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The Effects of Second Language Experience on Typologically Similar and Dissimilar Third Language

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THE EFFECTS OF SECOND LANGUAGE EXPERIENCE ON
TYPOLOGICALLY SIMILAR AND DISSIMILAR
THIRD LANGUAGES

by

Erin Elizabeth Gibbons

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Arts

Center for Language Studies
Brigham Young University

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BRIGHAM YOUNG UNIVERSITY

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ABSTRACT

THE EFFECTS OF SECOND LANGUAGE EXPERIENCE ON TYPOLOGICALLY SIMILAR AND DISSIMILAR THIRD LANGUAGES

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Master of Arts

Studies in third language acquisition (L3) add an exciting dimension to the field of language acquisition and present many interesting lines of research. One issue unique to L3 acquisition is the effect of second language (L2) experience on L3 acquisition. Because L3 learners have already experienced the process of language acquisition, it seems likely that the experiences, knowledge, and skills they may have gained while learning an L2 would transfer to, and even enhance, their ability to acquire an L3. It also seems reasonable to believe that the type of language previously studied would have an effect on learners' abilities to acquire additional languages of a similar type. Many research studies have affirmed these theories showing that L3 learners have an advantage in language learning which is absent in L2 learners. Other studies have shown L2 typology, level of proficiency, and extent of L2 experience to be contributing factors in

adult L3 learners who had studied French or Spanish as an L2 for varying lengths of time, and were studying French, Spanish, Korean, Japanese, or Russian as an L3. Participants' L2 experience, including length of study and language type, was compared to their scores on an L3 speaking assessment consisting of pronunciation, grammar, vocabulary, and fluency ratings.

A linear stepwise multiple regression analysis showed a modest trend in which length of L2 experience did have an effect on L3 acquisition. Although this trend did not achieve statistical significance, a hypothetical analysis showed that the trend became significant with the omission of three outliers. An analysis of variance demonstrated that type of language experience did not significantly affect L3 acquisition since participants from all five L3 groups received comparable scores on the speaking assessment. Another analysis of variance, however, showed language type to be a highly significant factor in the acquisition of L3 pronunciation.

The results of the study suggest that length of L2 exposure does seem to affect L3 acquisition to some extent, although the trend found from the data was modest. The study also concluded that language typology was not a significant contributing factor in L3 acquisition, with the exception of its effect on the acquisition of L3 pronunciation.

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Chapter One

Introduction

Monolingual speakers are often impressed when they meet someone who can speak more than one language. They are even more astonished when someone speaks three or four languages and often associate multilingual speakers with a superior level of intelligence and exceptional ability. In response, multilingual speakers often reply that learning a language gets easier – that once a person knows a second language (L2), learning subsequent languages is less arduous. Indeed, studies in third language (L3) acquisition introduce a fascinating new dimension to the study of language acquisition. Because L3 learners have already experienced the process of language acquisition, the experiences, knowledge, and skills they may have gained while learning an L2 present many interesting lines of research.

While L3 learners do seem to have an advantage in language learning ability over L2 learners, the nature of and reasons for this advantage are not fully understood at present. The possible development of metalinguistic awareness, the amount of L2 experience, and the typological relationship between languages are all potential factors in the enhanced adeptness which L3 learners seem to demonstrate. The current study has sought to investigate whether L2 experience contributes to greater L3 acquisition abilities. It also addressed the role of language typology in L2 to L3 acquisition.

Background and Significance

One of the main potential insights that could be gained through this study was whether the length of L2 study influenced L3 acquisition, or in other words, whether L3 learners who had studied an L2 for a longer period of time performed better than those

who had studied an L2 for a shorter period of time. While some studies have compared the language abilities and proficiency of L3 learners who had different L2 backgrounds but learned the same L3 (Cenoz, 2001; Ringbom, 1987), no studies were found which looked specifically at participants who shared a common L2 but were learning different types of L3s. Some studies have, however, focused on the role of L2 in L3 acquisition by investigating the effects of L2 proficiency on L3 acquisition (Muñoz, 2000; Tremblay, 2006). The current study added to the latter two lines of research by investigating the effects of L2 experience in one type of language on the acquisition of various types of L3s. The study also investigated the influence of length of L2 study on L3 acquisition.

The present study was unique because it investigated an extensive range of L3s across multiple language types. Other studies investigating only one L3 compared groups of learners with differing L2 backgrounds, showing that those learners whose L1 or L2 were typologically similar to the L3 outperformed learners whose L1 and L2 were typologically dissimilar to the L3. This indicated that learners were able to make connections to similar linguistic features between languages. While many studies have investigated the strategies used by L3 learners to transfer linguistic knowledge from a similar language while choosing not to transfer linguistic knowledge from dissimilar languages (Ahukanna, Lund, & Gentile, 1981; Cenoz, 2001), the current study simply looked at how L2 experience affected the acquisition of both similar and dissimilar L3s according to type and length of study.

Implications

The research questions presented in this study highlight two important ways L2 experience may affect L3 acquisition, namely the extent of L2 experience and language type. The results of these investigations bear positive implications for those involved in language programs and language acquisition research. These parties include researchers in the field of language acquisition, administrators, and officials planning the language curriculum in the American primary and secondary school system.

Better L3 performance by participants who had longer L2 experience than participants who had less L2 experience may indicate that those with longer experience had developed metalinguistic awareness or skills that enabled them to learn additional languages with greater ease or efficiency. Many researchers believe that the process of L2 acquisition does in fact endow learners with a unique understanding of language learning that enhances their propensity towards successfully acquiring additional languages (Cenoz, 2001; Herdina & Jessner, 2000; Jessner, 1999). While this study did not intend to identify or describe metalinguistic skills or strategies that the subjects employed, the results of this study may add to the collection of support for the theory of metalinguistic awareness in L3 acquisition.

In addition, evidence of enhanced thinking skills and language-learning abilities may foster convincing support for the retention and expansion of foreign language programs in American primary and secondary school curricula. Because language programs are frequently considered of secondary importance to other core academic subjects, language programs are often cut from the curriculum due to budget constraints and prescribed learning outcomes. Evidence that language study furnishes learners with

enhanced skills in future learning attests to the importance of language learning and emphasizes the value of language programs in the American educational system.

Another purpose of this study was to enable researchers to better understand and explain how typological similarity of previously acquired languages influences the acquisition of an additional language. Results from the statistical analysis were designed to show whether knowing an L2 which is similar or dissimilar to the L3 is an advantage or disadvantage to the learner. The effects of this particular point of inquiry are far-reaching: not only does it deepen the current understanding of L3 acquisition in the field, but also bears implications for administrators charged with L2 curriculum development as well.

The findings on the relationship between types of L2s and types of L3s may suggest what types of languages school curricula should offer. Currently, a push towards scholarship in internationally powerful languages has caused a shift towards offering less-commonly taught languages in American schools. Instituting these types of language programs, however, is a complex endeavor because it is difficult to find qualified instructors and reach more than a small number of students. Study results showing a correlation between L2 experience and success in L3 acquisition of typologically dissimilar languages may indicate that administrators and officials can justifiably limit less-commonly taught languages from their programs in favor of more conventional languages which are more feasible and allow more students the opportunity to study a language in school.

Lastly, the results of this study may have implications for those desiring to learn an L3 and those making language assignments, such as in the military. Greater

achievement in a certain L3 by participants who had studied certain languages or had studied language for a certain amount of time prior to entering the MTC, may suggest that decision-makers take into closer consideration background language experience when choosing an L3 or making language assignments. Additionally, results of the data analysis indicating little or no advantage between L2 experience and L3 acquisition, may suggest that such people place less importance on previous language experience when making those decisions and assignments.

Delimitations

Some missionaries at the MTC were encouraged to complete the Language Speaking Assessment (LSA); however, it was not required. Therefore, participants for the study were drawn from those who opted to complete the LSA. Because completion of the LSA was optional, there is a potential bias in the data based on the fact that participants self-selected to take the LSA. It is possible that those who participated in the LSA were more motivated language learners or felt more adept in their language learning abilities than those who did not participate in it.

Because L3 assignments were made prior to participants' arrival at the MTC, it was not possible to randomly select participants and L3s.

Constructs Investigated in the Study

Language Transfer: The application of knowledge or understanding of one language, such as knowledge of cognate words or word order, to the process of acquiring another language.

Positive Transfer: Instances where the application of knowledge of one language is beneficial to or enhances the process of learning another language, for example,

applying knowledge of cognate words to learning vocabulary in another, similar, language.

Negative Transfer: Instances where the application of knowledge of one language is disadvantageous or impedes the process of learning another language, for example, applying knowledge of word order in one language to a language which uses a different grammatical structure.

Linguistic Typology: The classification of languages into language families or categories, such as Romance, Slavic, or Asian, based on language origin.

Typological similarity (typologically similar): Languages considered to be similar in linguistic characteristics such as structure, (e.g. SVO,) lexicon, (e.g. cognate words,) or orthographic systems.

Typological dissimilarity (typologically dissimilar): Languages considered to be dissimilar because of differences in linguistic characteristics such as structure (e.g. SVO vs. SOV), lexicon (e.g. few cognate words), or orthographic systems (e.g. Cyrillic vs. Roman alphabet).

Research Questions

The purpose of the current study is to investigate the role of second language learning experience on the acquisition of a third language. Two main research questions will be addressed throughout the research process. First:

1. To what extent does length of L2 experience affect the acquisition of an L3?

To investigate this relationship, scores on the LSA, an assessment of speaking proficiency designed to elicit original, spontaneous speech responses to a prompt, will be evaluated from both a control group of English-only speakers learning a second language,

and an experimental group of English speakers with L2 experience learning a third language.

The second research question addressed in this study builds upon the first inquiry and is thus stated:

2. To what extent does language typology, as determined by accepted language family, affect the acquisition of an L3?

Where the first research question inquires as to the existence of a relationship between second and third language acquisition, namely whether second language acquisition does or does not contribute to successful third language speaking proficiency acquisition, the second research question seeks further understanding into such a relationship in regards to how closely the second and third languages are related to each other, determined by accordant or divergent categorization into language families.

Chapter Two

Review of Literature

Introduction

Substantial literature has been published on various studies of language transfer, most of which cites the effects of a native language (L1) on L2 acquisition with a select number of studies looking at L3s. Research on L3 acquisition and transfer effects from L2 has recently separated itself from the field of L2 acquisition and emerged as a distinct and legitimate subfield of its own, attracting the attention of researchers in a wide range of fields. Multilingual learners present intriguing circumstances: since they already know two or more languages it is plausible that they can access and draw from more than one linguistic system to aid in learning an additional language. In addition, L3 learners may well have specialized meta-cognitive abilities gained during L2 acquisition that give them a significant advantage over monolinguals (Cenoz, 2003).

Metalinguistic and Cognitive Advantages in L3 Acquisition

As learners move from learning an L2 into learning an L3, the nature of the learning process is presumably different from the L2 acquisition experience because the learner has become a more seasoned and skilled language learner in the process. Cenoz (2001) supports this concept, stating, “Most research studies confirm that third language learners present advantages over second language learners and attribute these advantages to highly developed learner strategies, metalinguistic awareness, and communicative sensitivity.”

Much of the research on L3 acquisition begins by pointing out that, contrary to the original concept of L3 acquisition as just an offshoot of L2 acquisition, L3 acquisition

more rightly belongs in a classification of its own (Jessner, 1999). This distinction is grounded in evidence suggesting that L3 acquisition introduces a new breadth of metalinguistic awareness, cognitive skills, and language experiences unavailable to learners at the L2 level.

In a precursory article to their book proposing the Dynamic Model of Multilingualism, Herdina and Jessner (2000) note that each language available in the L3 learner's repertoire is interdependent with and affected by the other languages known by that learner. Because of this relationship, L3 acquisition must be considered as more than just the co-existence of multiple languages within one repertoire or the summation of multiple, equally-valued languages (Herdina & Jessner, 2000). Rather, the multilingual learner's inventory contains a capacity for language learning constructed from the languages acquired by the learner as well as the linguistic awareness gained during the acquisition of each of those languages. As Herdina and Jessner (2000) put it, the multilingual system is greater than the sum of its individual parts.

Clearly, as with learning an L2, one component of a multilingual system is the potential for cross-linguistic transfer. Just as positive and negative transfer occurs from L1 to L2, it would seem that L3 learners have the advantage – and potential disadvantage – of being able to draw upon multiple languages as sources of transfer and resources for linguistic comparison in the acquisition of the L3. Thus, theoretically, the potential for cross-linguistic transfer is greater for multilingual learners because it includes a foundation consisting not just of the learners' L1 but also of all languages in their repertoire. Herdina and Jessner (2000) claim that one skill introduced at the level of L3 acquisition is that of “language management,” or effectively incorporating sources of

positive transfer while separating out those features that would cause cases of negative transfer. Such a management skill would be an example of the greater metalinguistic capacity available to L3 learners as new and old languages build up a larger and more complex body of language systems in the learners' multilingual repertoire.

A study by Jessner (1999) demonstrates learners' recollection of previously-learned languages when faced with the task of performing in their L3. The study involved adult bilingual speakers of Italian and German learning English. Participants were engaged in a think-aloud experiment while writing various types of English prose. The think-aloud exercise was intended to better understand the metalinguistic thinking and strategies the participants employed while trying to come up with the correct English words they wished to convey. The data showed that cross-linguistic transfer between learners' dominant L1 and the L3 abounded, and selective data showed that some participants looked for similarities from both Italian and German before arriving at a correct English word (Jessner, 1999), thus activating their knowledge of both previously known languages as resources for learning the L3. These examples demonstrate the enhanced metalinguistic thinking which results from knowing two or more languages in the performance of multilingual tasks and the connections multilingual learners are able to make between their L1, L2, and L3 (Jessner, 1999). Furthermore, the study concludes that multilingual learners naturally search for similarities between the languages they know and the target language – supporting the idea of the preeminence of language type as a primary factor in cross-linguistic transfer. A weakness in this study which Jessner (2001) himself points out is that the incidence of referring to both previously known languages accounts for only a minimal percentage of the overall occurrences of transfer.

The evidence indicating the presence of heightened metalinguistic awareness and cognitive abilities in L3 learners is most intriguing; however, because of the infancy of the field there is still much to be observed and understood in relation to how such awareness is developed and utilized by L3 learners. Further research should clarify these currently vague observations.

Cross-linguistic Transfer

As has been mentioned, reason holds that knowing one foreign language would make learning an additional foreign language easier (see Cenoz, 2003). Many research studies investigating the benefits of L2 competency on L3 acquisition have found significant support for this common notion. In the study of L3 acquisition, researchers have noted the importance of distinguishing between studies of general proficiency versus studies of specific aspects of language skills (Cenoz, 2003), a distinction that helps account for some incongruence in the research. Studies investigating the effect of L2 experience on the acquisition of specific aspects of an L3, such as phonetics, syntax, and grammar, have yielded mixed results (see Cenoz, 2003). Studies on overall proficiency, however, have shown that bilingual speakers learning an L3 perform better in language assessments than monolinguals learning an L2. In a study comparing bilingual Romansh and German speakers learning French as an L3 in the Swiss canton of Samedan and monolingual German speakers from a neighboring canton learning French as an L2, measurements of general competency in French in speaking, reading, listening, writing and translation tasks indicated that the bilingual speakers performed significantly better than the control group (Brohy, 2001). The speaking and writing skills of two cohorts of bilingual students were compared to those of the control group as rated by native

speakers and revealed that both cohorts performed better on the speaking assessments than the control group. Although the control group outperformed the first cohort of bilingual speakers in the writing assessment, the difference was found to be insignificant (Brohy, 2001). Furthermore, the raters indicated that the bilingual participants took more risks in their language use and volunteered extra information not required by the task (Brohy, 2001), perhaps indicating that the bilingual learners were more confident in their ability to use the language as well as to create and make accurate guesses in the language beyond the scope of what they had learned.

An added finding from Brohy's (2001) study shows compelling evidence for instances of transfer from the bilingual participants' previous language background. Brohy (2001) notes that these cases of transfer may have been unconscious and therefore were not deliberate choices made by the learners. While transfer in terms of lexical items were often incidents of negative transfer, as false cognates from Romansh and also Italian were supplied in lieu of French words, phonological transfer seemed to account for the bilinguals' greater ability to accurately produce French sounds compared with the monolingual control group whose pronunciation reflected their native language (Brohy, 2001). These examples of transfer are further support for the benefits of L2 learning or competency on L3 acquisition.

Typology

One of the most easily recognizable ways in which languages are similar or different is in their lexicon, or vocabulary words. The common notion that an English speaker can simply add an "-o" to the end of an English word and turn it into a Spanish word is evidence that many English speakers, with no additional abilities in the Spanish

language, are at least aware that Spanish and English have many similarities. In addition, the average English speaker listening to a Spanish or French orator may be well able to comprehend a high percentage of the message simply through recognition of similar vocabulary words, more than, say, Chinese, which shares far less lexical items with English. The degree of likeness between languages, or language distance, is also known as typology; languages stemming from a common language family are typologically similar while those that share few common features are typologically distant.

One of the central focuses of cross-linguistic influence on L3 acquisition is which language, L1 or L2, learners choose to use as the foundation for transfer into the L3. Because L3 learners have a reservoir of linguistic knowledge containing information from their L1 as well as their L2, the question of which language L3 learners choose, either consciously or unconsciously, as the source for cross-linguistic transfer is of great interest in understanding the nature of L3 transfer. Cenoz (2000) emphasizes the factoring role that linguistic typology plays in this decision, asserting that when learners have the option of relating aspects of the new language to aspects of a linguistically similar language in their reservoir, this similarity will supersede other options the learner has in choosing a source language.

A study conducted by Cenoz (2001) investigating possible sources of cross-linguistic influence in L3 acquisition indicates that typology of languages is one of the primary contributing factors. Her study involved ninety elementary and secondary students in grades two, six, and nine who were either L1 speakers of Basque or Spanish, or both. All subjects received Basque as the language of instruction at school and were studying Spanish and English as separate school subjects. Participants were asked to

narrate a book which contained pictures but no words to a native English speaker in the English language. These narrations were audio-taped and assessed for evidence of cross-linguistic influence. All participants in the study relied on Spanish as a source of transfer more than Basque, regardless of the status of Spanish as L1 or L2 (Cenoz, 2001). These results seem to indicate that participants perceived the similarities between Spanish and English, thus influencing their decision to choose Spanish as the source language for transfer rather than Basque.

Furthermore, out of the three groups of participants, the ninth graders produced the greatest amount of transfer from Spanish as the source language while the younger participants more readily accepted transfer from Basque as well as Spanish as a viable source (Cenoz, 2001). Cenoz (2001) attributes this finding to the possibility of greater metalinguistic awareness that the older learners may have gained, claiming that they may have been more perceptive to the typological relationship between Spanish and English.

A study of Finnish speakers learning English as an L2 and Swedish-speaking Finns learning English as an L3 conducted by Ringbom (1987) revealed the greater control Swedish subjects had over English article and preposition use, by relying on knowledge of similar categories in their L1, than Finnish subjects whose L1 lacks such categories. Since the Finnish language does not make use of an article or preposition system in the same way as Swedish and English, Ringbom (1987) specifically investigated the production of articles and prepositions appearing in essays written by subjects at three levels of English proficiency: 58 Finnish and 42 Swedish commercial college students who had studied English for an average of five years and were at an intermediate level of proficiency, 42 Finnish and 58 Swedish participants in an entrance

exam to the Åbo Akademi Department of English who had studied English for an average of seven to eight years, and 30 Finnish and 30 Swedish university students of English at Åbo Akademi. A word frequency error analysis calculating the number of article errors per 1000 words revealed that the Finnish speakers in the lowest proficiency group had an average of 16.2 errors compared to an average of 4.3 errors made by the Swedish subjects of the same proficiency level (Ringbom, 1987). This disparity equalized to some extent, however, as the proficiency level of the subjects increased, in view of the fact that both the Finnish and the Swedish subjects in the middle level proficiency group scored an average of 3.1 article errors, and the Finnish and Swedish subjects in the highest proficiency group scored an average of 5.3 and 4.8 article errors, respectively (Ringbom, 1987).

An error analysis of the use of prepositions in these same essays revealed similar results; the Swedish subjects in the lowest proficiency group scored an average of 6.2 preposition errors while the Finnish subjects scored an average of 15.7 errors, but, as in the case of article use, these differences became smaller as the proficiency level of the subjects rose (Ringbom, 1987). Ringbom (1987) attributes these results to the fact that Finnish speakers do not have a foundation of equivalent article and preposition systems in their L1 from which to transfer linguistic knowledge, and that the Swedish speakers, whose L1 indeed provides this foundation, have an advantage in learning English, especially at the beginning levels.

In a study comparing 23 Finnish speakers, 37 Swedish speaking Finns and 37 Swedish speakers from Sweden, Ringbom (1987) also found that typological similarity of some linguistic features was detrimental to English learners. The groups of Finnish and

Swedish speaking Finns were matched in the amount of time spent reading English and had passed the same matriculation exam; additionally the English proficiency of all of these subjects was rated at or slightly below the average of the total population. The group of Swedes was also rated slightly below the national average for English proficiency (Ringbom, 1987). On tests of English spelling, the Swedish subjects in her study consistently performed at a lower level than the Swedish-speaking Finns, who performed at a lower level than the Finnish speakers. This drop is attributed to the fact that Swedish orthography bears some resemblance to English orthography, thus portraying to the Swedish speaker the delusion of overt equivalence between the two spelling systems. The similarities do not yield correctly-spelled English words; however, thus the semblance of positive cross-linguistic transfer proves to be more of a barrier in this respect than an aid. She acknowledges that this weakness may be attributable to the fact that English writing skills are not emphasized in Sweden (Ringbom, 1987). She also highlights the fact that the similarities in the way that Swedish and English spelling systems match up with their respective phonological systems also facilitate automaticity in Swedish speakers' listening comprehension and speech, (Ringbom, 1987) thus offsetting the apparent disadvantage in traditional spelling assessments.

In summary, despite the poorer performance of Swedish subjects than Finnish subjects in the area of English spelling, Ringbom (1987) concludes that typological similarity between languages leads to positive cross-linguistic transfer at the beginning levels of language learning and that there is no difference for advanced learners of various L1 backgrounds.

In a study of Swedish and Finnish speakers learning English as an L3, Ringbom (1987) found that lexical transfer in English as an L3 was overwhelmingly derived from Swedish as an L2 over Finnish as an L2 due to the typological similarities between Swedish and English, and the non-similarity of Finnish. Furthermore, this transfer occurred nearly exclusively for form-based lexical transfer, such as cognate lexical items, and almost never for semantic, or meaning-based lexical transfer, which were influenced almost entirely from the learners' L1s, despite the typological distance of the L1 and the L3 and the greater typological similarities of the L2 and the L3 (Ringbom, 2001). In conclusion, Ringbom (2001) asserts that form-based L2 to L3 lexical transfer is motivated by typology of languages, but that this similar relationship between languages does not account for semantic-based lexical transfer. In a similar vein, Odlin (1989) notes that while visual and phonological similarities among lexical items may provide for instances of positive transfer, subtle differences in the meaning of the words between the two languages may in actuality cause negative transfer to occur.

In accordance with some of these studies, a study involving speakers of Igbo and English learning French as an L3 found that the participants transferred more syntactic and semantic patterns from English, which, like French, stems from the Indo-European language family and are thus typologically similar languages, in the L3 production than Igbo, which shares no relation to French (Ahukanna et al., 1981). Although this study investigated accounts of negative transfer exclusively, it still provides clear evidence that learners referred to the typologically similar language as a resource for linguistic aid in determining features of the L3 more than they referred to their non-typologically similar L1.

These studies on the effects of language typology point towards a relationship between cognate L2s and L3s, a topic which must be further investigated to both validate these results and furnish greater insight into the mechanics of language transfer in L3 acquisition. Further research would enlarge our current knowledge of how learners use language typology as an advantage in L3 learning. It would also shed greater light on the role of typology among dissimilar languages as well as similar ones.

The Role of Proficiency and Exposure

Other research has shown that learners' level of L2 proficiency and the amount of L2 exposure they have had greatly impacts the degree to which L2 to L3 transfer will occur. In a seminal study conducted by Thomas (1988), bilingualism in English and Spanish was found to be a significant advantage in the learning of French as an L3 over monolingual English speakers learning French as an L2. Participants in her study consisted of college students enrolled in a beginning French class at Texas A & I University who had been matched for socio-economic status, level of French exposure, teacher, teaching method, and textbooks. The participants fell either into a group of monolingual English speakers or bilingual English and Spanish speakers; the bilingual group was consequently subcategorized into those who had learned Spanish through formal education and those who had learned Spanish only passively in a natural setting. Each participant was assessed in performances of three types of language skills, namely vocabulary, grammar, and comprehensibility in writing tasks as judged by native French speakers. The vocabulary tests presented participants with isolated French words, half of which were visually or semantically similar to words in Spanish. The grammar items tested participants' understanding of word order, subject-verb agreement, adjectival

agreement, and negation by asking them to complete partial sentences with the correct answer from three possible choices. Thomas (1988) found that the bilingual participants scored significantly better than the monolingual group on all three assessments.

What is perhaps most notable in Thomas' study is that among the two bilingual groups, the participants who had experienced formal Spanish training for at least two years scored significantly higher on the grammar assessments than those bilinguals who had been exposed to Spanish without any formal education in the language. Furthermore, the results of an error analysis showed that those who had received the formal education in Spanish also produced significantly less errors (consistently about half as many errors) in French grammar structures and attempted more structures than either of the other two groups (Thomas, 1988). These findings provide substantial evidence that learning an L2 through formal instruction imbues learners with a level of metalinguistic awareness they can then employ in L3 learning, an advantage unavailable to monolingual learners (Thomas, 1988).

Other studies assessing the proficiency levels in L1, L2 and L3 also suggest that higher proficiency in L1 and L2 correlates to a higher proficiency in L3. One study conducted by Muñoz (2000) involved three groups of youth from the Catalan region of Spain who fell at various points along a continuum of proficiency levels in Catalan and Spanish bilingualism and who had been introduced for varying lengths of time to English instruction as their L3. Participants were matched according to amount of English instruction and the absence of additional exposure to English outside the classroom. Through analyses of performances on cloze and dictation tests, Muñoz (2000) found a

correlation between high proficiency levels in all three languages, thus suggesting that L1 and L2 proficiency is an important factor in L3 proficiency.

In addition to L2 proficiency, the extent of L2 exposure, as measured by type and length of L2 learning, has also been shown to play a significant role in the way L2 experience affects L3 acquisition. In a study involving thirteen native English speakers who had learned French as an L2 and were enrolled in second or third year college German classes, Tremblay (2006) found that both the level of L2 proficiency and the amount of L2 exposure influenced the acquisition of L3 lexicon. Second language exposure was measured by length and type of L2 study as reported by the participants on questionnaires. Through the information provided on the questionnaires and scores on a French proficiency test, participants in the study were categorized as high L2 proficiency/high L2 exposure, high L2 proficiency/low L2 exposure or low L2 proficiency/low L2 exposure. Participants were asked to describe in German twenty-five cartoons to a bilingual English-French speaker while being recorded. The cartoons formed a sequence of events and participants were asked to use as much detail as possible in their descriptions. Participants' attempts to use either their L1 or L2 to communicate in the L3 description task were tallied and categorized as cross-linguistic influence of either lexical inventions, where participants morpho-phonologically adapted L1 or L2 words into the L3, or language shifts, where L1 or L2 words were used, without adaptation, to communicate an idea or word in the L3. These instances of L1 and L2 transfer were analyzed with an analysis of variance to determine the relationship between L1 and L2 influence on L3 acquisition as well as the effects of L2 proficiency and L2 exposure on L3 acquisition. Tremblay (2006) found that the rate of L2 French influence on L3

German acquisition was significantly higher among the group with high L2 exposure regardless of the level of L2 proficiency. In other words, despite equal levels of high L2 proficiency, only those participants who also had received high L2 exposure were found to significantly affect L3 acquisition. This finding is quite valuable because it demonstrates the importance of L2 experience in L3 acquisition, independent of L2 proficiency. What is also intriguing about Tremblay's (2006) findings is that high L2 exposure was also related to the richness of the L2 transfer exhibited. Participants in the low L2 proficiency/low L2 exposure group demonstrated only a negligible amount of L2 transfer – just one instance in total. Furthermore, all instances of L2 transfer from participants in the high L2 proficiency/low L2 exposure group were categorized as slips of the tongue, which did not demonstrate a conscientious attempt to use L2 knowledge as an aid in L3 performance. In contrast, participants in the high L2 proficiency/high L2 exposure group demonstrated L2 influence among all three categories of cross-linguistic influence. Tremblay's (2006) findings richly depict the role of L2 proficiency levels and amounts of L2 experience in L3 acquisition. Since her research on the relationship between L2 exposure and L3 acquisition is the first of its kind, further research on this line of study is worthy of attention.

Conclusion

Much of the data resulting from studies in the field of L3 acquisition provide compelling evidence in support of the positive role L2 learning plays in L3 acquisition. These findings seem to confirm that language typology, the role of L2 proficiency and experience, and enhanced metalinguistic awareness in L3 learners are all vital factors in L3 acquisition, as common sense would predict. Further research can provide significant

advances in understanding the degree to which each of these factors affects L3 acquisition.

The current study focused on the issues of language typology and length of L2 experience in L3 acquisition, which were similarly addressed in articles by Cenoz (2001), Brohy (2000), and Tremblay (2006). The specific questions investigated in the research study are repeated as follows:

1. To what extent does length of L2 experience affect the acquisition of an L3?
2. To what extent does language typology, as determined by accepted language family, affect the acquisition of an L3?

The results of the study should add considerably to the growing quantity of literature and knowledge surrounding the relationship between length of L2 experience and language typology in L3 acquisition.

Chapter Three

Methodology

Introduction

The main purpose of the study was to discover whether there was a significant relationship between length of L2 experience and L3 acquisition. In addition, the study also looked at the role of typology in this relationship by investigating whether greater gains were associated with typologically similar languages, as was the case when both languages were Romance languages, or typologically dissimilar languages, as was the case of learning a Romance language followed by learning a Slavic or Asian language. The participants' L2 backgrounds were in either French or Spanish. The L3s investigated in this study were French, Spanish, Japanese, Korean, and Russian.

Participants

Participants for this study included language learners at the Missionary Training Center (MTC) of the Church of Jesus Christ of Latter-day Saints in Provo, Utah, United States of America. All participants had studied an L2 for various lengths of time prior to entering the MTC and were learning an L3 in an intensive language program while at the MTC. All participants had studied their L2 through formal study; two indicated that they also used their L2 as a common means of daily communication with friends or family. These two participants were considered to be heritage speakers of the L2; however, that did not have any effect on the data in the present research since the nature of L2 study was not a variable under investigation in the research.

This study analyzed data from thirty-four total participants. All participants were native speakers of English, which added the necessary control for possible transfer effects

on language acquisition from the participants' L1. The sample included both men and women, between the ages of nineteen and twenty-two. Table 1 describes the number of male and female participants in each group according to the length of their L2 experience.

Table 1

Sample Size and Gender of Participants According to Length of L2 Study

Length of L2 Study	Sample Size	Male	Female
1 year or less	3	3	0
2 years	5	3	2
3 years	11	10	1
4 years	4	2	2
5 years or more	11	7	4
	8*	6*	2*

* Indicates data for the 5 years or more category without the presence of outliers

Furthermore, the length of participation in the language program at the MTC was similar for all participants. Participants studying French or Spanish in the MTC received instruction for eight weeks; participants studying Russian, Japanese, or Korean received twelve weeks of instruction. The language curriculum, teaching methods, learning resources, amount and type of daily exposure (input), and amount and type of daily language practice (output) remained consistent across the participants, irrespective of the language program. The MTC has an intensive language curriculum in which participants spend about ten hours each day in language classes and learning activities. The program focuses on listening and speaking skills, although the development of reading and writing

skills is also encouraged. Language materials are organized by key topics and themes. Classes consist of small groups and two teachers who alternate their teaching schedule so that only one teacher is present at a time. Participants learn language skills through grammar lessons, technology-enhanced exercises, practice with other participants and teachers, and regular practice sessions conversing with proficient speakers of the language. Participants are also expected to use the language as their main means of communication as much as possible both in and outside of the classroom. By the time participants leave the MTC, they are usually at a high novice/low intermediate level in their language abilities.

Instruments

Two main instruments were used to elicit data on participants' previous language experience and their language performance after participating in the intensive language program: the MTC Entrance Questionnaire and the MTC Language Speaking Assessment.

The MTC Entrance Questionnaire. The MTC Entrance Questionnaire used in this study was created by the development department at the MTC in 2006 and has been administered to every missionary upon arriving at the MTC since that point. The MTC Entrance Questionnaire is comprised of twenty-five questions asking biographic information, educational background, and language learning experience (see Appendix A). After identifying whether participants have previously studied a foreign language, approximately seven of the questions describe which language they had studied the most, the length of time they studied that language, and the method of instruction they received. Method of instruction was specified by means of a checklist including elementary, junior

high, high school or college courses, school immersion programs, private tutoring, or self-study. Additional questions asked whether they used that language as a common means of communication with family or friends (as was the case for the two heritage speakers) and whether the participant had ever lived in a country where that language was spoken as the native language (which was the case for only one participant who indicated spending three – six months in the foreign country).

The MTC Language Speaking Assessment. The MTC Language Speaking Assessment (LSA) is an instrument created by the MTC research and development department. It is currently used by the MTC to assess participants' language gains near the midpoint of their language study at the MTC. To access the assessment, participants log into the MTC assessment software using their personal identification number. After reading through instructions, participants start the assessment when they feel they are ready to begin. Participants are then given a series of speaking prompts based on topics and communication tasks they have been taught over the course of their language instruction. Examples of prompts include describing self and others, recounting personal experiences, and telling stories (see Appendix B for the full list of LSA prompts). After each prompt, participants are given a certain amount of time, relative to the difficulty level of the task to prepare their responses, after which recording automatically begins. If participants are ready before the allocated preparation time finishes, they have the option of manually starting the recording segment. After recording their response to a prompt, participants click to view the next prompt.

The MTC Language Speaking Assessment Rating Rubric. All LSA ratings were conducted using a standard rubric created by the development department at the MTC

(see Appendix C). Assessments were rated in four categories: pronunciation, grammar, vocabulary, and fluency. Within each of the four categories raters make an appropriate assessment based on a scale from one to seven, with one meaning the language is unintelligible or impeding communication, and seven meaning the language is rich, extensive, and natural. The cumulative LSA score was calculated by simply averaging the four sub-scores.

Procedures

Several weeks prior to entering the MTC, all participants in this study were assigned the language they would learn at the MTC in conjunction with assignment to a geographic location in which they would live for the duration of their missionary service. For the purpose of this study, the participants' MTC language was designated as their L3.

Upon arrival at the MTC all participants were required to complete the MTC Entrance Questionnaire detailing their biographical information, educational background, and previous language learning experience. Questions regarding previous language learning experience identified the language they had studied the most, the method of instruction and the length of exposure in that language.

Responses to these items were used to select appropriate subjects who met the qualifications for participation in the study based on three criteria. Participants were first selected according to the L3 they would learn while at the MTC. All participants selected for this study received French, Spanish, Korean, Japanese, or Russian language instruction while at the MTC. Participants meeting this first qualification were then selected based on their formal L2 learning experience in either French or Spanish prior to entering the MTC, and the length of their L2 study. Length of L2 study was reported as

either less than or equal to one year, two years, three years, four years, or greater than or equal to five years. Since the main focus of this study was to investigate the effects of previous L2 experience on the acquisition of both similar and dissimilar L3s, each participant studied an L3 that they had not previously learned as an L2 (See Figure 1).

For the first research question, investigating the effects of length of L2 experience on L3 acquisition, data was categorized based on the length of the participants' L2 experience regardless of the specific language they were learning as an L3. For the second research question, investigating the role of L2 type on L3 acquisition, data was categorized based on the type of L3 each participant was studying.

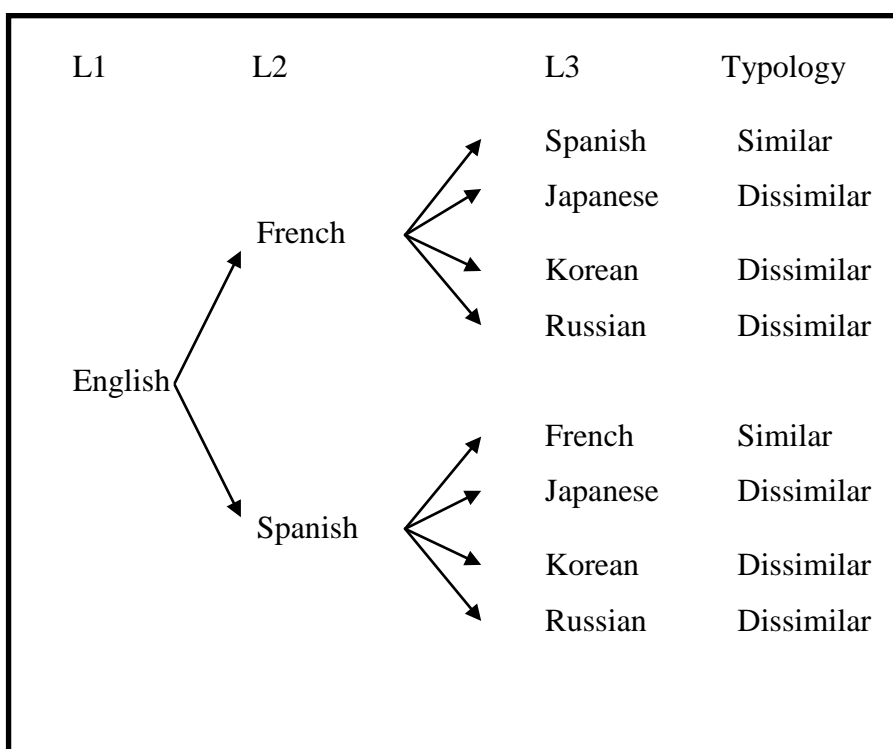


Figure 1. Categorization of Participants Studying an L3

Language typology was operationalized as inclusion in an accepted language family. For the purpose of this study, each language was categorized into an L3 group with French and Spanish categorized as Romance languages, Korean and Japanese

categorized as Asian languages, and Russian categorized as a Slavic language. Each participant in the study received intensive language instruction in their respective L3 for a period of eight to twelve weeks.

The language curriculum at the MTC is standardized across languages so that all who successfully complete the training should be able to communicate within the same range of topics and perform the same language tasks regardless of the language they studied. Therefore, based on the difficulty of learning the language for native English speakers and its perceived distance from English, participants who learned French or Spanish at the MTC received instruction and practice for eight weeks while those learning Russian, Korean or Japanese received instruction and practice for twelve weeks.

Near the midpoint of language training at the MTC, all participants took the MTC LSA in their respective L3. Because participants studying French or Spanish received eight weeks of language instructions and those studying Japanese, Korean, and Russian received twelve weeks of instructions, the participants studying a Romance language took the LSA around week four of their language study while those studying an Asian or Slavic language took it around week six. The software used at the MTC does not allow participants to access the LSA until they reach the midpoint of their language training, therefore the participants could not have taken the LSA before they completed the first half of the total language instruction. It was possible for the participants to take the LSA later than the midpoint of their language training, however, in cases where the participants had taken the LSA multiple times, the raters were instructed to rate the participants' first completion of the LSA and only these scores were used in the study.

Each LSA was rated according to the LSA rubric by highly proficient speakers of each language. Raters were selected based on their familiarity and experience with the languages under investigation. All raters received the same training on the LSA rating procedure and rubric at the commencement of the rating procedure. This training began with an explanation of the research questions under investigation and the purpose of the study. It also included a description of the LSA and some of the prompts (see Appendix B). Raters were also given instructions, both verbal and written, and shown how to access the LSA recordings through the MTC website. In addition, raters were given sample recordings in English and the corresponding scores so that they could listen to examples and gain a better understanding of how to appropriately rate the language samples. The sample recordings were selected by the MTC development department and had been rated multiple times by personnel at the development department, so they were confident that the scores were an accurate reflection of the participants' language abilities and appropriate use of the rubric.

The training also included a discussion of the rubric and how it should be applied to the LSA recordings. The rubric provided four descriptions of the type of language abilities that could be expected at the scores of one, three, five, and seven in each of the four language skill areas. Scores of two, four, and six were also possible, however they did not have descriptions associated with them. The training discussion highlighted the differences between some of these descriptions, especially among the three to five range on the scale, where the expectations of language performance shifted from lesser ability to greater ability. Raters were allowed to ask questions and received clarification during this training as well as during the rating procedure.

Raters logged on to the MTC online assessments website using a username and password. Raters typed in each participant's MTC identification number to locate the correct LSA recordings and began listening to the recordings. Because the degree of prior language experience was collected using the MTC Entrance Questionnaire, the raters did not have any knowledge of participants' L2 experience when they rated the LSAs. Each LSA consisted of two to three clusters, each of which was comprised of two to three recordings. Each recording responded to a separate prompt (see Appendix B). The raters listened to all available recordings in the same cluster and gave the participants one separate score for pronunciation, grammar, vocabulary, and fluency based on all of the recordings in the cluster (four scores total). Raters repeated this procedure for each cluster of recordings, totaling two to three scores for each language skill across all clusters. Raters were instructed to base scores solely on the recordings within the same cluster and to not compare participants' language abilities or recordings across clusters. The scores for each cluster were then saved which automatically averaged the scores together and submitted them to the MTC. When a second rating of the recording was saved, the scores from both ratings were automatically averaged together and submitted to the MTC, resulting in one score for each participant. This averaged score was then used in the study as the LSA score as the dependent variable. In addition to submitting the scores electronically, raters were asked to personally record and submit the individual scores for each language skill in each cluster for the purpose of the research.

Each LSA was rated by two raters to reduce error and establish inter-rater reliability. Averaging these ratings led to a greater degree of accuracy than if they had been single rated; averaging responses has been shown to reduce error and increase the

reliability of statistical analyses (See Bubb et al., 2007; Gibbons, Bubb, & Brown, 2008). Inter-rater reliability across all languages, as measured by Cronbach's alpha, was .559. For each language, one native speaker and one non-native speaker was selected to administer the ratings with the exception of Japanese, where each LSA had already been rated once by MTC employees prior to the current study, and Russian, where two non-native speakers were selected because a native speaker was not available. Almost all of the non-native speakers had studied their respective language through the same language program at the MTC as the participants. All of the non-native speakers had used the language as a common means of daily communication with native speakers for an extended amount of time and almost all raters had lived in a country where the language was used as the main means of communication for a period of fifteen to twenty-one months. Additionally, all had participated in advanced courses in their respective languages at Brigham Young University (BYU) or taught classes in the language at BYU or the MTC upon returning from the country where the language was spoken.

Design and Data Analysis

The design for this research was a quasi-experimental design using archival data. Because participants had been previously assigned to learn a specific L3, randomization was not possible.

The main inquiry under investigation in this study was the effect of previous language learning experience on the acquisition of an additional language. Thus, the primary independent variable for this experiment was the length of L2 experience and the dependent variable was the acquisition of the L3 as measured by scores on the LSA. The effect of typological similarity between L2 and L3 on L3 acquisition, as measured by

scores on the LSA was also investigated. The effect of previous language exposure on L3 performance was analyzed using a linear stepwise multiple regression. The regression analysis was the most suitable test for this hypothesis because length of L2 experience was interval data.

The effect of language typology on L3 performance was analyzed using analysis of variance (ANOVA). ANOVA was selected because the independent variable of language type was nominal data. In addition, the analyses for each of the individual skills included in the LSA (pronunciation, grammar, fluency, and vocabulary) were analyzed using a multiple regression. All statistical analyses were performed using SPSS 15.0.

Chapter Four

Summary of Results

Introduction

The purpose of this study was to investigate the role of L2 in L3 acquisition. Specifically, the study investigated the effects of length of L2 experience and language type on L3 acquisition as measured by scores on a speaking assessment. Chapter Two outlined previous research in L3 acquisition and provided a description of previous findings investigating various aspects of L2 influence on L3 acquisition. The review of current literature showed that many scholars believe L3 learners possess additional metalinguistic skills or awareness gained through previous language learning experience, which enhance their ability to learn subsequent languages (Cenoz, 2001; Herdina & Jessner, 2000; Jessner, 1999). The review also revealed that some studies have found typological similarity to be a significant contributor to L2 influence on L3 acquisition and abilities (Cenoz, 2000; Cenoz, 2001; Ringbom, 1987). These studies focused on the effects of various types of L2s on the acquisition of one L3, therefore the effects of one type of L2 on various types of L3s is yet to be explored. The review further concluded that some studies have found level of L2 proficiency to be another contributing factor in L3 gains, but that only one study had investigated the potential role played by length and extent of L2 exposure.

Chapter Three outlined the methodology, procedures, and data analyses conducted in the study. The MTC Entrance Questionnaire supplied information to identify and select qualifying participants based on type and length of previous language learning experience and L3 study. The MTC LSA provided the means to test participants'

L3 speaking abilities that were then rated by two proficient raters according to the MTC LSA Rating Rubric. These ratings produced individual scores based on pronunciation, grammar, vocabulary, and fluency abilities that were then averaged to obtain a cumulative score.

This chapter reports the results of the data analyses used in investigating the relationship between previous L2 experience and L3. The data involved the length of participants' L2 experience, the type of language they were studying as an L3 and their cumulative scores on the LSA. Individual LSA scores in pronunciation, grammar, vocabulary, and fluency were also analyzed from subset group of participants. The data were analyzed using multiple regression analyses.

Length of L2 Experience

The first issue addressed by the research questions concerned the extent to which length of L2 experience affected L3 acquisition. To understand this relationship, L3 LSA scores from thirty-four participants were rated and analyzed. Each participant had studied French or Spanish as an L2. Table 2 shows the sample size, mean LSA score, and standard deviation according to length of study.

A linear stepwise multiple regression was used to determine the effect of L2 experience on L3 acquisition with length of L2 experience as the independent variable and L3 cumulative LSA scores as the dependent variable. The regression analysis was the most suitable test for this hypothesis because length of L2 experience was interval data. This analysis produced a p value of .106 ($R^2 = .10$, $b = .254$). While not statistically significant, this result showed a general upward trend in the data, indicating a modest positive effect between length of L2 experience and L3 performance.

Table 2

Mean LSA Score and Standard Deviation According to Length of L2 Study

Length of L2 Study	Mean LSA Score	Standard Deviation
1 year or less	3.02	0.85
2 years	4.17	1.18
3 years	3.73	0.60
4 years	4.12	0.41
5 years or more	4.06	1.05
	4.63*	0.41*

* Indicates data for the 5 years or more category without the presence of outliers

As length of L2 experience increased, LSA scores generally increased and the standard deviation generally decreased, indicating that as length of L2 experience increases, LSA scores can be predicted with greater accuracy. Figure 2 shows this trend graphically.

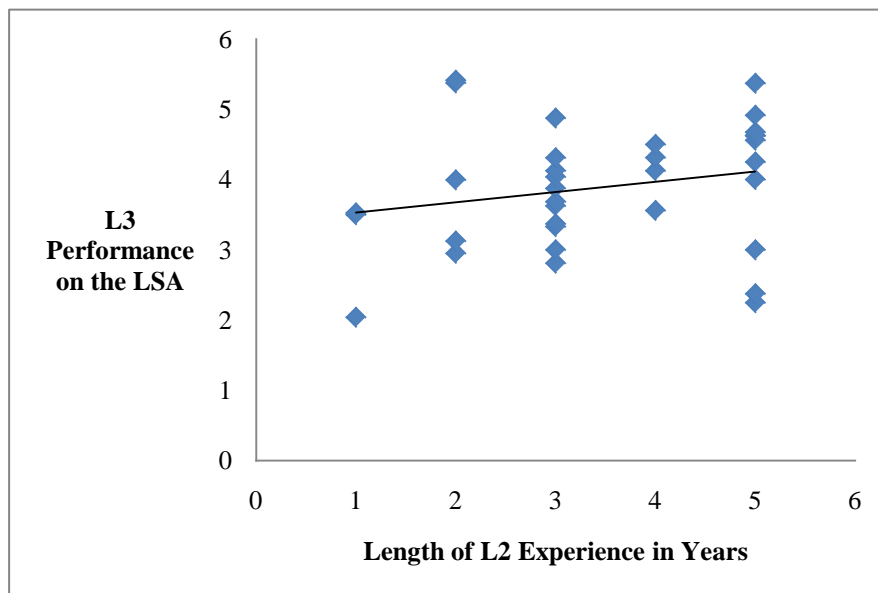


Figure 2. Effect of L2 experience on L3 performance

Although the effect of the length of L2 experience on L3 acquisition was not statistically significant, this may have been affected by a number of factors, most notably the limited sample size available for this study. The fact that the resulting p value approached significance at .10 suggests that further analysis of a larger sample size might produce more significant findings. Second, the restricted one to seven point scale on the LSA rubric also made it difficult to detect differences among participants' abilities, thus making it harder to obtain significant results. Using a different scale to rate participants' L3 skills could make statistical significance more likely. Third, the inter-rater reliability, as measured by Cronbach's alpha and as reported in Chapter Three, was low, possibly due to the less precise rating scale. Any single factor from among (1) small sample size, (2) a less sensitive rating scale, and (3) low inter-rater reliability would make finding statistical significance an obstacle. The fact that all three of these elements were present in the study likely combined to lower the probability of finding statistical significance.

Furthermore, there may be another reason why significance was not obtained. Performing an analysis after omitting three scores in one group yielded statistical significance, indicating that outliers may have obscured the definite trend of longer L2 experience enhancing L3 performance. Basically, the presence of three outliers in the category of those with five years or more L2 experience skewed the trend line downward. Omitting the data from these three participants from the analysis yielded a higher mean LSA score as well as statistical significance. The mean for these three participants was 2.54, while the mean for the other eight participants in the group was 4.63 with a standard deviation of .41, leading to a revised p value of .002 ($b = .494$, $R^2 = .244$) for the regression analysis.

With the omission of these scores, the trend became much more apparent, as shown in Figure 3. Because there was no justifiable basis for omitting the outliers' scores from the data, however, the findings of this analysis were not included in the main results of the study.

There was also one outlier in the category of those with two years of L2 experience, which skewed the data slightly upward and which made it seem that there was a dip in the mean LSA scores for the group with three years of L2 experience. Because there was only one outlier in this group, all analyses were performed including the data from that participant. Given the limited sample size used in the study, however, the outliers are disproportionately represented. Therefore, if the sample size were larger, it is easy to suppose that the overall results would perhaps have conformed more completely to the underlying trend shown in the data.

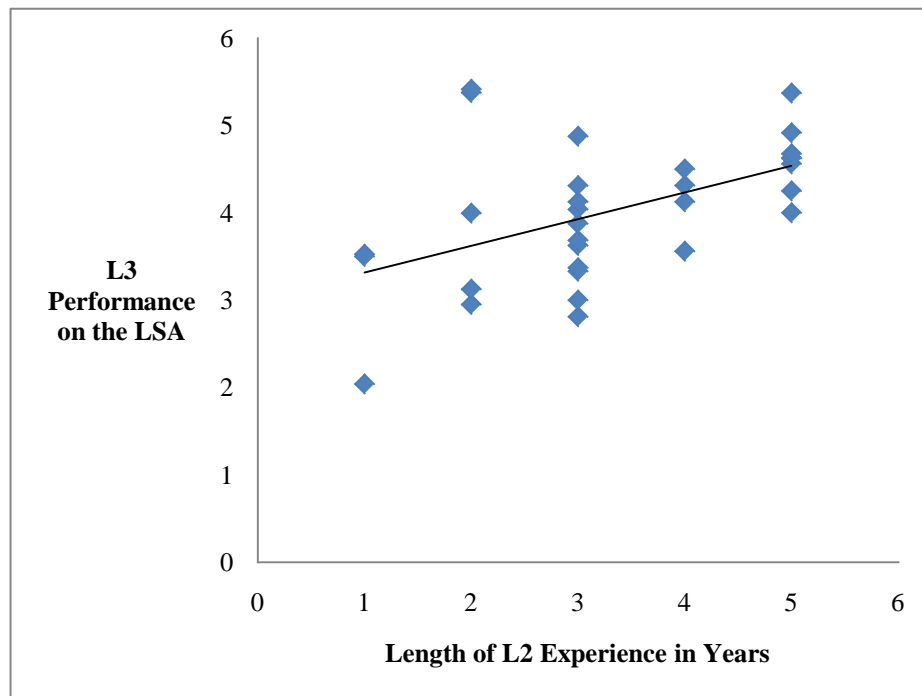


Figure 3. Effect of L2 experience on L3 performance without outliers

It should be noted that the length of L2 experience included various types of L2 learning, such as courses in primary, secondary, and higher education or types of self-study. Thus, the quality of participants' L2 experiences was probably different among participants depending on the experience that they had received, potentially limiting the effect that length of L2 experience had on L3 acquisition in the present research.

Typology

The second issue addressed in the research questions concerned the extent to which language typology affected L3 acquisition. Five different L3s were investigated in this study. The mean LSA score, sample size, and standard deviation according to L3 type are reported in Table 3. Figure 2 shows individual scores organized by L3 type.

Table 3

Sample Size, Mean LSA Score, and Standard Deviation According to L3 Type

L2	L3	Sample Size	Mean LSA Score	Standard Deviation
French	Spanish	17	3.76	0.96
Spanish	French	2	4.73	0.97
French or Spanish	Korean	8	4.08	0.67
French or Spanish	Japanese	4	4.34	0.36
French or Spanish	Russian	3	2.94	0.69

This relationship was investigated through an analysis of variance with L3 group as the independent variable and L3 LSA scores as the dependent variable. The analysis

indicated that language typology was not a significant factor in L3 acquisition ($F(4, 1) = 1.867, p = .145$) since participants learning L3s that were typologically similar or dissimilar to their L2 achieved comparable scores on the LSA.

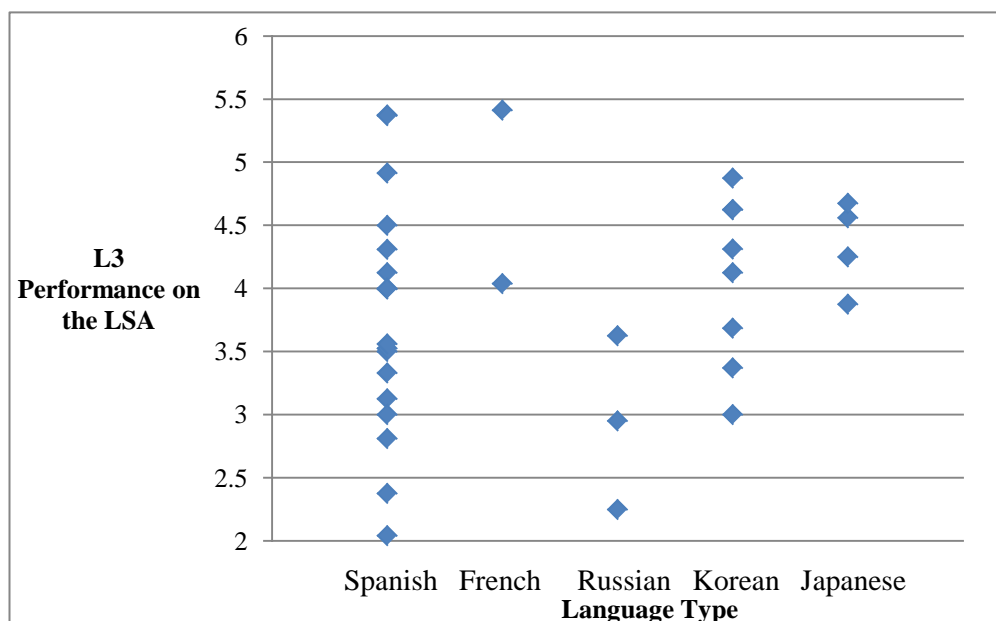


Figure 4. Effect of language type on L3 performance

A multiple regression analysis was used to investigate the effects of L2 type and L3 type on the individual LSA scores in pronunciation, grammar, vocabulary, and fluency. For this inquiry, data on the Japanese learners was not available because the first rating of the LSAs had been completed by MTC employees prior to the start of the study and because the individual scores were not recorded by the second rater during the study. The above results held true across the three individual skills of grammar, vocabulary, and fluency in which no effect was found based on length of L2 experience, L2 type, or L3 type. Participants' grammar, vocabulary, and fluency sub-scores according to language type are reported in Figures 5, 6, and 7, respectively.

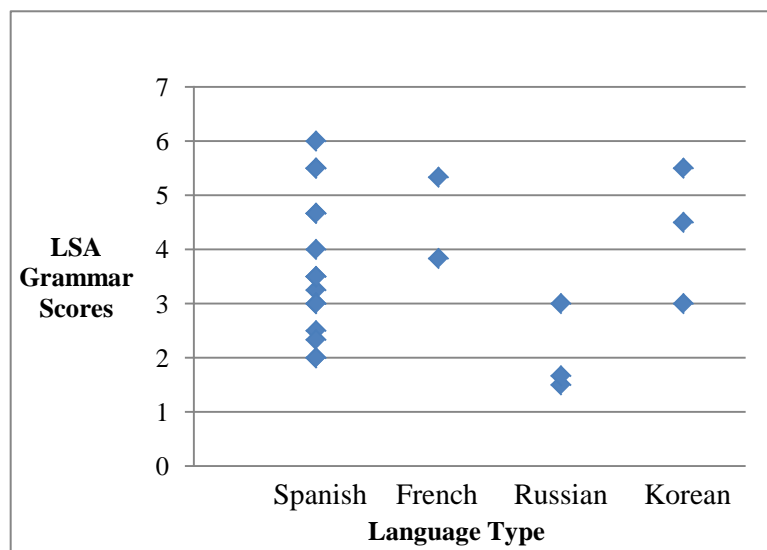


Figure 5. Effect of language type on L3 grammar

The p values obtained for the effect of L2 type on these individual skills were .494, .923, and .793 for grammar, vocabulary, and fluency, respectively. The p values obtained for the effect of L3 type on these individual skills were .297, .470, and .443 for grammar, vocabulary, and fluency, respectively. The p values demonstrate that none of these effects approached significance, indicating that grammar, vocabulary, and fluency scores were unaffected by L2 experience and language type.

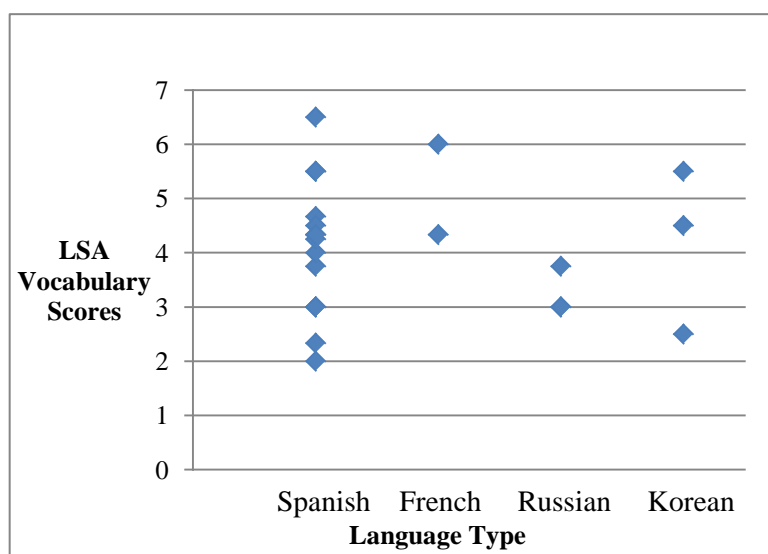


Figure 6. Effect of language type on L3 vocabulary

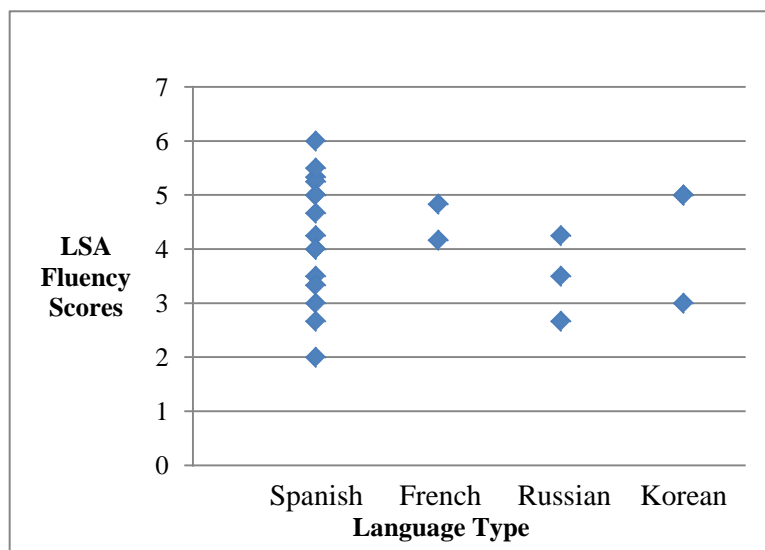


Figure 7. Effect of language type on L3 fluency

Interestingly, however, the regression analysis showed that L2 type did significantly affect pronunciation scores. The p value for L2 Type on pronunciation was .05, demonstrating that L3 pronunciation was, in fact, affected by the specific language studied as an L2. Table 4 reports the sample size, mean pronunciation score, and standard deviation of L2 French and L2 Spanish. The mean pronunciation scores signify that those who had studied French as an L2 had superior pronunciation regardless of their L3.

Table 4

Pronunciation Scores by L2 Type

L2	Sample Size	Mean pronunciation score	Standard Deviation
French	17	4.55	0.85
Spanish	6	3.75	1.34

In addition, the p value for L3 type on pronunciation was .01, demonstrating that L3 pronunciation was also affected by the type of L3 studied. The pronunciation sub-

scores according to language type are shown in Figure 8.

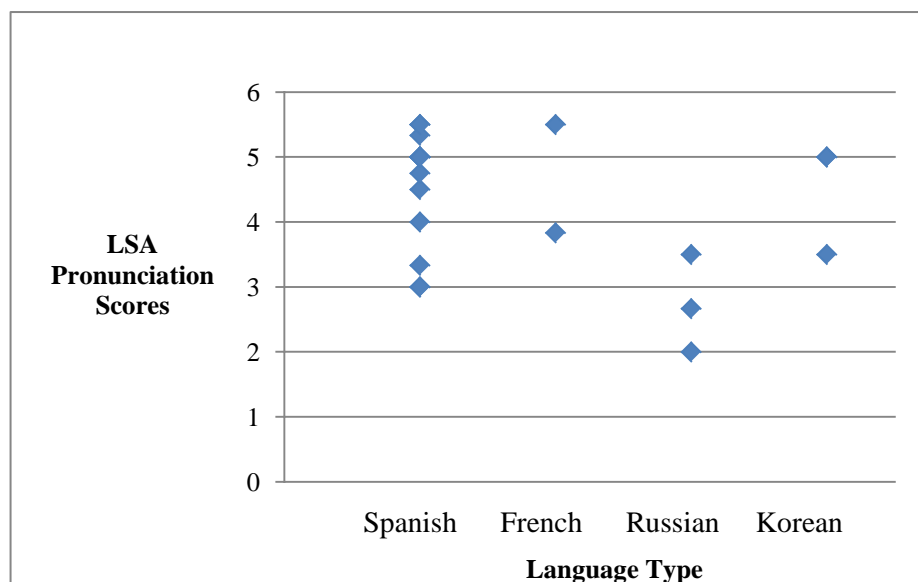


Figure 8. Effect of language type on L3 pronunciation

Table 5 shows the sample size, mean pronunciation, vocabulary, grammar, and fluency scores, and standard deviation for L3 types. The mean pronunciation scores for L3 type suggest that those who had studied a Romance or Asian language as an L3 after having studied a Romance language as an L2 had better pronunciation than those who studied a Slavic language as an L3.

Table 5

Pronunciation, Vocabulary, Grammar, and Fluency Scores by L3 Type

L3	Sample Size	Pronunciation		Vocabulary		Grammar		Fluency	
		Mean	S. D.	Mean	S. D.	Mean	S. D.	Mean	S. D.
Romance	17	4.60	0.85	4.18	1.25	3.80	1.29	4.26	1.09
Asian	3	4.50	0.87	4.17	1.53	4.33	1.26	4.33	1.15
Slavic	3	2.72	0.75	3.25	0.43	2.06	0.82	3.47	0.79

In summary, for the data investigated in the study, length of L2 experience did not have a statistically significant effect on L3 acquisition, as measured by the LSA scores. A possible upward trend in this relationship was suggested by the results, a relationship that was further strengthened when the outliers were excluded from the analysis of the results. The effect of language type on L3 acquisition was not found to be a statistically significant factor either. This finding was obtained for scores in grammar, vocabulary, and fluency; however, language type did seem to have a significant effect on L3 pronunciation scores.

Chapter Five

Discussion

Overview

The purpose of this study was to investigate the relationship between length of L2 experience and language type, and L3 acquisition. To better understand this relationship, the following two questions guided the research process:

1. To what extent does length of L2 experience affect the acquisition of an L3?
2. To what extent does language typology, as determined by accepted language family, affect the acquisition of an L3?

The present study sought to answer these questions and add to current understanding of the significance of these effects in L3 acquisition. To accomplish this, trained evaluators assessed speaking samples from participants who were studying French, Spanish, Korean, Japanese or Russian as an L3 and who had studied either French or Spanish as an L2 for various lengths of time. Assessment scores were then analyzed to examine the effects of the L2 factors in question. The results of this analysis were reported in Chapter Four.

This chapter will discuss in greater detail the results reported in Chapter Four and how they relate to previous findings presented in the review of literature. It will also include a discussion of some implications of the findings, limitations to the study and suggestions for future research.

Length of L2 Experience

The first research question explored in this study was the effect of L2 experience on L3 acquisition. Although there were no participants who had no L2 experience to use

as a control group, the upward trend in L3 LSA scores as length of L2 experience increased is similar to Brohy's (2001) results. Brohy's (2001) study showed that greater experience with language in general seems to enhance L3 performance (see also Muñoz, 2000). These results are also similar to Tremblay's (2006) findings, which showed the extent of L2 exposure to be a significant factor in L2 influence on L3 acquisition. Given that Tremblay's (2006) study was the first to thoroughly investigate the role of L2 exposure, including length and type of L2 study, the current findings add considerable support to the hypothesis that length of L2 experience is a significant factor in L3 acquisition.

Another finding of the analysis is that the standard deviation for LSA scores decreased as length of L2 experience increased, showing that participants scored more consistently on the LSA the longer they had studied an L2. This means that as L2 experience increases, participants' LSA performance can be predicted with greater accuracy. It is possible that this finding relates to learner differences, perhaps implying that the effect of learner differences on performance stabilizes with increased length of language exposure. It is also possible that increased length of L2 study provides learners with increased metalinguistic awareness or skills, which then causes greater stability in learner differences. This may add to the body of literature about learner differences in language acquisition and should be explored through future research.

Typology

The second research question posed in this study concerned the role of language typology in L3 acquisition. The analyses indicated that language typology was not a significant factor in L3 acquisition since participants learning L3s that were typologically

similar or dissimilar to their L2 achieved comparable scores on the LSA. This finding contradicts previous findings that showed that typological similarity between L2 and L3 was a beneficial factor in L3 acquisition (Ringbom, 1987; Cenoz, 2000; Cenoz, 2001). The limited sample size and amount of useable data available for the current study may explain the disparity in results between the current study and previous research.

Since the effect of language typology on L3 acquisition was insignificant for all three individual skills of grammar, vocabulary, and fluency, it may indicate that L2 study in a variety of types of languages provides a similar foundation for L3 study. If L2 study in diverse languages does indeed seem to provide a similar foundation for L3 study, it could have a meaningful impact on language planning for elementary and secondary schools in that language courses in any language may be more highly valued in academic curricula. This is especially important given that language programs are frequently cut from curricula due to budget constraints and prescribed learning outcomes. In addition, because some languages are not considered globally useful they are often edged out of language programs in light of the recent push towards learning internationally significant, but less-commonly taught, languages. Because L2 study seems to generally enhance L3 acquisition, (see Cenoz, 2001; Thomas, 1988; Tremblay, 2006) and L2 type does not seem to have a significant effect on L3 acquisition, administrators who determine curricula in schools may opt to keep language programs for the beneficial skills language study seems to introduce. They may also choose to maintain more traditional and more feasible language programs in their schools instead of shifting towards less-commonly taught language programs that are difficult to implement.

Interestingly, because there was no significant impact based on typology for any of those three skills, it is possible that the L3 gains may have simply been due to a greater ability to think about languages and the processes involved in language learning. Factors in this area fall into such categories as heightened metalinguistic awareness, cognitive abilities or language learning skills that the participants had gained throughout their L2 study (see Cenoz, 2003). The results of the current study showed that improvement in L3 performance was not explained by participants' knowledge of specific L2s. The results also showed that all L3 languages seemed to be equally affected based on type of language experience, but unequally based on length of previous language experience. These findings may provide support for the theory that language study equips learners with certain metalinguistic or cognitive skills which enhance their ability to learn additional languages.

As has been mentioned, Cenoz (2001) describes these skills as “highly developed learner strategies, metalinguistic awareness, and communicative sensitivity.” In other words, it may simply have been the *experience* of having learned a language that caused the participants with longer lengths of L2 experience to outperform those with shorter experiences on the LSA. This possibility would be in line with other findings in the field (see Cenoz, 2001; Herdina & Jessner, 2000) which conclude that L3 learners have an advantage over L2 learners in their language learning ability regardless of the L2 or L3 learned. The effect on L3 acquisition of metalinguistic awareness and cognitive abilities that are acquired during L2 learning was not a subject of direct inquiry in the present study; however, it does deserve a more in-depth examination through future research.

While grammar, vocabulary, and fluency were not significantly affected by language typology, pronunciation was, in fact, significantly affected by L3 type. This effect was most pronounced among the Romance language group where both L2 and L3 were Romance languages, followed closely by the Asian languages, where the L2 was a Romance language and L3 was an Asian language. The effect was considerably lower for the Slavic language group where the L2 was a Romance language and the L3 was Russian. Pronunciation transfer among Romance languages was interesting given that the two Romance languages under consideration were Spanish and French, which have vastly different pronunciation styles, rules, and sounds. Given that both Asian and Slavic languages are typologically dissimilar to the L2 Romance languages, it is quite interesting to note that the Asian language group performed noticeably higher, quite closely to the mean of the Romance language group, than the Slavic group. This finding is consistent with Brohy (2001) who determined that phonological transfer from previously acquired languages accounted for greater gains in L3 pronunciation. The differing results concerning the effect of language type on grammar, vocabulary, fluency, and pronunciation are also similar to the mixed results found in previous research investigating other specific aspects of L3 acquisition (see Cenoz, 2003).

Given the limited sample size available in this study, it would be interesting to replicate this analysis with a larger sample size in all sub-groups to gain a better understanding of how L2 type affects L3 performance in pronunciation. One caveat to this finding is that many of the effects in pronunciation were found among the group learning Spanish as an L3; it is possible that the participants had some level of exposure to Spanish given the prevalence of the language in the United States and had some

knowledge of Spanish pronunciation. Further research that examines this finding in greater depth would perhaps confirm this trend in Spanish and other languages.

Implications

As has been mentioned, the results of this study lead to a variety of implications. First, it seems that L3 learners do have enhanced metalinguistic awareness to help them in the language learning process. This may add support to current theories on metalinguistic awareness in the field of language acquisition as well as advocate the importance of language programs in the elementary and secondary school system.

Second, the findings of this study suggest the importance of the role length of L2 study plays in L3 acquisition, a fairly underrepresented relationship in current research. The difference between the participants' lengths of L2 study was not that large, since most groups measured a range over only one year of study. It is interesting, therefore, that even the slight differences in lengths of study still had an effect on L3 acquisition. A better understanding of this relationship would provide a more detailed picture of the L3 acquisition process.

Lastly, the finding that L2 type did not significantly affect L3 acquisition suggests that L2 experience has a positive impact on learning subsequent languages regardless of the similarity between the languages. This may have implications for persons planning on studying an L3 and those who make language assignments, such as for military personnel. Because language type did not have an effect on L3 acquisition, it suggests that L2 speakers may do well in any type of L3, regardless of the particular L2 they studied. These findings appear to support the value of language curricula and the teaching

of more traditional languages in the classroom, and provide compelling reasons to push for language programs in the school system.

Limitations

The amount of available and useable data proved to be a limiting factor in carrying out this analysis. This outcome was to a large extent the product of the application process that used multiple criteria to guide the selection of participants for inclusion in the study. The amount of data was further reduced slightly due to technological problems with the recordings of the assessments as well as errors that appeared in the rating process.

The one to seven scale on the LSA rubric was perhaps less sensitive than would have been useful, making it difficult to detect differences among participants' L3 abilities and thus reducing the likelihood of obtaining significant results.

Another potentially limiting factor in the study was the operationalization of L2 experience. Since L2 proficiency scores were not available, L2 experience was defined as length of formal language study, as measured in years. It would be helpful to have a precise measurement of the participants' L2 proficiency levels, such as scores on a specific assessment, from which to define L2 experience.

This study included information on the length and type of participants' L2 experience, however, information detailing the *quality* of each participant's L2 experience was not available. Because participants' L2 experience consisted of various types of learning settings, including elementary, junior high, high school, and college courses, as well as self-study and an "other" category, the lengths of L2 experience reported by participants may have differed in quality. For example, junior high or high

school language courses are not likely to be equal to college level language courses. It is possible, therefore, that participants could have made greater language gains in a shorter length of time by participating in a higher quality learning experience than participants who spent a longer amount of time studying the language in a lesser quality experience.

Suggestions for Future Research

The current study revealed modest trends in the data, suggesting a possible relationship between L2 experience and L3 acquisition. To more deeply understand this effect, future research might involve a larger sample size of participants in the same L3 groups investigated in this study. Such research would likely produce more apparent trends in the data, allowing for greater generalization.

Because the limited sensitivity of the LSA rubric proved to be a limitation in the current study, future research should consider using a more reliable assessment to measure participants' L3 abilities. A more reliable assessment and more precise rating scale might provide a more accurate account of participants' L3 abilities and provide greater insight into the results of the current study.

The analysis of the effect of L3 type on L3 acquisition showed similar values across L3 groups, demonstrating that participants seemed to perform equivalently well regardless of the degree of similarity between L2 and L3. Future research might hypothesize that L3 type has no effect on L3 acquisition and that the study of any L2 will provide a similar foundation for L3 study in any language.

For the purpose of this study, L2 experience was operationalized as length of L2 experience in number of years of formal L2 study. Future research could contribute to research in this area by establishing additional ways to operationalize L2 experience. One

suggestion would be to operationalize L2 experience based on demonstrated L2 proficiency. Future studies could include a pre-test to determine participants' L2 skills and proficiency. This approach would enable the researcher to pinpoint the participants' actual language abilities, thus allowing for more direct measurement of L2 experience on L3 acquisition.

The analysis of the relationship between length of L2 experience and language typology on the individual L3 skills as measured by the LSA revealed that pronunciation was indeed affected by language typology. Since this inquiry was of secondary interest in the study, future research should further explore this finding to see if other studies on pronunciation continue to yield similar results.

Conclusion

The most notable relationship observed in this study was the modest increase in L3 LSA scores as length of L2 experience increased. This finding answered the main research question, thus demonstrating that L2 experience does indeed affect L3 acquisition. Although not statistically significant, the trend found in this analysis does raise the possibility of a beneficial effect that L2 experience might have on L3 study and supports the majority of the current research in the field of L3 acquisition.

The findings on the role of language typology on L3 acquisition were also noteworthy. The significant effect that language type had on pronunciation scores was interesting, especially given that none of the L2 to L3 combinations could really be considered as having similar pronunciation systems. The fact that language typology did not have a significant effect on L3 acquisition, as measured by cumulative LSA scores, was also interesting in that it suggested that L2 study of a variety of types of languages

will have a similar effect on L3 study regardless of the similarity or dissimilarity of the two languages. This finding answered the second research question regarding the role of language typology in L3 acquisition.

When observed together these two main findings shed further light on the ways L2 study affects L3 study: Although the specific L2 studied seems to have little influence on L3 acquisition, L2 study in and of itself does indeed seem to enhance L3 study. Additional research in this area would be useful and would perhaps verify these findings, thus contributing to a more complete understanding of the relationship between L2 experience and L3 acquisition.

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Appendix A

MTC Entrance Questionnaire

1. What is your current age?
2. What is the highest level of school you have attended?
 - a. high school
 - b. less than one year of college
 - c. 1-2 years of college
 - d. 3 or more years of college
 - e. college graduate
3. How much did you like school?
 - a. I didn't like it.
 - b. I liked it okay.
 - c. I liked it a lot.
4. Overall, how well did you do in school?
 - a. I didn't do well.
 - b. I did okay.
 - c. I did well.
5. Did you study or speak your MISSION LANGUAGE (the language you will use in the mission field) before you came to the MTC?
 - a. No
 - b. Yes
6. Did you study or speak a foreign language OTHER THAN YOUR MISSION LANGUAGE before you came to the MTC?

- a. No
 - b. Yes
7. What foreign language OTHER THAN YOUR MISSION LANGUAGE have you had the most experience with?
- a. Spanish
 - b. German
 - c. French
 - d. Russian
 - e. Japanese
 - f. Portuguese
 - g. Chinese
 - h. Italian
 - i. Korean
 - j. Other_____
8. Did you use this other foreign language as a common means of communication with your family or friends while you were growing up?
- a. No
 - b. Yes
9. Have you lived in a foreign country where this other foreign language is spoken?
- a. No
 - b. Yes
10. Have you done any formal study of this other foreign language (e.g. classes, self-study)?

- a. No
- b. Yes

11. What kind of formal study of this other foreign language did you do? (Check all that apply.)

- a. elementary school class
- b. jr. high school class
- c. high school class
- d. college or university class
- e. school immersion program
- f. private tutor
- g. self-study (read books, listened to tapes, etc.)
- h. other_____

12. How long was your total formal study of this other foreign language?

- a. 1 year or less
- b. 2 years
- c. 3 years
- d. 4 years
- e. 5 years or more

13. Overall, how well did you do in learning this other foreign language?

- a. I didn't do well.
- b. I did okay.
- c. I did well.

Appendix B

MTC Language Speaking Assessment

1. Tell about yourself (e.g., name, hobbies, family, why you're serving a mission).
2. The bishop introduces you to a less-active member named Brother Gomez. Tell Brother Gomez about yourself and ask a few questions to get to know him.
3. A member introduces you to a friend who is interested in learning more about the Gospel. Get acquainted with this friend by asking him a few questions and telling him about yourself.
4. You meet a woman named Mrs. Cole as you are walking to an appointment. She seems interested in what you are doing. Tell Mrs. Cole about yourself and ask her a few questions to get to know her.
5. During your last visit with Mr. Diaz, you invited him to pray to find out if Joseph Smith was a prophet of God. Follow up on this commitment.
6. During your last visit with Mr. Griffin, you invited him to begin reading the Book of Mormon. Follow up on this commitment.
7. You have just taught Mrs. Ali that God loves her and is her Heavenly Father. Ask her at least 3 questions to find out what she understands about your message.
8. You have just taught Mr. Fisher that God reveals his truth in every dispensation. Ask him at least 3 questions to find out what he understands about your message.
9. You have just taught Mrs. Yung about the Savior's earthly ministry. Ask her at least 3 questions to find out what she understands about your message.

10. You have just taught Mrs. Chan about the restoration of the Gospel through Joseph Smith. She says, “Do you really believe that?” Testify to her about what you have taught.
11. You have just taught Mr. Amat about the Book of Mormon. He says, “Do you really believe that?” Testify to him about what you have taught.
12. You have just taught Mr. Crandall about the Book of Mormon. Invite Mr. Crandall to do something that relates to what you have taught.
13. You have just taught Mr. Takahashi that we can know the truth through the Holy Ghost. He says, “Do you really believe that?” Testify to him about what you have taught.
14. You have just taught Mr. Park that he can know the truth through the Holy Ghost. Invite Mr. Park to do something that relates to what you have taught.
15. In your last visit with Mr. Paul, you invited to find out if the message of the Restoration is true. Follow up on this commitment.
16. You have just taught Mrs. Wagner about the restoration of the Gospel through Joseph Smith. Invite her to do something that relates to what you have taught.
17. What do you usually do on your preparation day?
18. What do you like best about being a missionary? Why?
19. Describe your teachers.
20. Tell about your companion.
21. Tell about your hometown.
22. Tell about your family.
23. What do you usually do during your personal time?

24. In your planning session your companion mentions an upcoming appointment with the doctor. Ask your companion at least 3 questions about this appointment (e.g., the time and place).
25. Your branch president just asked you to come to a meeting tonight. Ask him at least 3 questions about the meeting (e.g., the time and place).
26. Your companion is telling you about his/her mother. Ask your companion at least 3 questions to learn more about his/her mother.
27. A member has a friend who is interested in learning about the Church. Ask the member at least 3 questions to find out more about this friend.
28. You are talking on the phone to a person who wants to learn more about the Church. Ask this person at least 3 questions to find out what they already know about the Church.
29. Your companion is telling you about his/her best friend. Ask your companion at least 3 questions to find out more about this friend.
30. You have just been transferred to a new area. You and your companion are planning to teach Mr. Cramer. Ask your companion at least 3 questions to find out about Mr. Cramer so you can help plan the lesson.
31. You have just met Mr. Davis. He believes in God and wants to know more about Him. Teach Mr. Davis “God is Our Loving Heavenly Father” from Lesson 1.
32. You have been teaching Lesson 1 to the Bernt family. They liked what you taught about the Book of Mormon. Teach them “Pray to Know the Truth through the Holy Ghost” from Lesson 1.

33. You have just taught Mr. Simoni how the gospel blesses families. You also testified and he seems interested. Begin teaching him “God Reveals His Truth in Every Dispensation” from Lesson 1. (You don’t need to finish teaching this whole section.)
34. You have just taught Mr. and Mrs. Rodriguez about the Restoration of the Gospel through Joseph Smith. They seem interested in your message. Begin teaching them “The Book of Mormon: Another Testament of Jesus Christ” from Lesson 1. (You don’t need to finish teaching this whole section.)
35. You have been teaching Mr. Cox about the Great Apostasy. He is touched by your message. Begin teaching him “The Restoration of the Gospel of Jesus Christ through Joseph Smith” from Lesson 1. (You don’t need to finish teaching this whole section.)
36. You have just taught Mr. Turro how Heavenly Father reveals his Gospel in every dispensation. He is touched by your message and is excited to learn more. Begin teaching him “The Savior’s Earthly Ministry” from Lesson 1. (You don’t need to finish teaching this whole section.)
37. You have just taught and testified about the Savior’s earthly ministry to the Jones family. They seem interested in your message. Begin teaching them “The Great Apostasy” from Lesson 1. (You don’t need to finish teaching this whole section.)
38. You have been teaching Mrs. Young Lesson 1. She is excited about what you have taught her and she wants to know the truth for herself. Begin teaching her “Pray to Know the Truth through the Holy Ghost” from Lesson 1. (You don’t need to finish teaching this whole section.)
39. You have just taught that God is our loving Heavenly Father. The investigator asks, “So, are Heavenly Father and Jesus Christ the same person?” Respond to his question

by comparing and contrasting the role of the Savior and the role of our Father in Heaven.

40. You have just taught how Heavenly Father reveals his gospel in every dispensation.

The investigator “Now that Christ has already come, why do we need more prophets?” Respond to his question by comparing and contrasting the role of prophets with the role of the Savior.

41. You have just taught about the restoration of the Gospel through Joseph Smith. The

investigator asks, “How is Joseph Smith different from Martin Luther and others who tried to change the church?” Respond to her question by comparing and contrasting the role of the reformers with the role of Joseph Smith.

42. You have just taught about the Book of Mormon. The investigator asks, “Why do we

need the Book of Mormon if we already have the Bible?” Respond to her question by comparing and contrasting the Book of Mormon and the Bible.

43. Tell ONE SPECIFIC STORY from your life about prayer, scripture study OR tithing.

44. Tell ONE SPECIFIC STORY from your life about fasting, following the prophet, OR keeping the Sabbath Day holy.

45. Tell ONE SPECIFIC STORY from your life about obeying the commandments, sharing the gospel OR serving others.

46. Tell ONE SPECIFIC STORY from your life about the Book of Mormon, the prophet Joseph Smith OR the Holy Ghost.

47. You are teaching the Alvarez family about Jesus Christ. You decide to share John 3:16 with them: “For so loved the world, that he gave his only begotten Son, that whosoever believeth in him should not perish, but have everlasting life.” Share this

scripture with them. Be sure to give an introduction to the scripture, ask someone to read the scripture out loud, and show how the scripture can be applied to the family members' lives.

48. You are teaching the Richards family about revelation. You decide to share Doctrine and Covenants 8:2 with them: "Yea, behold, I will tell you in your mind and in your heart, by the Holy Ghost, which shall come upon you and which shall dwell in your heart." Share this scripture with them. Be sure to give an introduction to the scripture, ask someone to read the scripture out loud, and show how the scripture can be applied to the family members' lives.
49. You are teaching the Kim family about Joseph Smith. You decide to share James 1:5 with them: "If any of you lack wisdom, let him ask of God, that giveth to all men liberally, and upbraideth not; and it shall be given him." Share this scripture with them. Be sure to give an introduction to the scripture, ask someone to read the scripture out loud, and show how the scripture can be applied to the family members' lives.
50. You are teaching the Franco family about the Holy Ghost. You decide to share John 14:26 with them: "But the Comforter, which is the Holy Ghost, whom the Father will send in my name, he shall teach you all things, and bring all things to your remembrance, whatsoever I have said unto you." Share this scripture with them. Be sure to give an introduction to the scripture, ask someone to read the scripture out loud, and show how the scripture can be applied to the family members' lives.
51. You have just taught Mrs. Jorgensen that God is our loving Father in Heaven. She asks you, "If God is a loving Father in Heaven why is there so in much suffering and

evil in the world? Why do bad things happen to good people?" Respond to her concern.

52. You taught the Merrill family the first lesson yesterday. Today you are at a follow-up visit and Mr. Merrill asks you, "I read parts of the Book of Mormon and I prayed, but nothing happened." Respond to his concern.
53. You have just taught Mr. Vaughn about the apostasy. He says to you, "I don't know if I believe that. My priest is a man of God and he has the priesthood." Respond to his concern.
54. You have just taught Mrs. Lam that the gospel blesses families. She says to you, "My husband died last year and we didn't have any children. I don't think your message about families applies to me." Respond to her concern.

Appendix C
MTC Language Speaking Assessment Rating Rubric

	1	2	3	4	5	6	7
Pronunciation	Pronunciation is usually unintelligible		Difficult to understand at times; frequent errors in sounds, stress, or intonation; accent inhibits communication or is irritating		Fairly easy to understand; some errors in sounds, stress or intonation; accent attracts attention but does not inhibit communication		Can be understood without difficulty; accent is not pronounced
Grammar	Does not use language rules; speech consists mainly of individual words strung together, with no regard for correct forms		Uses a limited range of language rules; as many errors as correct forms		Correctly uses a fairly broad range of language rules most of the time; uses grammar that is clearly required by the situation		Consistently and correctly uses an extensive range of language rules as required by the situation; few if any errors, even in less common or complex forms
Vocabulary	Vocabulary is inadequate to communicate intended ideas; often lacks even common, basic words and expressions		Uses some situation-specific vocabulary, but often lacks words and expressions needed to convey complete ideas; sometimes uses the wrong words or uses the same words repeatedly		Uses an adequate range of situation-specific vocabulary; words and expressions are sometimes imprecise, but speaker finds a way to convey intended meaning		Uses a broad range of appropriate and precise words and expressions needed to convey intended ideas; no searching for words
Fluency	Speech is so slow or so fast that communication does not occur		Speech is slow enough (i.e. frequent or long pauses and fillers) or fast enough to cause discomfort to the listener; listener may feel obligated to help out		Rate of speech does not impede communication; occasional unnatural pauses and fillers do not distract significantly from the message		Rate and flow of speech are usually natural and facilitate communication

* Language samples perceived to lie in between descriptions were given the scores 2, 4, or 6.