

Teacher use of the L2 and student attention in a Spanish language classroom: Establishing a functional relationship using single-case design

by

Erica Ruth Marilyn Grace Sponberg

B.A., Pacific Lutheran University, 2003

M.A., Valparaiso University, 2010

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Department of Curriculum and Instruction
College of Education

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Abstract

Much debate surrounds the effectiveness of a teacher's use of a second language (L2) in world language (WL) classrooms. Although teacher educators and language teaching scholars identify the use of an L2 in instructional delivery as a high value skill (Ellis, 2005; Gilsan & Donato, 2017), there is a paucity of research in measuring its effectiveness on student outcomes (Chaudron, 2001; Egber, 2007; Norris & Ortega, 2000; Ortega, 2005; Plonsky & Gass, 2011; Plonsky, 2014). However, student attention to task can be used as an indicator of student success (Logan & Etherton, 2008; Logan, 1988). This study investigates the relationship between a WL teacher's use of the Spanish language and student attention to task in three level-one high school Spanish language classrooms, using a multiple-base line across group design. Results suggest that there is no significant effect on student attention to task regardless of whether the instructor is using the L1 (English) or the L2 (Spanish).

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Approved by:

Major Professor

Dr. Socorro Herrera

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May my actions show you all how much you mean to me.

Dedication

I dedicate this work to my parents, Gus and Bonnie Sponberg, two free-wheeling soulmates who never said no to learning something new. I also dedicate this to those who are in the throes of dissertating. As my dad once said, “Procrastination is part of the creative process.” Keep going!

Chapter 1 - Introduction

Effective use of a first language (L1) and second language (L2) by an L2 instructor is a high-value skill (Ellis, 2005; Gilsan & Donato, 2017), but much debate surrounds when, how much, and how often the instructor should use the L1 and the L2. The American Council on the Teaching of Foreign Languages (ACTFL) recommends that 90% of the language of instruction be in the L2. However, studies measuring instructor L2 use show a wide variety of results on reported use. (Chavez, 2016; Duff & Polio, 1990; Kim & Elder, 2005; Thornbury, 2002), and conflicting evidence on how and when to use both the L1 and the L2 (Cook, 2001). Within pre-service teacher development, effective implementation of the L1 and the L2 is not often the focus (Bateman, 2008; Lindahl & Beecher, 2016; Evans, 2012; Trappes-Lomax & Ferguson, 2002; Wright, 2002). In cognitive linguistics (CL), an informational processing (IP) approach suggests that increasing the L2 usage may positively affect language acquisition in students (Altarriba & Basnight-Brown, 2009; McLaughlin & Heredia, 1996). However, world language (WL) classroom research remains inconclusive in establishing teacher use of the L2 as an evidence-based practice for WL teachers (Chaudron, 2001; Egber, 2007; Norris & Ortega, 2000; Ortega, 2005; Plonsky & Gass, 2011; Plonsky, 2014). To establish best practices, replicable research is needed. Single-case design (SCD) is a methodology commonly used in other educational fields, such as Special Education (Gast & Ledford, 2014; Kazdin, 2011). This study will use SCD to investigate the relationship between a teacher's use of spoken L2 and student attention to task in three second-semester level-one high school WL classrooms. Discussion in this chapter is organized into the following sections: (1) overview of the issues, (2) theoretical framework, (3) statement of the problem, (4) purpose of the study, (5) significance of the study, (6) definition of terms.

Overview of the Issues

In 2017, the American Academy of Arts & Science's Commission on Language Learning reported that 10% of people in the United States proficiently speak a language in addition to English. Of those adults, 75.5 % acquired the language at home, not in school. The report calls attention to the gradual decline of non-English language ability within the United States since the mid 1980s, and coincidentally, a decline in public elementary, middle, and high school WL programs. The commission connected language barriers to loss of opportunities for U.S. business:

Almost 30 percent of U.S. Business executives . . . reported missed opportunities abroad due to a lack of on-staff language skills, and nearly 40 percent reported that they had failed to reach their international potential due to language barriers (American Academy of Arts & Science, 2017, p.1)

U.S. business executives connected the ability to speak another language to the ability to expand into international markets. The percentages above make clear a significant gap within the U.S. workforce and make evident how proficiency in a language other than English may increase economic viability.

These numbers are staggering considering efforts made on the federal and state levels to promote language learning in K-16 education. In 2001, with the implementation of No Child Left Behind legislation, the United States saw the first federally funded grant-awarding program specifically aimed at supporting WL programs in K-12 schools through the Foreign Language Assistance Program. These three-year grants assisted the implementation or continuation of WL programs in elementary and secondary schools. They also aimed to assist districts and higher education intuitions to recruit, develop, and sustain hard-to-find teachers of world languages.

In 2006, the National Security Languages Initiative (NSLI), which, at its peak, oversaw 13 programs under four different government departments (U.S. Department of Education, 2008; Duncan, 2010), was launched to increase K-16 language education. In addition, NSLI supported language teacher training programs, as the United States deemed building a multilingual population in its economic and security interest (Duncan, 2010; U.S. Department of Education, 2008). However, by 2010, both *The New York Times* and *The Chronicle of Higher Education* reported that 54 U.S. higher education institutions cut or eliminated world language majors (Bauerian, 2010; Foderaro, 2010). In 2012, federal funds for WL programs stopped, and by 2015, U.S. universities experienced a 6% decline in overall enrollment in world language programs (MLA Office of Research, 2015).

In 2015, a bipartisan group of congressional representatives sought to counteract these trends by introducing the World Language Advancement Act (WLAA), which redesigned the Foreign Language Assistance Program (JNCL-NCLI, 2015). In their report, congressional members indicated that 50% of high school students take more than one year of another language, and only 25% of elementary schools offer WL classes (JNCL-NCLI, 2015). Unfortunately, the WLAA negotiations ended with the congressional session in January of 2017. The following month, Representative David Prince of North Carolina reintroduced the WLAA as the World Language Advancement and Readiness Act (WLARA) to the new congressional session, and again at the beginning of 2019 (H.R. 1094, 116th Cong., 2019). Addressing similar concerns, the authors of WLARA asked the Secretary of Defense to open grant funding for WL programs at the elementary and secondary level. At the time of this dissertation, the WLARA moved to committee for review (U.S. Congress, n.d. H.R. 1094).

Recent efforts at the state level to revive and incentivize WL proficiency in the K-12 system come with the establishment of the Seal of Biliteracy. The Seal of Biliteracy accompanies a high school diploma and official high school transcript to indicate that an individual has achieved a “state-determined proficiency” in a language other than English (American Academy of Arts and Sciences, 2017). This encompasses language traditionally taught in schools or in alternative programs, and students’ native or heritage language (American Academy of Arts and Sciences, 2017). The state of California started this program in 2012 with the assistance of other professional organizations, such as the ACTFL and the National Council of State Supervisors for Languages. Since California’s launch, the District of Columbia and 23 states have adopted the Seal of Biliteracy. Kansas began awarding the Seal of Biliteracy to high school graduates in 2017 and, as of 2018, 277 students have graduated with the seal on their high school diploma. (Chou, 2019)

Although the Seal of Biliteracy is a potential motivating factor for students to continue their study of a second language, it does not assist districts in funding WL programs, nor does it support teachers in illustrating how to bring students to fluency within a typical course. This, coupled with the fluctuating efforts of policy to support WL programs, has brought U.S. citizens no closer to the diplomatic and economic goals of a multilingual society (American Academy of Arts and Sciences, 2017; Duncan, 2010; U.S. Department of Education, 2008). How do we best equip future and in-service teachers with best practices that will lead students to proficiency and to the attainment of the seal of biliteracy?

The majority of Americans are exposed to another language through a classroom setting, making a teacher’s skill set in effectively using an L2 of the utmost importance. However, teachers may be less effective in supporting student achievement in L2 learning without the

necessary opportunities to investigate the WL classroom (Wang, 2009; Tochon, 2010). Without steady growth in student achievement, the success of the Seal of Biliteracy and the efforts at the state and federal level to support language learning in the United States are at risk. To address these concerns, this study specifically focuses on the secondary WL classroom to support the WL teacher and students in reaching learning and departmental goals.

Inconsistent policy and lack of cohesion within Second Language Acquisition (SLA) research on L2 learning affect pre-service WL teacher development. Firstly, field experience opportunities for pre-service WL teachers are diminishing (Bauderlin, 2010; Foderaro, 2010; Friedman, 2015; Tochon, 2011). Since the late 1940's, the United States has documented WL teacher shortages (Flattau et al., 2006; Swanson & Mason, 2018). By the early 2000's, WL teachers surpassed fields such as Special Education in difficulty in hiring (Murphy, et al., 2003; Swanson & Mason, 2018). More recently, approximately 44 states reported an inability to fulfill WL curriculum demands due to WL teacher shortages (American Academy of Arts and Sciences, 2017; Cross, 2017; Swanson & Mason, 2018). A decrease in available cooperating teachers may also decrease the availability of high-quality field placements for pre-service teachers. For pre-service teachers, the quality of their field experience placement can determine teaching habits, attitudes, and longevity (Cogan, 1970; Henry & Weber, 2010; Morehead, et al., 2009; Stokking, et al., 2003). Finally, once a pre-service teacher is placed with a cooperating teacher and university supervisor, research indicates that feedback rarely focuses on raising language awareness, which is key to increasing comprehensible L2 input (level-appropriate L2) and strategic uses of the L1 (Liu & Zeng, 2015; Loschky & Harrington, 2013; Trappes-Lomaz & Ferguson, 2002). The participants of this study were a cooperating teacher (CT) and a student intern (SI), with the researcher acting as the university supervisor. Throughout the 20-week

semester, the focus of mentorship was on raising language awareness to increase L2 use by the teachers.

A sought after, yet underdeveloped, skill set for WL teachers is the effective use of the target language (TL), or the language to be learned (Chaves, 2016; Ellis, 2005; Evans, 2012; Gilson & Donoto, 2017, Trappes-Lomax & Ferguson, 2002). To learn and be proficient in an L2, there must be considerable language input, or exposure to that language. The leading professional organization on language teaching in the United States, ACTFL, recommends that 90% of the language of instruction be in the L2 (See Appendix A for full statement). In their statement, they ask WL teachers to use as much comprehensible input as possible due to the protracted, yet dynamic, nature of language learning (VanPatten, 2003). These factors suggest that the foundation of an input-rich environment lies in the teacher's use of the L2 (VanPatten, 2014). This study will investigate the relationship between the teachers' use of the L2 and student attention over a 20-week semester.

Theoretically, to mimic L1 acquisition environments, WL teachers create implicit learning experiences for their students through their use of the L2. However, as most L2 learning theorists understand, the path to implicit knowledge (in this case, L2 fluency) can be enhanced through connections between the student's L1 and L2 (Antón & Dicamilla, 1999; Cook, 2001; Littlewood & Yu, 2011; Zhao & Macaro, 2016). The debate surrounding how, when, or if the teacher should use the L1 remains prevalent in the field of SLA research. The second chapter of this study reviews previous studies investigating the WL teacher's use of the L1 and L2 in the world language classroom.

Despite existing SLA research, systematic literature reviews and meta-analyses often remain inconclusive when identifying best practices for WL teachers (Chaudron, 2001; Norris &

Ortega, 2000; Ortega, 2005; Plonsky & Gass, 2011; Plonsky, 2014). R. Ellis (2005) qualifies his nine principals of language teaching by discussing the various controversies in the language teaching field (e.g., focus-on-forms vs. communicative and task-based approaches). Theories on SLA are often contested, incomplete, or lack adequate evidence (e.g., universal grammar vs. connectionist theories, Krashen's input hypothesis vs. DeKeyser's skill acquisition theory). Some scholars have gone so far as to question the effectiveness of instructed language learning altogether (Chaudron, 1988; Long, 1983; Pieneman, 1985). Others have debated the history of second language teaching and learning (Gass et al., 1998; Thomas, 1998). To bring theory and practice into evidence-based praxis, recent scholars call for consistency in reporting, methodological rigor, replicable research, and diverse population samples. The literature review presented in chapter two synthesizes theoretical approaches to language acquisition and historical connections to second language teachings regarding L2 use by the instructor. In an attempt to address these concerns, the researcher utilized a quasi-experimental methodological approach: a multiple-baseline single-case design (SCD) that is known for replication in a variety of settings for potential generalizability in the development of evidence-based practices (EBP).

In sum, advocates and policy makers have made great strides toward improving WL opportunities for students. If the ultimate goal of the United States is to create (and even celebrate) a multilingual society, academics must continue to look beyond policy and towards the WL classroom. Theory suggests that we need immersive environments for students to best acquire an additional language. For students in the United States, L2 exposure oftentimes comes from their WL teachers in a secondary school setting, making the teachers use of the L2 all the more important. Yet investigations of secondary classrooms are not typically the focus of SLA research. The research questions for this study arose from the establishment of a working

relationship with a practicing WL secondary teacher and her student intern and asking what questions they had about their classroom. Together, we investigated their use of the L2 and whether or not its use affected students' attention to task, as attention is an indicator of successful learning (Logan & Etherton, 2008; Logan, 1988). A SCD methodological approach was chosen because of its historical use in establishing evidence-based teaching practices, ease of replicability, and emphasis on social validity for practicing teachers and their students. Over the course of an academic year, a strong relationship was built between the cooperating teacher, the researcher, and the student teacher such that, over the course of a 20-week semester, we could better understand what may help students learn the Spanish language and achieve a state Seal of Biliteracy by the time they graduate high school.

Statement of the Problem

At a time when industry and community cross borders, the United States struggles to support language learning skills that reach new economic goals and improve diplomatic relations. Policies meant to undertake these objectives have, in the past, only gone as far as they are supported by the surrounding educational institutions. Educational institutions are in turn at the mercy of budgetary adjustments, shifting enrollment, and a diminishing number of qualified language professionals. Without skilled individuals furthering the field at the primary through the tertiary levels, the United States will remain stagnant in its intended target of 100% of its citizens exposed to a second language, and of 30% with practical occupational and personal language skills (American Academy for Arts and Sciences, 2017; Brecht et. al, 2014).

The root of these goals lies within the L2 classroom, where the majority of the people in the United States are exposed to another language; and with the WL teacher, from whom the majority of the United States hear, or receive input from, another language. WL teachers, then,

complement input by creating opportunities for students to use the language. Theoretically, it is through the WL teacher's input and through student interaction that grammatical forms and lexical chunks transfer from short term to working memory, a process known as intake (N. Ellis, 2002; Loschky & Harrington, 2013; VanPatten, 2003). Significant intake represents the first steps toward fluency, also known as automatization or implicit knowledge (DeKeyser & Juffs, 2005; DeKeyser, 2007; N. Ellis, 2004; R. Ellis, 2009; Paradis, 1994; Schmidt, 1994; Ullman, 2005; J. N. Williams, 2009). For the majority of L2 learners, gaining fluency begins with the teacher's use of the L2 (Chavez, 2016; Kraemer, 2006; Littlewood & Yu, 2011).

However, there is a paucity of research connecting the teacher's use of the L2 with student outcomes (Plonsky, 2014; Plonsky & Gass 2011). Despite organizations advocating for teachers to remain in the L2 for 90% of class time (ACTFL, 2010), the field of WL teaching continues to lack EBP (Ortega, 2005; Plonsky, 2014; Plonsky & Gass, 2011). Debate persists on how the teacher can best use the L2 to increase student learning, which is confounded by research methodological practices that have, to the benefit of the field, been critiqued (Chaudron, 2001; Norris & Ortega, 2000; Ortega, 2005; Plonsky & Gass 2011; Plonsky 2014).

Purpose of the Study and Research Questions

The primary purpose of this study was to extend existing L2 classroom research to better understand instructor use of the L2 and its relationship with student attention, which has not yet been well established. In addition, the study aimed to apply a quasi-experimental design commonly used in special education fields, known as SCD. SCD is a methodology that is used to build EBP by taking a small sample (e.g., small classroom) and replicating the experiment with different similar-sized samples. A requirement of SCD is to include a social validity component, which builds in a measure to better understand the teacher's perception of a particular strategy.

For this study, the social validity measured the teacher's beliefs around the use of the L2 as an instructional tool and its effect on student attention. Second, the study aimed to gain a better understanding of the social validity of maintaining the L2 90% of the time, per ACTFL's recommendation. The following research questions guided the study:

1. How, if at all, does increasing the WL teacher's use of the L2 affect students' attention to task in the classroom?
2. How does the WL teacher view the applicability and feasibility of using the L2 over the course of a 20-week semester?

Significance of the Study

The significance of this study was three-fold: the study contributed to theoretical, methodological, and practical work in L2 learning and teaching. First, the investigation utilized an informational processing theoretical approach as the framework for understanding how an additional language is learned. The informational processing theory relies heavily on L2 input and aligns with ACTFL's 90 percent language of instruction guideline.

Second, this study is methodologically important because it uses a single-case, multiple base line group design. Although not traditionally used in L2 classroom research, it is an established design that has been used in other educational fields, such as Special Education, to establish EBP for teachers. Regardless of the outcomes of the findings, it is a design that may be well suited for L2 classroom research.

Third, from a teacher development perspective, this study worked with both a CT and SI, to increase their language awareness in increasing their L2 use in the classroom. Throughout the semester, use of the L2 was a focal point when discussing classroom management, grammar explanation/presentation, instructional delivery, and feedback. The results of the study provide

practitioners and researchers with a better understanding on the connection between L2 use and student attention and offer insight into how the L1 and the L2 are used throughout the semester. In general, the study could provide a way for improving instructional strategies for both the novice and experienced teaching professional.

Definition of Terms

Explicit Knowledge: The language a learner produces in the early stages of learning an additional language. It represents language structures of which a learner is aware, and is the majority of language learned and produced in a WL classroom (DeKeyser, 2007; Paradis, 1994; Schmidt, 1994).

Implicit Knowledge: Represents speech acts, in which speakers can use complex structures correctly and fluidly but cannot explain why, or the rules for, those specific grammatical forms (Paradis, 1994).

Instructional Delivery: Language a WL teacher uses throughout the class period.

First Language (L1): The native language of an individual.

Second Language (L2): The language learned after the native language has been established in the mind of the learner. Students in WL classrooms may be familiar with multiple languages. In this study, *second language* will be used to represent any language learned after the native language.

Second Language Acquisition: The study of how an additional language is acquired or learned. SLA is concerned with the natural properties of language and how a learner grows to understand and produce a second language on a subconscious level (Gass, Fleck, Leder, and Svetics, 1998; Krashen 1985; Thomas, 1998).

Second Language Teaching: The study of how a second language is instructed or explicitly taught (Gass, et al., 1998; Thomas, 1998).

Student Attention to Task: Students attention to task was defined by engagements in any behavior for any period of time that matches the ongoing classroom instruction.

Target Language: The language meant to be learned. For example, in this proposed study, the target language is Spanish.

World Language Teacher: From a U.S. perspective, any language teacher who does not teach English. For example, a German, French, Spanish, Japanese, Chinese, Latin, or Russian teacher.

Chapter 2 - Literature Review

In the late 1990's, scholars studying second language acquisition (SLA) theory debated about its history, or lack thereof. Thomas (1998) argued that studies relied too heavily on seminal works from the mid-twentieth century and questioned the ahistoricity within the field. She claimed that the represented history is shallow because SLA scholars qualified a starting point with bracketed "flourishes and hedges" and ornamental academic prose (p. 389). Thomas provided multiple examples of formative works that glaze over what could have been an invaluable understanding of second language (L2) learning. Thomas connects this to the (dis)credibility of the SLA field in standing alone alongside linguistic, psychology, and engineering scholars (Newmeyer & O'Neil, 1988; Thomas 1998). Thomas (1998) asserted the necessity of understanding the past as a way to reassess what the field knows, the questions asked, and the future body of work produced. As the author expressed, "historical reflection may offer new insight into basic concepts in the field and into the framework within which we do the work of L2 acquisition theory" (p. 400). One of these basic concepts in the field is the teacher's use of the L2 in the classroom, a seemingly foundational strategy when teaching a L2, yet one that is often overlooked when discussing effective instructional strategies.

Thomas (1998) queried, why does "L2 acquisition theory believes itself to have no past?" (p. 394). She suggests setting boundaries in distinguishing language pedagogical research from language acquisition research. Thomas admitted the teaching of languages has sound historical footing. However, modern SLA views itself as separate from classroom concerns. Newmeyer and Weinberger (1988) bolstered Thomas' (1998) separatist take because they demarcated the rise of contrastive analysis studies in the United States during the 1940s, and the growing investigations of L2 syntactic and pronunciation errors. Although the collection of these works

further disconnected the field from pedagogical questions, these studies acted as a bridge between the language classroom and emerging linguistic theory (Newmeyer & Weinberger, 1988, p. 34). In sum, Newmeyer and Weinberger signaled the shedding of theory from practice, which, ten years later, left Thomas (1998) questioning the foundations of the SLA theoretical field and calling for scholars to review literature beyond the twentieth century.

Gass et al. (1998) responded opposingly to Thomas's (1998) critique. The authors identified instances in which SLA scholars went beyond the 50-year mark, or sought historical influences within the more general field of applied linguistics to answer modern-day questions. In addition, Gass et al. (1998) challenge Thomas's (1998) notion of ahistoricity by offering clear definitions of SLA that bind it outside the scope of instructed SLA. The authors see SLA theory as the exploration of the nature of language itself in relation to language acquisition, making the connection that how a language is learned versus how a language is taught is outside the scope of the majority of SLA researchers.

This leads to the inevitable question of whether the concerns of language teachers are outside of the scope of SLA researchers. Recognizing that a single researcher cannot be an expert in all things, how can SLA theories move into practical classroom application? In honoring the ideas presented by Thomas (1998) and Gass et al. (1998), this chapter addresses their academic debate by discussing relevant topics connected to the study's research questions, including 1) relevant theories about how a L2 is learned and 2) relevant approaches to the teaching of a L2. This discussion therefore connects theory to practice, and seeks to better understand the role of the L2 and student attention within the WL classroom.

Theoretical Framework

SLA theory describes how a L2 is acquired (Gass et al. 1998), as opposed to how a L2 is taught (Thomas, 1998). The following section presents a theoretical framework for the investigation of the teacher's use of the L2 for instructional delivery and how it potentially affects student attention and L2 learning. Taking a cognitive linguistics (CL) approach to L2 teaching, the following topics will be addressed to better understand their relationship to the language classroom: (a) explicit and implicit learning experiences and (b) informational processing (IP) theory.

Cognitive Approaches to Second Language Acquisition

“Cognition is really a fancy word for knowledge, its acquisition, and its use,” (DeKeyser & Juffs, 2005, p. 437). Cognitive linguists see language as something that is learned from the environment in which a person lives as opposed to something naturally occurring inside the mind (Verspoor & Tyler, 2009). The act of producing language activates multiple parts of the brain and relies almost exclusively on subjective memory (DeKeyser & Juffs, 2005; Ullman, 2005; Verspoor & Tyler, 2009). Therefore, cognitive approaches in SLA apply findings from the neurological and psychological fields to the learning of a new language after a first language (L1) has been learned (DeKeyser & Juffs, 2005).

As in most academic fields, there are opposing theories or positions to describe human processes. Although the discussion neither begins nor ends here, it is worth briefly mentioning how two differing positions define knowledge of a L2. From a universal grammar (UG) position, which stems from the work of Chomsky (R. Ellis, 2009; O'Grady, et al., 2009; Ritchie & Bhatia, 1996), linguistic knowledge represents the understanding of specific features of that particular language that are said to innately exist within the mind of the language learner (R. Ellis, 2009;

O’Grady, 2008). In contrast, a CL perspective views L2 knowledge as acquired from experience, exposure, and feedback (N. C. Ellis, 2002; R. Ellis, 2009; O’Grady, 2008; Verspoor & Tyler, 2009). Because experience, exposure, and feedback all happen in a classroom and can be controlled by an instructor, a CL perspective suits the framework of this study. To better understand the relationship between the WL classroom and CL and its application, the proceeding sections explore the following components of L2 learning: (a) roles of explicit and implicit knowledge, (b) how explicit knowledge transfers to automatized (implicit) knowledge, and (c) roles of awareness and frequency.

Explicit Knowledge in L2 Learning

Explicit knowledge in L2 arises from intentional learning, of which an individual is conscious (Brown, 2007). Paradis (1994) defines explicit knowledge as “that which individuals are aware of and that they are capable of representing to themselves and of verbalizing on demand,” (p. 394). Schmidt (1994) confirms this definition in his call to more clearly differentiate between explicit learning and knowledge; Schmidt recommends that knowledge be used to represent the production of language, or what he may refer to as language performance (p. 20). DeKeyser (2007) uses the terms *explicit* and *declarative* knowledge interchangeably to represent the information L2 learners receive and then produce in beginning stages of language learning. Explicit production is said to be more controlled (Bialystok, 1990; Paradis, 1994). Paradis (1994) states that explicit knowledge is illustrated in slowly constructed sentences and in the checking of the grammatical appropriateness of a sentence or phrase. Explicit knowledge can be represented in the memorization of vocabulary, language chunks, and even complex grammatical constructions (R. Ellis, 2009; Paradis, 1994; Ullman, 2005). It is at this stage of reception and production that the student participants for this study are expected to be.

For many adult learners, languages outside of their first are learned explicitly, through direct instruction (DeKeyser & Juffs, 2005), meaning that the L2 instructor draws the attention of L2 students to the learning objectives and creates activities for the learning of those objectives. This represents the classroom setting used in this study; the cooperating and student teacher are explicit in their instruction. Ullman (2005) posits that L2 learners use declarative memory (used here to represent explicit knowledge) to learn grammatical rules and use explicit knowledge well enough to give the impression of fluency, otherwise known as implicit knowledge. This can make assessing L2 learner progress somewhat difficult, which is one reason why this study relies on student attention as an indicator of learning. Logan (1988), in describing his instance theory of automatization, states that if a student is paying attention to what is happening within the classroom, they are more likely to learn the targeted objectives.

Implicit Knowledge in L2 Learning

Many researchers believe that implicit knowledge can lead to automatization, which contributes to fluency (DeKeyser & Juffs, 2005; DeKeyser, 2007; N. C. Ellis, 2004; R. Ellis, 2009; Paradis, 1994; Schmidt, 1994; Ullman, 2005; J. N. Williams, 2009). Ultimately, language educators would like their students' linguistic skills to be implicit. Implicit knowledge is intuitive, spontaneous (R. Ellis, 2009; Reber, 1993; Schmidt, 1992), and represented in actions we do without much thought, consciousness, or effort (Schmidt, 1992). Williams (2009) reminds us that we use "implicit knowledge in everyday action and perception," (p. 319). This holds true for the everyday interactions students and teachers have in the L2 classroom. Paradis (1994) asserts that implicit knowledge reveals itself in speech acts, in which speakers can use complex structures correctly and fluidly but cannot explain why, or the rules for, those specific grammatical forms. Ullman (2005) finds implicit knowledge to be procedural and to represent

skills that are mechanized. Implicit knowledge often represents complex grammatical forms that are learned through exposure to the L2, but can also represent the production of utterances (Paradis, 1994; Ullman, 2005). Theoretically speaking, implicit knowledge may develop in WL classrooms that take a communicative approach and allow for ample student-to-student L2 interaction.

DeKeyser & Juffs (2005) state that little implicit learning takes place within a WL, or L2, classroom setting (p. 445). However, Williams (2009) suggests that implicit knowledge can be represented in language patterns or in language chunking (p. 328-329), which does reveal itself within an WL classroom. Generally, when L2 production is fluent and takes little cognitive effort on behalf of the speaker, abstract behaviors demonstrate implicit knowledge (Paradis, 1994; Reber, 1993). It is this state that WL teachers strive to recreate in their classroom. Through the consistent use of the L2 by WL teachers and their consistent creation of learning affordances for the WL student, the classroom holds potential for implicit learning and production.

From Explicit to Implicit Knowledge

Providing a clear explanation of transfer from explicit to implicit knowledge within SLA also remains controversial (R. Ellis, 2009; McLaughlin, 1990; Schmidt, 1993, 1994). Ellis (2009) addresses SLA theorist's controversy over whether implicit and explicit knowledge are dichotomous or continuous. Ellis (2009) further claims that implicit knowledge is accessed by automatic mental processes, and that explicit knowledge is more controlled (p. 12). However, he underscored the acceptance that implicit and explicit knowledge interact during learner performance (R. Ellis, 2009). If L2 learners learn from explicit instruction and are more inclined to use declarative memory (DeKeyser & Juffs, 2005; Ullman, 2005), how does the L2 learner gain fluency, or automate linguistic performance? The answer to this elusive question remains

significant if the WL field's goal remains to increase this number of multilingual individuals through classroom instruction.

It is generally understood that to learn and be efficient in an L2, a student must have considerable language input and opportunities to use input so that those grammatical forms and lexical chunks transfer to intake (N. Ellis, 2002; Loschky & Harrington, 2013; VanPatten, 2003). To better understand this process from a CL perspective, we must consider the roles of *noticing*, or awareness (Schmidt, 1993), and frequency (N. C. Ellis, 2002), as essential components to transferring explicit to implicit knowledge. It is these concepts that build a foundation for communicative language teaching practices which aid in a student's ability to achieve L2 fluency.

Noticing, Awareness

Social scientist Gordon Logan (1988) found that quality and quantity of attention significantly contributed to storing information into long-term memory. This idea of attention, awareness, or consciousness on a specific task runs parallel to the explicit learning happening within a L2 classroom (Schmidt, 1993). Linguist Richard Schmidt's body of work has also played a significant role in the understanding of noticing and its importance in language acquisition (Loschky & Harrington, 2013). Simply put, the L2 learner must notice a grammatical structure, or other linguistic features, first before it can be transferred to intake (Loschky & Harrington, 2013; Schmidt, 1993). N. Ellis (2002) extends noticing to that which is targeted to relevant linguistic features for a particular system (p. 173). To notice something is to pay attention to it; therefore, student attention to task and to the L2 instructor may play a significant role in moving from explicit to implicit knowledge.

Schmidt (1993) discussed several studies that provide insight into gains achieved from *noticing*. Most notably, Schmidt and Frota (1986, as cited in Schmidt, 1993) report that students who had been directly taught a grammatical form were not only more likely to use it, but also were able to increase their ability to notice incomprehensible linguistic chunks (p. 212). These findings indicate that being aware of one's own learning, or self-monitoring, can assist in the types of grammatical structures learned and can potentially aid in deciphering incomprehensible input in a classroom setting. Even more so, it may emphasize the importance of the teacher's use of the L2 as a valuable tool in raising student awareness of language by varying the levels of comprehensible input he or she uses.

Frequency

Without enough quality input and opportunities to practice, it is almost impossible to attain L2 fluency. Once the L2 learner becomes aware of, or notices, a particular lexical chunk, the L2 teacher must increase the frequency at which it is used. Researchers who study frequency effects see the mind as a system that recognizes patterns (N. Ellis, 2002). In the L1, this is done implicitly (p. 173), but Ellis (2002) asserts there is still a pathway for these cognitive processes to attain L2 automatization. They are: (a) developmental sequence from formula, (b) low-scope pattern, and (c) construction (p. 170). What Ellis (2002) describes is the mind recognizing certain patterns, creating neurological mappings for mental recall, and constructing new lexical features. Frequency's relationship to automatization, in this case, is represented by quick mental recall with minimal effort and the spontaneous construction of new phrases.

These linguistic behaviors reflective of frequency effects align with usage-based theoretical applications to SLA (N. Ellis, 2002), such as informational processing theories. Adults build upon pre-existing mental maps of their L1 to comprehend new linguistic input (L2).

To move to L2 automatization, N. Ellis (2002) advocates for communicative language teaching approaches that allow for student L2 negotiation of the target language goals.

Informational Processing

An IP approach views the human mind is like a computer, and, like any computer, the brain works only as fast as its processor and can only store as much as its memory will hold (Altarriba & Basnight-Brown, 2009; McLaughlin & Heredia, 1996). Each mind organizes information as efficiently as possible but remains somewhat unique on what it gives attention to and how much time it spends on a specific task. McLaughlin & Heredia (1996) list the following characteristics of IP:

1. Humans are viewed as autonomous and active.
2. The mind is a general-purpose, symbol-processing system.
3. Complex behavior is composed of simpler processes. These processes are modular.
4. Component processes can be isolated and studied independently of other processes.
5. Processes take time; therefore, predictions about reaction time can be made.
6. The mind is a limited-capacity processor. (p. 214)

An IP approach assumes that learning a L2 requires multiple processes (e.g. phonological memory, working memory, and long-term memory) (Altarriba & Basnight-Brown, 2009; McLaughlin & Heredia, 1996). It is highly dependent on an individual's working memory, possibly determining how well that individual will eventually learn the L2 (Altarriba & Basnight-Brown, 2009). IP assumes that multiple memory systems are working together within the various stages of the learning process (Altarriba & Basnight-Brown, 2009). Once information is in the long-term memory, it is automatized which signals fluency.

To reach a fluent state in language development, IP theory explains two types of processes that occur: 1) Controlled processing, 2) Automatic detection. Information is first accessed through controlled processing then progresses towards automatic detection. Both Altarriba and Basnight-Brown (2009) and McLaughlin and Heredia (1996) credit Shiffrin and Schneider's (1977) work when discussing controlled and automatic processing. Shiffrin and Schneider (1977) define controlled processing as:

Controlled processing: Controlled search is highly demanding of attentional capacity, is usually serial in nature with a limited comparison rate, is easily established, altered, and even reversed by the subject, and is strongly dependent on load.

(p. 127)

The characteristics of controlled processing require a great deal of attention from the learner and ample opportunities for repetition of target linguistic features. Controlled processing could be said to occur while the mind is engaged with, or paying attention to, the language it is receiving (Altarriba & Basnight-Brown, 2009; McLaughlin & Heredia, 1996; Shiffrin & Schneider, 1977).

It is through this lens, that the researcher views for attention from the learner. For language acquisition attention must be placed on the target language, so that the language learner can automatically detect lexical chunks and linguistic forms. Shiffrin and Schneider (1977) define automatic processing as following:

Automatic detection: Relatively well learned in long-term memory, is demanding of attention only when a target is presented, is parallel in nature, is difficult to alter, to ignore, or to suppress once learned, and is virtually unaffected by load.

(p. 128)

Shiffrin and Schneider (1977)'s definition of automatic detection runs parallel to the field's definition of linguistic fluency.

Informational Processing (IP) is almost cyclical in nature. With an increase in exposure to the L2, and increase in frequency of specific linguistic components, chunks of information move from the working memory to the long-term memory. That learned language chunk then frees up working memory to learn a new lexical chunk of information (Altarriba & Basnight-Brown, 2009; McLaughlin & Heredia, 1996). Within this cycle, working-memory restructures stored information (McLaughlin, 1990). Restructuring happens when new information is processed in a way that causes previously learned information to shift, or realign, itself in the individual's mental schema (Altarriba & Basnight-Brown, 2009; McLaughlin & Heredia, 1996; McLaughlin, 1990). When restructuring occurs, it allows for more difficult or abstract linguistic concepts to be applied.

The IP approach to language teaching asks L2 teachers to establish a solid framework, similar to scaffolding, that complements the working-memory instead of overtaxing it. "Training should involve the frequent use of a particular sentence structure in varied lexical settings, not the frequent use of particular sentences (Levelt, 1978 as cited in McLaughlin & Heredia, p. 224). What Levelt suggests here is for educators to focus on common structural patterns that could be used in a variety of settings. IP also justifies the use of a flexible classroom routine and use of consistent classroom language that can be adjusted as students commit items to long-term memory.

The Teaching of a Language

The previous section provides the lens through which the researcher understands how languages are processed within the mind. The theoretical framework applies components of the

CL field to understand how humans move from explicit to implicit language ability, or move towards linguistic fluency, by delving into noticing, awareness, frequency, and informational processing. The proceeding sections situate the framework inside of the WL classroom through the discussion of communicative language teaching, translanguaging and implicit classroom experiences as it applies to the studies research questions.

Introduction

Darian (1972) cites Marcus Fabius Quintilian (35A.D.—100A.D) as one of the first scholars to address language-teaching methodology (p. 6). The early Roman philosopher and educator authored *Institutio Orator*, a sort of how-to for disseminating Greek thoughts and values. Quintilian's sole, yet influential, work addresses moral and civic purposes of school and schooling, methodology for instructional delivery, and development of educators, or rather, "the perfect citizen-orator" (Murphy & Wiese, 2015, p. xvi). At the time, education and the practice of oratory were intertwined; the language an educator used signaled what was to be learned, modeled how ideas should be expressed, and leveraged social capital (Murphy & Wiese, 2015). In other words, learning started with language and its uses (Murphy & Wiese, 2015, p. x). Quintilian called for the medium of instruction to be Greek, as opposed to the colloquial language, Latin, so that students would be well-versed in both languages (Darain, 1972; Murphy & Wiese, 2015). Quintilian writes:

I prefer that a boy should begin with the Greek language, because he will acquire the Latin, which is in general use The study of Latin ought, therefore, to follow at no long interval, and soon after to keep pace with the Greek; thus it will happen, that, when we have begun to attend to both tongues with equal care, neither will impede the other. (Murphy & Wiese, 2015, p. 13-14)

The quote reflects an early demonstration of SLA through an understanding that if the language is not used (e.g., the 4 language domains), then the likelihood of learning is minimal. In the beginning stages of a young student's education, the Greek language and Greek thought were taught orally, through stories and poetry; when asked to write down what was understood, students were encouraged to spell the words how they were pronounced (Darian, 1972; Murphy & Wiese, 2015). Quintilian suggested the following for pedagogy:

1. An Aesop fable is read aloud and the student is asked to tell the story in his own words.
2. The student writes down the story in simple language.
3. The student paraphrases, in prose, a poetry passage read in class.
4. The student writes a short composition on a proverb or saying of a great man.

(Darian, 1972 p. 6-7)

Although Quintilian suggestions represent receptive skills, the importance rests on the teacher's use of the Greek language. The teacher's use of the Greek language is how the students learn not only language structures, but also the valued ideas of that time (Darian, 1972). Quintilian's method of teaching and his significant emphasis on oratory would continue well into the Renaissance (Darian, 1972; Woodward, 1978).

While Quintilian's methods, which focused heavily on language as a vehicle for civic and moral education, laid the groundwork for later educational frameworks, they also underscore a key principle still relevant today: the importance of active language use in learning. In contemporary language teaching, this idea has evolved into what we now recognize as communicative language teaching (CLT). CLT emphasizes the interactive use of language in real-life contexts, fostering not only linguistic competence but also communicative competence.

Much like Quintilian's emphasis on oratory and active engagement with language, CLT advocates for meaningful communication as a core element of the learning process.

Communicative Approach to Language Teaching and Learning

CLT has been a dominant approach in SLA since the late 20th century and has fundamentally transformed the landscape of L2 teaching by placing emphasis on meaningful communication at its core. It prioritizes interaction and real-world communication over rote memorization and explicit grammar instruction (Canale & Swain, 1980; Larsen-Freeman, 2000; Littlewood, 1981; Nunan, 1989; Richards & Rodgers 1986; Savignon 2002, 1983). Canale and Swain (1980) defined it through the concept of communicative competence reflected in language, which includes grammatical, sociolinguistic, discourse, and strategic competence. Littlewood (1981) emphasized the importance of meaningful interaction in language learning, while Richards and Rodgers (1986) highlighted its learner-centered and task-based nature. Savignon (2002) reinforced the role of communicative activities in fostering fluency, and Larsen-Freeman (2000) underscored the dynamic and adaptive nature of CLT, advocating for flexible methodologies that respond to learners' needs. There is no shortage of literature discussing CLT and its application, so this section is not meant to present new debate. Rather, it's meant to highlight CLT's connection to implicit learning experiences, and challenges within WL classroom research when creating implicit experiences.

Implicit Language learning and CLT

A fundamental advantage of CLT is its attempt to create an environment that mimics implicit learning experiences, take of student-centered approach, and adaptability for the WL classroom (Canale & Swain, 1980; Larsen-Freeman, 2000; Littlewood, 1981; Nunan, 1989; Richards & Rodgers, 1986; Savignon, 1983, 2002). Canale and Swain (1980) argued that

communicative competence develops naturally when learners are exposed to meaningful and interactive language use rather than explicit rule memorization. This aligns with the principles of implicit learning, in which language structures are acquired subconsciously through exposure and use (N. Ellis, 2002; Loschky & Harrington, 2013; VanPatten, 2003). By prioritizing interaction, CLT fosters an environment where students process language input contextually, making language acquisition more intuitive and effective.

Littlewood (1981) emphasized that CLT's student-centered approach allows learners to engage with the language in a way that resembles natural acquisition. Through meaningful exchanges, problem-solving tasks, and interactive discussions, students internalize grammatical structures and vocabulary without direct instruction (Littlewood, 1981). Student-centered activities expose students to spontaneous discourse by requiring them to draw on authentic language within their linguistic repertoire (Littlewood, 1981; Richards & Rodgers, 1986). Instead of drilling isolated grammatical rules, students engage with language holistically, allowing them to discern patterns and structures organically (N. Ellis, 2002, Paradis, 1994). This experiential learning fosters may lead to greater retention and increased fluency, as students develop the ability to use language dynamically (N. Ellis, 2002, Paradis, 1994; Reber, 1993).

Larsen-Freeman (2000) further reinforced the adaptive nature of CLT, arguing that a flexible, communicative curriculum enables learners to acquire language through meaningful input and interaction. When learners are given opportunities to negotiate meaning and refine their language use based on real-time communication, they may develop not only accuracy but also fluency and pragmatic competence (N. Ellis, 2002; Larsen-Freeman, 2000; Paradis, 1994). Such an approach aligns with research on implicit learning, which suggests that language acquisition is most effective when learners are immersed in comprehensible and engaging

linguistic input (Canale & Swain, 1980; Larsen-Freeman, 2000; Littlewood, 1981; Nunan, 1989; Richards & Rodgers, 1986; Savignon, 1983, 2002).

Implicit Language Experiences and Classroom Research

Nunan (2005) defines a classroom as “a room in which teachers and learners are gathered together for instructional purposes” (p. 225). Classroom research, therefore, is research conducted in a classroom with teachers and students for the purposes of understanding and/or improving classroom experiences for all invested parties. Tsui (2003) found three aspects of classroom research that exist: (a) input factors, (b) interaction, and (c) output (p. 121). VanPatten (2004) argues that “at some level input is the primary initial ingredient for the development of competence. . .” (p. 35). In current debates within SLA, input can often be overlooked or taken for granted (VanPatten, 2004). Chaudron (1988) addresses the debate further questioning the overall value of second language instruction:

This issue hinges on the degree to which an L2 is acquired through natural development and exposure to it in meaningful, social interaction, compared to the degree to which a structured, formalistic environment . . . can contribute to acquisition. (p. 4)

Chaudron (1988) highlights the debate over whether language acquisition is more effectively driven by natural exposure in social interactions or structured classroom instruction. This perspective underscores the significance of input as a key factor in second language development, aligning with VanPatten’s (2004) argument that input is foundational to linguistic competence.

While research acknowledges the role of instruction in second language acquisition, its overall effectiveness remains debated due to limitations within the literature. Long (1983) argued in favor of instruction, but stated that his findings did not overwhelmingly support it. Pieneman

(1985) found that instruction sped up the “processing pre-requisites,” or developmental stages of language acquisition, but it did not allow for bypassing certain linguistic features of the TL before others were learned (as cited by Chaudron, 1988, p. 7). Norris and Ortega (2000) conducted a meta-analysis and systematic review of instructed SLA research. Although they found directed instruction benefited language learners overall, the research studies within their review contained significant flaws in reporting, disallowing applicable generalizations.

Implicit learning experiences are essential to developing multi-lingual individuals. Creating implicit language experiences in the classroom starts with target language (TL) exposure, and for the majority of learners in foreign language classrooms, the teacher is the TL model (Chavez, 2016; Kraemer, 2006; Littlewood & Yu, 2011). Thornbury (2002) found that classroom teacher talk represented 70 to 89% of the talking that occurred in the language classroom. However, whether or not the teacher is using the TL is another issue. Duff and Polio (1990), when studying 13 French language classrooms, reported a range of 10 to 100 percent of instructional TL use by the teachers. Kim and Elder (2005) investigated native-speaker teachers of Japanese, Korean, German, and French use of English (the L1) in New Zealand classrooms. The researchers found L1 use ranged from 12 to 70%. These inconsistencies in providing input-rich environments to students confirm the difficulty of teaching the second language in the second language. (Littlewood & Yu, 2011). Additionally, these are compounded by tangential studies exploring teacher’s self-awareness of or self-perceptions of TL use. Findings indicate that teachers over estimate their actual use of TL in the classroom (Bateman, 2008; Chavez, 2016; Cook, 2001; Evans, 2012; Liebscher & Dailey-O’Cain, 2006; Swain & Lapkin, 2000; Turnbull & Arnett, 2002).

Though teachers are inconsistent in providing instruction in the second language, there is still a place for L1 use in creating an input rich environment. Cook's (2001) work in advocating for strategic use of L1 as a classroom resource represents the foundation of the body of research that exists on the topic. Zhao and Macaro (2016) found that teachers' explanations of abstract L2 vocabulary in the L1 improves L2 vocabulary retention. Antón and Dicamilla (1999) studied dyads of adult beginner Spanish-language learners' negotiation of tasks. They found that students used the L1 (English) for meta-linguistic functions, scaffolding, and creating a social space. Liu and Zeng (2015) advocate for teacher self-monitoring of the diplomatic use of L1 over L2. The authors showed that both teachers and students used the L1 for meaningful connections between both languages and to better understand L2 culture, syntax, and grammar. Littlewood and Yu (2011) found three dimensions of L1 use in the classroom and point out that within these dimensions, meaningful negotiation of the TL can occur. They write:

These three dimensions of pedagogical communication—establishing constructive relationships, ensuring understanding, and maintaining a disciplined environment—provide necessary scaffolding for classroom student learning and it may not be surprising if teachers have recourse to the L1 to establish them. On the other hand, since they are so essential, they also provide an ideal framework for TL communication and input, motivated by real communicative needs. A large percentage of teachers feel that they OUGHT to use these opportunities for TL communication more (p. 69)

Effective use of the TL and the L1 is a high value skill, and one that is often neglected in language teacher preparation programs (Trappes-Lomax & Ferguson, 2002). Lindahl and Beecher (2016) conducted a discourse analysis on supervisor feedback for TESOL candidates. They found that within post-observation conferencing, issues of how teacher candidates used

language were often not addressed. Wright (2002) also made claims about the lack of literature developed to support raising pre-service teachers' awareness of TL use in the classroom. Evans (2012) found that pre-service French language teachers struggle when choosing between the L1 and the L2. Bateman (2008) investigated 10 pre-service language teachers' beliefs and attitudes about using the TL by surveying and interviewing them before and after their field experience. Participants held high regard for the TL at the beginning of the field experience, but as it continued, their attitudes changed. Non-native pre-service language teachers' confidence in TL use decreased.

CLT emphasizes meaningful communication over rote memorization in second language teaching and learning, fostering fluency through interaction and learner-centered activities. CLT aligns with creating an implicit language learning environment, where exposure to language in context facilitates spontaneous language production where explicit instruction may be applied. Research highlights the importance of input, particularly teacher-provided target language (TL) exposure, in developing linguistic competence. However, studies reveal inconsistencies in TL use among WL educators, with many overestimating their use of the target language. While the L1 can support language learning through scaffolding and comprehension, strategic use is essential and often under utilized. Effective TL and L1 integration remain underemphasized in teacher training, impacting classroom language immersion (Bateman, 2008; Wright, 2002).

This chapter would be amiss if translanguaging was not addressed, albeit briefly. When considering the beliefs that surround the TL and L1 within a WL classroom, this interplay aligns with the concept of translanguaging, which views a person's linguistic repertoire as dynamic and fluid, as opposed to two languages living separately from one another. Rather than limiting

learners to one language at a time, translanguaging encourages strategic use of both the L1 and TL to enhance comprehension, communication, and overall language development.

Translanguaging in the WL Classroom

Translanguaging is a theoretical framework that recognizes the full linguistic repertoire of the language learner (Canagarajah, 2011; Cenoz & Gorter, 2017; Thomas & Collier, 2002). It affords the opportunity for fluidly navigating multiple languages to enhance communication and learning. Rather than viewing languages as separate entities, translanguaging emphasizes the integration of linguistic resources to make meaning and deepen engagement in the learning process (García & Li Wei, 2014). In mainstream K-12 classrooms in the United States, this approach challenges traditional monolingual ideologies, such as English-only, or policies that require WL teachers to stay within the TL, or by promoting flexible language practices that reflect how multilingual communities use language in real-life contexts (Canagarajah, 2011). Research suggests that translanguaging may improve comprehension and cognitive processing, allowing learners to leverage multiple to make sense of new information (Cenoz & Gorter, 2017). Even more, Thomas and Collier (1997) argue that bilingual education models that incorporate students' home languages alongside the TL lead to higher academic achievement and long-term linguistic benefits, aligning with translanguaging principles.

Within SLA, translanguaging has been shown to support language development by facilitating metalinguistic awareness and promoting cross-linguistic transfer (Hornberger & Link, 2012). García and Sylvan (2011) Studies indicate that when students are allowed to use both their first language (L1) and target language (TL), they develop stronger linguistic skills, as they are able to make connections between grammatical structures, vocabulary, and discourse patterns (García & Sylvan, 2011). This pedagogical strategy also enhances student engagement, as it

validates their linguistic identities and encourages active participation in the learning process (Creese & Blackledge, 2010). Thomas and Collier (2002) further emphasize that sustained bilingual education, in which both languages are integrated into instruction, contributes to higher cognitive flexibility and improved academic performance among multilingual learners. Moreover, research highlights how translanguageing can be particularly beneficial in multilingual classrooms, where learners come from diverse linguistic backgrounds and can collaboratively construct knowledge by drawing on shared linguistic resources (Seltzer & García, 2020).

Despite its benefits, the implementation of translanguageing in formal education faces challenges, particularly in contexts where monolingual ideologies dominate curriculum design and teacher training (MacSwan, 2017). Many educators' express concerns about maintaining TL exposure while allowing space for L1 use, fearing that excessive reliance on students' native languages may hinder SLA (Turnbull & Dailey-O'Cain, 2009). However, research suggests that strategic and intentional translanguageing practices can enhance rather than impede TL development when used as a scaffold rather than a replacement for TL instruction (Lewis, Jones, & Baker, 2012). Thomas and Collier (2012) highlight that dual-language programs rooted in bilingual instructional strategies, including translanguageing, can lead to long-term academic success for language learners. As educators and policymakers continue to explore the role of translanguageing in language education, it remains a critical framework for fostering inclusive, equitable, and effective multilingual learning environments.

Summary

This chapter began by addressing the stark contrast between SLA and L2 teaching. Recognizing that a single researcher cannot be an expert in all things, how can SLA theories move into practical classroom application? In reviewing the literature, key linguistic and

instructional frameworks were discussed. CL provides the framework for understanding the transition from explicit to implicit knowledge, focusing on awareness, frequency, and processing. This theoretical grounding is applied to WL classrooms, where CLT and the creation of an implicit learning language environment are explored. The IP approach emphasizes structured yet flexible routines that support working memory and advocate for teaching lexical chunks in a variety of contexts rather than in isolated sentences. This aligns with CLT, which aims to foster authentic communication through meaningful use and interaction.

It is within these WL classrooms that a student may move towards L2 fluency through the teacher's use of the TL. Translanguaging challenges the rigid separation of TL and the L1, instead encouraging a dynamic, strategic interplay between both to support fluency and comprehension.

Finally, the role of teacher-provided TL input in developing linguistic competence, highlighting discrepancies in teacher perceptions of their TL use were discussed. While maximizing TL exposure is crucial, L1 has a place in scaffolding and comprehension when used strategically. However, teacher training often overlooks effective TL-L1 integration, leading to inconsistent classroom language immersion. By connecting historical perspectives, SLA theories, and modern instructional strategies, the current research literature highlights the importance of balancing structured input with communicative, flexible approaches to foster language acquisition.

This sets the stage for and provides context surrounding the purpose and significance of the research study as stated in chapter one. In the chapter to follow, the methods used in answering the research questions are explored.

Chapter 3 - Methods

Single case design (SCD) is rooted in applied behavior analysis and stems from American psychologist B. F. Skinner's (1904-1990) work on influencing animal behavior (Kazdin, 2011). Kazdin (2011) identifies three distinct characteristics of Skinner's work: (a) the study of frequency of performance, (b) the study of one or two subjects at a given time to see otherwise hidden behaviors, and (c) establishment of causal relationship without use of statistical analyses (p. 14). Over time, Skinner's methodology was applied to human behavior, from which intervention research grew and established evidence-based interventions. In education, we call these evidence-based practices (EBP); strategies, techniques, or programs that deliver positive outcomes for students (Cannon, et al., 2016).

Educational reforms such as No Child Left Behind (NCLB), of 2001, require the use of EBPs in public K-12 settings. This ensures accountability of services (Kazdin, 2011), but also affects how teachers make decisions (Cohen, 2010) and dictates how researchers choose research methods (Ortega, 2005). Experimental design with randomized control trials (RCT) are the "gold-standard" in establishing EBPs (Cannon et al., 2016; Gast & Ledford, 2014b; Horner et al., 2005; Kazdin, 2011). Because of its utilization of random chance, RCT mitigates threats to internal validity, entails a smaller number of assumptions, and removes selection-bias (Shadish, et al., 2002). It allows researchers to establish accurate treatment effects and more easily counter-balance procedures. However, RCTs are not without limitations. RCTs require a large number of participants. These are extremely difficult to carry out in world language (WL) settings in which the bulk of the participants are at post-secondary level, are small in number, and come from convenience samples (Ortega, 2005; Plonsky & Gass, 2011). In addition, RCTs come under ethical scrutiny when dealing with known effective treatments, participant preferred treatment,

and risky new treatments. The design also does not lend itself to quick results, nor to strong external validity.

In the field of second language acquisition (SLA) classroom research, experimental studies have been shown to be inconsistent in reporting practices (Chaudron, 2001; Henning, 1986; Norris & Ortega, 2000; Ortega, 2005; Plonsky & Gass, 2011). This makes conducting meta-analyses or identifying EBPs almost impossible (Chaudron, 2001; Norris & Ortega, 2000; Ortega, 2005; Plonsky & Gass, 2011). Even more, journals within the field have also not come to a consensus about what equates a quality study (Egbert, 2007; Henning, 1986). Chaudron (2001) underscores the importance of finding designs that fit language classrooms. Ortega (2005) recommends looking to other fields for different models that have social utility for language teachers and learners.

SCD has been demonstrated to be a successful methodology for applied fields in establishing EBPs, without the use of large randomized groups. In fact, SCD does just the opposite; it allows for a systematic approach to study the individual. When discussing how SCD can inform best practices in SLA, it is beneficial to look at the current state and past critiques of experimental and quasi-experimental SLA classroom research. In this section, three systematic reviews will be addressed to illustrate the gaps within SLA research and how SCD might offer an alternative to present practices.

One of the first major meta-analysis completed in SLA was conducted by Norris and Ortega (2000). This seminal work conducted a research synthesis (n=77) and meta-analysis (n=49) to assess the effectiveness of second language (L2) instruction. They investigated published studies from 1980 to 1998. Although Norris and Ortega were able to determine that explicit

instruction is more effective than implicit instruction, they were unable to make generalizable claims. They argue,

Widespread inconsistency was noted in the reporting of quantitative data and analyses, posing perhaps the most fundamental threat to accumulation and comparison of study findings . . . virtually none of the L2 type-of-instruction studies reported any measures of error or consistency of their observations or the magnitude of observed effects, despite the fact that studies made direct interpretations about the effectiveness of instructional treatments. (p. 496)

Here, Norris and Ortega point out that the contradiction between the lack of consistent quantitative analysis. Polio and Gass (1997, as cited in Norris and Ortega, 2000) speculated that the lack of basic descriptive statistics and other inconsistencies in reporting could be due to journal editorial practices. However, Norris and Ortega (2000) found that some studies did not meet American Psychological Association minimal guidelines. Norris and Ortega (2000) found that 91% of the reviewed studies reported statistical significance, and the majority of those studies did not report effect sizes, provide alternative explanations for statistical significance, or address the trustworthiness of findings.

Norris and Ortega (2000) argue that variables were also not clearly reported in detail to make replication a possibility for future research (p. 495). An operational definition might have existed within the study, but an understanding of treatment fidelity was lacking in most. Norris and Ortega also found uncertainty about “whether or not learners reacted in intended ways, and whether or not outcomes measures elicited enough and appropriate language use to warrant interpretations” (p. 496). Norris and Ortega (2000) established nine recommendations to improve the quality of SLA research. Within their recommendations, Norris and Ortega call for practices

that represent SCD standards. Considering the difficulties Norris and Ortega found, SCD can provide an alternative methodology for consistent, replicable work to establish effective L2 classroom practices.

A year after Norris and Ortega's study, Chaudron (2001) conducted a similar analysis of L2 classroom research. He focused on all relevant quantitative studies published in *The Modern Language Journal*, SLA's oldest journal on language teaching and learning. Chaudron discussed historical trends over 85 years (1916-2000) of SLA research using postsecondary foreign language classroom research. It was not until the 1990s that we see specific teaching tasks and practices examined. Even though he noted an improvement in methodological design, his critique is similar to Norris and Ortega (2000). He advocated for more reporting of experimental control and treatment fidelity, better design of studies to suit the unpredictable nature of SLA classroom, and increasing the duration of studies (i.e., semester in length or more, or multiple studies assessing the same variables). Chaudron (2001) also discussed a lack of references to previous literature within publications. He found that studies did not build off one another; rather they reinvented "the same problems . . . failing to refine and develop systematic hypotheses for clarification and verification" (p. 66). In addition, he observed lack of documentation of social and linguistic practices. In the end, Chaudron (2001) offers the following:

There are times when, reading through the many years of publication, the reader gets a feeling of *déjà vu*, that nothing seems especially new in the research, so that there only seems to be a need to refine and polish the methodology and assessment procedures. Yet, the recently expanding issues in research in the 1990s suggest that the study of classroom interaction and learning has only begun to scratch the surface. (p. 68)

Chaudron thus addresses the need for methodological improvements in the field and acknowledges the emergence of field-based research within L2 classrooms.

In 2011, the first systematic review of interaction research within SLA was published. Plonsky and Gass (2011) surveyed 174 studies, from 14 journals and 2 edited volumes, from 1980 to 2009. Nearly half (48%) of interaction studies were observationally or experimentally designed to study classroom interaction (as opposed to interaction in a laboratory setting). Plonsky and Gass found that 21% of the experimental and quasi-experimental studies did not utilize pretesting. Random assignment and the reporting of statistical power was often overlooked (p. 349-350). They state this could not only be attributed to small sample sizes, but also to lack of understanding of statistical measurements within the field itself (p. 351).

Eleven years after Norris and Ortega (2000), similar inconsistencies in data reporting and recommendations for improvement remain. Plonsky and Gass (2011) found that the inconsistencies within the assessed studies leave EBPs almost impossible to find. The authors “insist that changes occur in the way research is conducted and reported” (p. 356).

Ortega (2005) has argued that three normative principles have dominated SLA research. First, the value of research should be judged by its social utility. Second, there is no such thing as value-free research. Third, there is an understanding that epistemological diversity is a good thing (p. 450). One thing that sets the language classroom and language learning apart from other disciplines is the sociocultural relationship that must be learned (Tedick & Walker, 1994). This makes the consistent use of (quasi)experimental design difficult for language classrooms.

SCD is a methodology for social learning theories (Gast & Ledford, 2014a). A unique quality that sets SCD apart occurs at the onset of research. Researchers are asked to create a study for other researchers to use and adapt, and that will benefit the target population and

potentially become established as an EBP. SCD is beneficial for SLA research because it can aid in establishing EBPs. This is especially pertinent in the United States where, at the present time, there are no national requirements for studying a WL (Devlin, 2015; Duncan, 2010; U.S. Department of Education, 2008).

This study utilized a multiple-base line across-group design (Gast & Ledford, 2014) to evaluate the effects of the teachers' use of Spanish language on student attention to task. Spanish language was measured using frequency rate and 10-minute partial interval recording (Gast & Ledford, 2014). Student attention was measured through video analysis. Data were collected on three level-one Spanish language classrooms taught by the same cooperating teacher (CT) and student intern (SI) and through the observation of 1 focus student per class. The CT and SI were also given a social validity survey pre- and post-intervention to better understand the feasibility of maintaining the Spanish language as the medium language of instruction. Analysis of data collected sought to answer the following research questions:

1. Does increasing the teachers' use of the L2 increase student's on-task behavior?
2. How does the world language teacher view the applicability and feasibility of using the L2 over the course of a 20-week semester?

Setting, Participants, and Materials

Settings

School Setting

The study was conducted in a small, urban Midwestern public high school adjacent to a military base with a student population of approximately 1,763. Within the high school, 66% of students qualified for free and reduced lunch and 54.5% are economically disadvantaged. The demographics of the school were 46.85% female, 53.15% male; White 49.35%, African

American 24.16%, Hispanic: 12.88%, Other: 13.61%. Migrant populations represented 0.23%, English Learners represented 4.93%, and students with disabilities 14.8% of the total student population. The attendance rate was 96%.

The WL department offered German, French, and Spanish. All languages offered levels beginner through advanced.

Classroom settings

The classes studied were three level I Spanish classrooms. The physical classroom was the same; however, there were three separate groups of students within that classroom. The classroom contained movable desks and chairs. Students typically sat in groups of four or six. The classroom was equipped with a white board, projector, and wireless internet. The walls were decorated with Spanish language materials, including cultural items from various Spanish speaking countries.

Participants

This study was conducted with one SI, one CT, one focus student per Spanish I class, and one university supervisor. All participants were non-native Spanish speakers and non-heritage speakers of Spanish. The SI was enrolled in an undergraduate K-12 certification WL teacher education program at a Midwestern university. The SI was selected based on their participation in a distance supervision field experience, recommendation by faculty supervisor, and their willingness to participate in the study.

The CT was an experienced Spanish language teacher who graduated from the same teacher education program as the SI. They held a Masters in Spanish SLA and was the Department Chair of the WL Department. They were one of three Spanish teachers within the high school. They applied a communicative language teaching (CLT) approach to their

classroom, and often used collaborative, project-based assessments. The university supervisor and researcher was a third year doctoral student in Curriculum and Instruction with five year's experience mentoring pre and in-service WL teachers.

Three focus students were chosen from each Spanish I class from the pool of students who completed both the parental consent and student assent forms and who maintained consistent attendance throughout the course of the semester. These Spanish I courses utilized the same curriculum material, were a similar size, and exhibited similar demographics. See Table 3.1 for demographic information.

Table 3.1. Class Descriptions and Demographics

	Class A	Class B	Class C
Grade levels represented within the class	10-12	10-11	10-12
Class size	27	21	16
Gender			
Male	13	9	7
Female	14	12	9
Demographic			
African American	11	10	10
Hispanic/Latino	2	1	1
Asian/Pacific Islander	1	1	0
White	13	9	5
Number of English Language Learners	0	0	0
Academic Performance			
Below grade level	3	1	2
Above grade level	2	0	1
Students with special needs			
Emotional/Behavioral Impairment	2	0	1
Developmental Disability	1	0	1
Deaf/Hearing impairment	2	0	1
Other Health Impairment	1	0	0
Military connected students	8	5	4

Materials

Because this study used a hybrid-distance education model, meaning the university supervisor conducted both in-person and video-based conferencing with the SI, this study relied heavily on technology and reliable wireless connectivity and capabilities. Materials used for the study were (1) the Swivl, a robotic tracking device and cloud-based video-hosting platform, (2) an iPad with at least 2GB of available memory and at least 90 minutes of battery life, and (3) a tripod for stable filming. The SI and the university supervisor used Zoom, a video conference software program, for all distance conferencing.

Dependent Variables, Procedures, and Social Validity

Dependent Variables

English and Spanish Language Use

SI use of the English and Spanish language was used as a dependent variable. The SI was expected to deliver all classroom instruction in English, then switch to Spanish instructional delivery at differing points in time for each of the Spanish Level I classes according to the proposed study design.

Student Attention to Task

Students attention to task was defined by engagements in any behavior for any period of time that matches the ongoing classroom instruction.

Data Collection

A single-case, multiple-baseline across-group design (Gast & Ledford, 2014) was used to evaluate the effect of the Spanish language on student attention to task. The Spanish and English language was measured using frequency rate and 10-minute partial interval recording (Gast &

Ledford, 2014). Student attention to task was measured after an instance of Spanish or English was heard through pausing the video and checking if the student demonstrated on-task behaviors.

Procedures

Prior to collecting baseline data, the researcher communicated via email with the necessary administrators, the cooperating teacher, and the pre-service teacher to determine the interest and feasibility of the study. The researchers received IRB approval, and handed out and collected parental consent and student assent forms. Once these forms were collected, the social validity measure was taken. English was used as the language of instruction for the first five weeks in all of the Spanish I language class (Class A). The SI began switching to using Spanish for instruction at different intervals for each of the three classes. For the first class (Class A), the SI switched to using Spanish as the language of instruction after the first five weeks. The second class (Class B) received Spanish language instruction after 10 weeks, and the third class after 15 weeks. In each class, one student was selected as a focus student. At approximately 20 weeks, the study ended and the social validity measure was redistributed to the pre-service and cooperating teacher.

Baseline

Baseline data was collected to determine the effect of Spanish language on student outcomes in each classroom. The SI used English as the language instruction pre-intervention; data will also be collected on the amount of Spanish, used with the intention that a minimum amount will be used. The SI recorded weekly videos of classroom teaching, and Spanish language use will be measured.

Intervention phase

After five observational phases, or five weeks, the SI used Spanish as the language of instruction in the first class. Weekly videos of classroom teaching and 10-minute partial interval recordings and frequency rate continued to be measured. Observers counted the amount of English used within the 10-minute interval.

Data Analysis

Inter-observer agreement (IOA) is necessary to increase validity of findings and enhance experimental control (Gast & Ledford, 2014). Kratochwill et al. (2010) recommends IOA be collected for 20% of the data points in each condition (p. 15). IOA was measured during the baseline phase, and throughout the intervention to confirm the use of the English or Spanish language. A graduate student, and native Spanish speaker, was trained to watch the classroom videos, listen for English or Spanish, and look for on-task behaviors from the focus students. The IOA was calculated by using the counts of occurrences from both the researcher and graduate student. The two numbers were divided, taking the smaller number by the larger number and multiplying by 100 (Gast & Ledford, 2014). This measurement determines how much of the same behavior the two observers recorded and agreed upon (Gast & Ledford, 2014).

Visual Analysis

The visual analysis of graphed data identified whether or not a functional relationship between variables exists, and the strength of that relationship (Kratcohwil et al., 2013). Visual analysis evaluated the frequency of occurrence of English and Spanish by the SI and CT and its relation to the focus student's attention to task. Data points were plotted using the frequency counts from 10-minute momentary time sampling. Once data points were plotted, the researcher identified any trend, level, and stability within the graphs.

Social Validity

Social validity is paramount within SCD research, as researchers aim to find practices and behaviors that are socially viable and feasible for both teachers and students (Horner et al., 2005; Kazdin, 2011). Social validity was measured using a modified version of the Treatment Acceptability Rating Form-Revised (TARF-R) (Jolivette, et al., 2001; Reimers & Wacker, 1988). The TARF-R was used to measure the pre-service teacher's perception of five aspects of the treatment: (1) acceptability, (2) willingness, (3) disruption, (4) effectiveness, and (5) time. The survey was modified from Viakinnou-Brinson, Herron, Cole, Haight (2012)'s study on the perceptions of elementary-level college French students when taught French grammar in French. The TARF-R measurement was administered before and after the intervention.

Treatment Fidelity

Treatment fidelity is necessary to maintain experiment control in ensuring the implantation of the interventions. Because this study looks at teacher language use, which is inherently spontaneous, a mentorship approach was used. The university supervisor visited each classroom once a week to observe language use by all participants and to discuss ways in which the SI and CT might strategically maintain the use of the Spanish language in the classroom. Both the CT and the SI had online access to the recorded videos and were encouraged to watch themselves. The university supervisor also met with the SI three times throughout the semester to review video recordings of instructional language and discuss how and when both the L1 and the L2 were used.

Chapter 4 - Results

This study examines teacher use of the second language (L2) and student attention. This chapter is organized by the study's research questions. First, results discussing the teachers use of the L2 and student's on-task behavior will be presented. Second, results from the social validity measure (the modified TARF-R) will be presented. In each case, results are presented to include overall findings first, then individually for each class and/or participant.

Language Use and Student Attention

Visual analysis was used in determining whether the teacher's use of the first language (L1) or L2 and student's on-task behavior demonstrated a functional relationship. Ten-minute momentary time sampling was used to determine frequency counts of English (L1) or Spanish (L2) language by the instructors, and for the number of times the focus student was off task. No functional relationship was identified (See Figure 4.1). During the baseline phase, when English was the language of instruction, an average of 28.90 (SD = 6.12) instances of Spanish occurred. During this phase, focus students displayed little to no off-task behavior ($M = 1.09$, $SD = 3.30$). During the intervention phase, when Spanish was the language of instruction, an average of 24.78 (SD = 3.09) instances of English occurred. During this phase, focus students also displayed little to no off-task behavior ($M = 1.17$, $SD = 3.10$). This indicates there was more instances of Spanish while the teacher maintained the English language as the medium of instruction than there were instances of English when the medium of instruction was Spanish. The results also indicate that focus students stayed on task whether the teacher used Spanish or English as the language of instruction. In the proceeding chapter, these findings will be further discussed in their relation to the study's theoretical framework and its practical applications.

The author served as the primary data collector for this study, with a second independent observer conducting reliability counting for over 20% of all videos used for frequency counting. Total agreement for instances of language use was IOA = 97% and off-task behavior was IOA = 94%.

Table 4.1 on the proceeding page provides a breakdown of the results by class alongside the class description and demographic information presented in Chapter 3. Further discussion of these results, including their interpretation, will be presented in Chapter 5 of this study.

Table 4.1 Results by Class with Class Description Information

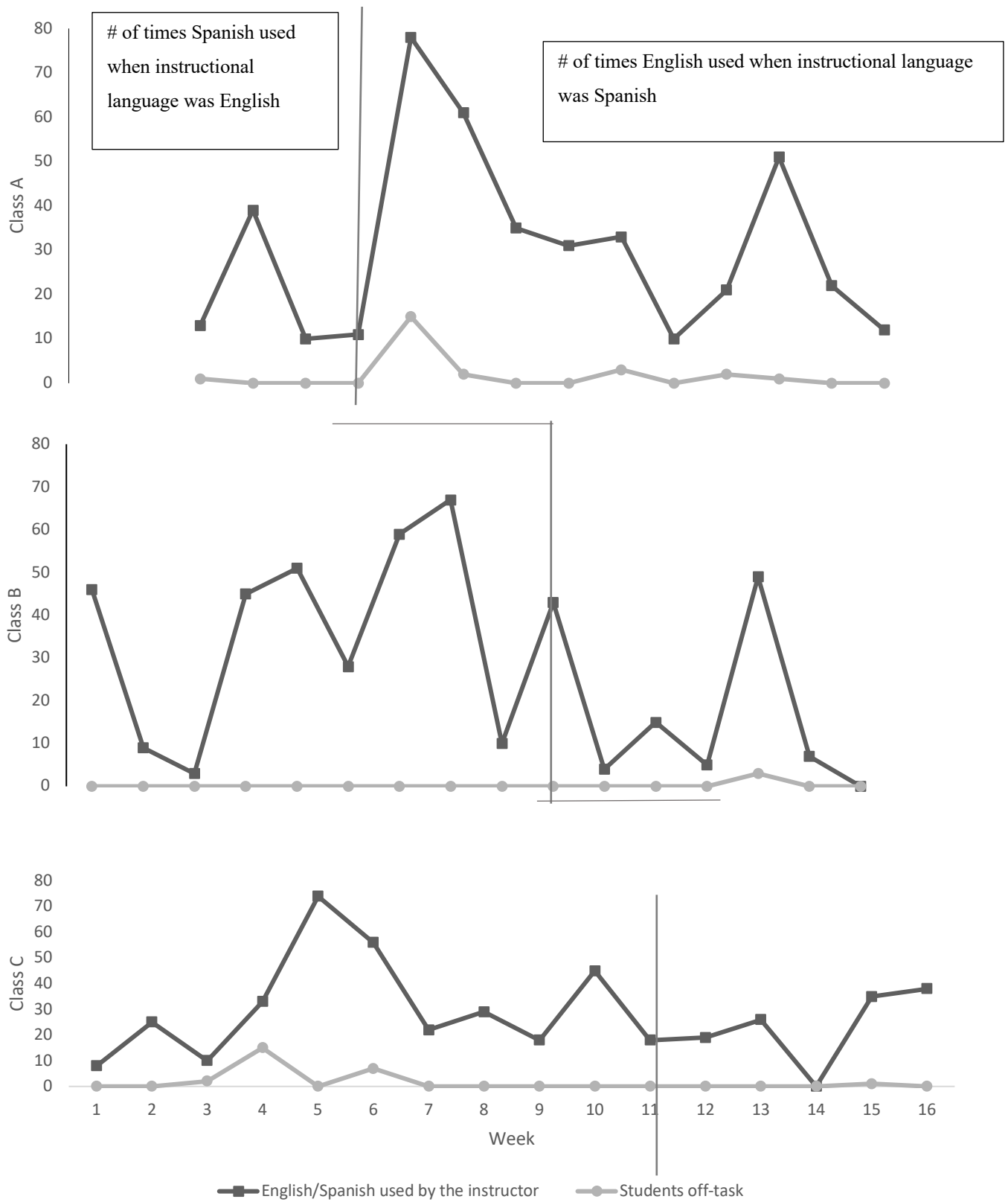
	Class A	Class B	Class C
Results			
Baseline Phase			
Language Use (Mean, SD)	20.66 (13.02)	35.33 (22.24)	30.73 (19.31)
Student Attention (Mean, SD)	0.33 (0.48)	0 (0)	2.18 (4.52)
Intervention Phase			
Language Use (Mean, SD)	33.18 (21.02)	17.57 (18.53)	23.6 (13.57)
Student Attention (Mean, SD)	2.10 (4.10)	0.43 (1.05)	0.2 (0.4)
Description			
Grade Levels Represented within the class	10-12	10-11	10-12
Class Size	27	21	16
Gender			
Male	13	9	7
Female	14	12	9
Demographics			
African American	11	10	10
Hispanic/Latino	2	1	1
Asian/Pacific Islander	1	1	0
White	13	9	5

Number of English Language Learners	0	0	0
Academic Performance			
Below Grade Level	3	1	2
Above Grade Level	2	0	1
Students with Special Needs			
Emotional/Behavioral Impairment	2	0	1
Developmental Disability	1	0	1
Deaf/Hearing Impairment	2	0	1
Other Health Impairment	1	0	0
Military-Connected Students	8	5	4

Note. In the results section of the table, “Language use” during the baseline phase indicates English was used as the language of instruction and the number denotes the number of instances Spanish was used. During the intervention phase, the opposite is true. “Language Use” indicates Spanish to be the medium of instruction and the number denotes the number of instances English was used during instructional delivery.

Figure 4.1 graphs the results of the visual analysis conducted throughout the 20-week semester. The graphs show the results of frequency of occurrence of English and Spanish used by the Cooperating Teacher (CT) and Student Intern (SI) in comparison with the focus student on-task behavior. The vertical line that runs through the graph demarcates the baseline phase on the left and the intervention phase on the right. Each plot point puts in conversation the number of times a student was off-task with the number of times the non-target language was used within instructional delivery during a 10-minute interval. The graphs represent the observations gained from employing the procedure described in chapter three. A more detailed interpretation of the visual analysis can be found in the discussion within chapter five.

Figure 4.1 Teacher Target Language Use (Baseline V.S. Intervention)



Social Validity

A social validity measure was used to measure the instructors' view of the applicability and feasibility of maintaining the L2 as the language of instruction in a WL classroom. A modified version of the TARF-R (MTARF-R, See Appendix C) was administered at two points during the study. The MTARF-R was administered at start of the study in-person, on paper, and a second time at the end of the study using Qualtrics online format. See Figure 4.2 and 4.3 for pre- and post-survey results for both the CT and SI.

Figure 4.2 Histogram of Cooperating Teacher Responses

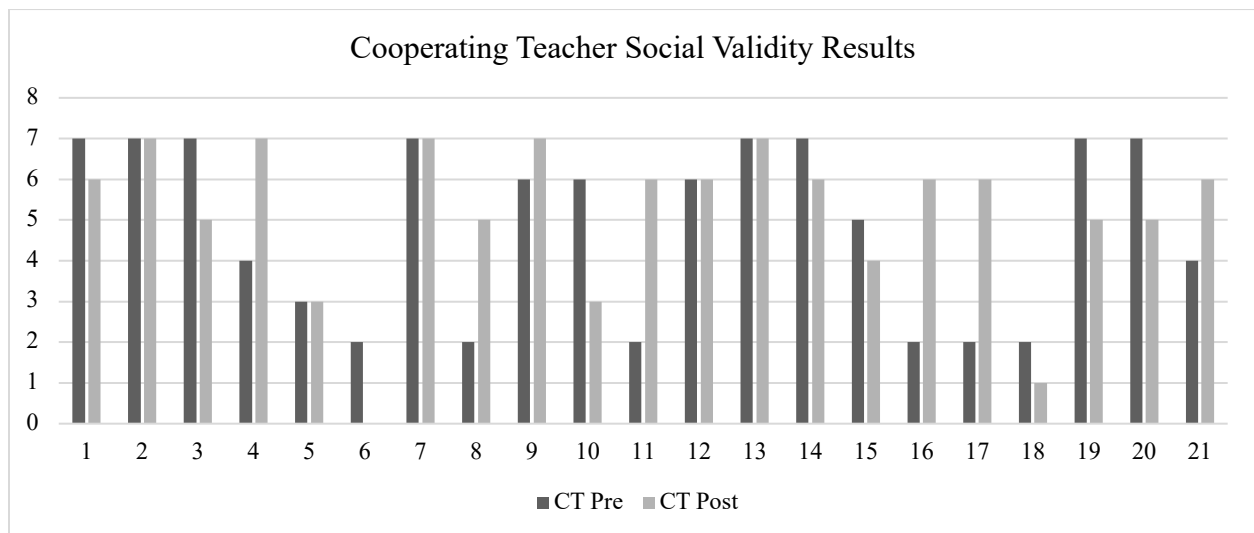
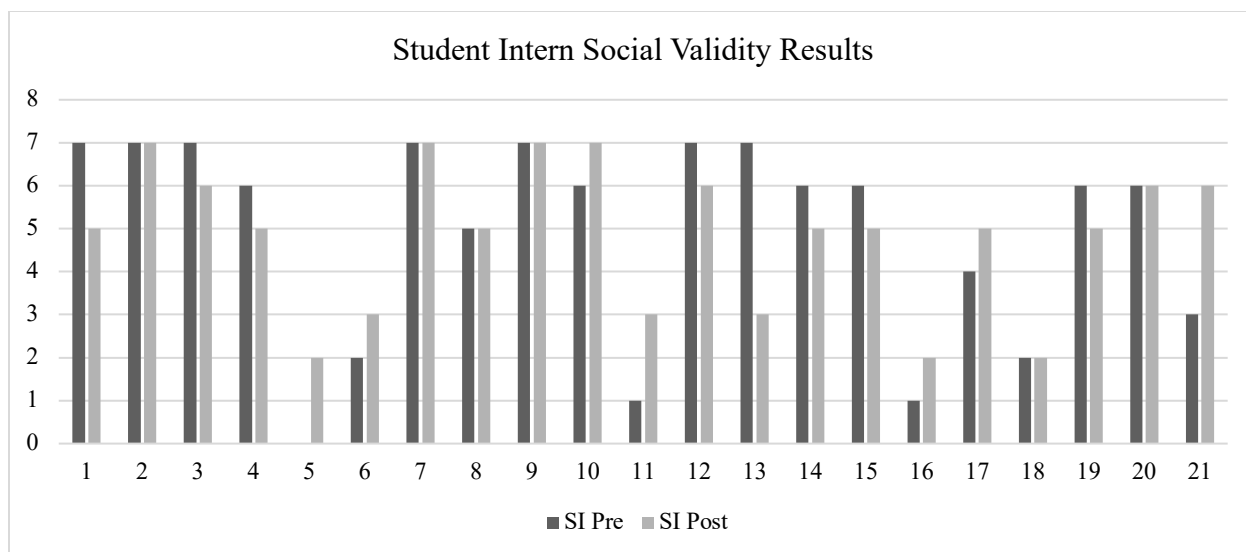


Figure 4.3 Histogram of Student Intern Responses



Prior to the start of the study, both the CT and the SI gave high importance to the use of the L2 and its role in the classroom and in student learning. They saw the use of the L2 as the language of instruction as highly reasonable and feasible. They also gave high ratings to their understanding of how to use the Spanish language as the language of instruction, and to the improvements it would make in student outcomes. The CT and the SI gave low ratings to any undesirable side-effects, yet high ratings to potential student discomfort in using the L2. This aligns with current WL teaching research that sees the use of the L2 by the teacher as a high value skill and as the gold standard of instructional delivery for students as discussed in chapter two's literature review (Chaves, 2016; Ellis, 2005; Evans, 2012; Gilson & Donoto, 2017, Trappes-Lomax & Ferguson, 2002).

By the end of the study, both the CT and the SI increased the rating of concern for their student's Spanish language difficulties measured by the modified TARF-R. Both gave higher ratings to how disruptive using the Spanish language was in the class. For the CT, other areas of change were seen in an increase in the reasonability of using the L2, an increase in time it takes to use the L2, and a decrease in how serious it is to use the L2 as the medium language of

instruction. Although this is a slight change from the previous survey results it maintains alignment to studies that underscore the variation of L2 use within a WL classroom (Duff & Polio, 1990; Kim & Elder, 2005).

At the end of the survey, there was space to leave a comment. It was only in the final administration of the survey that the CT left a comment. The CT stated that they did not expect that the transition to using only Spanish would go unnoticed among their students, listed a variety of questions they came to mind after the intervention, and remarked at how laborious classroom research can be. A more detailed analysis of the CT's comment will be presented in chapter five's discussion. Figure 4.4 showcases the full comment left by the CT in the social validity survey administered at the end of the 20-week semester.

Figure 4.4 Cooperating Teacher comment on Post-MTARF-R

22. Please use the space below for any additional comments, concerns, thoughts, or general musings about this past Spring Semester.

Hmm - I feel like I need an ongoing email for you. Consider this to be musing form and if something sparks your interest and you'd like more details - just ask. I wonder if... 1. This would be more effective in the fall, before experiencing 1 semester of rigor. 2.the results would be different if it weren't just the student teacher you focused on - and the classroom teacher - were there stressors and other tensions/responsibilities that effected how a student teacher approaches a classroom - especially as relationships are established. 3. Was there a "switcheroo" feeling with students - beyond those sampled. I had one student say - Spanish was so much easier when you talked to us in English - but were they talkng about Spanish or the process, the use? 4. With such a diverse class, I wonder if a larger sample size would have been more revealing 5. Was there test fatigue. 6. If done again, could a[n] exit ticket like product be given to the whole class so those 10 dont feel like they are missing out. I didn't expect.... I how frequently kids would be moving in and put of the classroom. It was more disrupive than i realized. Maybe with a class that meets every day this would be minimized. 2. How much kids would not notice the transition from English to spanish. 3 how really poorly (my opinion) we do with 90% target. I think I'd like to do that again....just me, in the fall, more students. I'd like to do it with an upfront explanation so the kids can monitor and provide their own reflections as we go. If

learning is a process, is it more beneficial to have kids aware? Does that wreck a blind test? Anyway.... [Researcher], I'm thrilled to have you in the classroom - it is invasive, otherwise I think more teachers would do it - but so useful!

Summary of Findings

In this chapter, the overall and individual class results discussing the teachers' use of the L2 and student's on-task behavior were presented, as well as results from the social validity measure (the modified TARF-R) given prior to the start and at the end of the study. The purpose of this research was to determine whether a teachers' use of the Spanish language as the language of instruction would affect students' attention to task. This inquiry relied on existing beliefs surrounding the importance of linguistic input reflected in cognitive linguistics (CL) as a framework to understand the WL classroom (N. Ellis, 2002; Loschky & Harrington, 2013; VanPatten, 2003) and on organizational policies that can influence a WL teacher's instructional choices (ACTFL, 2010).

This study investigated two research questions: (1) does increasing the teacher's use of the L2 increase student's on-task behavior, and (2) how does the WL teacher view the applicability and feasibility of using the L2 over the course of a 20 week semester. Results to the first question are inconclusive. No trend line was identified; therefore, a functional relationship between the teacher's use of the L2 and student attention to task cannot be determined. From this case, the effect of L2 use on student attention to task cannot be determined. The CT and the SI highly rated the importance of maintaining the Spanish language; however, by the end of the study this rating fell by 2 points. The CT also commented on the switch from English to Spanish going unnoticed by the students.

In Chapter 5, I discuss the significance of the results, the limitations and implications of the stud, as well as make recommendations for future research and for the WL teacher field.

Chapter 5 - Discussion

This chapter provides a summary of the study of the central issues that motivated this work. The introduction presents how and why the study was conducted. The conclusion discusses the study's theoretical, methodological, and practical implications as they pertain to the research questions. Limitations of the study are addressed as well as offering recommendations for the field.

Introduction

The impetus of this work began with contemplating recent U.S. language educational trends in conjunction with world language teacher development programs. As detailed in Chapter one, the American Academy of Arts & Science's Commission on Language Learning reported in 2017 that only 10% of the U.S. are proficient in another language. Despite federal and state initiatives – such as the Foreign Language Assistance Program, The National Security Languages Initiative, and the introduction of the World Language Advancement Act – many higher education institutions reduced or eliminated their world language (WL) programs due to budget constraints and policy fluctuations (American Academy of Arts & Science, 2017; Bauerian, 2010; Duncan, 2010; Foderaro, 2010; MLA Office of Research, 2015; U.S. Department of Education, 2008). Recently, the Seal of Biliteracy has emerged as a motivational credential for high school graduates to take learning an additional language seriously, it does not provide direct funding or clear guidance on how to improve instruction in K-12 WL settings so that students can attain the Seal by graduation. Organizations such as ACTFL advocate for 90% instructor language use as best practice, and WL teachers' perceptions of second language (L2) use is seen as a high value skill (Chaves, 2016; Ellis, 2005; Evans, 2012; Gilson & Donoto, 2017, Trappes-Lomax & Ferguson, 2002). However, there is a paucity of research establishing a

functional relationship between teacher language of instruction and student achievement (Chaudron, 2001; Egber, 2007; Norris & Ortega, 2000; Ortega, 2005; Plonsky & Gass, 2011; Plonsky, 2014).

In Chapter 2, research was highlighted that underscored the importance of developing evidence-based practices that addressed how and when the first language (L1) and L2 should be used in classroom instruction. Consistent, high-level L2 use by WL instructors is a critical factor in creating an environment conducive to second language acquisition (SLA). Studies within SLA indicate language exposure to be critical in developing language ability (N. Ellis, 2002; Loschky & Harrington, 2013; VanPatten, 2003). Current trends within the field suggest strategic use of the students' L1 proves beneficial in learning vocabulary and some grammatical concepts (Antón & Dicamilla, 1999; Cook, 2001; Littlewood & Yu, 2011; Zhao & Marcaro, 2016). While existing research points to the potential benefits of such an approach, there is a lack of conclusive evidence and methodological inconsistency in studies of L2 instruction, and the majority of these studies remain within tertiary or laboratory settings (Altarriba & Basnight-Brown, 2009; McLaughlin & Heredia, 1996).

The study set out to determine whether or not Spanish language use by the WL instructor increased or decrease students' on task behavior. Previous studies have shown that off-task behavior puts students at a high risk of poor academic performance, and the importance of attention in learning environments (Logan, 1988). By implementing a single-case multiple-baseline design, the aim was to contribute to more definitive strategies that can assist both teachers and students to reach higher levels of language proficiency (Cannon et al., 2016; Gast & Ledford, 2014b; Horner et al., 2005; Kazdin, 2011).

In developing research questions, the researcher worked directly with a cooperating teacher (CT) and a student intern (SI), to investigate instructional practices at the intersection of their needs and gaps within the relevant literature. The following research questions were developed:

1. Does increasing the teachers' use of the L2 increase student's on-task behavior?
2. How does the WL teacher view the applicability and feasibility of using the L2 over the course of a 20-week semester?

To answer the questions above, the study investigated three Spanish I high school classrooms using a single case-multiple baseline design to establish a functional relationship between student's attention to task and language of instruction. When using single case design (SCD), a social validity measure is needed to determine the usefulness of the intervention. A pre and post survey was given to measure the applicability and feasibility of using Spanish as the language of instruction over the course of the 20-week semester. In the preceding sections, the theoretical, methodological, and practical implications of the findings presented in Chapter 4 were discussed.

Implications

In this section, a wholistic discussion of the results is presented that highlight finding from the 10-minute interval frequency counting and the social validity measure. It is followed by a breakdown of the result's theoretical, methodological, and practical implications.

Analysis of the 10-minute interval frequency counting (Figure 4.1)

Figure 4.1 displays the results for Class A, B, and C. Each graph shows how frequently the instructor switched between English and Spanish during 10-minute observation intervals. Each graph includes a vertical line indicating the shift from baseline to intervention, where the

CT and SI aimed to maintain a higher percentage of Spanish language use during instructional delivery.

Class A (Top Graph)

During the baseline phase the data reveals notable spikes in Spanish usage during instructional delivery and little to no evidence of students off-task behavior. This may suggest the CT and the SI found it difficult to use English as the language of instruction in a Spanish language class, which may be a testament of their skill and belief in creating a language-rich environment.

After the intervention begins, and the CT and the SI use Spanish as the language of , there is a large spike of English present that coincides with student-off task behavior. However, this settles into moderate levels with little to no off-task behavior by the students. This could be a shift in both the teachers and the students getting used to new classroom routines and expectations.

Class B (Middle Graph)

In Class B, there are notable fluctuations in Spanish used throughout the baseline phase, where English should have been maintained as the language of instruction. Once the intervention is introduced, English usage during Spanish-mode remains relatively low and steady, suggesting the CT and the SI were more successful at sustaining Spanish when it was the designated language of instruction. Interestingly, there was little to no student off-task behavior throughout both the baseline and intervention phase.

Class C (Bottom Graph)

In Class C, during the baseline phase there are spikes in Spanish instructional language use that is reflective of baseline results in Class A and Class B. The spikes mimic spikes in

student-off task behavior, but it is not prevalent enough to create a trend line. During the intervention phase, when Spanish became the language of instruction, there are less instances of English present and almost no student off-task behavior present. It is within Class C, that we have a class where only Spanish is used (no presence of English used by the CT or SI), and no instance of student off-task behavior.

Overall, the findings indicated little to no relationship was present between the teachers' use of the L2 and student's on-task behavior as no trend line was identifiable. Within each of the three classes, high instances of both languages existed during the baseline and intervention phase highlighting the dynamic nature of the WL classroom. Class C had the only instance of consistently maintained Spanish instructional language use and student on-task behavior. This occurred at the end of the semester and within the smallest of the three classes. There were a few moments where there was a spike in L1 and a spike in off task behavior. This happens soon after the intervention phase begins in Class A and Class B. This could have been due to the loss of student attention once the L2 becomes the medium of instruction.

Social Validity Measure

It is worth spending the following sections discussing in detail the comment left by the CT. Three general themes were identified: 1) Research collaboration, 2) Instructional dynamics, and 3) Future improvement.

The CT suggests that the study's timing and participants (particularly the SI) might have affected outcomes. They speculate that running the study in the fall—before students and the SI encounter mid-year academic “rigor”—could yield different results. This reflects an awareness of how the semester's demands, stressors, and the SI's evolving relationships with students might influence language use and student engagement. Additionally, the teacher is curious about

whether involving more participants or a larger sample size could provide deeper insights into student reactions and performance.

A key point is the CT's realization that students might not always notice transitions between English and Spanish, raising questions about how to make language use more intentional or salient. The CT also mentions that some students found Spanish “easier” when the teacher reverted to English, prompting the CT to wonder whether students were commenting on the language itself or the classroom process. The CT further notes the logistical challenges—like frequent student movement and potential test fatigue—and how these factors may disrupt both data collection and instructional flow.

Finally, the teacher expresses a desire to refine and repeat the study, potentially conducting it themselves in the fall, being more upfront with students about the target language (TL) goals and gathering ongoing reflections. They acknowledge that involving students in the process could raise awareness of their own learning but might also alter the “blind” nature of the study. Overall, the teacher values the research experience despite its “invasive” aspects, viewing it as an opportunity for deeper pedagogical insight.

Theoretical Implications

The study contributes to SLA theory by challenging assumptions about the direct effects of L2 immersion on learner attention. While cognitive linguistic (CL) theories (as discussed in Chapter 2) emphasize the role of comprehensible input in promoting implicit learning and fluency, the current findings suggest that simply increasing L2 usage does not automatically translate into enhanced on-task behavior. This raises questions about the relationship between language exposure and attention allocation. In particular, the following considerations transpired upon reflection of the findings. First, the results may suggest that implicit learning processes may

not be linearly improved by higher percentages of L2 input alone. Second, it may give rise to a reconsideration of the role of teacher talk in terms of its qualitative features rather than the sheer quantity of L2 exposure. Finally, concepts under the CL umbrella do not always account for task design, student motivation, or individual differences which could mediate the relationship between language input and learning outcomes.

These implications call for a more nuanced integration of theoretical models such as informational processing (IP) and translanguaging into the broader conversation on effective WL classroom practices.

Methodological Implications

Methodologically, employing a SCD —often used in special education—offers a replicable, data-driven way to explore and refine classroom practices. This approach allows WL teachers to systematically investigate how students learn, moving instructional choices toward a more evidence-based practices (EBP). A social validity measure, which is an embedded part of SCD, captured the CT's and SI's perceptions of these instructional strategies. In this study, there are several considerations for improvement.

First, the use of partial interval recording for student attention may require further refinement to capture subtle shifts in engagement, particularly in the dynamic WL classroom. The semester long, 20-week intervention, provided valuable data on sustained teacher behavior; however as evidenced by the CT comment in the post-study survey, the timing, duration, and disruptive nature of the research should be more carefully considered. With refinement, this type of study may be feasible in a context other than a single urban high school to further understand how, how often, and at what points, does a WL teacher use the L2 in collaboration with the

students' L1. Overall, this study design may hold promise to contribute more deeply to the theoretically and practical understanding of language teaching and learning.

Practical Implications

SLA and classroom research guide educators to make strong, seemingly spontaneous decisions. From a classroom perspective, the findings hold several implications for educators: a) instructional strategies, b) balanced language use, and c) engagement techniques. The absence of a significant difference in student attention under high L2 usage indicate that simply adhering to guidelines (e.g., 90% L2 instruction as recommended by ACTFL) may be insufficient. Instead, teachers might focus on the quality of language interactions – incorporating varied, engaging activities that target student interests and address cognitive load. Given that student attention did not significantly shift with increased L2 use, teacher training programs and professional development should emphasize strategies that actively engage students beyond language exposure – such as interactive group work, problem-solving tasks, and culturally relevant materials. While the strategic use of the L1 can scaffold comprehension, this study reinforces the need for a balanced approach. Educators should consider integrating both L1 and L2 in a manner that supports meaning negotiation and content comprehension, similar to those that align with a translanguaging approach described in Chapter two.

Limitations of the Study

Three limitations to the following study will be discussed: 1) selection bias and treatment fidelity, 2) sample size, and 3) timing of implementation.

The study holds potential for selection bias for the CT, SI, and the WL class; all of which could have contributed to the low treatment fidelity. The cooperating and student teacher were specifically chosen for their willingness to participate in the study, and for their interest in using

the L2 as the language of instruction. As the social validity survey indicated, both rated using the L2 as of high importance. Although these participant characteristics might have been beneficial for the study, it could have been a hindrance when establishing baseline with use of the L1. In addition, the inclusion of a SI could have also affected how and how much of the L2 was used during both the baseline and intervention phase. Having a SI in a class, albeit a part of the classroom experience, does not represent what is typical in a WL classroom. It was not the researcher's intention to investigate the student teacher's ability of using the L1 or L2, but merely what the researcher had access to. The Spanish level I was chosen because the CT had three sections of this class. Although this proved advantageous in maintaining consistency, an intermediate language class might have produced different results from both the instructors and the students.

The small sample size is also a contributing limitation of the study. Although, there were three classes, only one focus student per class was chosen. The students chosen were from those who completed the consent and assent forms and were present for all observed classes. Typically, those students who volunteer are already in good academic standing, meaning these students might have paid attention regardless of the language of instruction. The study could also have benefited from increasing the focus students from one to three per class.

The study took place during the second semester of a Spanish I class due to the timing of the IRB, and the need of a full semester for data collection. A study of this kind might have been better placed during the first semester of an academic year as the teacher is establishing classroom habits, routines, and expectations. The second semester start time could have affected the teacher's ability to change their methods of instructional delivery, and the students' willingness to go along with those changes effectively.

Recommendations

The proceeding section offers recommendations for future research and to the WL teaching field.

Recommendations for Future Research

Future research in WL education should prioritize closer investigations of 9-12 classrooms using methods designed to build EBP, ensuring that findings genuinely inform teaching strategies. This includes examining the language used by instructors, not only to quantify how much TL is present in the classroom but also to determine what supports researchers and higher education institutions can offer to enhance teacher proficiency and confidence. Equally important is exploring how students themselves use the language, as their production and engagement can reveal critical insights into the effectiveness of instructional approaches. By developing models that incorporate translanguaging—strategically blending L1 and L2—educators can reduce the stigma associated with using either language, thereby fostering a more inclusive and flexible environment for second language acquisition. Ultimately, increased collaboration with 9-12 instructors is essential to ensure that all research endeavors align with actual classroom needs, allowing teachers and researchers to co-construct relevant, practical solutions that strengthen language learning outcomes.

Other considerations for future research may also include replicating the study across multiple schools with diverse student populations, incorporating a more nuanced observational and self-report tool to provide a deeper understanding of student attention and engagement, extending the duration of interventions to track long-term outcomes; and complementing quantitative data with qualitative methods to offer insights into teacher perceptions, student experiences, and the contextual factors influencing classroom dynamics. Future studies might

explore how factors such as task complexity, student proficiency, and teacher feedback interact with language use strategies to impact learning.

Recommendations for WL Educators

From a theoretical standpoint, WL educators can benefit from adopting an IP lens, which highlights the importance of frequency, noticing, and the interplay between implicit and explicit knowledge. This perspective encourages teachers and pre-service teachers (PSTs) to focus on how often students encounter key language structures, whether they notice them, and how those structures ultimately move from working memory to long-term memory. Practically, such an approach underscores the value of flexible, TL pedagogy in which students actively mimic and practice the language they hear. Rather than viewing the classroom as too “messy” for research, teachers can use theoretical insights as a springboard for making informed decisions amid the natural complexities of instruction.

Future directions in WL education should emphasize the teacher’s strategic planning of their oral instructional delivery coupled with instructional modeling and visual aids. A WL teacher’s voice is one of their strongest tools in fostering a productive struggle, that pushes learners to engage more deeply with the TL. This approach would be enhanced by developing clear models for translanguaging, allowing both teachers and students to make strategic use of their L1 and L2 without stigma. Additionally, classrooms should place a greater focus on student-to-student L2 interaction, as negotiated meaning can lead to richer communicative experiences and improved language proficiency (Loschky, 2013). Finally, it worth revisiting secondary-level programmatic learning outcomes. Is the goal for students to earn the Seal of Biliteracy? Improve socio-cultural skills in the target language? Or prepare students to use the target language in professional or academic settings? Or become a global citizen? This

reevaluation can ensure that curricula and teaching methods align with the evolving demands of the local community and the larger multilingual community.

For example, a WL teacher who focuses on the process language of the classroom—such as routine phrases for collaboration or transitioning between tasks—gives students repeated opportunities to notice and internalize these expressions. By making the language of classroom interactions explicit and encouraging students to work together in the TL), educators increase vocabulary exposure and create more implicit learning experiences. Often overlooked in favor of content standards, these routine, communicative moments can significantly bolster students' overall language development.

Summary

This study underscores the complexity of the relationship between L2 teacher usage and student attention. While increasing the L2 exposure did not yield significant improvements in on-task behavior, the findings point to the need for a multifaceted approach that combines quality instructional practices with balanced language use. The theoretical, practical, and methodological implications discussed here provide a framework for rethinking world language (WL) teaching and learning.

Although existing frameworks often emphasize the benefits of extensive L2 use, they typically overlook the reality of teacher oscillating between the L1 and L2 in day-to-day classroom practice. Recognizing that this is an inevitable part of many instructional contexts, the question becomes how to prepare language teachers to use both languages strategically. By guiding teachers to intentionally incorporate the L1 for clarifying complex concepts, while maintaining frequent exposure to the L2, educators can maximize opportunities for input, boost intake, and help students transition new information from working memory to long-term

memory. Embracing a translanguaging approach as a valid, purposeful tool rather than a shortcoming that can ultimately enrich the language-learning environment and enhance overall student proficiency. Reimagine the world language classroom, not as a monolingual space, but a space where students and teachers have a multitude of linguistic resources to understand the world around them.

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Appendix A - ACTFL Position Statement on Target Language Uses

American Council on the Teaching of Foreign Language Position Statement: Use of the Target Language in the Classroom.

Research indicates that effective language instruction must provide significant levels of meaningful communication* and interactive feedback in the target language in order for students to develop language and cultural proficiency. The pivotal role of target-language interaction in language learning is emphasized in the *K-16 Standards for Foreign Language Learning in the 21st Century*. **ACTFL therefore recommends that language educators and their students use the target language as exclusively as possible (90% plus) at all levels of instruction during instructional time and, when feasible, beyond the classroom.** In classrooms that feature maximum target-language use, instructors use a variety of strategies to facilitate comprehension and support meaning making. For example, they:

1. provide comprehensible input that is directed toward communicative goals;
2. make meaning clear through body language, gestures, and visual support;
3. conduct comprehension checks to ensure understanding;
4. negotiate meaning with students and encourage negotiation among students;
5. elicit talk that increases in fluency, accuracy, and complexity over time;
6. encourage self-expression and spontaneous use of language;
7. teach students strategies for requesting clarification and assistance when faced with comprehension difficulties; and
8. offer feedback to assist and improve students' ability to interact orally in the target language.

*Communication for a classical language refers to an emphasis on reading ability and for American Sign Language (ASL) to signed communicative ability.

Date:

Friday, May 21, 2010

Emphasis added. Taken from <https://www.actfl.org/news/use-of-the-target-language-in-the-classroom> 03/24/2025

Appendix B - Intervention Schedule

Week	Dates	Intervention
1	16-Jan	
2	23-Jan	
3	30-Jan	
4	6-Feb	
5	13-Feb	Intervention 1 on Feb 15th
6	20-Feb	
7	27-Feb	
8	6-Mar	Intervention 2 on March 8th
9	13-Mar	
10	SPRING BREAK	
11	27-Mar	
12	3-Apr	Intervention 3 starts on April 5th
13	10-Apr	
14	17-Apr	
15	24-Apr	
16	1-May	
17	8-May	OUT SICK
18	15-May	
19	22-May	

Appendix C - Modified Treatment Acceptability Rating Form

Revised

	Least			Neutral			Most
1. How clear is your understanding of using Spanish as the language of instruction?	1	2	3	4	5	6	7
2. How acceptable do you find using 90% Spanish as the language of instruction when considering optimal learning for students?	1	2	3	4	5	6	7
3. How willing are you to remain in the Spanish language while providing instruction?	1	2	3	4	5	6	7
4. Given issues of classroom management, how reasonable do you find this treatment to be?	1	2	3	4	5	6	7
5. How costly will it be to carry out this treatment?	1	2	3	4	5	6	7
6. To what extent do you think there might be disadvantages in using Spanish 90% of the time?	1	2	3	4	5	6	7
7. How likely is this treatment to make permanent improvements in your student's outcomes?	1	2	3	4	5	6	7

	Least			Neutral			Most	
8.	How much time will be needed each day for you to carry out this treatment?							
	1	2	3	4	5	6	7	
9.	How confident are you that the treatment will be effective?							
	1	2	3	4	5	6	7	
10.	Compared to other classroom issues, how serious is using the Spanish language as the medium of instruction?							
	1	2	3	4	5	6	7	
11.	How disruptive will it be to the class (in general) to carry out this treatment?							
	1	2	3	4	5	6	7	
12.	How effective is this treatment likely for your class?							
	1	2	3	4	5	6	7	
13.	How affordable is this treatment?							
	1	2	3	4	5	6	7	
14.	How much do you like the procedures in the proposed treatment?							
	1	2	3	4	5	6	7	
15.	How willing will students be to use the Spanish language in the classroom?							
	1	2	3	4	5	6	7	

	Least				Neutral			Most
16. To what extent are undesirable side-effects likely to result from this treatment?	1	2	3	4	5	6	7	
17. How much discomfort are your students likely to experience during the course of this treatment?	1	2	3	4	5	6	7	
18. At what level (in general) do you consider your class? (7=fluent Spanish speakers; 1=false beginners)	1	2	3	4	5	6	7	
19. How willing are you to change your classroom routine to carry out this treatment?	1	2	3	4	5	6	7	
20. How well will carrying out this treatment fit into your classroom routine?	1	2	3	4	5	6	7	
21. To what degree are your student's Spanish language difficulties of concern to you?	1	2	3	4	5	6	7	

Please use the space below for any additional comments, concerns or questions (optional):