affected by HL exposure. These implications are further explored in Chapter 5.

CHAPTER 5

DISCUSSION

Connections to the Conceptual Framework

The results of this study have important implications when viewed through the theoretical lens of Dörnyei (1990; 1994a; 2005) and his numerous works, most notably his L2 Motivational Self System. First, the findings relate to Dörnyei's concept of integrative motivation, part of motivational theory founded in Gardner's work and closely tied to factors that influence learners' interest in languages and cultures and their reasons for studying them. Next, the results relate to Dörnyei's view that the Motivational Self System is affected by learners' beliefs about what they *can* or *cannot* do—in short, their self-efficacy and self-confidence. Finally, the results of this study indicate that HLT can affect the ideal self and the L2 learning environment, two of the three constructs that make up the total Motivational Self System. These are each examined below.

Dörnyei (1990) conceptualized integrative motivation as a motivational system in three parts: first, *interest in foreign languages, cultures, and people*; second, *desire to broaden one's view and avoid provincialism*; and finally, *desire for new stimuli and challenges*. This concept was based on his studies of L2 motivation in EFL contexts with young adult learners and was closely aligned with earlier work done by Clément and Kruidenier (1985): Dörnyei's first dimension of the integrative motivational subsystem, *interest in foreign languages, cultures, and people*, shares much in common with Clément and Kruidenier's sociocultural orientation toward motivation, while *desire to broaden one's view* closely mirrors Clément and Kruidenier's

knowledge orientation. The results of this study suggest the HLT could affect all three of these integrative motivational dimensions.

The first dimension, *interest in foreign languages, cultures, and people* can be easily broken down into three facets for application to the data results: 1. *interest in foreign languages*, 2. *interest in other cultures*, and 3. *interest in people from other languages and cultures*. There was clear evidence of increased *interest in foreign languages* after this study's treatment period of exposure to introductory HL concepts. As mentioned in Chapter 4, several participants reported increased interest in and enthusiasm toward learning foreign languages, whether that interest was directed more toward their current L2 subject or a new TL that had been mentioned in the treatment. A few students were enthusiastic about taking a French class one day; another mentioned adding Portuguese because she already spoke Spanish. One participant, who prior to the treatment had already been interested in learning French and Russian one day, reported that the HLT fueled his interest in those two languages even more. Other participants indicated in the student journals or post-treatment interviews that the treatment had been enjoyable, fun, and "really interesting," leading them to appreciate other foreign languages, IPA, and other HL topics. Some TLs mentioned as areas of interest by respondents were French, Spanish, Portuguese, Greek, Italian, German, Latin, PIE, and Russian. Topics of increased interest included general linguistics and historical linguistics courses in addition to actual TL courses, indicating Dörnyei's (1990) original conceptualization of this dimension might have been too narrow when including only increased interest in *foreign languages* and not other closely related topics such as an interest in taking general or specific linguistics courses, which would seem to have clear connections to students' interest in other languages.

The second facet of this dimension, *interest in other cultures*, was not as prevalent in the data as *interest in foreign languages*. While many students exhibited enthusiasm and interest toward new languages and linguistic topics, fewer mentioned foreign cultures. A few did; notable quotes include “I want to learning languages and cultures not taught in school,” “I love other cultures,” and “I want to go to other countries and learn about other cultures.” However, when considered as a whole, the participants did not demonstrate as much interest toward other cultures as they did toward the more mathematical and decoding elements of the treatment, such as discerning and applying patterns to foreign words, decoding IPA, or working with language family tree charts.

The third and final facet, *interest in people from other languages and cultures*, was also evident in the data, although again not as prevalent as interest in languages. The students were interested in finding out more about the original speakers of PIE and several mentioned that this had been one of their favorite activities. References were made by students during treatment relating their new knowledge to native speakers of earlier versions of French and these speakers’ approach to language and sound. Therefore, there was evidence from this study to support all three facets of Dörnyei’s first integrative motivational dimension. Still, most of the interest after the HLT seemed geared toward specific TLs or linguistic topics rather than an interest in people or cultures related to those language.

Dörnyei’s second integrative motivational dimension was the *desire to broaden one’s view and avoid provincialism*; Dörnyei (1994a) indicated this was aligned with the knowledge orientation of motivation described by Clément and Kruidenier (1985). This trait is seen in learners who enjoy learning for the sake of learning and who value open-mindedness of thought. This was seen in the data when students responded they enjoyed connecting what they learned

during treatment to world history they already knew, liked learning about patterns in languages, and enjoyed finding new connections among languages. One reported that he liked “using deductive reasoning”—a skill used across disciplines. For many students, even those who might not intend to take a historical linguistics course in the future, the HLT was still valuable because they increased their knowledge and practiced important skills needed in other courses or areas.

Dörnyei’s final dimension of integrative motivation was the *desire for new stimuli and challenges*. The learners in this study often mentioned how the HLT was fun, exciting, or interesting. Two reported the final challenge game had been their favorite part of the HLT—a game designed as a trivia challenge match where teams of four to five players gain points by writing correct answers on their white boards. Many students approached IPA as a decoding game, becoming animated, gesturing excitedly, and trying to beat one another’s guesses. Some approached the French/Spanish/Portuguese and Grimm’s Law cognate-guessing activities in the same way, more as guessing games than traditional fill-in-the-blank worksheets. Throughout the treatment period, students exhibited an enthusiasm for new information and enjoyment of challenge-style activities and games that certainly reflects Dörnyei’s third dimension, *desire for new stimuli and challenges*.

Dörnyei (1994a) also believed that the motivational systems of L2 learners are affected by learners’ self-evaluations of what they *can* and *cannot* do. This self-appraisal then affects how and to what extent learners strive toward their goals in the future. Within this context, self-efficacy and self-confidence are crucial to a learner’s sense of self because they directly affect how learners will attempt to achieve their goals—if they will continue attempting to achieve them at all. Given this, it is especially encouraging that this study found statistical significance for positive changes to self-efficacy in the L2 classroom. Self-confidence, while not approaching

significance when understood as $p \leq .10$, came close on both the paired t-test, $t(1) = 1.72$, $p = .102$, and the Wilcoxon signed-rank test, $Z = -1.600$, $p = .11$. Regardless, self-efficacy and self-confidence remain factors that directly influence the trajectory of L2 goals and motivation, both according to Dörnyei's theoretical framework and then supported by quantitative and qualitative analysis in the case of self-efficacy and qualitative analysis in the instance of self-confidence. Taken together, these two self-constructs influence and affect the internal workings of the L2 Motivational Self System.

As outlined in Ch 2, Dörnyei's L2 Motivational Self System is comprised of three constructs: an *ideal self*, an *ought-to self*, and the *L2 learning experience*. The ideal self guides learners in setting and achieving goals with the purpose of becoming more like the ideal self. For some students, this may be as a fluidly plurilingual world traveler, while for others, it may be as a conversational speaker of one language. The ought-to self also serves a guiding purpose, but where the ideal self guides *to*, the ought-to self guides *away* (Dörnyei, 2009). While the ideal self guides students toward a positive future self-image, the ought-to self steers them away from feared possibilities such as being laughed at for making a mistake or failing a language test. The third and final construct within the L2 Motivational Self System, the L2 learning experience, relates to learners' attitudes toward the L2 and the L2 learning process, including the overall classroom experience and physical learning environment (Dörnyei, 2009; Papi, 2010).

The results of this study have clear implications for two of these constructs, namely the ideal self and the L2 learning experience. The data shows repeatedly that the HLT got students enthusiastic about learning new languages in particular and about language in general, either through linguistics courses or simply learning more about the connections between related languages. In many cases, respondents' comments revealed the HLT had changed and even

augmented their ideal L2 selves, expanding their sense of who they want to become as L2+ speakers.

Several salient examples of changes to the L2 ideal self that were observed after the HLT included continuing the current TL for longer or, more often, adding a new TL to the speaker's linguistic repertoire. For instance, one student, said, "I already wanted to major in Poli-Sci and Spanish, but now I want to add Italian and all Romance languages." Another reported, "I already wanted to minor in anthropology, but I never thought about the linguistic side. I'm more interested in French, I want to keep Spanish and pick German back up." A third learner stated, "French would be cool, because I already know Spanish." All these students were studying Spanish. The first learner's comments do not indicate a change to his Spanish L2 ideal self, but they do support the emergence of idealizations and aspirations in new languages, namely Italian and other related languages from the Italic language branch. This version of the ideal self is certainly expanded from the student's pre-treatment ideal self, including at least one new language and preferably several. This lends support to Ushioda's (2017) claim that language learners may have distinct L2 selves for each language but may also have a more general multilingual ideal self. This certainly seems to be the case for the aforementioned student, who envisions his future self fluently speaking several Romance languages rather than having a list of specific TLs in mind. In his case, his goal seems to be multilingualism, using the connections among Romance languages to facilitate his journey to an ideal multilingual self.

The second participant likewise described an ideal future self that could operate in multiple languages, although in her case she had specific TLs in mind rather than a generic multilingual goal. She wanted to continue taking Spanish, in which she was already currently enrolled, but her post-treatment ideal self had expanded in two distinct ways: first, to include a

new language (French) and second, to renew her lapsed German studies. The third participant's ideal self had also expanded to include a new TL (French), seemingly due to its relative ease of acquisition due to its close relation to Spanish, a language with which the participant was already familiar.

A fourth instance of the HLT augmenting the ideal self can be seen in the comment, "In the future... I would like to learn French and Spanish." This student, a bilingual English/Arabic speaker currently enrolled in German, became interested in adding two new TLs to her linguistic repertoire. Unlike some of the other respondents, her language goals changed without regard to the relatedness between her TLs. Given her background speaking Arabic, a Semitic language, as well as English and German, both part of the Germanic branch of PIE, neither French nor Spanish are very closely related to her current languages. This example highlights the possibility for HLT to affect learner's L2 ideal selves and increase motivation to study FLs even beyond the ones historically related to their native and studied languages.

In addition to these positive changes to the L2 self, this study's results have implications for another construct in the Motivational Self System envisioned by Dörnyei's L2 learning experience. This includes student beliefs and attitudes about every aspect of the L2 learning environment, including student/teacher and student/peer relationships, the physical learning space and its accommodations, learning materials, teaching style, and classroom activities. Responses post-treatment indicate that the HLT promoted enjoyment in the L2 classroom in addition to positive responses toward the HL topics covered and the teaching materials utilized. Enjoying enrichment topics related to the L2, engaging in collaborative learning and enthusiastic but friendly competition, and positive attitudes toward teaching methods and materials all affect

a learner's attitude toward the L2 learning environment, the third critical component housed within the Motivational Self System.

As stated previously, there were students who approached what might have been a rote fill-in-the-blank activity more as a challenging guessing game. This reflects the teaching style of the researcher as well as the autonomous tendencies of the participants, and it should be noted that the rapport between the researcher and students and the teaching/presentation style of the researcher may be reflected in the results of this and any future studies, as they are directly related to the L2 learning environment that comprises the third part of Dörnyei's Motivational Self System.

Clearly, the results of this study have meaningful implications when viewed via Dörnyei and his theoretical frameworks. The results of this study relate to all three dimensions of Dörnyei's concept of integrative motivation: first, *interest in foreign languages, cultures, and people*; second, *desire to broaden one's view and avoid provincialism*, and third, *desire for new stimuli and challenges*. The results also connect to Dörnyei's assertion that the entire three-part Motivational Self System is affected by learners' beliefs about what they *can* and *cannot* do—in short, their own senses of self-efficacy and self-confidence in the L2 classroom. Finally, the results of this study indicate the HLT affected the L2 ideal self and attitudes toward the L2 learning environment, two of the three constructs that comprise the whole of Dörnyei's L2 Motivational Self System.

Other Considerations

Aside from the theoretical implications of this study, there are other elements of the results that merit further discussion. For instance, despite high levels of interest and enjoyment, post-treatment levels of L2 motivation were not significantly different from initial motivation

levels. Enjoyment was not included in quantitative analysis for data triangulation, an omission that should be rectified in future explorations. An additional review of the self-constructs grouped under *other aspects of L2 identity* is needed to understand more fully the selective, rather than exhaustive, nature of this list, as well as to explore why some of these constructs were less supported in the quantitative analyses than the qualitative. The findings from each of these categories is briefly summarized and these discussion points explored below.

Motivation. After the treatment, respondents mentioned several areas of increased motivation to begin or continue language studied and revealed some long-term ideal selves reaching far into the future and made of multiple L2+ selves representing distinct languages. Several responses revealed high value placed on multilingualism, a trait both admired and aspired to. Therefore, several respondents seemed to have an ideal multilingual self, a positive future image of someone who navigates multiple languages fluently and with ease, although whether there could be some flexibility in the individual languages comprising that multilingual self was unclear.

Motivation was observed in four different areas. First, some students reported they were more motivated to study new FLs after exposure to them during the treatment period. These languages were often those mentioned during the treatment. Second, some students became motivated to study linguistics, most often desiring to take a historical linguistics class but at least one mentioning general linguistics, as well. Third, some participants indicated that, while their principal future plans and goals had not changed, they were now motivated to incorporate some element of HL into their previously chosen courses of study. Finally, one respondent said the HLT had motivated him to study abroad and experience more of the world and its languages.

Although motivation was a repeated theme in the qualitative data, it was not statistically significant in the quantitative data phase. The lack of significant difference in the quantitative analysis could be due to either of two factors: treatment length and/or initial levels of L2 motivation. Because the treatment was brief—one school week (five days) long for one class period each day—an absence of statistical difference should not be taken as the final word on treatment’s effectiveness; this situation calls for further study to determine if a longer treatment period would produce stronger statistical differences. Another possibility is that no significant difference was found after treatment due to already-high levels of motivation in the population at the beginning of treatment. Pre-treatment responses did indicate relatively high levels of L2 motivation prior to the study, as presented in Chapter 4. This could be due to the unique language-learning opportunities afforded this population through the school, as students who had attended for multiple years could start language studies earlier and take TL courses not often offered at other schools, such as German and Chinese, possibly allowing for the creation of a well-developed sense of L2 self beyond that which would normally be found at the middle- or high-school levels. However, although the elevated levels of L2 motivation prior to treatment may have made it difficult for changes during treatment to show statistical significance, small but positive changes in motivation were still evidenced. Any changes in learners’ L2 identities in such a short time bolsters the claim that HLT can be an effective tool to increase students’ L2 selves, as the qualitative data indicated. Further quantitative study is needed to rule out motivation as a category of statistically significant post-HLT change.

Enjoyment. Qualitative analysis revealed enjoyment of the HLT. This was evident in post-treatment interviews and student journals as well as in video recordings taken during the treatment. During the treatment, several students were observed engaging with the treatment

materials in verbal and nonverbal ways: asking and answering questions, discussing material with peers or the researcher, and joking about the topic. Verbal and non-verbal signs of excitement were observed. Some groups became very engaged with the discussion, staying after that day's treatment to carry on their conversations about the topic past the treatment period length. Other participants exhibited enthusiasm and autonomy in asking questions during treatment to better understand the topics. Likewise, in the post-treatment data collection phase, many participants indicated strong personal enjoyment of the HLT, listing everything, PIE language and cultures, and IPA decoding activities as some of the most-enjoyed topics. Several students asked if the treatment could be transformed into a semester-long class.

Enjoyment was the only factor studied that was not included in the quantitative data collection phase. No t-tests were run on Likert survey questions related to enjoyment of the HLT. The rationale for this was that pre-treatment data was not available regarding participants' enjoyment of HL prior to the study. Many students, in fact, had never heard of HL or many of the topics explored during the treatment phase. However, future studies could consider including general L2 enjoyment-related factors into the pre-test, as the potential exists for changes in overall L2 enjoyment. The rich qualitative results obtained in this study suggest such changes may be possible if empirically proven in future explorations. However, that claim cannot be made until a newer, more general exploration of the relationship between HL in the L2 classroom and overall L2 enjoyment is made.

Other aspects of L2 identity. The other important constructs of L2 identity included in this study were self-efficacy, self-confidence, anxiety, and global competence. This grouping is not to imply these constructs are less important to L2 identity than motivation and enjoyment; any hierarchical tendencies are practical rather than theoretical. There may also be other

constructs related to the self and L2 identity, such as self-esteem, of interest for future study not explored in the current project. These four were chosen for their prominence in the L2 literature and guided by the researcher's experience and interests.

Self-efficacy was significantly higher in post-treatment survey responses, and qualitative data indicated areas of specific increased self-efficacy were translation, pronunciation, spelling, and cognate decoding in Spanish, French, Portuguese, and German. In this case, triangulation of the data confirmed its effectiveness. Self-confidence was not significantly higher in the quantitative analysis, although participant interview and journal responses revealed some participants felt the HLT had augmented their confidence in their general language abilities. Anxiety was likewise not significantly different, possibly due to low levels of L2 anxiety in some of the population before the treatment, as viewed in the statements, "I'm already not nervous" when a student explained why she reported she had experienced no change in anxiety levels after the treatment. Finally, statements related to global competence also failed to yield significant differences in pre- and post-test responses. This was confirmed in the qualitative data when some participants gave weak or vague explanations of global citizenship and how their L2 selves fit into a broad global, multilingual community.

The lack of quantitative confirmation for the positive qualitative results (with the exception of self-efficacy) could potentially be explained by the brevity of the treatment period. A longer, more in-depth treatment is necessary to further investigate the role of the treatment duration on the differing results for self-confidence, anxiety, and global competence. In addition, the absence of quantitative support for changes in pre- and post-test global competence scores coupled with the lack of qualitative evidence for changes in learners' global competence might simply be due to the failure of the HLT to adequately address and emphasize the

connections among the world languages studied and their applications to global cultures and communities.

In conclusion, both the quantitative and qualitative results presented in Chapter 4, can be filtered through the lens of Dörnyei's theoretical framework. The results of this study clearly reflect the three dimensions of Dörnyei's concept of integrative motivation: first, *interest in foreign languages, cultures, and people*; second, *desire to broaden one's view and avoid provincialism*, and third, *desire for new stimuli and challenges*. The results also relate to Dörnyei's assertion that the entire three-part Motivational Self System is affected by learners' beliefs about what they *can* and *cannot* do—put succinctly, their L2 self-efficacy and L2 self-confidence. The higher rates of self-efficacy found in this study suggest the HLT could affect students' Motivational Self System by increasing their self-efficacy. The HLT also affected the L2 ideal self and the L2 learning environment, two constructs that comprise the whole of Dörnyei's L2 Motivational Self System. Contradictory results can best be understood as related to several factors, including the brevity of the treatment, population-specific traits that contributed to already-high levels of pre-treatment motivation, and a lack of clear connection between the HLT and students' global competence. These results, along with their limitations and suggestions for future study, are summarized in Chapter 6.

CHAPTER 6

CONCLUSION

Summary of Findings

After exposure to HL during a five-day enrichment workshop for middle and high school students enrolled in a German, French, or Spanish FL course, participants completed a post-treatment Likert survey, student journal, and oral interview process. Survey responses were compared to responses from an earlier pre-treatment survey and analyzed using two parametric tests, namely paired t-tests and an analysis of variance (ANOVA). Oral interview transcripts, student journal responses, and transcripts of video recordings made during the treatment were coded and analyzed for evidence of changes in the L2 self, especially enjoyment and motivation. Other aspects that contribute to the L2 self and exist in dynamic interplay with enjoyment and motivation, such as self-efficacy, self-confidence, anxiety, and global competence, were also analyzed.

Key findings of this study were evidence in the qualitative data analysis for an effect on FL motivation, enjoyment, anxiety, and self-efficacy. This was echoed by strong support for FL self-efficacy in the quantitative analysis ($p = .011$). The majority of participants seemed to greatly enjoy learning about the history of the languages they speak or study, using terms like “really fun”, “interesting”, and “I liked everything.” Many also expressed a desire for HL to be offered as a full-time class at the school, perhaps as a language elective.

The treatment had a positive effect on motivation, in many cases igniting a desire to learn new languages or study novel linguistics topics, and in some cases, motivating participants to continue their current language studies longer or farther than originally planned. The four areas of increased motivation observed were the study of a particular language, taking a linguistics course, study of a non-linguistics topic already of interest but with an interdisciplinary HL component, and a desire to travel abroad. While the qualitative data showed strong support for increasing FL motivation, this was not statistically significant upon quantitative analysis. Likert survey data did show an increase in overall motivation, but not a significant one.

No significant changes were observed in the quantitative analysis of self-confidence, anxiety, or global competence, although self-confidence was near to approaching significance. However, student responses in the oral interview process did indicate lower levels of FL anxiety in the classroom and higher levels of linguistic self-confidence, both due to a newfound ability to detect patterns among languages and decode opaque cognates.

As such, the following statements can be made regarding the research questions and hypotheses:

Research Question 1. What effect, if any, does historical linguistics treatment (HLT) have on students' motivation in the L2 classroom? Does this affect motivation to learn other languages? To further study linguistics, archeology, history, other related fields? To continue TL studies longer than originally planned?

RQ1-H0: HLT will have no effect on student motivation in the L2 classroom.

RQ1-H1: HLT will have a significant effect on student motivation in the L2 classroom.

The HLT did affect student L2 motivation in the qualitative section. This study suggests that exposure to HL can inspire students to learn other languages, to further study linguistics,

archeology, history, and other fields, and to continue their current language studies longer than originally planned. However, quantitative analysis with t-test comparison of means was unable to confirm a difference in pre- and post-treatment motivation. Therefore, the null hypothesis cannot be rejected.

Research Question 2. What effect, if any, does HLT have on enjoyment of the L2 subject? Does this affect desire to learn other languages or to further study linguistics or other related fields? Does this influence desire to continue TL studies longer or more in-depth than originally planned?

According to student responses during and after treatment, the HLT increased student enjoyment, which is an important factor in student motivation and the self. No statistical tests were run to compare student enjoyment of HL before and after treatment, as students had not been exposed to HL before the treatment, making it impossible to state with certainty whether this change was statistically significant. However, the enthusiasm and evident enjoyment of students during treatment (as described in Chapter 4) lends credence to the claim that HLT increased L2 enjoyment, directly affecting students' motivation to further study linguistics and related fields as well as to continue TL studies longer than originally planned.

Research Question 3. What effect, if any, does the HLT have on *other L2 identity constructs* that contribute to students' L2 ideal selves as global language learners and speakers? How, if at all, does this apply to the embedded conceptions of self-efficacy, self-confidence, anxiety, and global competence? For the quantitative analysis, the following hypotheses were used:

RQ3-H0: The HLT will have no effect on other aspects of student L2 identity.

RQ3-H1: HLT will have a significant effect on student self-confidence.

RQ3-H2: HLT will have a significant effect on student self-efficacy.

RQ3-H3: HLT will have a significant effect on student anxiety.

RQ3-H4: HLT will have a significant effect on student global competence.

The HLT allowed students to see “hidden” phonological and orthographical connections among related languages and to decode previously opaque cognates, especially after learning about the French *accent circonflexe* and Grimm’s Law. It increased their awareness of the interconnectedness of many modern languages and cultures, as well as their understanding of the common ancestry of many European languages. This led to greater self-efficacy. It possibly also resulted in greater self-confidence and lower levels of anxiety when encountering new TL words. It did not seem to greatly affect global competence.

Statistical analyses could not find significance in the pre- and post-test changes reported in the areas of self-confidence, anxiety, or global confidence. They did, however, reveal a significant change for self-efficacy, $p = .011$, in the post-treatment Likert scale means. A significant difference for metalinguistic awareness, $p = .00001$, was also observed. Accordingly, the null hypothesis RQ3-H0 is rejected. The RQ3s-H1 (self-confidence), 3 (anxiety), and 4 (global competence) are rejected due to insufficient evidence. The RQ3-H2 (self-efficacy) is accepted. Future exploration of potential HLT effects on self-efficacy and metalinguistic awareness is recommended.

Limitations of This Study

As stated previously, this study was limited in its scope. First, students were only exposed to the history of PIE cultures and languages, with a strong focus on the language branches offered at the school (Germanic and Italic). No conclusions can be drawn as to the efficacy of HL exposure when said exposure is not related to a PIE descendant, which is the case

for those studying Asian, African, Semitic, Native American, or non-PIE European languages. This especially relates to the recent popularity of non-PIE foreign languages such as Chinese and Arabic being taught at the secondary and university levels.

This study was also limited in its duration. The treatment lasted only for a week of classes; that is to say, one class period per day for five days. This brief exposure was sufficient to provide a brief introduction to historical topics of interest, but not to go much in depth—something some participants lamented in their student journals and oral interviews. The fact that statistical analyses did not mirror the positive qualitative findings in regard to self-confidence and anxiety may well be due to the brevity of the treatment rather than its ineffectuality.

Finally, the study population was drawn from a small private school. Analysis of participants' backgrounds revealed the language learners, while predominately English monolingual L1s, had a diverse and rich linguistic background: some had been raised bilingual, some had an L1 other than English, and all were studying at least a third language (some a fifth). For specifics on the linguistic backgrounds of the respondents, see Chapter 3. The participant population differs from many North American public-school populations due to the students' unique exposure to multiple languages at this school. Similar studies should take into account this unique student population.

Considerations for Future Study

Future investigators may want to explore the effect of HLT on learners even younger than those represented in this study. Common Core Standards suggest that basic root words and morphology can be introduced at all levels K-12. It would be worthwhile to see what kind of HL topics are of interest to young learners and to explore how the field could be tailored for presentation to learners as young as elementary school.

In addition, future investigations should test the effect of HLT over a longer period of time, which will allow for both a broader scope of treatment topics and a more in-depth study of those introduced here. A two- or four-week enrichment unit might be expected to yield more results than this one; an entire semester or year-long course might completely change the insignificant or approaching significance results into statistically significant ones.

Aside from the implications of HL on L2 identity, an investigation of HL on TL content knowledge would be a good recommendation. Preliminary exploration in this study showed strong statistical support for HL treatment increasing self-reported metalinguistic knowledge and linguistic competence. This was also indicated by several participant remarks during the qualitative data collection phase.

Finally, it would be worthwhile to explore the effect of HL on a particular TL rather than several at once. Because the population of this particular school was so small, the treatment group was comprised of FL students studying Spanish, French, and German. The treatment was therefore broad enough to include a bit of the history of each of these languages. In larger school populations, however, it would be prudent to group students according to their TL and tailor the treatment to the specific TL of the students. This personalized treatment would logically provide clearer results.

Conclusions Drawn from This Study

Historical linguistics has greater potential to incite learner interest and engender student enthusiasm than is traditionally thought. Far from its reputation as old, boring, or dry, the field can be relevant, engaging, and fun. In addition, evidence suggests that the traditional practice of reserving heavy linguistic topics for language students who have attained a graduate-level

proficiency in the TL is outdated and lacks empirical support. In contrast, learners as young as middle school showed great interest in and derived benefits from HL exposure.

The HLT was shown in this study to significantly affect the self-efficacy of students. Qualitative data also indicated HL increased the enjoyment of students in the language classroom and motivated them to learn new languages, continue their current TL longer than originally planned, study linguistics or HL, and travel to new countries. A majority of participants indicated the treatment increased their language motivation. For many students, the treatment was also an effective way to lower anxiety when encountering new words in the TL that could be decoded using phonological and orthographic patterns learned during the HL treatment. Finally, HL was broadly applicable for improving language enjoyment, motivation, and identity. In other words, HL was as effective for middle schoolers as it was for high schoolers, as effective for males as for females, and as effective for those learning an L2 or L3 as for those learning an L4 or L5.

Contributions to the Field

To date, no study has explored the effect of phonological and orthographical HL exposure on the motivation, enjoyment, and identity of L2 learners. This investigation suggests HL exposure, even at beginning levels of L2 study or among young secondary learners, can be applied to teaching methods and L2 pedagogy as one avenue to engage and motivate learners. Its future potential is yet to be explored. This study paves the way for more research to be done and implies it is an area ripe for future exploration.

Recommendations for Future Research

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Final Remarks

Historical linguistics is a topic rarely explicitly introduced to FL students until university or beyond. However, Common Core standards, ACTFL standards, and emerging research support the notion that HL can strengthen learners' language abilities and metalinguistic

competence as well as contribute in positive ways to the L2 ideal self as envisioned by Dörnyei, Ushioda, and others.

This study confirmed that exposure to HL can be a fun, engaging activity for middle and high school language learners. This was true regardless of the gender, level in school, or monolingual/bilingual L1 status of the participants. Participants reported higher levels of L2 motivation and enjoyment, new interest in linguistic topics and additional target languages, and lower levels of L2 anxiety. They also reported significantly higher rates of self-efficacy and metalinguistic awareness.

This study contributes to an emerging body of research regarding the role of HL as a tool to aid in FL acquisition. Historical linguistics has the potential to engage learners in the TL and its history, increase L2 motivation and enjoyment, and help learners make connections among languages and cultures. It increases student self-efficacy in the L2 classroom and has the potential to influence and augment learners' L2 ideal selves. While further study must be done to establish and strengthen the claims made here, the results of this study indicate this is a promising area of investigation for future research.

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APPENDIX A: PRE-TEST LIKERT SURVEY

Question	Likert Scale : 5-Strongly Agree, 4-Agree, 3-Neutral, 2-Disagree, 1- Strongly Disagree
1. n/a	
2. n/a	
3. I would like to someday study a language other than the one I'm studying, such as French, Italian, Spanish, German, Portuguese, or Latin.	5 4 3 2 1
4. I would like to someday study historical linguistics.	5 4 3 2 1
5. I would like to someday study some other area of linguistics, such as phonology, IPA, PIE, or sociolinguistics.	5 4 3 2 1
6. I would like to further study another field of interest, such as archeology, history, or sociology.	5 4 3 2 1
7. I am aware of the roots, patterns, and word structures in my native language.	5 4 3 2 1
8. I am aware of the roots, patterns, and word structures in the language I am studying, French, German, or Spanish.	5 4 3 2 1
9. I am aware-of the roots, patterns, and word structures in another language I speak or have studied. 10. (Please list these languages here: _____)	5 4 3 2 1
11. I am aware of sounds and sound combinations in my native language.	5 4 3 2 1
12. I am aware of sounds and sound combinations in Spanish/French/German.	5 4 3 2 1
13. I am aware of sounds and sound combinations in other languages I speak or have studied. (leave blank if no languages studies)	5 4 3 2 1
14. I am aware of connections among the phonological (sound) patterns of all the languages I speak or study.	5 4 3 2 1
15. I see complexity in words and language	5 4 3 2 1
16. I am equipped to decode new words or concepts in Spanish/French/German.	5 4 3 2 1
17. I am confident I can succeed at specific language tasks.	5 4 3 2 1
18. n/a	5 4 3 2 1

19. I am confident in my ability to communicate in Spanish/French/German.	5 4 3 2 1
20. n/a	5 4 3 2 1
21. I feel my language studies are worthwhile and positively contribute to my self-worth.	5 4 3 2 1
22. I am not anxious about encountering new words in my native language.	5 4 3 2 1
23. I am not anxious about encountering new words in the language I am studying.	5 4 3 2 1
24. I am not anxious about encountering new words in other languages I speak or have studied.	5 4 3 2 1
25. I understand how various cultures of this world interact socially.	5 4 3 2 1
26. I am able to empathize with people from other places and cultures.	5 4 3 2 1
27. I am interested in getting to know people from other places and cultures.	5 4 3 2 1
28. I believe it is my responsibility to be actively involved in global issues.	5 4 3 2 1

APPENDIX B: POST-TEST LIKERT SURVEY

Question	Likert Scale : 5-Strongly Agree, 4-Agree, 3-Neutral, 2-Disagree, 1-Strongly Disagree
1. I have enjoyed learning about historical linguistics.	
2. Learning about historical linguistics has motivated me to study Spanish/German/French longer than I had originally planned.	
3. I would like to someday study a language other than the one I'm studying, such as French, Italian, Spanish, German, Portuguese, or Latin.	5 4 3 2 1
4. I would like to someday study historical linguistics.	5 4 3 2 1
5. I would like to someday study some other area of linguistics, such as phonology, IPA, PIE, or sociolinguistics.	5 4 3 2 1
6. I would like to further study another field of interest, such as archeology, history, or sociology.	5 4 3 2 1
7. I am aware of the roots, patterns, and word structures in my native language.	5 4 3 2 1
8. I am aware of the roots, patterns, and word structures in the language I am studying, French, German, or Spanish.	5 4 3 2 1
9. I am aware-of the roots, patterns, and word structures in another language I speak or have studied.	5 4 3 2 1
10. (Please list these languages here: _____)	
11. I am aware of sounds and sound combinations in my native language.	5 4 3 2 1
12. I am aware of sounds and sound combinations in Spanish/French/German.	5 4 3 2 1
13. I am aware of sounds and sound combinations in other languages I speak or have studied. (leave blank if no languages studies)	5 4 3 2 1
14. I am aware of connections among the phonological (sound) patterns of all the languages I speak or study.	5 4 3 2 1
15. I see complexity in words and language	5 4 3 2 1
16. I am equipped to decode new words or concepts in Spanish/French/German.	5 4 3 2 1
17. I am confident I can succeed at specific language tasks.	5 4 3 2 1
18. After studying historical linguistics, I feel better able to communicate in my native language.	5 4 3 2 1
19. I am confident in my ability to communicate in Spanish/French/German.	5 4 3 2 1
20. n/a	5 4 3 2 1

21. I feel my language studies are worthwhile and positively contribute to my self-worth.	5 4 3 2 1
22. I am not anxious about encountering new words in my native language.	5 4 3 2 1
23. I am not anxious about encountering new words in the language I am studying.	5 4 3 2 1
24. I am not anxious about encountering new words in other languages I speak or have studied.	5 4 3 2 1
25. I understand how various cultures of this world interact socially.	5 4 3 2 1
26. I am able to empathize with people from other places and cultures.	5 4 3 2 1
27. I am interested in getting to know people from other places and cultures.	5 4 3 2 1
28. I believe it is my responsibility to be actively involved in global issues.	5 4 3 2 1

APPENDIX C: STUDENT FINAL JOURNAL

- I. What were your thoughts about this unit on historical linguistics? What were some activities you enjoyed or didn't enjoy?

2. What seemed relevant and applicable to your language studies and what did not?

3. What seemed relevant and applicable to your personal interests and goals and what did not?

-
-
4. Do you believe this has helped increase your language abilities or linguistic knowledge?
How? In which languages?

-
-
-
-
-
-
5. What, if anything, do you think the cultures of France, Italy, Spain, Portugal, and Latin America (including the Caribbean and Brazil) have in common? With what evidence can you support your claim?

-
-
6. Do you believe there is such a thing as *world citizenship*? What does it entail? How does it rank in importance next to *national citizenship*? Why?
-
-
-
-

APPENDIX D: SEMI-STRUCTURED ORAL INTERVIEW QUESTIONS

Name: _____ Age: _____ Grade: _____ Class: _____

Languages: _____

1. What were your thoughts on learning historical linguistics? Did you enjoy it, and why? What did you enjoy and what did you not enjoy or think I should take out the next time I teach this? (Code: RQ2)
2. Outside of what we did in class, did you discuss this unit with any peers, family members, or friends outside of class? Did you look up any other historical resources? (Code: RQ1, RQ2)
3. Has our unit made any other languages or cultures seem more interesting to you? Which? What about them? (RQ2, RQ3)
4. Do you think our study has helped you or will help you in your Spanish/French/German class? How or how not? (RQ3)
5. Can you tell me if you particularly enjoyed any of our concepts or activities? Which ones, and why? Which ones did you not enjoy? (only if need more info from #1.) (RQ1)
6. Since studying historical linguistics, do you think you've been able to find more patterns in the language you're hearing every day? If so, what are some examples? (RQ3)
7. *Only for L3+ learners:* Since our unit started, have you found any patterns in any of the other languages you speak? (RQ3)
8. Has anything we studied in our unit helped you feel more confident or less nervous in **[language]** class? Do you think it will help you succeed in your class? If so, how? (RQ3)
9. Finally, has this unit motivated you to study other languages, cultures, or to continue your current language studies longer? What about related topics like anthropology, history, linguistics, history of language, etc.? (RQ1, RQ3)

APPENDIX E: MATERIALS USED IN TREATMENT LESSON PLANS

Historical Linguistics – Day 1

What is linguistics? – The study of language.

Sociolinguistics, phonology, grammar, anthropology

What does IPA stand for?

Why is IPA useful for linguists?

Hospital: /'hɒs-pi-təl/ /os-pi-tal/ /o-pi-tal/

What words are these IPA symbols for?

English	French	Spanish	German
/ˈθʌroʊbrɛd/	/fɛt/	/hoben/	/tak/
/ˈhɒspɪtəl/	/savwa fɛʁ/	/karo/	/kʁʌŋkənvaɡʌn/
/dʒʌdʒ/	/oʒoʁdwi/	/karo/	/ʃtat/

Student discussion:

1. What are the possible uses of IPA for language learners and linguists?
2. Did you enjoy learning about IPA? Why or why not?
3. Today you learned about different sound changes that can happen to languages. Do you think this knowledge will help you in your future language studies, and if so, how?

Consonants (Pulmonic)

Missing some symbols? Apply Doulos SIL font

	Bilabial		Labiodental		Dental		Alveolar		Postalveolar		Retroflex		Palatal		Velar		Uvular		Pharyngeal		Glottal	
Plosive	p	b					t	d			ʈ	ɖ	c	ɟ	k	g	q	ɢ			ʔ	
Nasal		m		ɱ				n				ɳ		ɲ		ŋ		ɴ				
Trill								r										ʀ				
Tap or Flap				ɸ				ɾ				ɽ										
Fricative	ɸ	β	f	v	θ	ð	s	z	ʃ	ʒ	ʂ	ʐ	ç	ʝ	x	χ	χ	ʁ	ħ	ʕ	h	ɦ
Lateral fricative							ɬ	ɮ														
Approximant				ʋ				ɹ				ɻ		j		ɰ						
Lateral approximant								l				ɭ		ʎ		ʟ						

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

Vowels in IPA:

/i/ /ɪ/ /e/ /ɛ/ /æ/ /a/

/ə/ /o/ /ʌ/ /u/ /ʊ/ /y/

Can you and your group members decipher these words and phrases written in IPA?

/ai-pi-e in in-ɣlɪʃ/
 /'θʌroʊ brɛd/
 /dʒʌdʒ/

/fiɛntʃ/
/fɛt/
/sav-wa fɛɤ/
/ma-saʒ/

/spa-niʃ/
/ho-ben/
/ka-ro/
/ka-ro/

/dʒʌɪ-mən/
/kʁʌnkənvaɡʌn/
/ʃtat/

Day 2:

Pre-activity: Sanskrit vs. English vs. Latin t/d words

English	Sanskrit	Greek	Latin
Two	Dvau	duo	Duo
Three	Trayas	treis	Tres
Tooth	Dantam	edóntos	Dentis
Mother	Matar	mater	mater
Me	Ma	emé	med
Ewe	Avis	owis	ovis

What is a proto-language?

*Language is probably _____ years old

* Proto-IndoEuropeans = PIE

* PIE is approximately _____ years old

What do we know about PIE culture by the words they did and didn't have?

PIE weather and climate	PIE geography and wildlife	PIE family and society

PIE domestic animals	PIE social structure	PIE family/clan

Student discussion –

1. How are these languages or cultures related?
2. How is English related to French? German? Spanish? Latin? Which relationships are closest? Think of words you know that show the relationships.
3. Today you learned about PIE language and culture. What did you think of this lesson? What did you enjoy or not enjoy? What was interesting or not about it?
4. Without looking, can you draw a family tree of some PIE languages? Include as many as you can.

Day 3:

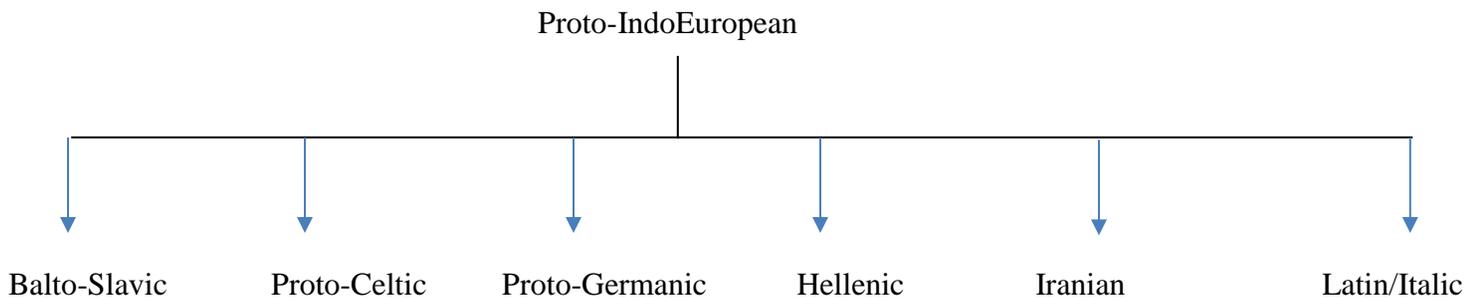
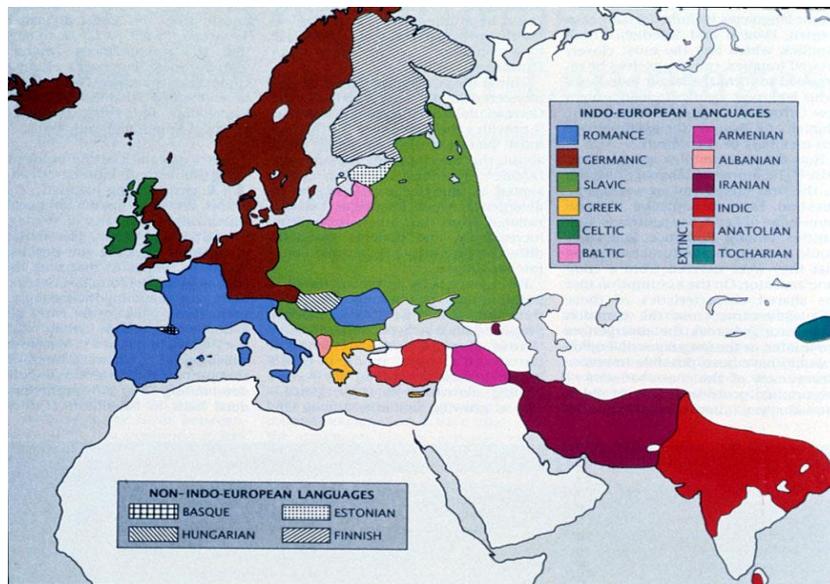
Finish discussing:

- PIE culture – institutions, hierarchies, structure
- PIE geography – where did these people live?

Student Discussion Questions:

- What is a proto-language?
- When did language begin?
- Do we have records of PIE?
- How old is PIE?
- How do we know?
- What do we know about PIE culture and life?
- Why do you think this language survived and others did not?

Activity – Using this map, can you draw a PIE family tree?



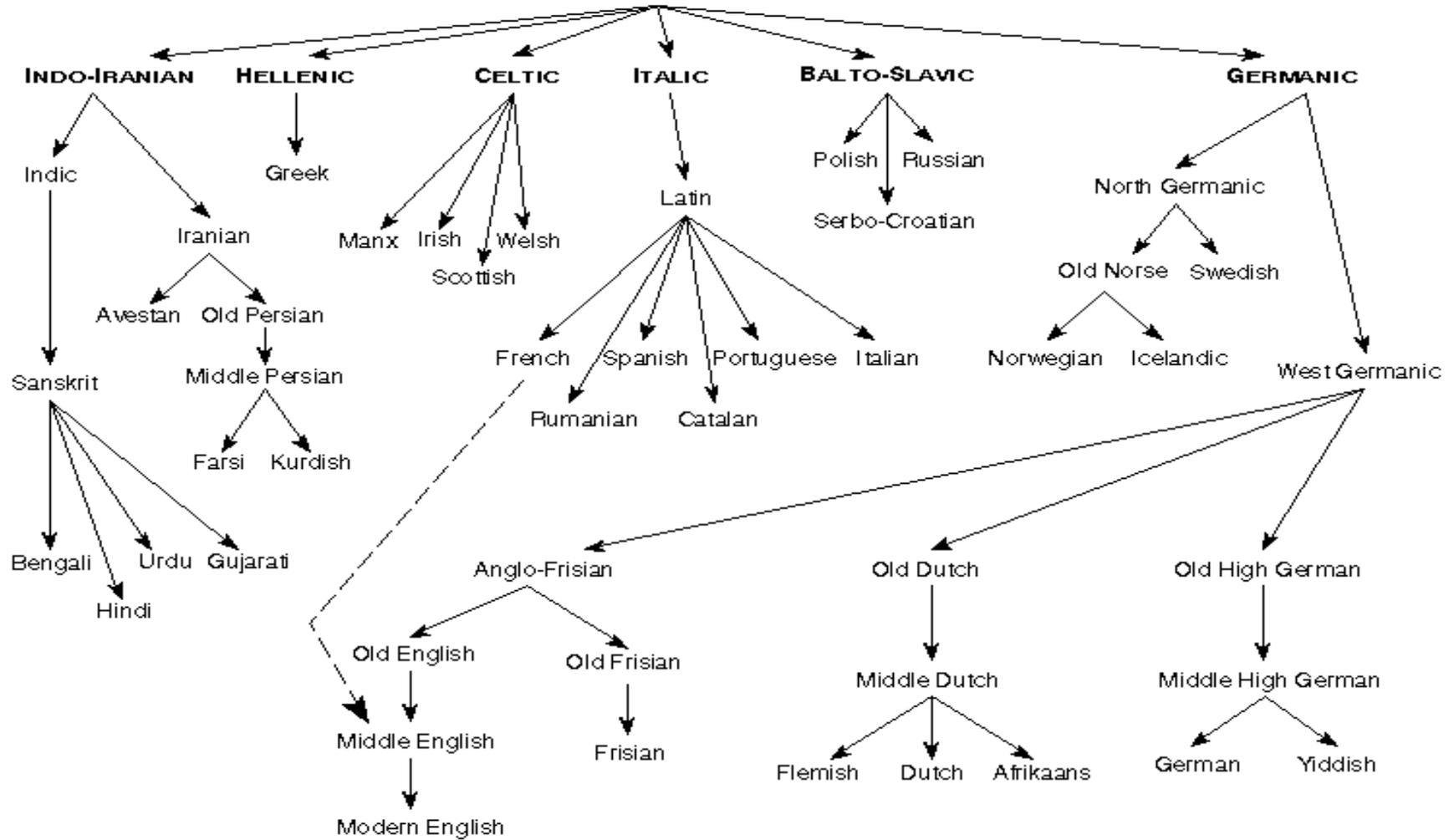
Grimm's Law: Connections between Germanic languages and Latin/Romance Languages

- Grimm's Law. Proto-German suffered sound changes that other PIE languages did not.

Now, most Germanic languages follow the following patterns:

- **/d > t/** or **/t > θ/ (th)**
 - Third <
 - Three <
 - Ten <
 - _____ < fraternal
 - _____ < paternal, padre
- **/g > k/**
 - Gato <
 - Gel, gelatin, helado, <
- **/d > t/**
 - _____ < tooth
 - Pedro, Piedra <
 - Ped- < foot
- **/kw > w/** and **/gw > w/**
 - qué / que <
 - cuál / quoi <
 - cómo / comment <
 - cuando / quand <
 - guerra, guerre <
- **/k > h/**
 - canis, canine <
 - corn (cornucopia, unicorn) <
- **/p > f/**
 - Foot <
 - Father <
 - Fish <
 - For <

Proto-Indo-European



Prepared by Jack Lynch, jlynch@andromeda.njgers.edu

Day 4:

Review Grimm's Law / Finish Grimm's Law from yesterday

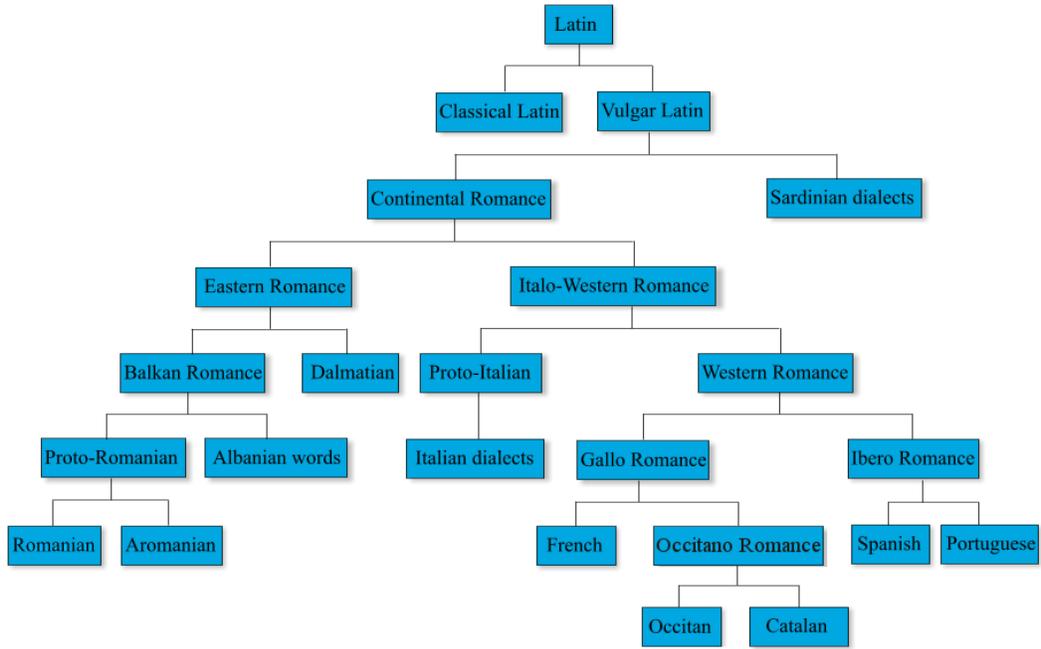
Look at close-ups of Germanic and Italic branches of PIE

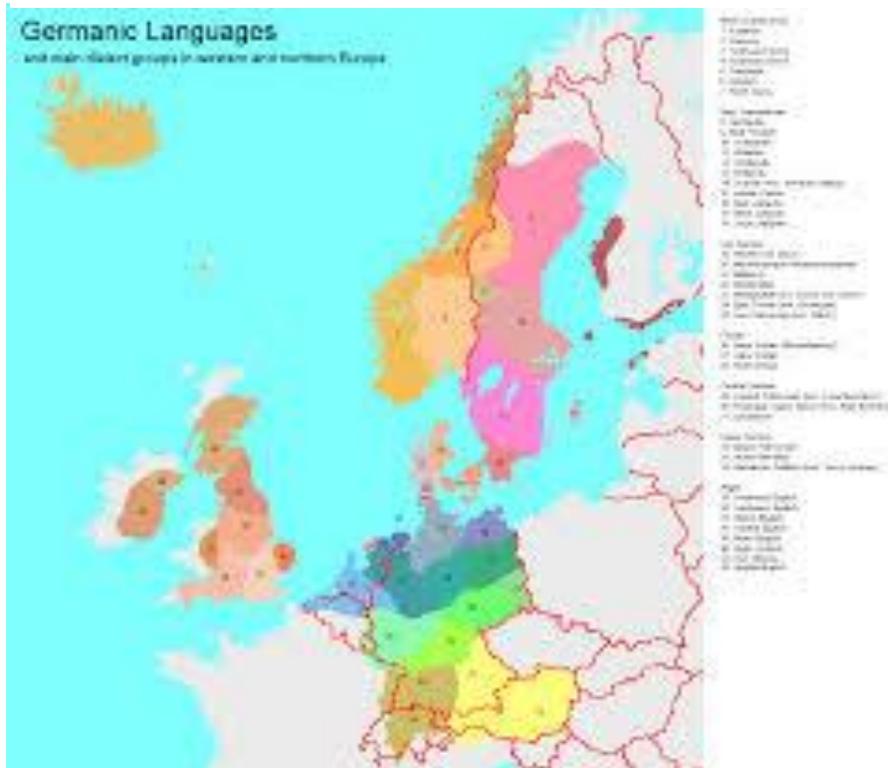
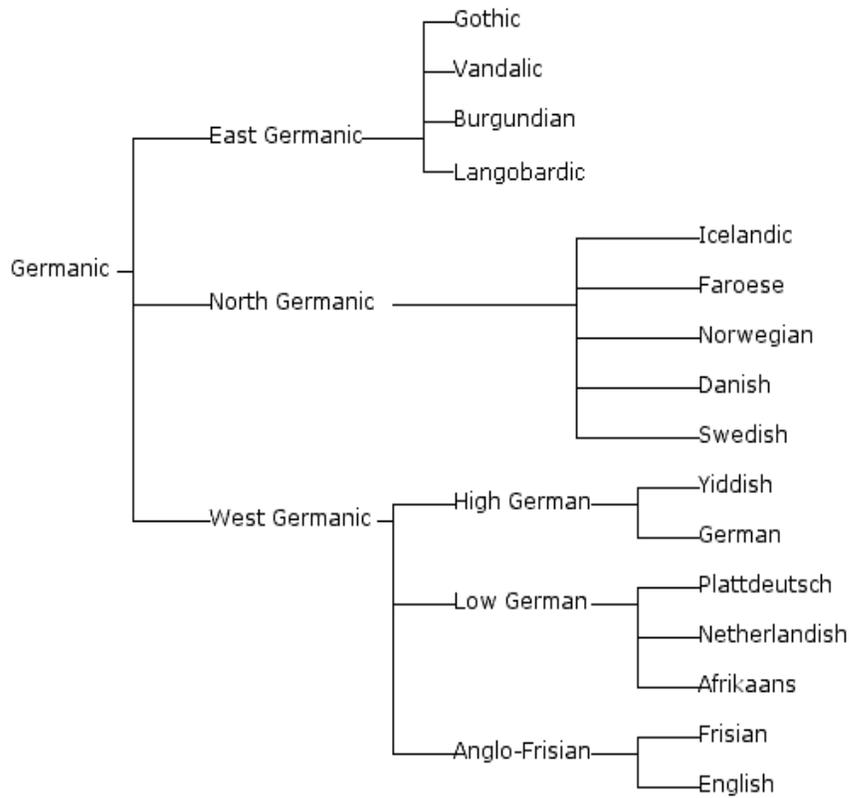
Discuss differences among Romance Languages:

- All Romance Languages
 - Softening of sounds t > d > ð > ø
 - Latin fata "fairy"
 - Portuguese fairy = fada
 - Spanish fairy = hada
 - French word for fairy = fée
 - Latin nata
 - Portuguese =
 - Spanish =
 - French =
 - Latin vita "life"
 - Portuguese =
 - Spanish =
 - French =
 - Palatalization

<ul style="list-style-type: none">▪ French -gn<ul style="list-style-type: none">• Spain: Frn: _____• Spider: Frn: <u>aragne</u>• Mountain : Frn : _____• Lasagna : Frn : _____▪ French -l or -ille<ul style="list-style-type: none">• Bee: Frn: Abeille• Ear : Frn : _____• Garlic: Frn: Aille	<ul style="list-style-type: none">Spanish ñ<ul style="list-style-type: none">Spn: <u>España</u>Spn: _____Spn : _____Spn : _____Spanish -j<ul style="list-style-type: none">Spn: _____Spn : <u>Oreja</u>Spn: _____	<ul style="list-style-type: none">Portuguese -nh<ul style="list-style-type: none">Port : _____Port _____Port : Montanha_Port : _____Portuguese -lh<ul style="list-style-type: none">Port: _____Port : _____Port: _____
--	---	--
- French :
 - deletion of final -o and -a
 - accent cironflexe ^

île	arrête
forêt	maître
hâte	quête
côte	pâte
intérêt	tempête
hôtel	conquête
bête	vêtement





Day 5:

- Finish discussing any topics of interest or topics we did not complete earlier
- Discuss the history of English
 - Anglo-Saxon = _____
 - Who spoke Anglo-Saxon?
 - Where did they come from?
 - What do we know about Anglo-Saxon life?
 - Anglo-Saxon city/town names still existing in English today:
 - -HAM =
 - -ING =
 - -SHIRE =
 - Exs: What do the names Reading, Nottingham, Birmingham, and Yorkshire mean?
 - William the Conquerer and the Norman French:
 - When?
 - Who was William and why did he invade?
 - What effect did Normal French have on the Anglo-Saxon language?
 - Foods:
 - Beef/cow
 - Venison/deer
 - Pork/pig
 - Canard/duck
 - Poultry/chicken
 - Sound changes:
 - What happened to the final -e? (e.g. house)
 - Double consonants:
 - Kn: know, knee, etc.
 - Can you think of other double consonants in English we no longer pronounce?
- Play review game – teams compete with trivia about what we learned this week

APPENDIX F: IRB APPROVAL



May 8, 2017

Jana Coffman
Department of Modern Languages & Classics
College of Arts & Sciences
Box 870246

Re: IRB#: 17-OR-169 "The Effect of Historical Linguistics on Students' Metalinguistic and Linguistic Skills"

Dear Ms. Coffman:

The University of Alabama Institutional Review Board has granted approval for your proposed research.

Your application has been given expedited approval according to 45 CFR part 46. Approval has been given under expedited review category 7 as outlined below:

(7) Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies

Your application will expire on May 4, 2018. If your research will continue beyond this date, complete the relevant portions of the IRB Renewal Application. If you wish to modify the application, complete the Modification of an Approved Protocol Form. Changes in this study cannot be initiated without IRB approval, except when necessary to eliminate apparent immediate hazards to participants. When the study closes, complete the appropriate portions of the IRB Request for Study Closure Form.

Please use reproductions of the IRB approved stamped consent/assent forms to provide to your participants.

Should you need to submit any further correspondence regarding this proposal, please include the above application number.

Good luck with your research.

Sincerely,

Stuart Usdan, PhD
Chair, Non-Medical Institutional Review Board