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First Language as a Resource in Additive Bilingual Education

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First Language as a Resource in Additive Bilingual Education

by

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Abstract

Bi-multilingual language and literacy research over the past three decades demonstrates the positive benefits of integrated language learning pedagogic approaches. In the Alberta Kindergarten to grade 12 bilingual program construct, where second language (L2) learning and biliteracy are the goals, pedagogic practice has not capitalized on these findings. Instead, there continues to be a parallel monolingual orientation to instruction, resulting in the complete separation of languages in learning. As programs have expanded, pedagogy for middle-years and secondary level learners who have attained intermediate level competencies in the second language has become a challenge in that learners frequently interact in their first language (L1) instead of the second language. Practitioners have begun to question existing instructional practice, and research is needed to explore next pedagogic approaches suited to adolescent learners at intermediate and advanced L2 levels. Educational researchers have reported that for pedagogic practice to evolve, practitioner participation in research is critical. To that end, a participatory action (PAR) research study was conducted. Classroom teachers explored English-Spanish dual language (DL) processes with middle-years learners, and specifically observed the role of the first language (English) as a resource for intermediate level second language instruction. DL approaches such as integration of learning and bridging of knowledge were investigated. Data was gathered chiefly from the perspective of the bilingual program teachers informed by classroom experiences with students, as well as through researcher observations and student feedback. Results demonstrated ways in which L1 was a resource for cognitive mediation, L2 development, biliteracy growth, and adolescent bilingual identity formation.

Keywords: bilingual education, SLA, biliteracy, dual language, secondary education, advanced second language, pedagogy, identity, code choice, PAR

Preface

This thesis is original, unpublished, independent work by the author, Elaine Schmidt.

The qualitative study conducted with three middle school teachers and their students was

approved within Ethics Certificate number REB16-1443, by the University of Calgary Conjoint

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Dedication

To my dad, mom and Alexander, who have trusted and enabled me to follow my path.

Table of Contents

List of Tables

List of Figures and Illustrations

Chapter One: Introduction

Educational Context

Concurrent with increasing levels of ethnic and linguistic diversity in Alberta

communities and schools (Alberta Treasury Board and Finance, 2017), there is growing interest

in alternative language learning programs. Alberta is unique in Canada in that as well as French

Immersion education, the current *School Act* legislates an option for bilingual programming in

languages other than French (Alberta Education, 2000). Bilingual programs offer up to 50% of

instruction in a target second language (L2), such as Spanish. According to the *Guide to*

Education, these programs have the objective of developing high levels of language and literacy

in both English and the second language (Alberta Education, 2012). It is important to note that

in French Immersion (FI) and this bilingual program construct, the L1 (English) is the majority

language, and the L2 is a minority language chosen by the stakeholders. This distinguishes these

additive language learning programs from many other bilingual education contexts in which the

learners' L1 may have a lower status locally. In these bilingual programs both languages are

valued, but the learners' L1 (English) remains the high-status language in the community.

In spite of commonalities with FI such as similar educational environments and

comparable student demographics, there are distinct differences between the two forms of

language education. Bilingual program learners spend less instructional time in the target second

language; French Immersion offers approximately 40% more time in the L2 in grades one to six,

and 25% more time in the L2 in grades seven to 12 (Alberta Education, 2012). As well, the

Alberta Spanish Language Arts Grades 7-8-9 Program of Studies (2006b) rationale explicitly

promotes the transferability of first language competence. In spite of these differences, bilingual

program pedagogy has largely been based on the French Immersion (FI) model, which has

traditionally advocated for the separation of languages, i.e., the target language only policy (Swain & Lapkin, 2013). This pedagogic orientation has proven to be problematic in the view of some bilingual program educators (Naqvi, Schmidt & Krickhan, 2014).

In bilingual programs, learning has been structured into discreet time blocks for each of the two languages, thereby reducing opportunities for cross-linguistic learning. Generally, the Language Arts course, Mathematics and an optional subject such as Music, Art, or Physical Education occur in the L2 (Alberta Education, 2012). All other subjects are offered entirely in English. This strict separation of content fractures the learning experience for students and continues to be perpetuated despite substantial global research over the past three decades that refutes the efficacy of such siloed approaches to instructed language learning.

The target language only approach is rooted in the half-century-old discipline of second language acquisition (SLA), which continues to be the subject of divergent theoretical conceptualizations of language and related pedagogy (Byrnes, 2008; Firth & Wagner, 2007). Traditional practices have been heavily influenced by Chomsky's 1950s theory of generative linguistics, and by biologically driven views of cognition. Pedagogically, the view of language as an autonomous element to be learned independently of other languages has contributed to learner first language being treated as interference or as a problem in the second language acquisition process.

In recent decades social constructivist orientations have challenged this conceptualization of language and learning, and consequently sociocultural thinking has gained prominence in social science, humanities and education research. This reconceptualization is exemplified in Vygotsky's (1987) seminal work on the sociocultural theory (SCT) of language and learning. He claimed that meaning is socially constructed primarily by using the symbolic tool of language,

and that language leads in the development of cognitive processes. Further, his conceptualization of the zone of proximal development (ZPD) radically positioned teacher-learner interaction as a powerful element in the learning process. The application of SCT to second language acquisition articulated the important role first language plays as a semiotic tool to facilitate learning of the L2 and learning in the L2 (Lantolf & Thorne, 2006). The shift away from viewing learner first language as a problem and toward the notion of first language as a resource with regard to second language acquisition was broadened by research contributions from educational theorists and those in other disciplines. These include the ecology of language learning (Van Lier, 2008), the linguistic interdependence principle and related language education hypotheses (Cummins, 1979, 1980, 1982), interdisciplinary perspectives on learner identity (Norton, 2013), and motivational theory (Dörnyei, 2009).

Current perspectives on language education include approaches such as dual language (DL) instruction, which embraces learner first language and other affordances in the learning environment in support of second language acquisition. Principles of the DL approach as outlined by Hamayan, Genesee and Cloud (2013) include: *skill and knowledge bridging, balanced literacy, integrated instruction, equal status of languages,* and *oral language foundations*. In this study teachers were positioned to explore dual language principles in the context of their middle-years bilingual education setting, with specific attention to the role of the first language (English) related to content learning in the second language (Spanish), the learning of the L2, and biliteracy growth.

The overview that follows includes a description of the research problem, the purpose of the study, the research questions, and the research design. These are followed by the rationale

and significance of the study for the language learning community, and the researcher

perspectives and assumptions. The overview concludes with key terminology.

Research Problem

While some bilingual program educators and administrators have recognized that the

separation of languages inhibits opportunities for cross-linguistic learning, there was uncertainty

as to how to address the pedagogic gap regarding the best way to best capitalize on cross-

linguistic knowledge and skills. A longitudinal action research study resulted which explored the

potential of language integrated learning for kindergarten to grade four students attending a

bilingual English-Spanish program (Naqvi et al., 2014). The study produced findings consistent

with substantial previous global research which demonstrated that learning occurs across

languages, and that first language is a resource in second language acquisition (Cummins &

Persad, 2014; Llinares, 2013; Norton, 2013).

As bilingual programs expanded into the secondary grades, further questions arose

regarding language learning needs of students who should have already acquired substantial

competencies in their second language. Among the pedagogic issues that gained attention of

middle-years and secondary school educators were the perception that learners lacked confidence

with L2 production, and that they frequently chose English (L1) in Spanish learning settings.

Additionally, recent national research indicated that during the secondary years, students

reported progressively decreasing levels of intellectual engagement with learning (Willms,

Friesen & Milton, 2009). For all these reasons, attention to the instructed language learning

experience of this age group seemed timely.

This study investigated the phenomenon of integrated dual language pedagogy in the

middle-years bilingual context, with a focus on the role of learner first language (English) as a

deliberate learning resource. Feedback from the language learners (end users) regarding the interplay of the two languages during the learning tasks served to inform teachers vis-à-vis learner needs within the zone of proximal development. This input helped teachers refine DL processes and created an instructional feedback loop between teachers and students.

Statement of Purpose and Research Questions

The purpose of this study was to collect qualitative data in order to document the experiences of classroom bilingual program teachers investigating the dual language (DL) learning environment. Teachers explored DL learning and the affordances of learner first language (English) as a resource in meeting middle-years learner needs, including Spanish language acquisition, and literacy development in both Spanish and English. The phenomenon of study was bilingual pedagogy, and the unit of analysis was the role of learner first language (English) as a pedagogic resource. This was an exploratory study, intended to describe the processes, affordances, strategies and tensions that teachers and students experienced when using first language as a resource in the dual language setting.

The study was intended to inform bilingual middle-years classroom pedagogy and potentially grow more general theoretical understandings about SLA and bilingual education in this setting. Through observation and reflection regarding the hands-on experience of bilingual teachers using an integrated dual language approach, the findings describe ways that first language can be employed as a resource for advancing bilingual learning and literacy growth at the intermediate L2 level. Further, this research was intended to inform and promote conversation among local educators, those in the provincial network of bilingual educators, and others with interest in second language learning pedagogy.

This study was based on three interpretive, inter-related research questions:

1. How can first language (English) be employed to support cross-linguistic transfer of knowledge and skills?

2. How can first language (English) impact instruction for a) second language (Spanish) acquisition, and b) biliteracy development?

3. In what other ways might an integrated dual language approach support bilingual middle-years learners?

Research Design

A participatory action research (PAR) methodology was employed. It had the goal of collecting insights from bilingual middle-years teachers and students regarding the ways in which student first language (L1) can support second language (L2) learning and biliteracy growth. As principal researcher, I worked interactively with the teachers as they designed and implemented dual language learning sequences that focused on roles of L1 (English) as a tool for L2 learning. During the implementation, the teachers journaled regarding their classroom experiences with students and their ongoing interactions with the researcher. I gathered observation field notes in the classroom, which also served as stimulus for researcher-teacher conversations and reflections. A research team debrief followed the implementation of PAR cycle one. Based on discussions regarding phenomena of interest in the data, the teachers refined another dual language sequence for PAR cycle two. Implementation, the focused-conversations with students, and a final debrief and focused-conversations with the teachers followed.

Rationale and Significance

The rationale for this study originated from the researcher's interest in the instructed language learning context. My hope was to assist bilingual program educators to improve pedagogy for intermediate level L2 learning. In turn, these secondary level students might develop increased skills to action personal agency for ongoing growth of their L2 communicative capacity. As well, learners who develop skills for navigating the contact zones between languages and indirectly between cultures, could be better equipped for intercultural participation locally and globally.

Immersion language learning programs in Canada have been internationally recognized for their success, yet educators and researchers have acknowledged that all is not well with regard to some aspects of intermediate level second language outcomes (Lyster, 2007). As recently as 2013, at the National Conference of the Association canadienne des professeurs d'immersion (ACPI), acclaimed language education researchers Jim Cummins, Fred Genessee, Sharon Lapkin and Roy Lyster each voiced the need to evolve bilingual pedagogy in light of research findings. For example, Lapkin challenged the longstanding position that the L1 is a problem in bilingual education, reinforcing that it was an area worthy of investigation. By peeling back the layers surrounding L1 assumptions, norms and pedagogic practices, I intended to inform the conversation regarding the L1 affordance within intermediate L2 level bilingual pedagogy.

The significance of the proposed research is twofold. Within the discipline of second language acquisition (SLA), this study makes a specific contribution in the area of Alberta bilingual program pedagogy with regard to understanding the purposeful role of learner first language (English) at the intermediate L2 level. The study investigated an alternative to target

language only practice by examining and documenting an integrated dual language approach. It was particularly important as there is a dearth of global research regarding secondary school bilingual practices in these intensive language learning settings, and it was therefore intended to advance that pedagogic conversation.

Second, the study employed a participatory action research (PAR) methodology with a group of bilingual educators who participate in school professional learning communities (PLCs) and province-wide community of practice (CoP) networks. Such school-based environments do not normally have access to the tools, processes and time needed to effectively support collaborative action research. In this regard, the PAR experience may have provided a model to empower teachers and the school instructional leader in order to build future action research cycles of professional learning within the school.

Researcher Perspectives and Assumptions

I am a full-time doctoral student. My background includes program administration and teaching in both urban French Immersion and mainstream English junior and senior high schools. I also have experience as a district specialist involved in the development and expansion of bilingual programs in English and Spanish, English and Chinese, and English and German. I have participated in several recent action research studies involving dual language pedagogy. It is in the context of these varied experiences in second language learning that I chose to embark on this topic for investigation.

My career in education mostly involved working with students and teachers in school settings, and has influenced my beliefs regarding professional learning. I value the PAR methodology because it brings a variety of voices and perspectives to the conversation, and it challenges the teacher participants and the greater school professional learning community to

look at practice from different perspectives. In order to do so, it was important to regularly reflect on personal and professional assumptions and orientations regarding bilingual learning and any new learning that arose from our study experiences. All participants were asked to identify and acknowledge their existing preconceptions (to the degree possible) during the collaborative interactions, as part of debriefing and discussion agendas, and independently through journaling and research notes.

The study concept was based on a number of assumptions about second language acquisition, bilingual education, and teacher professional practice. My personal language learning assumptions include the belief that a high level of second language learning along with first language growth (referred to as additive bilingualism) is achievable in instructed L2 learning settings. However, pedagogic approaches and strategies vary according to the nature of the learning situation. For example, the Alberta additive English-Spanish bilingual structure differs from the Alberta French Immersion program structure (Alberta Education, 2012), thereby implying the likely need for a context specific instructional approach for each program.

With regard to educational practice, this study was based on the assumption that teachers have the deepest practical knowledge of learners in bilingual settings and they were therefore best positioned to explore practice in the bilingual middle-years program. As well, if teachers participated in the action research process (planning, implementing, reflecting and then refining and repeating the learning design), the potential trustworthiness of the data would be increased, as would the likelihood of ongoing professional growth within the school community.

Terminology

Language learning terminology varies significantly according to the differing perspectives of scholars, practitioners, policy makers and the public in general. For the purposes of this study, the following language education definitions (and acronyms) will be used:

- *Additive language learning* – a new language that (L2) is learned in addition to the mother tongue (L1), with the L1 continuing to develop. (Skutnabb-Kangas & McCarty, 2008)

- *Affordances* - a relationship between an organism (a learner) and the environment that signals an opportunity for, or inhibition of, action. (Van Lier, 2004)

- *Bi-multilingualism education* – two or more languages are used as the medium of instruction for various subjects; non-forms and weak forms such as sink-or-swim submersion, perpetuate monolingualism; strong forms such as Canadian French Immersion, lead to high levels of bilingualism and are associated with greater academic success overall. (Skutnabb-Kangas & McCarty, 2008)

- *Biliteracy* - generally refers to written competency in two languages. (www.merriam-webster)   The stated goal of Alberta bilingual programs (Alberta Education, 2006b) is high levels of spoken and written language competency in English and another target language. Accordingly, in this study, biliteracy refers to high levels of written and spoken competency in two languages.

- *Codeswitching* – speakers alternate between two or more languages, or language varieties, in conversation. (Turnbull & Dailey-O'Cain, 2009)

- *Dual language* (DL) – learning a second language (or more), while continuing to learn the first language. (Office of Head Start, 2016)

- *First language* (L1) – a synonym for mother tongue or language most used. (Skutnabb-Kangas & McCarty, 2008) In the context of this study, L1 is English.

- *Languaging* – the process of making meaning and shaping knowledge and experience through language production. (Swain, 2006)

- *Metalinguistic (ML) awareness* – the ability to see language as an object, and to think and talk about it. (Ó Duibhir & Cummins, 2012)

- *Metalinguistic (ML) knowledge* –learners' ability to correct, describe, and explain second language errors; includes using language above surface structures, which enables deep thinking and the abstract use of language. (Roehr as cited in Alipour, 2014; Roehr, 2008)

- *Parallel monolingualism* - the conceptual separation of learning along the strict line between autonomous languages. (Heller, 1999)

- *Second language* (L2) – language learned after the mother tongue. (Skutnabb-Kangas & McCarty, 2008)

- *Spanish Language Arts* (Spanish LA) – instructional outcomes as described in the Alberta Education Spanish Language Arts Grades 7-8-9 Program of Studies. (Alberta Education, 2006b)

- *Target language* – a language other than one's native language that is being learned. (www.merriam-webster.com)

- *Translanguaging* – using the entire linguistic repertoire and modes of language to navigate autonomous languages for communicative purposes. (Garcia, 2010)

Chapter Two: Literature Review

The context of this investigation was an additive bilingual language learning environment where the traditional program pedagogy was characterized by the complete separation of the two languages for learning. The study was inspired by previous action research (Naqvi et al., 2014) at the grade one to grade four level, which was developed in response to a call from practitioners for a rethinking of the pedagogic practices in the program. The results of that exploration of integrated dual language learning became of interest to educators working with intermediate level second language (L2) learners in the middle-years setting. The bilingual teachers participating in this study had integrated English-Spanish teaching assignments. They were thereby positioned to explore dual language (DL) learning and the affordances of learner first language (English) in meeting middle-years learning needs, particularly Spanish language acquisition and biliteracy development.

Conceptual Framework

Social constructivism and sociocultural theory (SCT) of language and learning (Vygotsky, 1987) formed the theoretical base for the study. Second language acquisition (SLA) and bilingual education theory further informed the choice of the dual language (DL) pedagogic approach as an alternative to traditional target language only pedagogy, which has been challenged in educational research for several decades. The challenge included broad-based theoretical support, such as Cummins' (1979, 1982) language interdependence principle, principles of dual language instruction (Hamayan et al., 2013), views on learner identity and investment (Norton, 2013), and second language motivational theory (Dörnyei, 2009). Together these interdisciplinary perspectives supported the conceptualization of a bilingual ecology of language (Van Lier, 2010), within which the role of learner first language (L1) as a resource was

explored. The conceptualization identified specific pedagogic areas of focus including content

and conceptual learning through the L2, and the learning of and about the second language

including metalinguistic knowledge and other elements that may support biliteracy development.

As well, the study considered the broad picture regarding language education and the role of L1

in building other aspects of being bilingual. Figure 1 illustrates the conceptual framework.
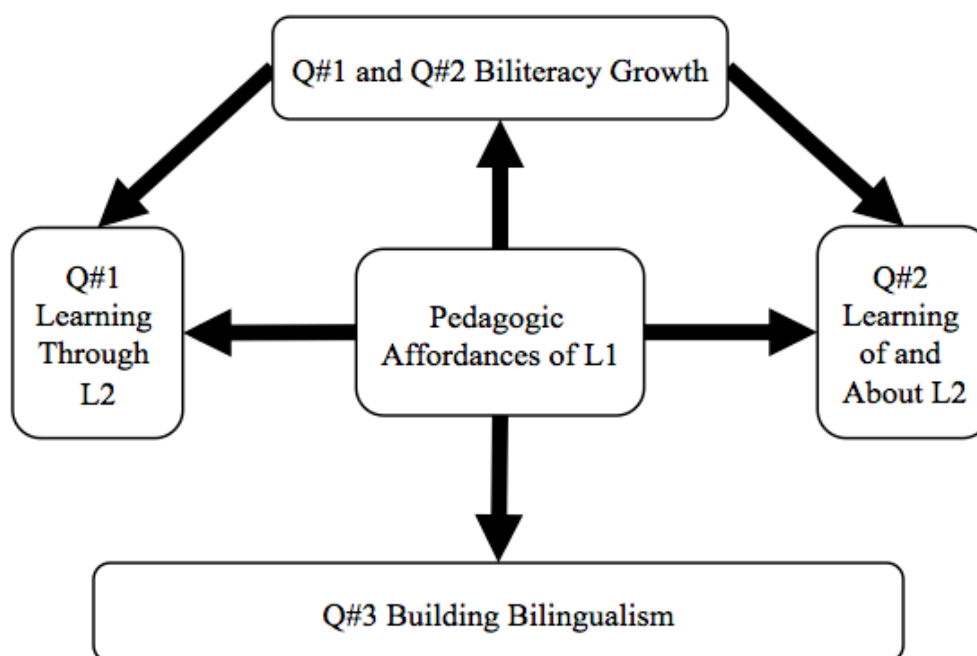
Figure 1. Conceptual framework for PAR study on first language affordances within the
bilingual ecology of language.

In reviewing the literature related to the study of language learning, it quickly became

evident that the topic was both highly interdisciplinary and rapidly evolving. My research was

conducted using numerous databases readily available in the University of Calgary enabled

online environment, including but not limited to Eric, Jstor, and ProQuest. Key search terms

included various combinations of: second language acquisition, bilingual education,

multilingualism, sociocultural theory, biliteracy development, intermediate language learning

pedagogy, middle-years education, code choice, metalinguistic knowledge, motivation, identity, twenty-first century literacy, ecology of language learning, and action research.

The literature review was structured using a deductive (broad to specific) focus on second language learning. It begins by setting the study within an interpretivist paradigm, and providing an overview of the multidisciplinary influences and tensions shaping second language acquisition (SLA) and bilingual education. Following that is a discussion of literature supporting the applicability of a sociocultural lens and an ecological perspective in the service of reorienting bilingual education in the twenty-first century. Scholarly insights into middle-years language and literacy within the evolving multiliteracies context also help situate contemporary pedagogic challenges. Evidence from bi-multilingual research that supports the integrated dual language (DL) approach to bilingual education and its suitability for this study, is then outlined. The literature review section culminates with a discussion about learner characteristics of middle-years students, specifically with regard to the role of identity and motivation within the classroom learning community, and a conclusion.

Social Constructivist Orientation

In the past four decades, ontological, epistemological, and research perspectives as they pertain to language and literacy education have shifted. Though first rigidly defined by the natural sciences in the early 1900s, they have been dramatically recast through various lenses, particularly those of the social sciences, humanities, and education. This interpretivist study was guided by the social constructivist perspective which claims that what we know, and how we know it, is based on a relative and collaborative process of interactive meaning-making (Denzin & Lincoln, 2011).

The study process drew from lived experience, through which knowledge is co-constructed and embodied in language. This ideological perspective is consistent with my belief that language is a powerful social force which both impacts and is impacted by daily interactions, including educational experiences. Social constructivist educational research was valuable for this study in that it enabled exploring the complexity of the ecologies in the educational setting, in the lives of participants, and in the linguistic and other processes by which meaning is derived, sustained or altered (Bergold & Thomas, 2012).

Denzin and Lincoln (2011) stated that social constructivist educational research has the aim of improving practice. Likewise, educational researcher and applied linguist Catherine Snow (2016) claimed that the relevance of educational research hinges on making contributions to the improvement of education by putting practice at the center. She supported Schoenfeld's (1999) position that research knowledge contributions can synergistically respond to both pure and applied objectives and that this is a "high-leverage strategy for making a difference in the years to come" (p. 5). The objective of the participatory action research (PAR) approach in this study was to explore the overlap between practice and theory in a second language acquisition and bilingual education context.

Evolving Disciplines of SLA and Bilingual Education

The second language acquisition (SLA) sub-discipline of applied linguistics has continued to be populated by a range of conceptual and theoretical assumptions about language and learning, interpretations of second language (L2) education terms, program aims, and pedagogic approaches. As represented in Figure 2, various fields of study informed the unique additive language learning construct known as the Alberta English-Spanish bilingual program. These included: specialized areas of linguistics; cognitive and developmental psychology;

language and bilingual education; semiotics; ecology of language; and since the 1990s,

neurolinguistics (Douglas Fir Group, 2016; Dunn & Lantolf, 1998; Firth & Wagner, 2007;

Lantolf & Thorne, 2006; Spada, 2007).
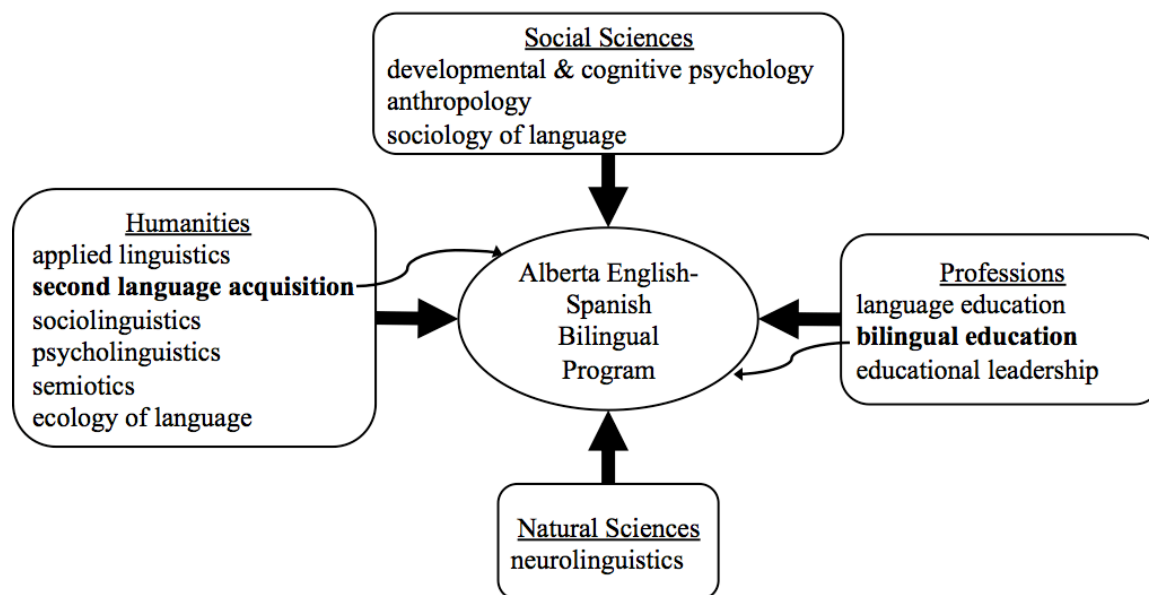
Figure 2. Fields of study informing second language acquisition (SLA) and bilingual education.

There has been ongoing controversy regarding the *emic* (dynamic, holistic and interactive

view of L2) and *etic* (language as a standardized, autonomous construct, external to language

practice) perspectives on language learning (Firth & Wagner, 2007). The debate was

representative of the 1990s paradigm tensions occurring in the related human, social science, and

educational fields of study. Etic perspectives were grounded in Chomsky's 1950s theory of

generative linguistics, which was based on the notion that meaning in language is embedded in

the universal grammar (UG) structures, which we learn to generate using a developmentally

programmed language acquisition device (LAD) (Byrnes, 2008). Sociocultural perspectives on

language and learning attracted scholarly interest in related fields of study where branches of

SLA research progressed beyond the singular role of biological and cognitive growth as the operant in second language learning. Comprehensible input of language, linguistic interaction, and language production (Swain, 2000; Mitchell, Myles & Marsden, 2013) were increasingly investigated. By the start of the 21st century, key leaders in SLA scholarship favored sociocultural theories of meaning-making and emic perspectives of language (Douglas Fir Group, 2016).

In spite of scholarly challenges, Chomsky's early view of language as a finite set of autonomous linguistic elements and an object of knowledge continued to be instrumental in SLA research. In language learning pedagogy it translated into a preference for form and structure over function and meaning (Byrnes, 2008; Quigley, 2004). Teaching of form and structure remained the common instructional approach to second language (also called foreign language) teaching for both youth and adult education around the world (Firth & Wagner, 2007). The etic perspective has also continued to dominate in intensive second language learning settings, such as the Canadian French Immersion (FI) and Alberta bilingual program constructs, where it has translated into a parallel monolingual pedagogic approach to language instruction (Heller, 1999). Parallel monolingualism is the conceptual separation of learning along the strict line between autonomous languages, and results in target language only practice. This perspective implies that first language is not of service in second language instruction and bilingual education. Consequently pedagogy has not deliberately capitalized on knowledge of, and knowledge in the first language (L1) as a resource in the bilingual setting.

In variance with the parallel monolingual perspective, ecology of language (Creese & Martin, 2008), is an interdisciplinary area of study, based on language learning in a holistic context. This conceptual frame incorporates the complexity of the learning process including the

range of relationships, activities, interactions, interconnections and interdependencies across the dynamic network of physical, psychological, social and symbolic elements that comprise the environment (Van Lier, 2010). Each of these elements is an affordance, "a relationship between an organism (a learner) and the environment that signals an opportunity for or inhibition of action" (Van Lier, 2004, p. 91). In short, an affordance is "a possibility for action" (Aronin, 2014). Contrary to research that isolated aspects of the learning environment for detailed study, when using the ecology of language lens, researchers view learning processes within the whole of the instructed bilingual experience. Essentially it orients classroom L2 learning as a social process which includes collaboratively generating meaning and drawing on all resources including knowledge and skills in the L1.

Significance of SCT for Second Language Education

Assumptions about socially constructed meaning that are at the heart of this social constructivist research correspond closely to the tenets of Vygotsky's (1987) sociocultural (SCT) theory on learning and language. Lantolf and Thorne (2006) were careful to establish that SCT is not a theory about human social or cultural existence, but 'a theory of mind' recognizing the central role of relationships and cultural artifacts in the development of human thinking. Vygotsky dismissed the idea that meaning is referentially located in language forms. Instead, he asserted that meaning has social and cultural origins, and is interactively and historically mediated through language. Key SCT concepts as they relate to second language learning include: mediation processes; interfunctionality; and the zone of proximal development.

Contrary to Chomsky's notion of development leading learning, Vygotsky argued that dialogical social experience (interaction and guidance) using symbolic tools (primarily language) leads cognitive development, and that this development is dialectically constructed between

culture and mind (Dunn & Lantolf, 1998; Vygotsky, 1987). He acknowledged the presence of biological development but saw it as intertwined with the sociocultural development of the individual, who through mediated mental development, became increasingly able to regulate the self. Vygotsky helped further theorize the dynamics of cognitive growth with his conceptualization of interfunctionality which states that human functions increasingly transform one another to higher-level interfunctional systems (Van Lier & Waiqui, 2012). Among these interfunctional systems were thinking skills, metacognitive, and metalinguistic processes; all of which are engaged during independent learning. Bilingual learning could include interfunctional operations in either language or both languages.

Also important to the application of sociocultural theory in instructed learning environments is Vygotsky's developmental learning model, the zone of proximal development (ZPD). It represents the potential between a learner's actual skill level and the level of skill attainable when expert guidance is provided (Vygotsky, 1987). Van Lier (2008) clarified the often confused distinction between scaffolding, which is a pedagogic strategy, and the ZPD, which is a developmental learning model. He further articulated their relationship in explaining how the takeover-handover dialogical process in pedagogic scaffolding can be at the heart of how learners are dialectically guided to the levels of skill they do not yet possess. Additionally, second language learner actions within the ZPD serve as a diagnostic tool for teachers or expert guides to design strategies for the expansion of learner language competency to next levels of capacity. For example, in the context of middle-years learners who have participated in a bilingual program since Kindergarten or grade one and who have many linguistic competencies in their L2, relevant ZPD strategies might include empowering learners to increasingly manage

their own language use choices, including awareness about how to purposefully draw from L1 as a resource in their L2 processes.

When SCT was applied to second language learning, it demonstrated that first language is a semiotic tool available to share cognitive load and to facilitate the conceptual mediation of the second language, and in the second language (Lantolf & Thorne, 2006). The authors cited substantial research evidence that thinking (inner speech) is strongly supported by the first language at all levels of L2 proficiency. They concluded that denying the use of L1 reduced learner agency and learner capacity for cognitive growth. This claim was illustrated in a study of French Immersion students' use of L1 for mediating cognitive and collaborative learning situations (Swain & Lapkin, 2000). The researchers contended that learner use of first language was not due to gaps in L2. Rather, as described by Lantolf and Thorne (2006), it reflected learners close psychological link with their first language as a mediating artifact. However, this does not mean that mediation was limited to the L1 only. The authors shared examples of adult L2 learning research that demonstrated increased L2 conceptualization with advanced language proficiency. Further, they asserted that strong learner interest in the L2 culture or community also positively influenced increased L2 conceptual development.

Following this same line of thought, Van Lier (2008) argued that the capacity of the learner to reflect the self as part of the L2 community relied on learner perception of, and interaction with, affordances in the environment including those in the L1. From a psychological perspective he described the self as a union of intellectual and affective processes including agency, motivation, and affective engagement in learning. He suggested that the ability of the intermediate level learner to perceive and act on the affordances in the ecology of language, including L1, enables personal linkages with the L2 and may initiate the formation of new L2

identity patterns. Theoretical support for this perspective was provided by Norton (2013) in her

studies with English language learners. She elaborated on the related sociological notions of L1

identity, investment, and imagined communities, and how they are linked to L2 growth and L2

identity formation. These notions are further discussed in the *Identity, L2 Motivation & CoP*

section of the Literature Review.

Sciocultural theory (SCT) principles including mediation, interfunctionality, and the zone

of proximal development have been influential in language education and research in recent

decades (Van Lier, 2008), and are conceptually suited to this study of bilingual pedagogy. The

pedagogy aims to develop advanced bilingual competencies, which are characterized by

increased learner capacity for and agency in languaging choices. The dual language (DL)

context provides an opportunity for adolescent learners to explore the affordances and develop

strategies suited to the intermediate level of L2 and to their bilingual ecology of language.

Middle-Years Literacy Engagement

A convergence of factors makes the middle-years both a challenging and opportunity-rich

educational space. In Alberta, the middle-years are grades five to nine (Willms & Flanagan,

2010), i.e., approximately 10 to 15 years of age, which includes the developmental stage of

adolescence. In relation to this experience with bilingual learning in the middle-years, there

were three affordances that I anticipated as potentially being instrumental in the implementation

of the DL learning sequences. These were: the adolescent threshold for literacy development;

adolescent interests as they relate to the all-encompassing digital revolution; and adolescent

learner engagement.

First, in relation to literacy development, international research indicates that many

learners experience increasing literacy struggles as secondary schooling progresses. For

example, the 2013 Organization for Economic Co-operation and Development-Programme for

the International Adult Academic Competencies (OECD-PIAAC) survey stated that Canadian

youth (16 to 24 years) were under-performing in literacy compared to their OECD counterparts.

Contrary to assuming a biological rise in intellectual capacity, Christie (2004), and Smith and

Wilhelm (2002) claimed that literacy development is essential for assuring that learners gain

sufficient intellectual capacity through reading and language awareness to develop intellectual

control and disembedded, abstract thought. Vygotsky's SCT notion of learning leading

development highlights the educators' potential to create designs for learning that will nurture

cognitive develeopment and literacy growth. Honing bilingual practices that support literacy

development during this middle-years stage is timely, particularly in context of an educational

program that targets literacy growth in two languages.

Additionally, literacy in the 21st century context is increasingly characterized by digital

interaction. Bilingual middle-years students are first and foremost modern adolescent learners,

and are influenced and empowered by digital literacy environments both as consumers and as

producers of media (Hoechsmann & Poyntz, 2012; Jenkins, 2006). Consequently, and in spite of

the separation of languages policy that many bilingual educators still espouse, middle-years

learners have developed what Cope and Kalantzis (2009) called multilingual and multiliteracies

communication patterns. These include crossing languages, registers and other discourse

boundaries. Digital tools might be employed to engage middle-years learners in exploring dual

language processes for conceptual mediation and communicative purposes.

Finally, along with the digital shift in the past decade, learner engagement has become a

issue of concern in the overall Canadian educational context. A 2009 publication entitled *What

did you do in school today?* captured the national pulse of student perspectives on schooling:

"Levels of participation and academic engagement fall steadily from Grade six to Grade 12, while intellectual engagement falls during the middle school years and remains at a low level throughout secondary school" (Willms, et al., 2009, p. 17). That study was followed by an Alberta provincial study and several national student surveys, which corroborated these initial findings regarding low levels of student engagement in secondary settings (Daniels, Friesen, Jacobsen, & Varnhagn, 2012; Willms & Flanagan, 2010). The frequent use of L1 by bilingual program students might be associated with decreasing intellectual engagement in secondary settings, and explored in context of this phenomenon.

The interplay between integrated DL instruction processes and these three affordances present in the bilingual ecology of language may produce insights and touchpoints related to middle-years biliteracy growth.

Dual Language (DL) Approach: Integrating L1 and L2

The *Alberta Spanish Language Arts Grades 7-8-9 Program of Studies* (2006b) claims a communicative language learning approach, and the front matter expounds upon the merits of learning processes that include a focus on meaningful interaction, cross-linguistic transfer of learning, and the growth of language awareness. However, the manner in which the guiding documents translate into classroom is also driven by hegemonic forces in the community, education politics (Garcia, 2014), as well as by pragmatics such as teacher training, demographics, and pedagogic trends. These factors could help explain the continuation of the parallel monolingual orientation into middle-years and secondary bilingual programs, where instructional time in the target language is reduced and the potential of integrated learning has been fractured by linear timetabling structures.

Since the 1970s, the concept of parallel monolingualism and the related pedagogic practice of target language only, have been disputed and discredited by numerous bi-multilingualism scholars (Cummins, 2001; Garcia, 2014; Swain & Lapkin, 2013). Critical to these conversations have been Cummins' (1979, 1980, 1982, 2008a) seminal theoretical contributions. First, is the linguistic interdependence principle:

> To the extent that instruction in Lx is effective in promoting cognitive/academic proficiency in Lx, transfer of this proficiency to Ly will occur provided there is adequate exposure to Ly (either in School or environment) and adequate motivation to learn Ly (1980, p.122).

The related model of common underlying proficiency (CUP) provided a conceptual orientation for second language and bilingual pedagogy. Based on the broad notion that advancement in either language can assist in building proficiency in the other, these principles informed instructional design toward maximizing cross-linguistic transfer of skills and knowledge.

Second, Cummins (2008a) articulation of the communicative processes of Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP), increased understanding of the distinction between communicative and academic vocabulary. This fundamental lexical understanding backed a framework that outlines the relationship between cognitive involvement and contextual support, and provided strategic frames for integrated instructional planning, and scaffolding for literacy development (Cummins, 1982). These principles guided practitioners to situate learning tasks based on skill levels and the dynamics between cognition, language(s), and the learning environment.

Insights gained from vocabulary acquisition research in other bilingual contexts have also contributed to a more holistic understanding of instruction in the bilingual settings. For example, Roessingh (2016) demonstrated how challenges faced during the middle and secondary school

levels produce a widening English language (L2) vocabulary gap for English language learners (ELLs) in a monolingual educational setting. She noted that the amount of academic language in school course work grows substantially around the developmental milestone of approximately age 15 (secondary schooling). To understand the nature of the gap, Roessingh referred to Beck, McKeown and Kucan's (2002) three-tiered language model that categorizes vocabulary from concrete to highly abstract. The model distinguishes between tier one conversational language, similar to BICS and tier two and three discipline-specific and high-utility general academic vocabularies such as verbs with Greek and Latin roots (e.g. investigate, analyze and prepare), similar to CALP. Her findings point to the need for deliberate instructional goals for growing tier two and tier three language. This insight from ELL literacy research reinforced the general pedagogic questions regarding what vocabulary is needed, what is available to L2 learners, and how each ecology of language can support vocabulary growth.

Further, international bi-multilingualism research strongly supports cross-linguistic learning, and has demonstrated that enabling learners to employ their first language competencies has substantial learning benefits (Creese & Blackledge, 2010; Cummins, 2001; 2008b; Cummins & Persad, 2014; Garcia, 2010; Llinares, 2013; Lotherington & Jensen, 2011; Norton, 2013; Nteliougou, Fannin, Montanera & Cummins, 2014; Ó Duibhir & Cummins, 2012; Schleppegrell, 2013; Turnbull & Dailey-O'Cain, 2009; Wei, 2011). These benefits include evidence of: cross-linguistic transfer of knowledge and skills, language awareness, symbolic multicompetence, increased literacy engagement, and learner investment. For example, Nteliougou et al. (2014) shared numerous scenarios from the past fifteen years of Canadian multilingualism research that demonstrated both increased literacy engagement and increased literacy achievement when dual language approaches were employed. To capture the literacy

affordances available to each student, the teachers engaged with multimodal means and multilingual approaches, such as translanguaging, which "is the act performed by bilinguals of accessing different linguistic features or various modes of what are described as autonomous languages, in order to maximize communicative potential" (Garcia, 2010, p. 140). Nteliougou et al. (2014) concluded "…multilingual and multimodal classroom practice changed the classroom dynamics and allowed the students access to identity positions of expertise, increasing their literacy investment, literacy engagement and learning" (p. 1).

To examine the claim that literacy engagement leads to literacy achievement, Cummins and Prasad (2014) sought out traditional, evidence-based research. They reviewed various data sources including the Organization for Economic Co-operation and Development-Programme for International Student Assessment (OECD-PISA). Across the socio-economic spectrum, the results demonstrated a consistently positive relationship between literacy engagement and literacy achievement, providing some validation of Nteliougou et al.'s (2014) claims.

The above referenced bi-multilingualism research was mostly conducted in English speaking communities, where English has a high status, and English (L2) learning was the primary objective. Notwithstanding this context where the learners' L1 were minority languages, the evidence reported also encourages the exploration of alternative conceptualizations of language learning in the additive setting in that it recognizes the holistic nature of learning. In a compilation of studies specifically focused on L1 use in second language acquisition (SLA) settings, editors Turnbull and Dailey-O'Cain (2009) stated that there was no evidence that a target language only environment is beneficial. Rather, they stated that it might be a detrimental approach. For example, in studies on codeswitching (alternating between languages) in L2 learning, researchers concluded that such moving between languages is a

natural part of moving between discourse relationships and identities, and a deliberate, and playful approach to learning (Evans, 2009; Fuller, 2009). These authors advocated learning approaches that explicitly recruit affordances from learner L1 and other parts of the ecology of language.

Supporters of dual language instruction for the bilingual program have looked for global educational comparisons to inform pedagogy for this context. In my view, other than the Canadian French Immersion model, the most similar in structure and intent is the Content Language Integrated Learning (CLIL) approach being explored and developed in the European Union (Llinares, 2013). CLIL's additive bilingual, biliteracy, and intercultural learning objectives closely resemble the Alberta bilingual program objectives, moreso than do approaches such as the Two-Way Immersion (TWI) model common in the United States (Garcia, 2010). The CLIL model provides a comparative resource because it employs principles of dual language instruction to meet cognitive, communicative and affective goals within the context of building intermediate and advanced language skills and literacy (Llinares, 2013). Although these intensive language learning models have some common language learning goals and affordances, each one also has unique affordances available to enhance the design of DL instruction in that environment. For the purposes of this bilingual education context, the notion of dual language instruction as defined by Hamayan et al., (2013), in *Dual Language Instruction from A to Z*, was chosen to frame the instructional approach. This resource provided an overview of instructional aims and practical strategies based on five fundamental principles: equal status of languages, skill and knowledge bridging, balanced literacy, integrated instruction, and oral language foundations. Ultimately each teacher's dual language initiatives addressed one or more of these DL principles, while focusing on the exploration of the L1 affordance in the learning process.

Identity, L2 Motivation & CoP

In light of teacher concerns identified before and during the study regarding frequent use of the L1 at the expense of L2 intermediate level learning, language code choice became an area of interest for the researcher. Ecological perspectives describe language learning as a dynamic and complex activity that is based on language not as a finite knowledge set, but as a socially constructed phenomenon (Larson-Freeman & Cameron, 2008; Van Lier, 2008). To explain the learner-ecology interactions in this complex dual language environment, sociological identity theory, psychological motivational theory, and situated learning theory as it relates to communities of practice, were considered (Dörnyei, 2009; Lave & Wenger, 1991; Levine, 2011; Norton, 2013).

Though Norton's (2013) identity theory research focused largely on English language learners gaining access to social and cultural capital, it also has merit in other SLA contexts. She explained the relevance of identity for SLA in four key ways: identity integrates the learner with the social world and recognizes multiple positions from which language learners can speak; identity practices are negotiated in life beyond the classroom through learner agency; imagined identities and communities could be reconstructions or desired possibilities for the future; and, identity facilitates the sociological construct of investment and signals attention to factors in learner commitment.

The bilingual program was conceptualized and stakeholders chose to participate in it, with the intent of future involvement in imagined/desired language communities. I contend that the nurturing of bilingual identity is foundational to perpetuating the goal of membership in these communities, and thereby to commitment and learner investment in the instructed English-Spanish ecology of language. Ideally, if the sense of bilingual identity is nurtured alongside

increasing adolescent agency, then authentic and continuous interaction in the L2 classrooms (as reconstructions of imagined/desired communities) can occur.

To support classroom L2 communities, teacher and student participants need to understand the role of the L1 in this language community relationship. In his code choice framework, Levine (2011) acknowledged the cognitive and social dominance of the L1 in the context of the classroom. His instructional paradigm was based on SCT and learning as a socially situated activity, wherein meaning-making and identity enactment take place through code choice. Operating from the L2 learning assumption that maximal time in the target language is a critical goal, he promoted a principled and collaborative approach to classroom language choice. He drew on Lave and Wenger's (1991) social theory of learning and the community of practice (CoP) framework to acknowledge code choice norms, and to collaboratively build relationships and new L2 practices among the class members and the teacher. This CoP approach to code choice was intended to create a conceptual and experiential space for emerging bilinguals, and to increase awareness of personal agency in the L2 learning process. Levine's CoP framework puts into practice Norton's notions that identity is enacted through learner agency, and that identity facilitates investment and commitment to the L2 community.

Parallel to the sociological construct of L2 identity as social and cultural capital (Norton, 2013), motivational theory explains how core feelings and the sense of the L2 self are valuable for mediating and controlling ongoing L2 learning behavior (Markus & Ruvolo, 1989, as cited in Dörnyei, 2009). Dörnyei's L2 Motivational Self System theory presented a psychological interpretation of possible selves that targets adolescent learners, and therefore may have particular relevance in relation to this study. His notion of the ideal L2 self capitalized on

leverage potential during adolescence, when according to Zenter and Renaud (2007) individuals become capable of stable representations of the *ideal self.* Dörnyei's theory explained how L2 motivation is maximized through guided imagery about the ideal L2 self and in combination with concrete short-term goals. He described the stage of adolescence as a potential advantage for creating L2 motivation because it is a time when individuals try on multiple identities as part of their identity formation process. Correspondingly, Levine (2011) outlined two identity probes related to the L2: 'who am I in this language' and 'how am I me in this language'? These questions captured the challenge in Dörnyei's ideal L2 self concept, in that learners must negotiate the presence of both L1 and L2 in their perception of self, and then make choices that support their identity objectives. He suggested that the L2 classroom experience must take into account the highly influential peer norms present in schools, and that pedagogic structures are powerful in the determination of the short-term learning experiences that will perpetuate the ideal L2/bilingual self motivation.

Norton's sociological perspective on identity, investment and desired communities helped theorize language relevance within the bilingual program ecology, while Dörnyei's psychological perspective focusing on the ideal L2/bilingual self, was applicable for theorizing the pedagogical affordance of adolescent bilingual identity formation. Levine's code choice and CoP framework provided a structure for collaboratively exploring the code choice norms in the bilingual classroom (imagined/desired community), and with regard to ideal L2/bilingual identity goals and behaviours.

Conclusion

Alongside the established SLA and bi-multilingualism research, there was need for bilingual program research that specifically investigates the middle-years dual language context,

including the actual nature and function of the traditionally maligned use of the L1 (English) as a potential asset. Theoretically, dual language approaches have had growing support from sociocultural theorists, applied linguistics, and various other interdisciplinary fields. Sociocultural-oriented research has reinforced the role of L1 as a semiotic tool for cognitive processing in mediation and internalization, in support of the development of higher order thinking, and as a diagnostic pedagogic tool in the zone of proximal development. Substantial international bi-multilingual research has demonstrated multiple learning benefits when all affordances, including the first language, are recruited for learning. However, in additive bilingual middle-years and high school level settings where literacy and learner engagement are ongoing concerns, there remained a dearth of related pedagogical research.

Aspects of dual language learning that needed to be understood in the Alberta bilingual setting included: the processes through which knowledge and skills are being transferred; when and how the cognitive load can be shared between languages; in what ways L1 is a resource for intermediate level L2 learning and literacy growth; and, what additional affordances can be engaged in the service of nurturing bilingualism? Dual language research might provide a window on interpersonal and intrapersonal strategies, collaborative processes, biases, limitations, tensions, and other dynamics in the bilingual ecology of language.

Chapter Three: Research Design

In recent years, the traditional second language learning target language only approach has produced significant pedagogical questions and challenges for educators and researchers. An alternative approach that has garnered attention is dual language (DL) instruction, which aims to access first language (L1) knowledge and skills in the service of advancing authentic second language learning (Hamayan et al., 2013). This study explored the role of the first language (English) as the unit of analysis in an integrated dual language (English-Spanish) middle-years context. A participatory action research (PAR) methodology was employed in order to engage and support classroom teachers in the exploration of the dual language learning approach.

The chapter begins by contextualizing the study within a social constructivist paradigm, followed by the rationale for the participatory action research (PAR) methodology and the research questions. The research setting, population and sampling, data collection methods, and methods of data analysis are then outlined. Ethical considerations, measures for establishing integrity in the research, limitations and delimitations of the study, and researcher background are discussed, followed by concluding comments.

Context

Over the past decade, the Alberta English-Spanish bilingual program has expanded to the secondary level (grades seven to 12). Some educators have expressed concerns regarding the framework for this initiative. Three of the areas of concern relate to this study: language performance expectations for bilinguals; use of instructional time in the target language; and context appropriate bilingual pedagogy. First, the mandated Alberta bilingual programs of study do not include benchmarks for assessing target language performance. Beyond locally developed benchmarks, the only L2 performance measure available is the Spanish government's

international Spanish language exam (DELE), which is not directly aligned with the Alberta programs of study. This incomplete framework leaves secondary level educators grappling with a lack of clarity regarding student performance expectations in L2 learning. Second, some educators questioned whether such unclear performance expectations are exacerbated by the middle-years context wherein beginning in grade seven, instructional time in the target language decreases to 35% Spanish, from the 50% Spanish mandated in the elementary years. Third, the various stakeholders' agendas and practices, including many school districts' longstanding French Immersion target language only pedagogic tradition, have collectively enabled the continuation of a monolingual approach to second language education despite substantial educational research that challenges the pedagogic success of this approach (Cummins, 2014, Swain & Lapkin, 2013). The latter concern was the primary subject of focus in this study.

Provincial, district, and school documents were used to outline the complexity of the language ecology in this bilingual program setting. Figure 3 represents a network diagram organized into regulatory, administrative and contextual influences which demonstrate the range of factors that impact the bilingual program conceptualization, implementation, and ultimately classroom pedagogy and practice.
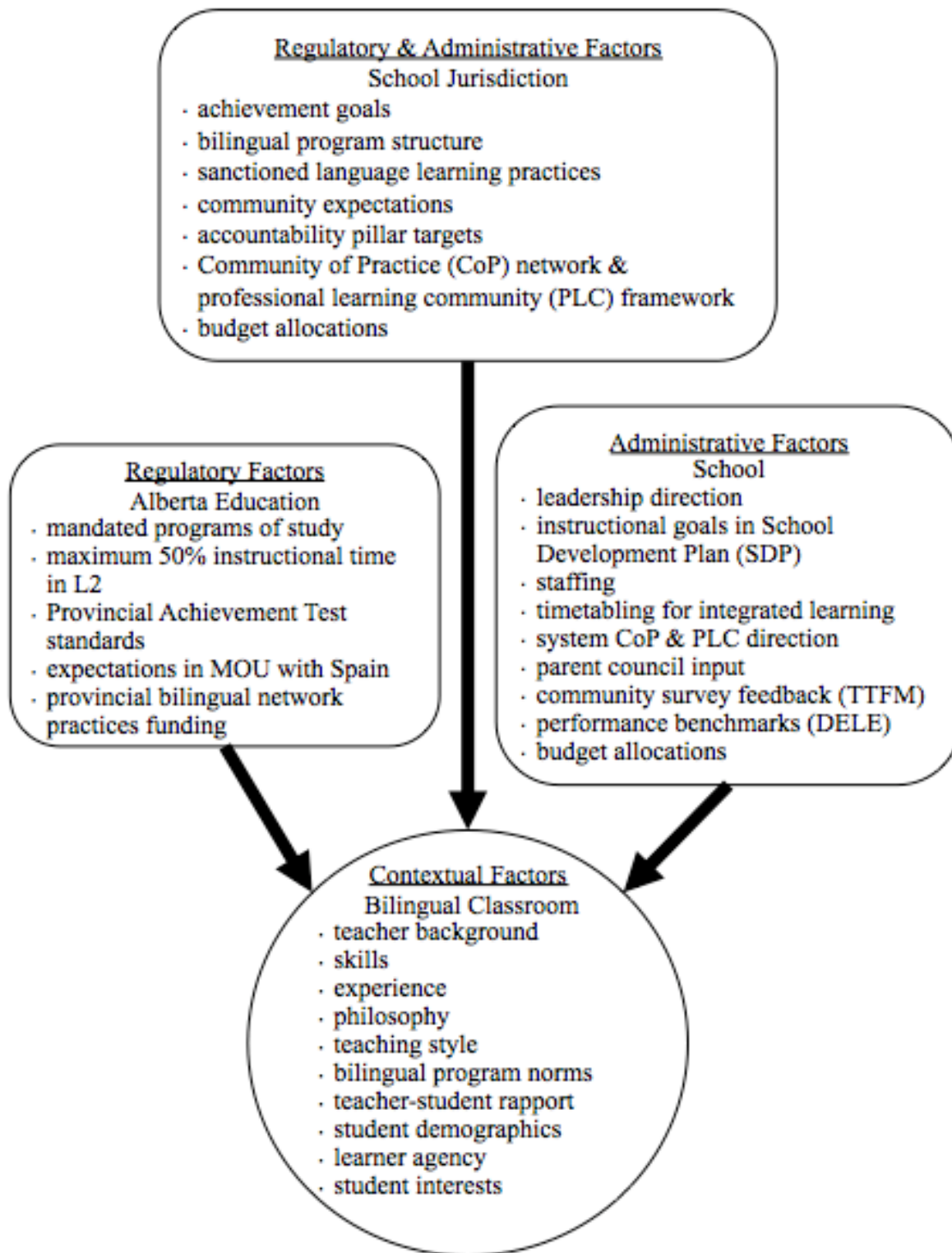
Figure 3. Network diagram of the bilingual program ecology of language.

Based on this bilingual program context, and driven by both pragmatic and pedagogic interests, a small group of bilingual educators were motivated to explore dual language (DL) instruction as a step in evolving a middle-years bilingual pedagogy. To that end, the Sierra Middle School (pseudonym) staff agreed to include an exploratory and participatory research opportunity in their professional learning process. The dual language exploration occurred in three different classrooms but was in essence, a single study involving a group of bilingual teachers jointly investigating DL initiatives, interacting, and reflecting upon their experiences.

Rationale for PAR

This qualitative study exploring dual language pedagogy was positioned in the naturalist-interpretivist tradition within a social constructivist paradigm. The study was informed by Vygotsky's (1987) sociocultural theory (SCT) of learning, by Cummins' (1979) language interdependence principle in bilingual learning, and by Hamayan et al.'s, (2013) dual language principles of instruction. The fundamental relationship between the constructivist paradigm, sociocultural theory, and this collaborative pedagogical exploration was well described by Lincoln, Lynham, and Guba (2011). They stated that if knowledge is constructed through experiences with others, then "as researchers, we must participate in the research process with our subjects to ensure we are producing knowledge that is reflective of their reality" (p. 103). Accordingly, participatory research (PR) seemed an appropriate research process for this study as it was designed to gather data that represents the complexity of the lived classroom experience.

Participatory research (PR) is an evolving methodology with multiple formats. The most suitable format for any study is largely determined by the transformational intent of that study and the degree of stakeholder participation in the development, implementation and

interpretation of the data (Bergold & Thomas, 2012; Cornwall & Jewkes, 1995). Within the broad PR sphere, action research (AR) is common in educational studies and includes cycles of educators planning, acting, observing and reflecting (Carr & Kemmis, 1986). It is an approach whereby teachers systematically inquire into a practical and often local educational problem with the intent of finding a solution (Creswell, 2015). A critique of AR is that the benefits often remain local, and cannot automatically be applied to knowledge at the larger theoretical level or practitioner level. Therefore in relation to this study, AR did not meet the larger study aim of evolving program appropriate bilingual pedagogy.

While practical AR studies have evolved as highly local or classroom oriented ways of improving practice or solving a problem, participatory action research (PAR) evolved from outside of education with a broader agenda of political empowerment and social change. Kemmis and McTaggart (2005) described PAR as a critical, experiential methodology with a significant degree of ongoing practitioner and stakeholder participation. They claimed that PAR has a broader impact than action research because it creates communicative spaces for collaborating groups of people to transform their world by better understanding the recursive nature of the knowledge of the workers, practices of the work, social structures that make up the workplace, and the social media or discourses that represent the work. Similarly, Lincoln et al. (2011) stated that quality constructivist inquiry advocates authenticity by way of fairness aimed at balancing the perspectives of all stakeholders. This includes a raised level of researcher awareness to prevent marginalization of stakeholders, and an orientation toward action with the participants.

The PAR orientation to inquiry facilitated several essential characteristics that held the possibility of helping increase professional learning about bilingual education. First, through

PAR the teachers were acknowledged as the knowing subjects (Bergold &Thomas, 2012) with regard to pedagogic practice, affordances in this ecology of language, and intermediate level learners. They were thereby positioned to use their knowledge and bilingual classroom experience in the service of transforming their own practice, and informing the practice of colleagues. Second, PAR was adaptable. The organic process enabled progressive problem solving as each teacher moved through unique action research cycles (Creswell, 2015) that were informed by feedback from, and interaction with, students and with the researcher.

Finally, PAR's potential to empower participating teachers and their colleagues to grow communicative spaces (Keemis & McTaggart, 2005) for ongoing collaborative research within the school and beyond was essential in order to ultimately evolve an intermediate level L2 bilingual pedagogy. The emancipatory characteristic of PAR could be attained as participants grew mid-level bilingual pedagogic theory through professional learning community (PLC) and language learning community network (CoP) initiatives. Empowerment could also be realized in the evolution of DL strategies and processes, influenced through the inclusion of student voice as an authentic data source (Lincoln et al., 2011). Empowerment has particular importance with students at the middle-years levels and beyond, where national research has shown that decreasing learner engagement is an issue of concern (Willms et al., 2009).

In rebuttal to critiques that PAR is insufficiently scientific or poorly articulated in terms of method, Keemis andMcTaggart (2005) aligned with John Dewey's characterization of the scientific method as being emerging cycles of experience and intelligent action. The authors argued for generative research methods based on communicative action and reflection, instead of standardized forms that reproduce previous interpretations and practices. The *Integrity of the Study* section of this chapter details how this PAR study addressed the related issues of

credibility (validity) and dependability (reliability). Lincoln et al. (2013) reminded researchers that the constructivist process also acknowledges that our subjective selves are embedded in the knowledge that we produce interactively, and thus necessitate that we are reflexive and acknowledge this subjectivity. Ways that pre-existing beliefs and assumptions relative to this study were acknowledged are described in the *Delimitations* section of this chapter.

This study was intended as a first step in the long-term transformative process needed to evolve a bilingual pedagogy for middle-years learners in this distinct language learning context. PAR research methodology seemed most appropriate for ensuring that key stakeholder voices were incorporated into the creation of new understandings. Insights and further questions that emerged from the PAR approach are topics that may provide focus for future research.

Research Questions

The three inter-related research questions that guided this inquiry are as follows:

1. How can first language (English) be employed to support cross-linguistic transfer of knowledge and skills?

2. How can first language (English) impact instruction for a) second language (Spanish) acquisition and content learning and b) biliteracy development?

3. In what other ways might an integrated dual language (DL) approach support bilingual middle-years learners?

Population and Sampling

The sampling for this study was purposefully selected to investigate the lived experiences of bilingual program teachers in interaction with their bilingual program students as they explored dual language pedagogy. The school staff included 30 fluently bilingual program

teachers who came from a wide variety of Spanish-speaking countries and a broad range of teacher educational backgrounds. Many did not have specific pedagogical training for the instructed second language learning context (personal communication with program administrators, 2016). The vast majority of the students in the bilingual program had been together since Kindergarten or grade one, and had English as their first language. As they progressed through the grades, these students became increasingly involved in the decision to continue in the English-Spanish program, and ultimately, in determining their personal level of investment in the second language (personal communication with program administrators, 2016).

School setting. Sierra Middle School housed several educational programs and served a broad geographic, mid-level socio-economic community. Approximately 80% of the students in the school participated in the bilingual program. The school was purposefully selected for participation in the study because of its professional learning pedagogy-oriented trajectory.

In the 2015-17 school-generated and jurisdiction-monitored School Development Plan (SDP), school leadership and staff prioritized authentic learning and bilingual literacy development. School leadership translated these goals into the dedication of school resources to action priorities including: bilingual teacher staffing at the school level; the creation of integrated teaching assignments for many bilingual teachers; and the development of a bilingual literacy Professional Learning Community (PLC). For example, from the practice perspective, the 2015-2016 SDP stated that grade level PLCs would share task design strategies in order to strengthen cross-linguistic transfer.

Prior to and during this study, members of the bilingual literacy PLC and other bilingual teachers at Sierra School expressed a range of views regarding L2 performance expectations in the bilingual program, and the role of L1 at the intermediate L2 level. During a pre-study

orientation with the entire bilingual staff, teachers expressed concern regarding the lack of clarity vis-à-vis program expectations. Others expressed concern about the parameters of dual language instruction in this context. Some expressed the need for a bilingual literacy framework and a need for outside expertise to inform the professional learning process related to bilingual education (personal communication with program administrators, 2016).

As well, on numerous occasions during the thirteen-week study, teachers randomly approached me to discuss their concerns about suitable pedagogy for bilinguals. Based on my observations and interactions with teachers and administrators, I interpreted that the language learning issues related to authentic L2 learning and bilingual literacy were a program concern and a recurrent topic of discussion among the teachers.

Study participants. During professional learning discussions in 2015 and 2016, the principal informed the bilingual staff about the potential for voluntary participation in a doctoral study aimed at developing understanding of the role of first language (English) within the school's bilingual program context. All permanently certificated teaching staff members were under no pressure to take part, but had the opportunity to participate. If interested, they were invited to share their interest with the school principal. As well, in the fall of 2016, I attended a professional learning session at the school to outline the purpose and process of the study, and answer related questions for all of the teachers. In this way, the purposeful sampling was identified, i.e., those who "represent the central phenomena in dramatic terms" (Creswell, 2015, p. 206). The central phenomenon was teachers with a strong interest in exploring the role of L1 in a dual language context; in this case, three teachers self-identified.

Additionally, in light of the goal of growing communicative spaces and creating transformative PAR potential at the school and system level, I thought it was important to

include a school-wide instructional learning leader on the research team. The instructional leader

participated in the debrief and professional learning discussions, and was the interface between

the study and school's professional learning process. In this case, the school principal

volunteered to join the PAR research team in that role. The self-selected research team of five

was therefore comprised of three volunteer teacher participants, the principal in the role of the

school professional learning leader, and me, as the principal researcher.

Once the three teacher participants and the instructional leader were identified, each one

completed a Study Participant Survey (Appendix A) intended to provide an overview of each

person's education, background, and experiences to date with dual language approaches. This

survey included initial questions designed to raise self-awareness regarding teacher subjectivity

with regard to language learning and bilingual education.

The participating teachers had both Spanish and English teaching assignments. They had

varied linguistic backgrounds; two teachers were raised in bilingual families and experienced a

mix of English and Spanish education, and one was raised and educated in English only, but had

lived in a variety of multilingual environments. Their years of teaching experience ranged from

three to 11. Only one had training for language teaching; she holds an English Language

Learning (ELL) Certificate. Table 1 provides the demographic details gathered through the

initial teacher survey, followed by a brief profile of each participant based on the survey and

conversations with the researcher. All study participants are identified by pseudonyms.

Table 1

Study Participant Background

Study Participant	Mia (Teacher)	Cari (Teacher)	Rita (Teacher)	Kloe (Instructional Leader)
Educational Background				

Study Participant	Mia (Teacher)	Cari (Teacher)	Rita (Teacher)	Kloe (Instructional Leader)
Years of post-secondary	10	6	6	7
Related degrees & specialization	BEd MEd & another grad degree	BA Spanish BEd - minor history	BA - History BEd – secondary SS	BEd – Early years major, music minor MEd
Other specialized training	ELL certification			
Years studying in English K-12	12	12	3 years (and 3 years bilingual)	13
Years in English post-secondary	8	6	6	7
Years studying in Spanish K-12	0	3 (Spanish as an L2)	6 years (and 3 years bilingual)	0
Years in Spanish post-secondary	2	0	0	0
Languages				
Years living in Spanish language settings	4 years in Spanish countries	lifelong exposure (bilingual family)	28 years in a bilingual family in Spanish settings	10
Years living in English setting	lifelong except for 4 years in a multilingual context (English, French, Spanish, Arabic, Swedish)	lifelong exposure (bilingual family)	3 years in Canada (28 years in a bilingual family)	33
Teaching Experience				
Number of years	5	11	3	22
Number of years as L2 teacher in Spanish bilingual	5	2	3	14

Study participant Mia was raised as a monolingual English speaker who began

experiencing and learning second languages as a child while living in a variety of multilingual

environments. She completed two years of post secondary education in Spanish, was a fluent French speaker, and has completed her ELL Certification. She was particularly interested in investigating how to advance levels of conceptual understanding and literacy growth across the two languages. She expressed concern and uncertainty about the frequency of middle-years learners' choice to collaborate in the L1 (English) in spite of her consistent modeling of L2 (Spanish) usage. Philosophically, Mia expressed a strong pedagogic commitment to maximizing exposure to the target language during instructional time, and used English minimally during her interactions with students.

Study participant Cari was raised in a mostly Spanish speaking family and a bilingual community, but received most of her education in English. She had no specific training related to second language learning. Cari worked in bilingual settings for two years as a literacy consultant, teaching in English, and began teaching in Spanish in the previous school year. She expressed concern about what she called fossilized errors in the L2, and about the limited confidence of middle-years learners in using the L2 conversationally. She commented on her class's limited ability to work independently and wondered if they were accustomed to 'being spoon-fed' in their Spanish classes. Cari said she used her perception of student content comprehension as a benchmark and took related cues from the students to inform her own choice of using L1 or L2 in a given learning interaction.

Study participant Rita was raised in Spanish speaking countries with an English speaking mother and a Spanish speaking father. She spent six years in Spanish school, three years in English school and three years in a bilingual setting. She had no specific language education training. Rita has lived in an English environment for the past three years and has taught in both languages within the bilingual program. Rita also expressed concern about apparent fossilized

errors in the L2 and the learners' frequent choice to interact in English during Spanish class. She avoided assigning collaborative learning tasks for this reason, and expressed interest in better understanding the dual language process. She wanted to learn strategies for increasing learner motivation to practice the L2. Rita used English to support her Spanish explanations, and commented that she felt uncomfortable and unsure about this practice.

Kloe, the instructional leader learned Spanish as an adult while living and working in a Spanish speaking country. She also had no formal training in second language education, however, she had previously taught at the K to grade four level and participated in dual language action research within that English-Spanish bilingual program. Like the three teacher participants, she expressed concern about the shift she observed in the middle-years context; learners appeared to be progressively interacting more in English (L1) and less in the L2 during Spanish instructional time. As well, in her informal interactions with students, she perceived a growing lack of confidence with basic interpersonal interactions in Spanish and heard frequent low level language errors, (forgetting numbers and days of the week in Spanish). She was perplexed with regard to finding the best pedagogic approach for increasing the investment of adolescent learners in their L2 development. In her observation of teacher practice, she noticed a wide range in the amount of English employed in Spanish classes by both students and teachers and she wondered about the pedagogic relevance of this phenomenon.

No study participants were specifically university trained in second language learning pedagogy, however, they had all gained knowledge by pursuing an interest in language education. For example, the Hamayan et al. (2013) dual language instruction resource was in the school library, and conversations about how it could support their work had begun between the instructional leader and teachers. Each of these educators brought substantial background

knowledge from a range of cultural life experiences in various second language learning settings, all of which informed and influenced their pedagogic perspectives.

Educator attitudes regarding the dual language approach. The pre-study teacher survey responses shown in Table 2 indicated that the study participants were philosophically receptive to the exploration of dual language initiatives. Responses to the initial indicators about philosophical views show only a variance of one point on a five-point scale, indicating shared perspectives about the positive potential and value of a dual language approach to language learning. The indicators regarding pedagogic practices showed only slightly more variance regarding their personal perspectives on the positive uses of both languages in the bilingual middle-years classroom. The four participants were receptive to engaging in a dual language investigation.

Table 2

Educator Attitudes Regarding the DL Approach (4 respondents)

Number of Respondents	SA	A	NO	D	SD
Philosophical views					
English and Spanish should be kept entirely separate				3	1
English can be a useful tool for learning content in Spanish	4				
English can be a useful tool for the learning of the Spanish language	3	1			
Strong language and literacy skills in both languages is a feasible goal in the program	2	2			
Pedagogic practices					
I feel comfortable using Spanish in English classes	2	2			
I feel comfortable using English in Spanish classes	1	2		1	
I feel comfortable about students using English in Spanish classes		2	1	1	
Intentional planning for Spanish language learning is a pedagogic priority in middle years	2	2			
Middle years learners are enthusiastic about Spanish language learning		2	1	1	

Legend: SA=strongly agree A=agree NO=no opinion D=disagree SD=strongly disagree

Educator attitudes regarding the role of L1 in L2 learning. As shown in Table 3, with regard to how teachers strategically used the L1 (English) in the dual language context, a range of perceptions existed. All of the participants made lexical and grammatical comparisons between the L1 and the target language, and were somewhat comfortable with student translanguaging, i.e., movement between the target language and the L1. They had differing views regarding teacher use of translation and translanguaging, and also about the appropriateness of L1 usage in the L2 class time.

Table 3

Educator Attitudes Regarding the Role of L1 in L2 Learning (4 respondents)

Number of Respondents	OF	OC	S	N
I make comparisons between languages and help students see features e.g., root words, cognates, similar or different patterns in grammar	4			
I translate into English or into Spanish		3	1	
I encourage student to translate into English or into Spanish		2	1	1
I switch between languages to build vocabulary or develop concepts	1	1	1	1
I encourage students to switch between languages as needed (translanguaging)	2	2		
I use additional strategies	1			3

Legend: OF=often OC=occasionally S=seldom N=never/no response

During planning and debrief conversations with the teachers, they all reiterated their uncertainty about the suitability of available strategies. Some expressed concern about translanguaging and wondered if it simply demonstrated a decision to default to English when the work became challenging. Though all of the teachers were comfortable allowing students to draw on the L1 for cognitive load sharing during the mediation process, they had differing views on the merits of teacher use of the L1 in Spanish class time. They anticipated that the action

research process would inform their understandings of these issues and help evolve other strategies.

Student demographic profile. Each study participant shared information about the purpose and process of the PAR study with her participating class of students. Following this initial interaction, I spoke with students in each of the three classes to share the purpose of the study and explain the three ways in which they could voluntarily participate, i.e., share questionnaire comments, participate in student focused-conversations, and/or share artifacts of student work. A student-parent information letter was provided to each student, as well as a student assent form and a parent informed consent form, for those students interested in further participation.

Teachers then employed a Student Questionnaire (Appendix B) to gain insight on student perspectives regarding the ways that first language (English) and the target language (Spanish) co-existed in the classroom context, and, how they interpreted what it means to be bilingual program students. Figure 4 reflects demographic data from 72 completed student questionnaires across the three participating classes, as shared with the researcher by teachers through their journal entries.
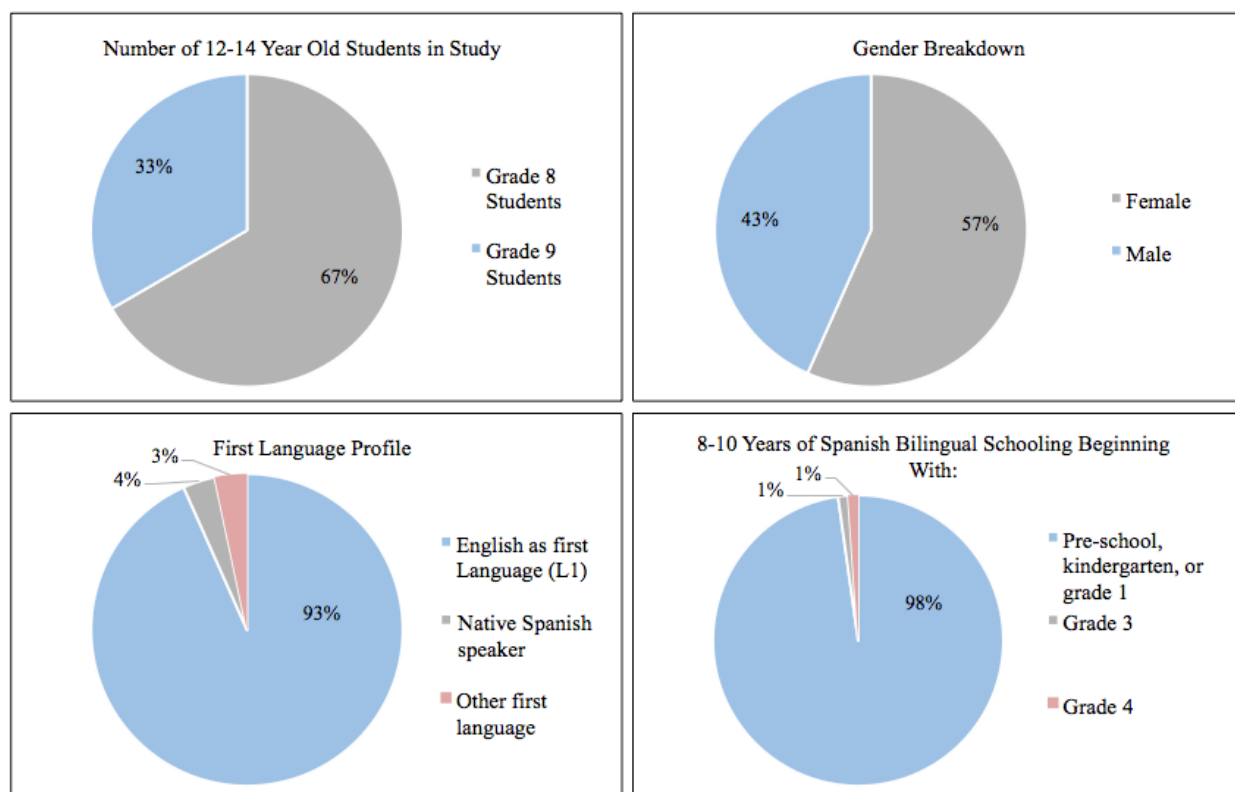
Figure 4. Middle-years bilingual program student demographic profile.

Although this student group was 93% Anglophone, 19 of 72 students said they had

speaking and writing skills in another language. When asked what languages other than English

family members speak, 24 languages were identified. Generally, student survey input reflected

positive attitudes toward the bilingual experience, but expressed a range of confidence levels

with the L2 (Spanish). The attitudes expressed in these classroom surveys were consistent with

the school's general survey feedback from students (personal communication with Khloe,

November, 2016).

As detailed in Table 4, of the 90 students in the three participating classes, 30 assented

(with parental consent) to share their questionnaire comments, 32 agreed to share artifacts of

their DL classwork, and 29 agreed to participate in focused student conversations with the

researcher.

Table 4

Student Participation Numbers

Student Participation	Questionnaire	Artifacts	Focused conversations
Cari's Class	11	10	10
Mia's Class	0	0	3
Rita's Class	19	22	16
Total Participants	30	32	29

Note: Students in Mia's class provided assent but most did not return the parent consent forms.

Methods of Data Collection

Substantial qualitative data and some quantitative data were gathered from teachers,

students and institutional sources, using multiple collection methods. Contextual information

included provincial Spanish Language Arts program of study guidelines (Alberta Education,

2006b), and the International Spanish Academy *Memorandum of Understanding* between

Alberta Education and the Spanish Ministry of Education (Alberta Education, 2006a). As well,

school based qualitative data included student performance benchmarks such as provincial

exams and Spanish language exams (personal communication with Khloe, November, 2016), and

national and provincial student and parent input evidenced through responses to the *Tell Them*

From Me survey and *Accountability Pillars*, both of which are stakeholder satisfaction and

feedback tools used within the school jurisdiction (personal communication with Khloe,

November, 2016).

This data provided a detailed picture of the overlapping elements comprising this complex

bilingual ecology of language, as illustrated in the bilingual program network diagram (Figure

3). The teacher surveys provided demographic information about teacher participants (Table 1), and the teacher administered student questionnaire provided demographic information regarding students (Figure 4).

At the heart of this qualitative study is perceptual data gathered regarding the dual language (DL) pedagogical experience. Teacher perceptions were collected through: audio-recorded planning sessions; journal entries; ongoing documented researcher-teacher interactions; audio-recorded focused-conversations; audio-recorded debrief sessions; and written subjectivity updates (written reflections regarding evolving teacher perceptions about bilingual education processes).

Teacher data was integrated into individual narratives, and across classes into a collective narrative. First, each teacher's DL learning sequences were tracked as an independent evolving account through the planning, implementation and reflection phases. The transcribed research team sessions and digital teacher journals were thematically coded in relation to the research question concepts and emerging topics. Second, pedagogic vignettes were selected from these DL learning sequence narratives to illustrate specific findings related to each research question. Third, the DL scaffolding strategies and processes that evolved across the three classes were summarized to illustrate strategic use of the L2, the L1, and both the L1 and the L2 (Appendix G and Appendix H). The *Methods of Data Analysis* section in this chapter provides further explanation of the data integration process.

Student perceptions about bilingualism, L2 learning, and the role of L1 in their learning were gathered through: feedback instruments created by the teachers including questionnaires; exit slips; oral and written feedback; teacher and researcher observations; reflections on teacher-student interactions; and student focused-conversations with the researcher. Teacher collected

student feedback data was documented and indirectly shared through the teacher journals.

Student data was also collected via 26 audio-recorded focused-conversations with the researcher.

As outlined in Table 5, the data collection process took place over a three-month time period in iterative cycles, which are further outlined in the *Research Design – PAR Process* section that follows.

Table 5

Data Collection Timeline

Week 1	• document analysis • bilingual teacher DL study orientation • planning meetings recorded • participant informed consent/assent sent out • teacher survey completed
Week 2	• PAR cycle one began in grade nine class • researcher observations recorded • informal researcher-teacher discussions • teachers conducted initial student questionnaire • teacher journaling
Week 3	• PAR cycle one began in two grade eight classes • researcher observations recorded • informal researcher-teacher discussions • teacher journaling • information documented and shared in the Google Drive (GD)
Weeks 4 to 6	• PAR cycle one continued • student participants' informed consent/assent documentation completed • cycle one research team debrief conducted & audio-recorded • member-checking of data completed
Week 7	• PAR cycle two planning sessions completed & audio-recorded
Weeks 8 to 13	• PAR cycle two continued • ongoing teacher journaling • researcher observations and informal discussion documented and shared in the GD • focused conversations with students conducted and documented in the GD • final teacher debrief and focused conversations conducted and documented in the GD for member-checking

Research Design - PAR Process

There was a tight focus on bilingual pedagogy as the phenomenon of study, with the role of first language (English) in a middle-years dual language context as the unit of analysis. The PAR process, as shown in Figure 5, favoured a flexible study design within which the teachers were the main study participants. Teachers influenced the PAR process in three significant ways:

- during the planning stages wherein they designed a DL learning initiative;

- during implementation of the initiative including their formative interactions with students; and,

- through learning sequence adaptations and resultant input in the debrief discussions.

The learning sequences, student learning tasks, and methods of gathering data were modified in response to evolving variables in the classroom, the school context, and the demands of the research process.
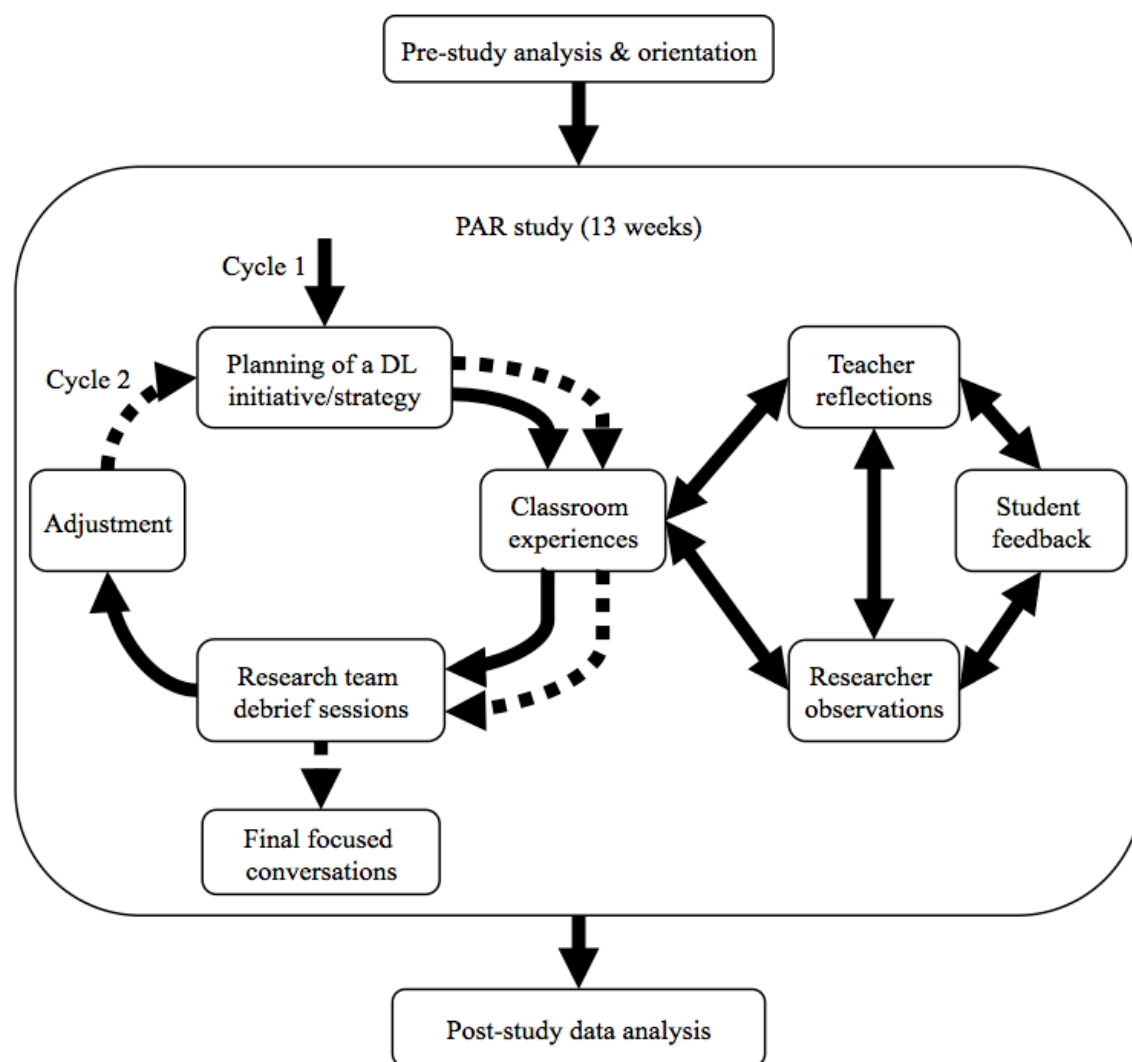
Figure 5. Participatory action research (PAR) process.

Pre-study contextual analysis & teacher orientation. The bilingual program ecology of language data gathered from institutional sources and illustrated in Figure 3, helped contextualize the Alberta middle-years English-Spanish bilingual program as experienced at the Sierra School site. Over the course of the study, research team discussions occurred regarding the role of various affordances in the environment as they applied to the conceptualization and implementation of the bilingual program. For example, we began the process with a team

orientation focused on teacher perceptions about the bilingual program. We articulated the distinctions between established pedagogical practices and the Spanish Language Arts Program of Studies requirements, which helped identify opportunities for alternative approaches such as integrated dual language learning.

During the teacher orientation session, I familiarized participants with language learning terms that would be used during the study, including those in the *Terminology* section outlined in chapter one. We discussed these concepts in light of the teachers' prior language learning experiences, and other relevant theory that informed this study. I agreed to provide study related professional learning resources, such as articles and educational conference videos. These were shared with all study participants in a resource page on the research team's Google Drive shared space.

Teachers completed a Study Participant Survey (Appendix A), which provided the contextual data discussed in the *Study Participant* section of this chapter. The Student Questionnaire (Appendix B) was primarily for teacher use as well being as a source of student demographic data. It was intended to initiate teacher-student interaction, inform pedagogic planning, and serve as a method to generate student awareness about this collaborative exploration.

To illustrate the nature of subjectivity in qualitative research, I related to participants how this study was influenced by my own personal and professional experiences. I described how these experiences connected to my beliefs regarding sociocultural theory on learning and my biases towards holistic second language learning approaches. At the outset through the teacher survey, and at two other intervals during the study, teachers were asked to reflect on different

aspects of their own subjectivity (beliefs, biases and assumptions) with the intent of increasing self-reflection and growing our professional learning conversations.

PAR cycle one planning sessions. Participants preferred individual researcher-teacher DL planning sessions because each teacher's learning plans were unique and based on the specific needs of her students. I met independently with each teacher for one or more planning sessions. These were audio-recorded, transcribed, and the notes made available in the secured Google Drive online repository as a resource for the teachers and for member checking of the data.

Though each class's DL learning initiative was unique, data gathering elements were consistent, including teacher journaling, gathering formative feedback from students, and researcher observations in the classroom. I asked that each DL sequence include a formative student feedback mechanism to ensure that student-teacher interactions regarding the DL learning experience occurred, and that there be some documentation of these interactions so as to make them available for teacher reflection and research team conversations. My research classroom observation schedule was determined with each teacher and depended on the specific activities occurring. I observed each class at least once per week and more frequently at the onset of the study. Initially my researcher notes followed Creswell's (2015) suggestion that an observation protocol should include field notes regarding setting, chronology of events, individual portraits, description of activities, capturing quotes, and observer reflections about emerging themes. Within a few days of each classroom observation, I shared my field notes in the Google Drive as a means of sharing those observations and creating an ongoing dialogue with each teacher about her evolving practice.

During the course of the study, teachers found the journal writing challenging. They said that it was difficult after the fact, to recall the details of teaching and learning moments and interactions with students. We also realized that when I took detailed researcher field notes during the class and posted them in the Google Drive promptly, the teachers were able to use those notes to help recall the events, produce their own descriptions of what was intended and what actually occurred in the teaching and learning moments. We began to take advantage of that process to create a digital professional dialogue in which I regularly posted questions based on researcher observations and the teachers were able to take up those prompts to reflect on specific interactions, issues, or learning processes in the classroom. As well, during the first cycle of research, we held a weekly session to share and discuss the unfolding of the study and some of the professional learning resources I had posted for the study participants.

Classroom learning sequences. The length of each PAR cycle was approximately six weeks, comprised of a two week window for planning and four weeks of classroom data collection. Teachers were encouraged to reflect in their DL journals for each day that they interacted with the class. Creswell (2015) proposed, "In qualitative research, you pose general, broad questions to participants and allow them to share their views relatively unconstrained" (p. 21l). In the spirit of encouraging individual in-depth explorations, a few general Teacher Journal Prompts intended to focus reflection were offered for the journaling process (Appendix C).

Student voice was captured through the initial questionnaire, field note observations, and focused-conversations with the researcher. As well, the formative assessments and student–teacher interactions during the dual language learning sequences produced substantial indirect student input.

Debrief session of PAR cycle one and planning for PAR cycle two. Van Lier's (1996) perspetive on educational research claiming that the unity between practice, theory and research is an essential one, helped inspire the choice of PAR methodology and guided the debrief process. The cycle one debrief occurred over two one-day sessions, and was a combination of research team member sharing, professional learning, and conversation about potential common DL objectives and initiatives.

Research team member sharing included: team development of a diagram illustrating affordances in the Sierra Middle School ecology of language; participant descriptions of their cycle one dual language initiative; and reflections about the experience and the student feedback. Professional learning included a discussion of clips from the Swain presentation: *Vygotskian Sociocultural Perspectives on Immersion Education: The L1/L2 Debate*, presented at the CARLA Conference (2012), and a discussion of Levine's (2011) framework for a multilingual community of practice in the classroom. The team then considered common objectives and potential DL classroom initiatives for cycle two of the study.

A recurring challenge raised by all of the research team participants before and during cycle one was the large amount of student L1 code choice that occurred during Spanish class time. To inform that conversation and prior to the debrief session, I sourced additional research on the topic of code choice and second language learning in an instructed environment. I presented an overview of key ideas from Levine's (2011) *Code Choice in the Language Classroom* and we discussed the applicability of a community of practice (CoP) approach within this context.

The second part of the debrief session occurred after the Christmas break and was dedicated to the planning of cycle two dual language initiatives. We discussed data collection

processes for cycle two, plans for researcher and student focused-conversations, and the researcher observation schedule in the classroom. The researcher offered another question regarding individual subjectivity, and teachers reflected on this topic in their journals. The debrief and cycle two planning sessions were audio-recorded with the transcription and notes shared in the Google Drive space.

PAR cycle two. Based on the PAR cycle two planning session discussions and each teacher's planned DL initiative, teachers journaled regarding their ongoing experiences. I observed and recorded field notes, and prompted interactions with teachers through my questions and observations. Over the course of the last two weeks of the study I also conducted small group focused-conversations (Appendix D – Student Focused-Conversation Questions) with 26 of the 29 volunteer students (three were absent) from the classes involved.

The purpose of the focused-conversation process was to give all student participants a voice and to promote active listening by the other student participants in order to facilitate self-reflection about the language learning process. Focused-conversations involved asking each participant the same question in turn, with a predetermined time limit. Participants could pass on a question if they chose to and there was no commentary, debate or questions from other members of the group during the process. Group sizes varied from two to four members and groups were created according to alphabetical grouping. The conversations were audio-recorded, transcribed and shared with the research team members in the shared Google Drive space. Students were aware that their comments would be shared with participating teachers without consequences.

Debrief PAR cycle two. The cycle two debrief was combined with a focused-conversation that replaced the final teacher interviews that were initially planned. The focused-

conversation format was chosen to allow the research team participants to hear the reflections of colleagues with the intent of increasing the relevance of the PAR experience for the school's professional learning process. The cycle two debrief session began with work time for teachers to complete journal reflections and member checking of the study documentation. As a group we continued with: individual sharing of cycle two DL initiatives; reflections about their experiences; thoughts about future directions for the DL approach; and, discussion about student feedback. We then conducted the formal focused-conversation (Appendix E – Teacher Focused-Conversation Questions) and spontaneously generated a group list of possible bilingual community of practice (CoP) ideas and activities for the school (Appendix F – Bilingual CoP Strategies). Teachers completed their final subjectivity reflection. The cycle two debrief session was audio-recorded, transcribed and shared with participants in the shared Google Drive space to allow for final member checks. This completed the data collection aspect of the PAR two-cycle process.

Teachers were invited to have further input into the data analysis portion of the study and to participate in a related conference presentation regarding the school's professional learning initiative. However, teachers' time constraints limited their participation in further stages of the research process. The instructional leader, Kloe, joined me in leading the conference presentation (Languages Without Borders, CASLT, Edmonton, Alberta, April, 2017), during which we discussed the exploration of dual language approaches within additive bilingual instructional environments.

Methods of Data Analysis

The study was initially informed by preliminary contextual documentation represented in a network diagram (Figure 3), and survey and questionnaire input. The teacher survey data

represented in Tables 1, 2, and 3, provided a descriptive overview of the teacher participant backgrounds, and their preliminary perceptions regarding dual language learning. The student questionnaire was shared with the researcher indirectly through the teacher journals. It provided demographic data for the participating students which was represented in Figure 4. As outlined in Table 4, across the three participating classes, 30 students assented to share their questionnaire comments directly with the researcher. These students comments were included in the data coding process.

The qualitative data collected during the PAR process included: teacher surveys; student questionnaires; transcribed audio recordings of planning and debrief sessions; teacher journals; field notes regarding classroom observations; notes of ongoing researcher-teacher interactions; audio-recorded teacher focused-conversations; and, audio-recorded student focused-conversations. As data was collected, it was made available to the research team in the Google Drive repository. The prompt sharing of data served as feedback and thereby informed the teachers' pedagogic explorations while the work was in progress. Informal and formal member-checking opportunities occurred during both the cycle one and cycle two debrief sessions.

Input of teachers as co-researchers occurred formally through teacher design of dual language initiatives, and during the two debrief sessions and the focused-conversations. Informally teacher input was received regularly during the teacher-researcher interactions, which were documented and available in the Google Drive repository along with the teacher journaling. Member checks and discussions during debrief sessions informed the data analysis process, ensuring that the interpretation of patterns and other findings reflected the perspectives and voices of team members. For example, as a result of continued teacher input with regard to the dominant pattern of student L1 choice for social interaction in the classroom, the research team

discussed the unspoken code choice norms that governed this middle-years setting and during cycle two the teachers explored ways that code choice in the classroom could be impacted.

The researcher conducted what Miles, Huberman, and Saldana (2014) referred to as provisional coding. This is a preliminary cycle of coding that is deductive in nature, and uses anticipated categories based on what previous knowledge of the field suggests might appear in the data. These codes reflect the conceptual categories outlined in the research questions, such as cross-linguistic transfer of knowledge. An example of data associated with the code for *innovation properties - dual language attributes* (IP-DLatt), was taken from research team planning session notes: Mia recounted an interaction with a student during which the student observed that when she was doing homework in English she realized that she only knew the Spanish word for her idea. Mia commented "... keep that in mind as well, they are learning so many things for the first time in Spanish and they're not drawing upon English." Another provisional coding example was taken from Rita's journal and illustrates data coded for *adoption process - modifications* (AP-mod):

> I think I am gradually going to increase the time that I give them
> for conversation and see how long they can communicate with
> each other solely in Spanish, and then ask them why they revert
> back [to English] when they do.

A consecutive category of thematic coding was generated inductively (Miles, et al., 2014) and included relationship patterns and causal patterns regarding L1/L2 code choice. Interpretation of these categories was generated through teacher-researcher interactions and the team debrief session discussions, as well as follow-up analysis by the researcher. The thematic codes informed the topics shared in the findings of the study. An example of a relevant theme that emerged in this study was the evolving student sense of becoming bilingual *(bilingual*

identity). Data coded to this pattern was identified from the responses gathered during the

focused-conversations with students, and in the teachers journals and debrief sessions

specifically in relation to student feedback. Some of the data was manually coded on the printed

teacher journals or audio-recorded transcripts, and some was entered into NVivo software which

enabled the researcher to pull together coded themes from across multiple documents and

sources. Figure 6 illustrates a sample clip from the NVivo student focused-conversation data. It

was taken from the thematic node labelled *bilingual identity* and is an amalgamation of data from

participant comments in three classes.

Reference 1: 0.30% coverage
I'll just kind of focus out in one language sometimes the other.

Reference 2: 0.75% coverage
The people I am surrounded by when I'm speaking, it's definitely a big thing too. There are these people that I just always speak to in English it's just automatic.

Reference 3: 1.11% coverage
My grandfather speaks Sp so when I talk to him on the phone I try to start in Sp and then if there's something I'm just so excited to talk to him about in English, I'll just talk to him I English. Depending on who I am talking to it will be different.

Reference 4: 0.40% coverage
I feel bilingual when I encounter someone who also speaks Sp that I didn't know before.

Reference 5: 2.54% coverage
I think I would like to travel more often to different Sp countries to see the differences and use my Sp in different ways. I could also learn different types of Sp and ya I think going on exchanges, that's why I applied for the Spain exchange. I thought it would be a really good

Figure 6. Sample of NVivo software thematic coding process.

The data collection and analysis process was intended to explore three perspectives of

this bilingual program. First, a narrative to provide a rich description of the dual language

processes and strategies that teachers explored through their DL initiatives as well as presenting

their reflections about those experiences. Second, it was intended to present student perceptions

and experiences with the L1 during these DL initiatives, and student perspectives regarding the

larger bilingual experience. Finally, through the analysis process, the researcher aimed to create

a holistic picture of this bilingual education context acknowledging the affordances and the dynamic nature of L1 within emerging middle-years bilingualism.

Ethical Considerations

By agreement with both the University of Calgary Conjoint Faculties Research Ethics Board and the school jurisdiction where my research was conducted, I was morally bound to conduct the research in a fashion that did no harm to anyone involved in the study. Confidentiality of student and staff information was a priority. Precautionary measures were taken to ensure secure data and records storage as per the standards of both institutions.

All participants and parents received information letters explaining the study purpose, the process, the voluntary nature of the study, and then provided written consent/assent for participation to the researcher. All records will be destroyed within the mandated five-year time frame.

Integrity of the Study

This research process aligned with Guba and Lincoln's (1994) interpretation, which replaces other traditional quantitative data integrity terms with the term trustworthiness. They defined trustworthiness in data collection and presentation as: dependability of auditable processes of data collection (replacing reliability); credibility for accurate representation of data (replacing validity); and potential for transferability through rich description of data (replacing generalizability).

Dependability was addressed by posting regular, detailed, auditable documentation of study events and processes in the shared Google Drive workspace for all participants to review during the course of the study. As well, with the agreement of the study participants, an instructional leader (School Principal) was invited to participate as a research team member. Her

role was to contribute to theoretical discussions regarding bilingual education, and to challenge

our reflexivity by asking questions and offering alternative perspectives. Her participation

helped maintain a broad school and program perspective on the classroom experiences described.

With regard to credibility, the PAR process drew data from multiple sources and is one

that embraces feedback, debriefing, and member checks regarding events and data, thereby

increasing the plausible and genuine representation of the data. Further to the concept of rigor

through auditable processes, Altheide and Johnson (2011) reported that rigor in interpretive

research (the ethnographic ethic) includes being transparent about the subjective self within all

stages of the research process, adding that influences on validity such as culture, language, and

standards, must be public. They referred to "validity-as-reflexive accounting, which places the

researcher, the topic, and the sense-making process in interaction" (p. 585).

As the principal researcher, I was responsible for creating opportunities at various stages

of the process for beliefs, biases and assumptions to be uncovered and examined. For example,

one teacher expressed a strong position throughout the study that she should not use L1 during

the Spanish class time, while another teacher believed that using L1 as a way of checking

comprehension was appropriate. The teachers discussed the challenge related to the lack of a

collective message for stakeholders with regard to L1 use in the classroom. On several

occasions, the research team discussed how each of our unique experiences in becoming

bilingual influenced our individual approaches to instructed language learning and the role of L1

in that process. All of the teachers communicated that the researcher's questions following

classroom observations were a valuable aid in prompting reflection about pedagogic choices.

This reflection process began with the initial teacher survey responses, was prompted and

encouraged in the teacher journaling exercise, and became part of the agenda for discussion in

the debrief sessions. Teachers also commented on the value of collecting regular student feedback and how that feedback informed reflection related to teacher assumptions and the pedagogic process.

Generating a rich, thick description of the PAR data allows others to assess the potential for transferability of findings to their own contexts. First, by offering a broad view of this educational setting through the network diagram, the teacher survey data, and the student questionnaire data, many affordances of this bilingual context were represented. Second, display techniques such the findings vignettes (presented in chapter four) which portray the lived experiences of teachers exploring DL approaches, enable comparison to other settings.

Triangulation of data is the common approach for increasing credibility of research data. In this case, triangulation was accomplished by incorporating multiple data sources: teacher experiences and reflections; student perceptions; researcher observations; and, research team interactions.

Delimitations

I chose PAR for the research design over other possibilities because it best enabled accessing the knowledge and experience of bilingual program teachers who were familiar with the affordances of this distinct additive bilingual instructed language learning setting including:

- bilingual programming structure and instructional time of 65% English - 35% Spanish;

- dynamics of instruction involving adolescent students;

- 8 – 10 years of student education in the local bilingual program environment;

- 90% English home-language demographic; and,

- students primarily living in an English milieu.

Within the context of the bilingual program goal of developing high levels of biliteracy, I believed that classroom teachers were best positioned to investigate the pedagogic alternatives. Further, related to the PAR methodology, it was hoped that continuing to raise the profile of participatory research as a legitimate research approach may also serve to increase interaction between the local scholarly and bilingual educational practitioner communities.

I chose to present the data mostly through the pedagogic lens regarding the role of L1 in the instructed dual language context because first-hand data was accessible through teacher participation, and because the L1 was an ongoing topic of interest in bilingual educator circles. Choosing this as the unit of analysis was intended to enable professional conversations regarding the purposeful roles of the L1, which is a topic that teachers could build upon in their school PLCs. To assure reflexivity and multiple stakeholder input, the design of the study required that the teacher perspectives were directly informed by student perceptions and feedback, ongoing teacher-researcher interactions, and research team discussion and analysis.

Finally, I chose a middle-years context rather than the more frequently researched context of early years bilingual education (Naqvi et al., 2014; Schleppegrell, 2013). This context was intended to enable future conversations regarding the complexity of intermediate level L2 at the secondary level. These included: the nature of evolving adolescent identities; changing instructional frameworks at the secondary levels; lack of significant teacher or district experience providing intermediate level L2 instruction in the bilingual context; and, limited relevant research available for comparative purposes.

Limitations

The scope of data collection in this study was limited by three significant factors. First, given the time frame of the study, only preliminary perceptions of the impact of DL learning

strategies and processes were possible. It is important to note that language and literacy development are long-term processes, therefore three months of teacher and student perceptions and reflections about dual language approaches can only provide a snapshot at an early stage within the process. Second, data was drawn from only three teachers and three classes of students. It was limited by teacher understanding of the research endeavour and availability of teacher time to invest in this study. Last, although I have some knowledge of Spanish, as the principal researcher my lack of Spanish fluency may have limited the depth and scope of my understanding during in-class observations. However, based on nearly two decades of experience as a French Immersion educator I have a strong awareness of the general dynamics within language education contexts.

In this educational research context, there were two challenges related to engaging teachers at a collaborative level of PAR participation. They arose for reasons similar to those described in the Biggs PAR framework (Cornwall & Jewkes, 1995). There was limited teacher availability for participation because of the extraordinary time commitment and professional learning investment required. As the principal researcher, I recognized the teacher orientation in favour of action research because it resembled the approach I instinctively used as a teacher. My methodological approach was to observe and interact, followed by adaptive interventions, more planning, observation and interaction, all with the intent of improving immediate practice related issues in the classroom. The research team was challenged during the study to reflect on the broader impacts of DL instruction beyond their immediate classroom. Although it was a part of the reflexive aspect of PAR, time for participation was limited and immediate instructional goals were pressing. The degree of teacher participation with regard to data analysis was heavily impacted by their lack of availability; however, I ensured that regular member checks of data

occurred. I also ensured that the representation of findings included perspectives and data from each member of the research team.

Second, in my view, stakeholder expectations may have favoured the status quo in terms of the extent of pedagogic exploration undertaken. One of the DL initiatives in cycle two was a total departure from the general year plan, while other DL initiatives were adaptations to established plans. Teachers were cautious about dramatically adjusting their teaching plans, which may have produced unrecognized limitations. Teachers may have questioned having genuine voice regarding the language learning pedagogy they were permitted to use, and therefore may have chosen to invest cautiously in the exploratory process. Substantial institutional and parental pressure exists at the middle-years level related to academic performance standards, which may also have impacted instructional risk-taking.

Role of the Researcher

Theoretically in a PAR study, there is a range of available study participant as co-researcher participation levels. Cornwall and Jewkes (1995) named four categories, from full co-researcher status (collegiate) directing and interpreting the study, through collaborative, consultative, to contractual, in which participants have minimal input. In my role as the principal researcher, and in an effort to accommodate both the daily demands of a school setting and the requirements of my doctoral program, I designed a collaborative participatory research construct in which the principal researcher and study participants worked together. This collaborative design aimed to meet the transformational and participatory intent of PAR, without overtaxing the classroom teachers. The iterative nature of PAR included multiple opportunities for participating teachers to strongly influence essential aspects of the study, chiefly through their role in the design and implementation of the dual language initiatives. As well, the research

design facilitated regular interaction with students about the exploratory process in which they all participated and provided teachers with important insights about student perspectives.

The value of this collaborative research team approach was exemplified in the bilingual community of practice strategies document generated by the group during the final debrief session (Appendix F). Feedback in the teacher journals and during the debrief sessions also indicated that teachers valued the reflections that resulted from the interactive teacher-researcher journaling process which evolved during the study.

Conclusion

This study was motivated by ongoing bilingual educator questions regarding pedagogy at the intermediate L2 level. The PAR research design was chosen for this study in order to capture bilingual program practitioner knowledge and insights by enabling in-depth explorations of lived learning interactions through repeated cycles of investigation. This research attempted to spotlight critical elements that needed to be explored within the natural learning space that bilingual program teachers and students cohabitate. The study data mapped dual language (DL) learning experiences with middle-years intermediate L2 level learners and specifically focused on exploration of the pedagogic role of the L1.

Chapter Four: Discussion of Findings and Analysis

Three major themes emerged from the findings regarding the role of first language (L1) in this additive bilingual education context. They are presented in relation to each of the three research questions. With regard to research question one, the L1 can support intermediate level L2 conceptual learning in various ways including: enabling the cross-linguistic transfer of knowledge and skill; facilitating cognitive loading with the L1; comprehension checking of L2 notions; and externalizing conceptual understanding. With regard to research question two, implicit L1 and L2 knowledge can be made explicit through language awareness strategies and deliberate cross-linguistic vocabulary analysis, thereby supporting biliteracy growth. Concerning research question three, exploring L1/L2 code choice norms with adolescent learners can assist in nurturing bilingual identity and potentially grow learner motivation and investment toward the goal of bilingualism.

This chapter begins with an overview of the study context and a summary (Table 6) of the dual language (DL) initiatives created by the three teachers. Each of the three thematic findings discussions is introduced with one or two pedagogic vignettes. The vignettes include a brief description of the DL initiatives undertaken by the teachers, followed by a discussion of their experiences with DL strategies and their related journal reflections regarding L1 as a resource in DL learning. Subsequent to the teacher reflections is the analysis of student feedback related to the DL experience. The student feedback sources were indirect student quotations and paraphrased student reflections drawn from the teacher journals, as well as quotations from student focused-conversations with the researcher. A discussion of the thematic findings in relation to second language learning theory follows, along with a brief summary.

Research question two follows the same format and also includes a narrative analysis of findings and a theoretical analysis regarding the biliteracy development theme. Similarly, after the pedagogic vignette for research question three there is a narrative analysis of findings and a theoretical analysis regarding the bilingual identity and code choice themes. The thematic findings and analysis for each of the three questions is followed by a revisitation of the study assumptions and a chapter summary.

Context

Bilingual programs in Alberta are intended to provide learners with an additive language learning opportunity and literacy development in both the target language and English. Some educators have questioned the target language only pedagogic approach for this construct, particularly with intermediate level L2 learners. This study explored an alternative to target language only pedagogy. It investigated dual language (DL) learning and the affordances of learner first language (English) in meeting middle-years learning needs, including Spanish language acquisition and biliteracy development.

Several educators at Sierra Middle School who were motivated to better understand intermediate level L2 acquisition and related pedagogic practice agreed to participate in this participatory action research (PAR) process. PAR methodology is theoretically commensurate with sociocultural theory of language and learning. It establishes learning as a non-linear, socially mediated process drawing on contextual affordances to make meaning and to support cognitive growth (Lantolf & Thorne, 2006; Van Lier, 2004; Vygotsky, 1987). The study included two cycles of dual language (DL) learning sequences that were designed and implemented by the teachers. The DL initiatives were constructed in relation to course learning objectives, in communication with the researcher, and based on ongoing interactions with

students. Each teacher implemented two DL initiatives during cycle one. In cycle two each

teacher conducted a content-focused DL initiative, and implemented a series of DL strategies for

addressing code choice in the classroom. Table 6 delineates the dual language initiatives which

comprised the study.

Table 6

Teacher Designed Dual Language Initiatives

Teacher Designed DL Initiatives	Mia	Cari	Rita
PAR Cycle One	DL Slam poetry/ creative writing	DL Slam poetry/ creative writing	DL Slam poetry/ creative writing
	DL integrated justice & human rights study	L1 as a resource for leading an L2 conversation	L1 & L2 comparative grammar study
PAR Cycle Two	integrated DL consumerism study	integrated DL novel study	integrated DL water study
	code choice & repertoire awareness	code choice awareness	code choice awareness & development of DL repertoires

Over the course of the thirteen-week study, as the DL initiatives unfolded in the

classrooms, we gathered and documented teacher reflections, researcher observations, teacher-

researcher interactions, and student feedback. The cycle one DL initiatives and debrief, the cycle

two DL initiatives and debrief, member checks, and the data analysis that followed were all

conducted through the broad lens of bilingual pedagogy, with the role of L1 (English) as the

specific unit of analysis.

L1 in Support of Cross Linguistic Transfer of Knowledge and Skills

The first research question, 'how can first language (L1) be employed to support cross-

linguistic transfer of knowledge and skills', explored the potential of DL pedagogy to improve

bilingual learning by accessing substantial learner L1 knowledge in service of learning in the L2.

A previous study of the additive bilingual context in the elementary grades (Naqvi et al., 2014)

demonstrated the presence of the common underlying proficiency (CUP) that is central to

Cummins' linguistic interdependence principle. The study showed that early gains of CUP in

learning were visible as L1 skills and knowledge were regularly transferred to the L2, such as

adding numbers in L2 (Spanish) based on the previously formed L1 (English) concept of

addition. However, at the middle-years stage, the potential transfer of knowledge and skills from

L1 may be more limited, as learner knowledge base and competencies in the L1 may be

exceeded by cognitive demands of the L2 content, such as learning new algebraic concepts in the

L2. Consequently in order to develop pedagogic understanding, the research team attempted to

observe evidence of how learners mediated new concepts taught in the L2, and specifically, what

the related role of L1 might be in that process. We also observed how access to resources and

learning tasks in either language impacted teacher and student choices relative to the use of L1

and L2 in the classroom.

During the Spanish Language Arts (Spanish LA) classes, each of the teachers explored

dual language (DL) initiatives focused on engaging learner knowledge and skills that had been

previously and/or simultaneously developed in the English Language Arts (English LA) class or

the English Social Studies (SS) class. As the intermediate level L2 learners participated in these

DL initiatives, they were challenged with mediating, internalizing and languaging complex

knowledge and cognitive understandings across the two languages. A grade eight illustrative

vignette and a grade nine illustrative vignette of the dual language experience follow.

Pedagogic vignette: L1 as a resource in grade eight DL integration. This vignette

relates the DL experiences of bilingual teacher Cari who designed a grade eight DL initiative

based on a Spanish Renaissance time period novel study. Prior L1 skills related to an earlier

novel study in English LA, along with the students' growing L1 knowledge of the Renaissance.

Social Studies visual resources (English) were accessed to support the Spanish novel study. The

lessons involved daily oral reading of novel chapters interspersed with teacher-led discussion and

conceptual mediation of the text, focusing on comprehension and period specific Spanish

language usage. The student application of learning centered on student pair-share oral

interactions, individual written chapter summaries, and the final task assignment, a Spanish book

report.

Teacher L1 scaffolding strategies and reflections. Comprehension of the Spanish novel

and enriched understanding of the Spanish language within the Renaissance context were key

content objectives in the learning sequence. Cognitive and linguistic objectives included

accessing resources from both L1 and L2 for deepened comprehension of the historical novel

concepts, as well as developing student code choice awareness in their production activities.

Cari noted that specific L1 knowledge and skills such as elements of the novel from English LA,

or the Renaissance concepts from Social Studies, were generated in the L2. During a

conversation about teacher use of the L1, Cari shared her cues for accessing the L1 to scaffold

for comprehension during the Spanish LA class discussions, "I tend to rely on body language,

eye contact and the details which are provided by students in response to the question(s) posed

by me to judge comprehension." In her journal reflections, Cari also shared her observation of

student strategies for using L1 as a resource. Students:

- accessed prior L1 Renaissance knowledge to generate related L2 vocabulary;

- asked and answered questions about the Spanish novel in the L1;

- referenced classroom Renaissance L1 visuals;

- collaborated in L1; and,

- chose L1 or L2 for pair-sharing and summary writing regarding each chapter in the novel.

In conversation with the researcher, Cari related that initially students relied on the L1 to confirm comprehension and share understanding. Of the 29 students in the class, 16 wrote their chapter one summary entirely in English. However, as Cari encouraged them to mediate and externalize understanding in both languages, processing and production in the L2 increased. If students pair-shared in the L1, Cari asked them to write the summary in the L2. She then had students track their language choice for each chapter summary and set personal targets to increase their L2 usage going forward. For chapters seven to 12, all students wrote the summaries in a combination of Spanish and English or entirely in Spanish.

Integration across other content areas was also incorporated and mediated or languaged into the L2. For example, to help understand geopolitical and cultural forces at play during the Renaissance, Cari asked the Spanish mathematics teacher to respond to student questions about the mathematics involved in the construction of the Alhambra in Spain. Following the content integration activity in the mathematics class, the researcher observed the DL integration process unfold in an oral Spanish task. The Spanish LA class began with a daily Spanish question and answer warm-up. The question was: *Como están conectados las temas de las matemáticas y el Renacimiento* (how are mathematics and Renaissance themes connected)? Each student responded orally in Spanish and in full sentences, incorporating understanding gained from the discussion with the mathematics teacher. During this oral interaction, Cari and the students only accessed L1 for a few clarifications and a few vocabulary articulations. The researcher noted that all of the students were able to participate, and many externalized complex explanations in fluent Spanish.

This DL vignette was chosen to illustrate potential roles for pedagogic scaffolding with the L1 and L2. For example Cari drew on content knowledge and skills developed in English, and she coached L2 learners to become aware of and control their day-to-day language choices in the structured classroom context. The vignette also illustrated the creation of authentic language experiences within the bilingual instructional community of the school.

Pedagogic vignette: L1 as a resource in grade nine DL integration. This vignette outlines data from teacher Mia's DL learning initiative based on the integration of knowledge from English LA, SS and Spanish LA sources, followed by student production in Spanish (L2). During a conversation with the researcher Mia reported that she chose L1 and L2 resources to complement and enrich ideas about the themes of identity, justice and human rights, and she deliberately avoided duplication of content. Her DL initiative aimed to investigate learner ability to integrate and build concepts between English and Spanish, as well as analyzing student ability to externalize their understandings in both languages. She believed that the pedagogic challenge was to create appropriate scaffolding for concept mediation across languages. At the same time, she was challenged to provide instruction of the relevant L2 linguistic elements needed to potentially support L2 as the language for thought (mediation and internalization) and for social speech (externalization). Strategies that she employed and her reflections regarding the experience as outlined in her journal follow.

Teacher L1 scaffolding strategies and reflections. Prior to the onset of the study, and in spite of her focused efforts to model L2 use in the classroom, Mia expressed dismay at the code choice norm she witnessed during most student interactions saying "...almost all of the time they are speaking English". She noted that students often spoke in English about a task being produced in the L2, and mostly interacted with peers using English during social and

collaborative talk. Her question was: "How do I inspire more interaction in the L2?" Following teacher-researcher discussions in regards to this question, she adopted several strategies to raise student linguistic awareness. These included: an initial class conversation about code choice awareness; discussing Spanish slang expressions based on expressions that student used in English; and gathering routine oral and written feedback from students to encourage awareness regarding code choice behaviours.

Mia's instructional design focused on maintaining principles of L2 instruction (Ellis, 2008). These included maximizing time in the target language, engaging in meaningful content and language tasks, providing opportunity for learners to access all relevant learner resources including the L1, and teacher modeling of L2 conceptual mediation and languaging in the L2. Strategies were outlined in her journal, shared during teacher-researcher interactions, and in debrief explanations. They included:

- using cognates and L1 for purposeful linguistic comparisons to L2 terminology, and for lexical explanations aimed at building vocabulary;
- acknowledging the processing role of L1 by allowing students to translanguage and translate to support cognitive load sharing during concept mediation;
- creating several five-minute pair-share or small group oral interaction tasks during each lesson that involved the application of new Spanish vocabulary and concepts; and,
- comparing and contrasting with L1 linguistic forms to illustrate various language functions during L2 mini grammar lessons.

During our planning conversation Mia shared that she was highly interested in investigating the complexity of cross-linguistic conceptual development but was uncertain about how best to gather evidence. In the spirit of further exploration of the process, Mia designed a

formative assessment activity, which she called a 'thought circle'. The students were seated in a large circle and the learner task was to reflect on and share thoughts about the question or audiovisual prompts that Mia presented to the group. The prompts were drawn from concepts and ideas studied during the months prior to this task, and responses required critical reflection. Other than providing the initial prompts and questions in Spanish, her role was as an equal member in the conversation. Although the activity occurred in the Spanish LA class, students had the choice of participating in either language. Mia's observations as outlined in her journal related how L1 was used as a resource by students, and how code choice occurred during the interactive task:

- there was two-way transfer and integration of conceptual knowledge in the spontaneous and complex explanations that students generated in both languages;

- students developed generalizations and evaluated information, i.e., showed evidence of using higher order thinking and conceptual mediation in each language, and across the L1 and the L2;

- there was deliberate L2 risk-taking on the part of many students;

- students showed patience with each other, and took extra time to externalize their mediated understandings into Spanish or English for sharing with the group; and,

- some students used L1 to provide one reflection and later chose L2. (Additionally, my researcher observation was that 19 students participated in English and 13 participated in Spanish).

Mia explained that there was considerable socio-political knowledge needed for this learning sequence and she realized that with her integrated teaching assignment she now had the flexibility to bridge more knowledge from the English LA and SS classes for the Spanish LA

learning sequence. In response to the researcher's question regarding the value of any particular kind of English (L1) scaffolding that Mia provided in the weeks prior, she responded:

> Yes, the vocabulary support at the beginning [referring to mini-lessons on vocabulary, cognates, and socio-linguistic features such as analyzing and contrasting to L1 the vulgar expressions found in an historic film they had viewed] … Yes, in retrospect I think that scaffolding in English Humanities more, would be beneficial.

Mia also commented that the thought circle activity was rich in evidence of cross-linguistic learning, and said, "Wasn't that it? [a pause and smile]… can't tell me that it's not happening!" Mia was adamant that student performance demonstrated comprehension and integration of knowledge from both languages into complex oral analysis and reflections that were languaged into both Spanish and English. Further, students chose the language (L1 or L2) for interacting in context of personal and group dynamics at the moment of their participation. This classroom vignette was chosen to illustrate student capacity, motivation, and strategies for navigating cross-linguistic language production in the context of a learning task that reflected a complex social interaction.

Student feedback regarding L1 as a resource. Mia and Cari discussed the DL initiatives with the students and gathered student feedback about specific classroom learning experiences. As well as providing diagnostic information for the teacher, the feedback was intended to help raise student awareness regarding the dialectical relationship of the L1 and the L2 in learning. The students were able to identify their own DL strategies and processes. The excerpts that follow came from teacher journals and illustrate students' reflections regarding their experiences with various aspects of the DL learning sequence. The italicized words were inserted by the researcher to match the terminology used within the study.

- *translanguaging*: "…it [English] can be really helpful, it's just like you are just on a roll with words, and then if you are writing it down you can write the English word and keep going without having to stop and then find the Spanish word after because you know what you were trying to say …"

- *translating*: "If I start thinking in English ... I'll continue thinking in English and then just translate word by word instead of drawing on my Spanish skills…"

- *metalinguistic knowledge*: "…some words are similar [cognates] and I can kind of think about it in English and translate it to Spanish later on …"

- *oral interaction and learner agency*: "…they [classmates] see you are trying to make an effort to speak in Spanish, they'll try and make an effort back…"

- *learner agency*: "If I'm really trying to focus on the subject at hand then I'll do everything I can to think in Spanish and anything to help me with that [Spanish] activity."

- *scaffolding in the ZPD*: "I mean everyone also has a different learning style too so it just all depends on how you learn differently. [My teacher] is really good with trying different things with teaching us, so she shows videos, and she writes things on the board, and comes around and helps you, and she is really good at trying to help everyone differently."

- *language processing*: "I think repeating things over and over again is a really big thing too."

- *processing time*: "Writing in Spanish takes more time which is sometimes a reason to choose English."

In gathering student feedback, teachers gained insight as to the processes that students use and their reasons for choosing L1. During a researcher classroom observation session, Cari asked students why they chose English for their summary writing. Seven students responded: one said that Spanish takes too long; three said that English is easier; one said he is not very good in Spanish; another thought that it would be easier to review later in English; and one student thought he would understand it better by translating to English. This provided Cari with diagnostic information relative to ways that she could better support learners in the L2 processes, such as providing more time for L2 languaging. It also articulated a challenge for the design of learning to help increase student investment in L2 code choice during class work. Ultimately, Cari interpreted the decrease in the number of students choosing L1 and increase in students choosing L2 for chapter summaries as a reflection of growing confidence among learners in dealing with the cognitive challenge of L2 as the language of mediation. Observation over a much longer time period and additional student feedback would be necessary to validate this perception.

During the debrief conversations, teachers shared that reflective teacher-student interactions also increased student awareness about potential learner strategies. This awareness enabled the initiation of class discussions regarding code choice and personal investment in actively engaging in these practices.

Discussion of findings: L1 as a resource in cross-linguistic transfer. A fundamental premise of Vygotsky's SCT is that dialogical social experience (interaction and guidance) using symbolic tools (primarily language) leads cognitive development (Dunn & Lantolf, 1998; Lantolf & Thorne, 2006; Vygotsky, 1987). Teacher Mia generated tasks and strategies to conduct an integrated DL learning sequence, hoping to gain evidence regarding the DL processes

that supported the transfer of knowledge and skills between languages. Pedagogically Mia's

design for cross-linguistic learning focused on the DL instruction principles of integration of

instruction, bridging of knowledge, and oral foundations (Hamayan et al., 2013). As discussed

in our planning meeting her instructional DL strategies were intended to: enable learners to draw

on common underlying proficiency (CUP); select relevant affordances; interact socially in both

languages in service of mediating and internalizing concepts; and ultimately to externalize their

understanding.

During interactions with the researcher, Mia explained that throughout the DL learning

sequence, student tasks incorporated regular L2 interactions about new concepts. This allowed

learners to, as Vygotsky described it, linguistically play with evolving ideas (Lantolf & Thorne,

2006). Expert guidance during this dialogical social interaction in the ZPD appeared to

encourage movement between private and social speech in both languages, as evidenced later in

the bi-directional, cross-linguistic learning process during the thought circle activity. Whether

social speech (externalization) during the thought circle activity was in English or Spanish, Mia

shared that students had integrated knowledge gained from content studied in both languages

into their explanations. Both Mia and the researcher interpreted that the dialogical interactions

between class members drew on both languages and seemed to push further mediation,

conceptualization and critical thinking as the thought circle activity progressed. This process

paralleled Van Lier's (2004) claim that learners variably access affordances (potential resources)

in the learning environment, and Vygotsky's (Lantolf & Thorne, 2006) notion of perception as

an active behavior of selecting or seeking relevant data for action. In her journal and during the

debrief discussions Mia shared that students commented on peer reflections, referenced data and

ideas from visual and text prompts, used personal knowledge, and employed a range of

multimodal learning resources accessed during the thematic DL learning sequence. Mia further shared that students appeared to be empowered by the DL context in both their conceptual explorations and their languaging choices.

Cari's teacher-led novel study also applied the DL instructional principles (Hamayan et al., 2013) of integrating instruction and bridging knowledge of L1 academic content. Her other focus was on incorporating balanced literacy tasks. Knowledge and skills specifically developed in English during English LA and SS classes were conceptually bridged through the teacher-led discussions during which she drew on L1 to assure and check comprehension. Concepts were further mediated and languaged into the L2 during the balanced literacy activities of oral pair-share and summary writing.

The students' L2 ability to express orally the complex relationships involving cultural and geopolitical forces in the application of mathematics in Renaissance Spain demonstrated learners accessing of CUP, and integrating understanding across languages and subject areas. Student needs in the ZPD were nurtured through the dialogical social and DL instructional interactions involving the students, the Mathematics teacher, and the Spanish LA teacher. Knowledge that might otherwise have been segregated into random bits of Social Studies, Mathematics and Spanish Language Arts content were integrated and mediated dialogically. The process resulted in rather spontaneous student L2 explanations about complex cultural-historic phenomena and socio-political relationships.

In both initiatives, the DL strategies enabled the L1 to serve as a semiotic tool for cognitive load sharing, and to facilitate conceptual mediation, and in some cases languaging into the L2. Learners were encouraged to externalize in the L2, and as the DL process became more

explicit, teachers evolved further strategies, such as engaging student awareness regarding code choice to support the ultimate goal of L2 production.

Summary. In these integrated dual language learning sequences, L1 was a significant resource in support of cross-linguistic transfer of knowledge and skills for L2 content learning. L1 knowledge and skills were integrated into student explanations and during the processing of new ideas. There was also evidence that, in the intermediate level DL context, there was some reciprocal transfer of knowledge and skills from the L2 into the L1 as learners drew on L2 knowledge to produce L1 explanations. L1 was used to share the cognitive load during mediation of unfamiliar L2 concepts, for comprehension checking of L2 notions as students interacted around new ideas, and for expressing understanding (externalization) when ideas had not yet been languaged into the L2.

Teachers strategically scaffolded the L1 as a pedagogic resource to access common underlying knowledge and skills, maintain interactional flow, check comprehension, and as a source of diagnostic information with regard to learners' needs in the zone of proximal development (ZPD). A Summary of DL Scaffolding Strategies practiced by teachers and students during the DL content learning sequences is detailed in Appendix G. In each of their DL integrated instruction contexts, teachers became more attuned to their interest in better understanding the ZPD, particularly in ways that might support increasing L2 conceptual mediation and production at the intermediate L2 level.

L1 in Support of Intermediate L2 Instruction and Biliteracy Development

The second research question, 'how can first language impact instruction for a) second language acquisition and b) biliteracy development', explored the pedagogic potential of engaging L1 as a resource in developing intermediate level Spanish language, and literacy in

Spanish and English. Although students had been in the bilingual program for between 8 and ten years, participating teachers agreed that many students expressed a lack of confidence with L2 grammar. This was exemplified during the student focused conversations when Kylie said, "when I was more fluent than I am now..." referring to an experience during grade 6. As well, Kloe had recently supervised an international exchange trip to a Spanish country, and she described how much students struggled during spontaneous L2 interactions in that immersion context. However, she noted that when students shared prepared presentations, they received compliments from the local participants regarding the quality of their L2 production.

Study participants agreed that L2 production standards at this level are unclear. They also expressed concern about teaching the same discreet grammar lessons that students had encountered in previous years and questioned whether student Spanish proficiency would continue to improve with this approach. Teachers were unclear about whether the pedagogy for intermediate levels should have a literature focus, which presumes substantial L2 linguistic proficiency, or a L2 learning (foreign language) focus. They looked toward action research to help better understand how L1 could be a resource in intermediate level L2 pedagogy.

Pedagogic vignette: L1 as a resource for Spanish language acquisition. Teacher Rita was particularly sensitive to the apparent lack of self-regulation and the frequent use of L1 during Spanish class time. During a debrief session she explained that she shied away from collaborative classroom activities because it troubled her that students frequently spoke in English instead of the L2. In her journal and during debrief discussions, Rita shared that during classroom interactions with students, they were frank about using L1 for peer collaboration. They stated that they regularly accessed L1 whether or not the teacher condoned it, and believed that they lacked the vocabulary to speak spontaneously with peers in the L2. Students also

shared that they felt very confident about conjugating verbs in the past tense using drill

worksheets, but when they needed to produce the past tense in authentic language production,

they were frequently unaware of the tenses and unable "to get it right". In this regard Rita shared

her reasoning:

> Oftentimes, I find that students don't have the foundation to be
> able to learn this [grammar concept] in Spanish because in
> English, they do not know what a verb, pronoun or infinitive is.
> They also do not know what present/past/future tense means,
> and do not realize that verbs are conjugated differently
> according to these things.

In addition, Rita observed how students interacted in English classes and wondered how

that social space might be an access point for the L2. In her journal she reported that in English

they: got their ideas out quickly; became emotionally invested in their work (frustrated, happy, or

excited with each other); used casual language and slang; spoke naturally with each other; and,

even when focused on the task, got off track and started talking about something else. With

these observations in mind, Rita decided to create two dual language task sequences designed to

draw on implicit and explicit L1 knowledge to authenticate L2 (Spanish) language practices. In

the first learning sequence, she engaged L1 knowledge as an L2 grammar instructional resource,

and in the second learning sequence, she accessed L1 casual linguistic repertoires in order to

generate the Spanish repertoires that students would need to maintain L2 interactions during

collaborative work time.

L1 scaffolding strategies and reflections. The first learning sequence focused on the

purposeful use of L1 grammar knowledge during explicit Spanish grammar instruction, and

during the student small group practice portions of the learning sequence. In her journal Rita

reported that the L1 strategies she engaged to support cognitive mediation regarding L2 past tense structure included:

- making purposeful pedagogic comparisons of the preterite in Spanish to the simple past tense in English to illustrate similarities, differences, and how related idiomatic expressions are derived in both languages;

- encouraging students to deconstruct L1 grammar structures as a comparative resource to check comprehension of L2 structures; and,

- generating class notes showing L1 and L2 comparative examples for reference purposes.

For the practice portion of the task, student pairs created mini-interviews in the L2 regarding a special gift received last year, which they presented orally to the class. As a listening and critical thinking exercise, class members were assigned a peer-editing task regarding the accurate use of the past tense in Spanish.

During follow-up discussion with the researcher and in her journal, she reported that during the oral practice component of the comparative grammar sequence, students were able to correct errors in their own L2 usage and the language of peers. They were also surprised at the type of errors they were making. Rita expressed satisfaction with having risked speaking the L1in the class, in the service of ensuring better understanding of the L2 past tense structure. Near the end of the study she made an important follow-up observation:

> I was able to speak in Spanish for a large majority of the class, which I had not been able to do so far. I think that was because students were able to draw from what they knew [implicitly in English] and they had more confidence in what they knew.

During a follow-up conversation with the researcher, Rita also noted that as she purposefully planned for the role of L1 in her L2 language lessons, she was able to reduce the use of L1 in

the classroom because she was developing better scaffolded task design strategies for the instruction and student interaction time.

The second DL learning sequence began with groups of students analyzing their L1 linguistic repertoires to serve as a resource for building comparable casual repertoires in Spanish. Each group chose a category of collaborative language such as language for Internet research, discussions, or language for a writing process activity. The group then generated a list of social and collaborative phrases they would use if doing this group activity in English. These phrases reflected the characteristics and casual ways of speaking (speedy, casual, emotionally invested, off-topic) that Rita had previously observed during English interactions between students. This was followed by a class discussion about comparable Spanish usage. In her journal Rita explained:

> As we were going through these phrases, I asked students if they had any ideas on how they expressed those thoughts in Spanish. It was interesting for me when I noticed that they attempted to do direct translation, even though I had explicitly stated that the aim of this was not to translate, but instead to express ways of thinking within a different context that took into account culture, formality, etc. …Instead of translating, we discovered ways in which students could express the same ideas that they do in English, but using their L2.

The initial stage of the DL learning sequence helped students to make explicit their implicit L1 knowledge of sociolinguistic features, register of language, and idiomatic expressions. In the next stage, Rita drew on that understanding to access students' previous L2 knowledge in order to build Spanish casual repertoires. For example, the researcher observed that the international scope and idiomatic nature of Spanish was highlighted when Rita asked students about the expression *que guay* [how cool] frequently used by another teacher from

Spain. As well, Rita made an excited reference to her own Columbian expressions "oh and the word I taught you the other day!" Students called out *bacana!* [cool], *super bacana!* and then they added, *Padre!* and *chido!* [Mexican terms for cool, which were also previously discussed in class]. This led to one of many spontaneous mini-lessons; in this case, on the relative value of various superlatives in casual Spanish language, e.g., *bueno* and *buenisimo,* and, *bacana* and *super bacana*. Other authentic interactions emerged in this generative process. For example, with regard to register of language, Rita spontaneously called on Diego (pseudonym), a student from Spain, for what she referred to as examples of more formal expressions in comparison to her own Spanish usage.

The researcher observed the evolving process which Rita also described in her journal. Generating the L2 repertoires involved a teacher-led collaborative process of translating, translanguaging, deconstructing idiomatic expressions, exploring word morphology, providing mini grammar lessons, and documenting the learning. Once the repertoires had been generated, each student group created a reference poster for the classroom illustrating the casual and collaborative Spanish language repertoires related to their original topic. This task generated further comparison of languages and deeper analysis of structures. For example, one group of students was debating whether *qué pagina* or *cuál pagina* was the correct usage. A female student was adamant in her challenge to Rita, "why not *cuál*?" Rita reminded them that *qué* is mostly for a definition, so *qué es tu email?* would be *what does email mean?,* while they instead wanted to ask *cuál es su email?* Rita also observed shifting code choice behaviours in the classroom saying,

> Many are using Spanish a lot more in class, for example that
> group and two boys over there are really trying to speak

> Spanish, and these two groups [students at the back of the
> room] are speaking Spanish when they work.

The teacher and researcher observed that both of these learning sequences, based on explicit linguistic comparisons between the L1 and the L2, generated enthusiastic participation from many students. The L1 comparison seemed to serve as an access point to leverage the collective and individual implicit L1 knowledge as well as untapped L2 knowledge of the group members.

Student feedback regarding the role of L1 in SLA. Rita solicited individual written feedback about DL learning as well as gathering feedback through casual conversations with students, and shared the feedback in her journal. In relation to a teacher question about previous L2 grammar learning and comparisons to English grammar, students responded with comments such as, "Oh I didn't even know that in English we have a similar thing." Students also commented on the positive value of building social and collaborative L2 repertoires similar to the ones they use in English:

- "I think it's really important that we're learning the casual way to talk in Spanish because since kindergarten we've been taught the formal way of Spanish and nobody every uses it because it's our second language and it's not normal for us, so being taught the casual way is kind of like easier I guess…"
- "it doesn't give us an excuse anymore to speak English in class…"

Students appeared to be making language use choices based on social perceptions and norms that had evolved in the classroom peer circle. Their comments suggested that they were open to a kind of L2 social language that they had not previously been able to access.

In her journal Rita shared that during a classroom feedback session, students challenged her to increase the amount of oral and collaborative work time during Spanish class. She recounted the reasoning the students provided for their request:

- "when we are doing presentations in Spanish it helps us practice more because we practice in Spanish, but when we have to do essays and posters we only write it down and don't have to think in Spanish,..."

- "having goals would motivate us to speak more Spanish,..." and,

- "in group work we do speak English but we are doing work in Spanish so we are still practicing, but when we are doing solo work we don't practice much speaking."

Based on this student feedback, it appeared that students perceived that regular collaborative and oral production was directly linked to their ability to expand L2 externalization (social speech). They made a case through their feedback for increased social and oral second language classroom opportunities. Through the process of these DL learning sequences and the related classroom interactions, Rita and her students spontaneously began to negotiate alternative bilingual practices for their bilingual community.

Discussion of findings: the role of L1 in SLA. The L1/L2 comparative grammar initiative accessed a key affordance available in the bilingual classroom; the students' internalized knowledge and understanding of L1 tense usage. It also capitalized on the ZPD by way of broadening the scope of feedback to include peers as guides. It created a continual interactive practice and feedback loop that allowed learners to collaboratively and explicitly contrast L1 and L2 usage under the expert guidance of the teacher. Van Lier (2008) described the takeover-handover dialogical process operating in the ZPD as essential in assisting learners to achieve levels of skill they did not yet possess. In this DL activity, the dialogical process

facilitated learner exploration of their L1 competencies to increase L2 grammar mediation and internalization. The task design focused on expert guidance and a feedback loop between the teacher and students, that made transformation in the quality of L2 social speech possible.

In Vygotskian terms, the internalization of L2 language function (simple past tense) was facilitated by inter-personal interactions (Lantolf & Thorne, 2006) as they occurred in the preparation, delivery, and editing feedback of the pair interviews during the L1/L2 grammar sequence. Further, while the L1 knowledge was used to grow past tense usage in Spanish, the critical thinking aspect of the editing task enabled learners to simultaneously increase their self-awareness of and ability to analyze their L1. This process further facilitated an intra-personal transformation of metalinguistic knowledge relative to the L1. Students appeared to be transferring what they formerly described to their teacher as worksheet conjugation competency into contextual usage. It appeared to the researcher and the teacher that they were now beginning "to get it right" in the communicative context.

The task design and guidance in the ZPD was intended to increase the L2 practice needed to move toward greater automaticity in L2 tense production and to positively impact student confidence about their knowledge and ability to make accurate language choices. By scaffolding in expert linguistic input, a concern named by a student during the focused-conversations was addressed. The student had concluded that practicing Spanish with her friends had limitations because she said they were all making errors and therefore might only be reinforcing incorrect Spanish language structures. In this learning sequence students were critically analyzing peer language under the expert guidance of the teacher, which assured accuracy in language corrections. It also allowed for explanations and reflective group interactions comparing the Spanish structures and sociolinguistic features to the previously outlined English repertoire.

In one of the rare pieces of global high school bilingual research, Llinares (2013) spotlighted the critical role of teachers in providing specific guided support so as to impact how students at advancing L2 levels used their existing knowledge and skills to make "future language choices*" (p. 166). During the DL comparative grammar initiative, Rita and her students realized that students possessed more knowledge of the L2 than previously understood. Rita said that this knowledge surfaced as students made comparisons to the L1 during the class discussion and then again through the collaborative peer-editing process. Rita helped students recognize and organize the seemingly random L2 linguistic knowledge components they had previously learned. Through the interactive L2 editing experience, students were empowered to access and apply their knowledge, with ongoing teacher feedback to ensure accurate peer editing.

The rationale that students presented to Rita regarding the value of collaborative (oral) classroom activities presented a position that is theoretically reinforced. Gutiérrez, Bien and Selland (2011) claimed that experimentation and play should be encouraged as an essential stage in L2 language development. Lantolf and Thorne (2006) further explained Vygotsky's view of play as opening up the ZPD, where participants are making creative errors while operating beyond their current level of ability. Potentially the oral collaborative process between students takes on the role of play with the L2 by providing the opportunity for imitation of social models and transformation in usage patterns. This was evidenced repeatedly during this DL initiative; as students analyzed their L1 social repertoires they played with and explored potential L2 repertoires. Their exploration of the relationships between meaning and form in Spanish included linguistic challenges to each other and to Rita.

During these DL initiatives, students became aware of ways to use L1 as a linguistic semiotic resource for exploring second language structures. Instead of defaulting to L1

languaging and attempting to translate word for word into the L2, with the support of explicit

instruction and feedback, L1 became a semiotic affordance that students used to generate

authentic L2 social and collaborative repertoires. Rita and students were engaging at a deeper

level of cross-linguistic awareness and they experienced how "meaning and form are

dialectically dependent on one another" (Lantolf & Thorne, 2006, p. 5). With continued

opportunity to internalize and imitate these forms, Vygotsky's SCT predicts an eventual

emergence of these forms in social speech (externalization), which was the ultimate intent of this

DL initiative. Rita shared her conclusions about the significance of L2 communicative skills at

this intermediate level and how they are associated with the L1:

> I wonder if students' comfort level with their L2 would increase if we framed the skills and processes more on their social development in L1. … I think that making language instruction more authentic and more geared towards students' intellectual and social development can be a valuable step... I do think that conversational Spanish is something that needs to be done more explicitly in the context of the way in which students express their thoughts and ideas to each other in L1. We need to give them the tools to be able to express ideas in L2, not just translate them from L1.

Rita's conclusion stressed the need for explicit instruction to develop L2 languaging

processes that may draw on L1 as a semiotic tool. Her reflections highlighted how the

disproportionately academic focus in middle-years L2 could be undermining growth of balanced

literacy and oral foundations, both key principles of DL instruction as per Hamayan et al. (2013).

Rita proposed reorienting task design to focus on engaging intermediate level L2 learners in oral

social language. The authentic communicative purpose of these DL initiatives engaged the

learners, and commanded an elevated level of linguistic analysis for which L1 became a

powerful affordance. With teacher expert guidance and by recognizing the implicit L1 linguistic

repertoires, the ZPD was nurtured to enable students to move beyond strategies of direct L1 to L2 translation toward a dialogical process for generating social and collaborative L2 repertoires.

This example of a pedagogic redirection illustrates bilingual researcher Llinares' (2013) assertion that the research process involving teacher investigation produces insights regarding pedagogic opportunities. At various times during this study, all three teachers shared perceptions that the action research process, (e.g. participant interactions, teacher-researcher dialogue, and student feedback) promoted reflection, thereby providing ideas for task adaptations or next steps in task design. The PAR process enabled spontaneous pedagogical exploration, as was the case with the DL exploration of casual L2 repertoires.

This pedagogic vignette analyzed two DL learning sequences that explored the role of L1 in the instruction of L2 forms and sociolinguistic and idiomatic structures. In the cycle two debrief session, Rita recounted how students responded enthusiastically as they made linkages between the two language systems. She concluded that students had more implicit L1 and L2 knowledge than they were conscious of prior to undertaking the tasks. In the context of these two DL sequences, first language (L1) was a semiotic resource for intermediate level L2 instruction, and provided authentic linguistic L1 repertoires from which to generate relevant intermediate level L2 casual repertoires.

Biliteracy development. Part b) of the second research question addressed the ultimate Alberta bilingual program goals for developing oral and written literacy in English and in Spanish. As explained in the *Context* section of chapter three, there are limited bilingual program L2 benchmarks, and program educators wanted to better understand the nature of biliteracy as it applied to these students. Within the dual language explorations in this study,

teachers cultivated two elements of literacy, vocabulary development, and metalinguistic (ML) knowledge.

Vocabulary development. The DL instructional principles of integrated instruction and bridging knowledge (Hamayan, et al., 2013) encouraged explicit instructional strategies aimed at cognitively capitalizing on conceptual understanding and academic vocabulary growth across languages. During the study, the teachers each targeted cross-linguistic conceptual understanding through integrated instruction, which in turn both enabled and depended on the growth of related academic vocabulary.

In the grade nine DL integrated study, teacher Mia accessed a range of content and media in both L1 and L2 to develop the concepts of justice and human rights. She highlighted conceptual language in film, informative text, and social media, and used frequent oral peer interactions to develop and internalize it. Following a formative evaluation, she reported that the oral thought circle activity demonstrated substantial bridging of knowledge and cognitive academic vocabulary from L1 to L2 and vice-versa. Teacher Cari explicitly integrated instruction between Spanish LA and English Social Studies, and focused on academic vocabulary development in Spanish based on learner knowledge in English. As part of the DL initiative she and her students generated a list of relevant content specific terminology across the L1 and L2 and students recorded this vocabulary for future reference in follow-up L2 production tasks including the novel chapter summaries. In Rita's integrated DL initiative, she called on students' L1 Science knowledge for a study on water access in South America. She noted in her journal that based on their extensive prior L1 knowledge of the topic, students required minimal assistance in producing the content specific academic vocabulary in Spanish.

As well, the use of authentic resources captured student attention and enabled lexical instruction related to sociolinguistic usage and idiomatic expressions. For example, Mia presented a Spanish film during which she was able to spotlight Spanish-English cognates and context-specific vulgarized language to highlight the sociocultural issues of the time period. From that context, she was able to highlight with the students the structural and sociolinguistic transitions in language usage over time. Similarly, Cari's time-period novel study also included the exploration of Spanish language change. In each case, morphological awareness was increased through context related discussions about the language choices made in authentic film and novel texts. In these ways, each of the teachers in the study attempted to nurture cross-linguistic vocabulary development through integrated instruction, bridging of knowledge and equally acknowledging the two languages.

Metalinguistic (ML) knowledge. Metalinguistic (ML) knowledge is defined as the learners' ability to correct, describe, and explain second language errors (Roehr, 2008). Roehr also explained that metalinguistic ability includes using language above surface structures, which enables deep thinking and the abstract use of language (Alipour, 2014). Pedagogic attention to DL instruction resulted in spontaneous and regular analysis of cognates, word morphology, and the roles of grammar and syntax in the expression of meaning, which influenced ML awareness in both L1 and L2. For example, when teacher Mia's students completed exit slips responding to questions on the role of L1 in their Spanish studies, a student with strong L2 skills shared his ML epiphany. He pointed out that he had never thought about language in this way before and was surprised by his new awareness; he almost always thinks in English (L1).

Purposeful attention to features of the L1 during the study of Spanish, as illustrated in the comparative grammar sequence, facilitated student awareness of their implicit understandings of

English structures, and demonstrated how this ability to reflect on L1 knowledge could be an affordance in L2 development. The teacher and researcher observed enthusiastic participation across a grade eight classroom during this grammar study. Learners were becoming aware of their L1 and L2 knowledge, which resulted in practicing purposeful control of L2 forms during oral interactions. Likewise, as outlined in the DL initiative for building casual repertoires, learner feedback demonstrated inquisitiveness and enthusiasm for expanding the L2 linguistic repertoires. This further illustrated growing awareness of their ability to control both linguistic systems.

Discussion of findings: Biliteracy development. In educational contexts, scope of vocabulary is a commonly used indicator of literacy and academic success. In her research on the critical role of what Cummins (2008a) termed cognitive academic language proficiency (CALP), for English language learners (ELLs) and literacy growth, Roessingh (2016) noted that the amount of academic language in school course work grows substantially around the developmental milestone of approximately 15 years of age (middle-years). Like ELLs, bilingual program students face an onslaught of academic vocabulary in two languages during the middle-years. In the context of the current bilingual program pedagogy, which separates languages in learning, the potential bilingual literacy vocabulary asset often remains fractured along the L1 and the L2 subject lines. Spanish LA, Math and an option course are offered in the L2, while all other courses and formal and informal school discourse are in the L1. When learning is compartmentalized between subjects and languages this way, learners may inadvertently experience a vocabulary deficit in both languages instead of having the lexical and the implied literacy advantage. Nurturing the DL principles of integrated instruction and bridging knowledge were significant first steps taken by these teachers in capitalizing on potential cross-

linguistic vocabulary strength. For example, during the grade eight DL Renaissance study, integration with Mathematics resulted in a rich oral Spanish academic language and conceptual learning sequence in which the students interacted with different teachers in different learning contexts and had the opportunity to apply and play with the newly acquired academic language.

Though the development of what Cummins (2008a) coined as basic interpersonal communication skills (BICS) was a focus of primary additive bilingual education, by the middle-years the focus had shifted to academic language. During this study, the comparative grammar and repertoire building DL initiatives addressed what appeared to be a growing gap in BICS competency. The DL initiatives accessed the large pool of students' implicit L1 knowledge of language structures and communicative discourse to support the building of casual linguistic repertoires suited to adolescent learner discourse types. ML awareness of the L1 became an analytical tool for understanding L2 language forms and for growing ML knowledge of the L2. This process illustrated the linking of cognitive and linguistic processes as explained by Vygotsky's dynamic of interfunctionality (Van Lier &Waiqui, 2012). The reciprocal relationship within interfunctionality was previously demonstrated in a French Immersion study conducted by Bialystok, Peets, and Moreno (2014). In this study students showed better understanding of grammar in their L1 (English) than other English native speakers who had not studied the L2 (French). Similarly, Rita shared that during the L2 language lessons her students expressed expanding L1 linguistic awareness.

Sociocultural based educational theory and emic perspectives on SLA substantiate the dynamic and nonlinear nature of L2 learning, which proponents propose is shaped by multiple interacting variables (Ellis & Larson-Freeman, 2006; Firth & Wagner, 2007; Roehr, 2008). For example, as ML awareness grew, students expressed increased awareness regarding code choice

norms in the classroom, and awareness of their agency relative to language choices. This is further discussed in the *Supporting the Development of Bilingual Identity* section that follows. The potential influence of interacting variables is amplified at intermediate and advanced L2 levels, where learners are independently able to access multiple affordances in the classroom ecology of language and externally. ML knowledge is a fundamental literacy tool for expanding independent language learning.

Summary. The dual language sequence findings demonstrated that implicit L1 and L2 knowledge can be made explicit through language awareness and comparison. The L1 served as an affordance for deepening understand of L2 grammar elements, and the associated growth in metalinguistic (ML) knowledge was also evident in context of increased L1 (English) language awareness. The comparative grammar DL sequence and the casual L2 repertoire building sequence were informed by authentic L1 language, and the L1 was a lens on the ZPD relative to the existing gap in second language repertoires. Appendices G and H provide a detailed Summary of DL Scaffolding Strategies practiced by teachers and students during the DL learning sequences. The DL sequences resulted in increased levels of student-initiated conversation in the L2 and about L2 oral language use (norms) in the classroom. Metalinguistic knowledge and bilingual vocabulary development were two specific elements of literacy that were impacted by the pedagogic connections made between L1 and L2 learning. This awareness provided leverage for further biliteracy development, such as building high frequency cross-

linguistic vocabulary (Roessingh, 2016) and expanding BICS repertoires in the L2. As well, ML

knowledge served as a tool to further advance L2 language development and refine L1 usage.

Supporting the Development of Bilingual Identity

Research question three took a broad look at the instructed bilingual environment to

explore L1 related affordances that could nurture the growth of bilingualism among middle-years

students. In the early years of the program, evidence of that growth was demonstrated in the

production of the phonology of the language, interpersonal communicative skills (BICS), and

content learning of Mathematics in Spanish. At the secondary level of the program, acceptable

performance in advanced content learning in Spanish appears to be the key indicator of continued

progress. At this level, there may also be an assumption that bilingual students can and will

interact orally at advancing levels in the L2. This assumption has not been substantiated and has

become an issue of concern. Students in this study perceived themselves as L1 dominant and

somewhat bilingual. They recognized that classroom L1/L2 code choice norms did not entirely

facilitate their goal of L2 oral proficiency. Teachers looked to action research to help understand

what leads to frequent L1 use, and how to increase L2 production within the secondary

instructional context.

During the middle-years, there are converging dynamics that impact bilingual education

in this instructed context. I will highlight three. First, at the secondary level, there is an

educational shift toward increased academic and content related language and formal literacy.

As discussed in the *Discussion of findings: Biliteracy development* section of this chapter, the

increased focus on academic language (CALP) may inadvertently reduce the instructional focus

on communicative language (BICS). Second, Canadian national research shows progressively

decreasing levels of student engagement through the secondary years (Willms, et al., 2009), which may also be a factor in this educational settings. Finally, as middle-years students transition from childhood to adolescence, they are in the process of creating new identities and voices. After multiple years in Spanish language education, this identity might ideally include self-characterization as bilinguals and result in increased L2 code choice. However, teachers have observed low levels L2 oral interaction in the middle-years classroom suggesting that environmental affordances may be operating at cross-purposes with regard to the program goal of bilingual development.

Pedagogic vignette: The quandary of L1 and L2 code choice. To illustrate the issue that teachers referred to as defaulting to English, what follows is a summary of events that occurred during an introductory DL initiative implemented in all three of the participating classes. The DL initiative was a school-wide five-day slam poetry residency, conducted in cooperation with a local urban arts organization. Sofia, the artist in charge of the residency, was a Spanish speaker who was comfortable conducting the residency in either Spanish or English. The only instructional variance across the three classes was the role chosen by the classroom teachers. Their choices inadvertently created a control group/experimental group scenario highlighting the role of pedagogy.

Two of the teachers ceded the instructional role to the artist who conducted activities and conversations in both English and Spanish. She asked students to work in Spanish when possible and to attempt to produce a dual language rap poem. The two teachers were available as a resource in the classroom. Over the course of the residency, the researcher and teachers

observed that students in both of these classes worked and spoke progressively more in English, and less in Spanish. Only one in twelve of their final poetry performances included Spanish.

The third teacher adopted the role of language coach while the artist conducted the residency activities. The teacher reflected:

> … I felt that my role as the teacher was very important, both in encouraging Sofia to speak to students in Spanish and to help students articulate their ideas in the target language…. and helping them find poetic tools to express their thoughts in Spanish.

In this class, the teacher helped access student L1 and L2 knowledge. As rap poetry ideas were generated by Sofia and the students, Mia helped generate the L2 terminology from identity, justice and rights concepts previously studied. She circulated in the classroom, helping students draw on knowledge of word morphology to generate Spanish word patterns and rhymes for their poems. These were also posted in the classroom for easy student access. Mia circulated in the classroom interacting in the L2 as much as possible, and discussing literary devices to support the students' writing process. The researcher observed that classroom interactions involved both languages, and the teacher reported that most of the students' final rap poems included some Spanish, and some of the poems were entirely in Spanish.

Notwithstanding the short-term nature (one week) of this slam poetry residency, it was worth noting that the class where the teacher provided regular and supplemental guidance regarding the L2 interacted more in the L2 and created more of the final product in the L2. This impromptu comparison raised questions related to Vygotsky's zone of proximal development (ZPD). Was it the expert guidance learners accessed from their teacher that enabled them to accomplish learning goals with the L2 beyond levels achieved without the same degree of expert guidance? Or, was it other affordances and dynamics that created significantly different results

regarding L1 and L2 code choice in the three classes? For example, during the debrief discussions the three teachers agreed that in context of the strongly affective aspect of poetry writing, perhaps the process would have been better served by less restrictive expectations regarding topics and language. At minimum, these DL experiences spotlighted the pedagogical quandary regarding when and how to influence L1/L2 code choice. As well, the contrast between the classes captured the attention of the research team with regard to the potential influence of pedagogic choices on student language choices.

The role of L1 in evolving bilingual identity. In context of the teacher concern about frequent student L1 interaction during L2 instructional time, the teacher-administered questionnaire asked students when and why they engaged L1 during L2 classes. Among the 72 student respondents, 96% confirmed that they use L1 (English) in Spanish class time. They shared that uses of L1 occurred when: translating for others; finding vocabulary; explaining and understanding things better; comparing ideas between languages; asking for help; sorting out confusion; and, when trying to understand new ideas in math. They also used Ll to increase speed of communication, to help friends with learning, when requiring social comfort and social convenience, and when they were distracted from the task. Students were clear that they regularly accessed the L1. Their responses implied that they strongly identified with their first language. Further, during the focused-conversations, students (n=26) reiterated the central role of L1 during cognitive activities involving private or public speech. They highlighted its role as a social tool, and for affective communication purposes. Following are a few examples of student reflections about their processing experiences involving the L1:

- "English helps a lot … if I'm trying to figure out a complicated thing I'll use English instead of Spanish to get the gist on it, so later I'll know what this is in Spanish."

- "if I start thinking in English it's kind of hard to start thinking in Spanish after that."

- "our minds always go back to English if you don't know the vocabulary…"

- "...because English is just the language that I naturally speak all the time and that's what I want to talk in…"

Through feedback to their teachers and in focused-conversation comments, many students used the word translate in their description of DL interactions. Analysis of these descriptions suggested that translate seemed to be the catchall word for linguistic and cognitive processes involving both of the languages, or movement between linguistic repertoires (translanguaging). Many perceived that they largely functioned in the L1 for thinking and personal communicative processes and then translated into Spanish as needed, specifically for assignment production. The presence and importance of L1 was clear, and appeared to be the dominant language.

This perceived dominance of the L1 could be interpreted as painting a grim picture for the potential growth of the L2 and bilingualism. However the students had more to say. The teacher-administered questionnaire (n=72) also attempted to gain understanding of student perspectives regarding the learning of Spanish and becoming bilingual.

- 80% planned to continue in Spanish bilingual programming through high school, 12% said they would not continue, and 8% were undecided.

- 65% said they used Spanish outside of school for reading or viewing television, when traveling, and when speaking with siblings, other family members, family friends, neighbors and at community events.

- Reasons for continuing Spanish studies included: future opportunities; travel; work; educational opportunities; parent wishes; increasing fluency; family relationships; fun;

learning about cultures; mental challenge; to be bilingual; lifelong value of languages;

and, the pleasure of learning.

This student feedback suggested that students have some personal identification with the L2, as

well as strong future expectations for being English-Spanish bilinguals.

Similarly, during the focused-conversations with the researcher, student (n=26) responses

to the question 'when do you feel bilingual' included: being able to fully express ideas in

Spanish; the feeling of Spanish being automatic; having the ability to stay focused on Spanish

learning; and, having the experience of authentically and spontaneously interacting with native

Spanish speakers. The following recollection illustrates one of these authentic experiences as

shared by Ella, a grade 9 student.

> For example, I teach younger children at Tae Kwon Do and I
> notice that this one pair of siblings, I heard them speaking in
> Spanish and their English is kind of broken. I guess they just
> recently moved here from a Spanish country, so I decided to
> explain things in Spanish so they would understand and when
> they realized that I spoke Spanish as well I could see that that
> was a huge relief to them because they were constantly getting
> almost scolded by the other teachers: "I repeated this to you
> 1000 times why don't you do it?". I'm thinking "just because
> you repeat it 1000 it doesn't mean it sticks to them", so I
> decided to make my best effort to explain it to them in Spanish
> and it actually worked. And now when I see them the little girl
> comes up to me and she excitedly chats with me in Spanish
> and things like that. And all my friends are looking at me
> "what is she saying?", "what is she talking about?". Then I
> just smiled because I totally forgot that they don't speak that
> language and they don't know what's going on, and I
> understand her perfectly and she understands me perfectly.

Several students shared similar stories wherein they had the realization that they were in the

midst of a spontaneous experience as an English-Spanish bilingual. In each case they related the

stories with substantial enthusiasm, again reinforcing some level of personal identification with the L2.

Of significant note from the student feedback is that only one student indicated that feeling bilingual occurred when she scored high grades in Spanish LA. Student feedback overwhelmingly indicated that their bilingual identity was affirmed through oral interaction experiences. This provided their middle-years response to Levine's (2011) second language identity formation questions: 'who am I in this language', and 'how am I me in this language'. These adolescent L2 learners wanted to be orally proficient, and expressed feeling bilingual when they participated comfortably in oral L2 interactions, particularly with native speakers. Their perception of a bilingual identity goal was clear, however, students did not seem to associate day-to-day classroom interactions in Spanish with achieving that goal or they did not have the language skills or intentionality needed to follow through in the L2. Consequently the L1 continued to be the frequent code choice norm for social interaction and intellectual activity.

Code choice norms and the bilingual CoP. In the initial Teacher Participant Survey responses, the three teachers consistently identified a pattern of teacher use of the Spanish language (more than 80% the time) for academic instruction and interaction with students. In comparison, they perceived that students chose L2 for assignment production 85% of the time, but less than 50% of the time for communicative interaction, and less than 10% of the time outside of the Spanish class. The code choice norm that teachers often referred to as defaulting to English, was articulated by a student: "You don't have to try because you can say it in English." This code choice norm was identified as the behaviour teachers most wanted to see changed. During the DL initiatives each of the three teachers explored ways to facilitate code

choice awareness, scaffold for strategic use of the L1, and encourage increased choice of the L2 in production. Following are examples from Mia, Cari, and Rita's classes.

Teacher L1/L2 code choice strategies and reflections. During Mia's thought circle activity, she scaffolded the learning using the L2 but acknowledged learner code choice in the mediation and externalization of ideas. Students gave "a glimpse of the learning process in flight" within the ZPD (Lantolf & Thorne, 2006, p. 185), as they purposefully integrated input from both languages, and then chose in which language to externalize their conceptual understandings. Mia and the researcher noted that students rarely chose to translanguage. Instead they communicated fully in either English or Spanish. In some cases they switched languages for a next response, as if they were choosing the more suitable of the two languages in a given communicative context; an action which Fuller (2009) described as a natural behavior of bilinguals.

Similarly, during the Renaissance study, Cari's students increasingly began to choose L2 for the language of mediation in their pair-share and summary writing activities. This was demonstrated in a code choice shift from chapter one, where 16 students wrote summaries in English and 12 wrote in Spanish or in Spanish and English, to chapters seven to 12 where no students wrote summaries in English and 18 wrote summaries in Spanish or in an L1/L2 combination. This shift illustrated L2 learners progressively choosing to mark (choose less often) the L1 and increasingly unmark (choose more often) the L2. Levine (2011) described this marking objective in his code choice framework, which he proposed would also occur in their casual interactions as code choice became a more explicit behaviour.

Finally, following the casual L2 repertoire building initiative in Rita's class, students shared that they were able to unmark the L2 because of having access to the casual and

collaborative Spanish repertoires that they had generated together. One student stated: "…telling us the ways to communicate with each other casually as we could in English, our own language, is exactly what we're going to have to do to eliminate English in Spanish class…". The classroom feedback that she received reinforced Rita's view that to further develop L2, intermediate level learners must be intrinsically motivated about their own L2 growth. She also concluded that explicit context-relevant instruction of intermediate level casual language was needed to support learner motivation to choose the L2 in day-to-day interactions.

During the DL initiatives teachers also explored various written and oral feedback mechanisms intended to help increase learner attention to their agency in code choice. As awareness grew amongst teachers and students, it facilitated the informal evolution of code choice behaviours within the larger community of practice (CoP). For example, following DL activities that included code choice discussions, Mia related that some students began to engage with her in Spanish outside of the classroom. In a conversation following the cycle two debrief session, the teachers spontaneously generated a substantial list of ways in which Sierra School staff and students could further expand and explore the bilingual CoP internally and with community partners (Appendix F). Teachers anticipated taking these ideas to the school's bilingual professional learning community (PLC) for consideration as future school-wide initiatives.

Student feedback regarding code choice. During the focused-conversations with the researcher, students' (n=26) comments suggested that group code choice norms were a powerful affordance that influenced their individual actions. Examples included:

- "The people I am surrounded by when I'm speaking, it's definitely a big thing too. There are these people that I just always speak to in English it's just automatic."

- "I'll be thinking in Spanish of the words and stuff but as soon as my mom starts talking to me in English my brain goes back to English."

- "We're all teenagers so when we're in English class we talk to each other really casually. … We know how to speak it [Spanish] properly the correct way, not the slang way or the casual way …it's a lot easier to say 'hey guys let's get back to work'."

It is also important to note that during the same focused-conversations where students' comments reflected a reliance on their L1, others expressed awareness of moments when they believed that L2 led their thinking, and others related their awareness of the need to make intentional language choices. Comments included:

- "It takes a lot of concentration to get myself back into the Spanish mode. For me it helps to reread what I've already written in Spanish."

- "…because it's really hard to speak when everything you say is being translated from English so I think we need to get in the habit or learn to think in Spanish when you're in Spanish class."

- "It's not a help …when you are switching out of the Spanish mindset and talking more in English, because it's just distracting."

Students were aware that they often actively chose between L1 and L2, and, that for the L2 to grow, it required intentional action on their parts. They proposed strategies for exercising learner agency relative to code choice:

- "I could research it [Spanish topics of interest] more… I could put more effort into that outside of the classroom."

- "Most of our teachers speak Spanish, there are very few teachers that only speak English so when you talk to them you try and talk in Spanish."

- "Surrounding myself a little more with Spanish, TV…."

- "We could use our new vocabulary that we learned about Spanish teamwork words."

In summary, students described a natural propensity toward the L1, however they sounded optimistic regarding their potential to advance in the L2. Some indicated that they believed their L2 skill level to be sufficient to be able to conduct large parts of their class work in the L2 if they exercised the agency to apply their skills. They also expressed awareness of language use as a choice around which classroom norms have evolved.

Discussion of findings: L1 in bilingual identity, code choice and the CoP. There are three dimensions to what seemed a contradiction between middle-years learners' stated ambitions to be orally proficient in the L2 and their frequent choice of the L1 over the L2. First, results have illustrated the role of L1 as a semiotic tool for mediation and cross-linguistic transfer in the content learning areas. Teachers and students drew on common underlying proficiency (CUP) between languages, and they translanguaged to bridge knowledge and maintain flow in thinking or interaction. These learning processes occurred across languages, and thereby authenticated supportive roles of the L1 for L2 conceptual and linguistic growth. However, a significant number of learner references to translating may suggest that students needed stronger ZPD support. For example, scaffolding strategies were needed to transition from L1 concept mediation to developing L2 mediation and internalization capacity, and ultimately externalizing in the L2.

Second, although the elementary bilingual experience had a strong communicative focus, it is possible that the language developed in the elementary years does not serve the linguistic needs of adolescent students. They repeatedly commented on the need for casual repertoires similar to the ones they use in the L1. The positive student reaction regarding the casual L2

repertoires initiative illustrated and affirmed the need for ongoing development and structured practice of oral repertoires suited to adolescent learners at the intermediate L2 level.

Finally, of particular interest at this age, is the potential affordance of adolescent identity formation and its relationship to investment, motivation and agency. The student questionnaire responses indicated that more than 80% of students planned to stay in the bilingual program. The reasons given reflected the instrumental value (e.g. career opportunities) of additive language learning that is promoted in the provincial bilingual construct, as well as some intrinsic motivations, such as the pleasure of learning and the desire to participate in intercultural communications.

From a sociological perspective, these learners were personally invested in the bilingual agenda, and broadly able to identify with some of the imagined communities (Norton, 2013) that this program advocates. However in the day-to-day middle-years instructional setting, there were gaps that presented as a lack of the essential L2 skills and strategies, and/or a lack of intentionality for L2 production. Like Dörnyei (2009), Levine (2011) drew on self and identity theory to explain the potential for engaging L2 learner motivation to make learning choices that advance their L2. Throughout the DL initiatives, the participating teachers engaged students in code choice conversations, which helped bring student attention to the self-regulatory aspect of L2 learning as an alternative to external incentives such as prizes and grades. As well, the casual L2 repertoire building initiative illustrated a holistic and exploratory approach for intermediate level L2 instruction. Students understood and identified with the L2 linguistic repertoires they had generated and were then empowered to use in their classroom CoP. This initiative illustrated a positive example of Dörnyei's L2 Motivational theory in practice. It connected specific L2

short-term learning tasks (casual oral language) with the ideal bilingual self goal of oral proficiency.

There are both social/cultural dimensions, and personal/individual dimensions that bolster the growth of bilingual identity in the instructed language learning setting. Some learners identify with and invest in the social and cultural capital that the L2 enables relative to intercultural and global opportunities, while others respond more deeply to personal motivations associated with grooming a bilingual self identity. In this middle-years context, the CoP model could assist in developing a space for emerging bilingualism that involves deliberately moving between various language and identity relationships (Fuller, 2009). Adopting a bilingual perspective goes beyond the typical L1/L2 dichotomy that has driven the pedagogical discussions to date, and instead focuses on the contact zone where these intermediate level, middle-years learners are making purposeful L1/L2 code choices within various identity and discourse contexts.

Summary. Academically and socially students identified strongly with their L1. They wanted to become bilingual and named the goal of oral proficiency in relation to their ideal bilingual selves. Student feedback reinforced their awareness of the contradictory norm of frequent L1 code choice, in spite of knowledge regarding many strategies for growing their L2. The DL experience built awareness and stimulated preliminary conversations regarding the investment, motivation, and learner agency needed to grow intermediate level L2 proficiency in the instructed setting. Evolving code choice norms to support bilingual identity growth could be

nurtured by building the community of practice (CoP) among participants in the bilingual networks.

Revisiting Assumptions

The study concept was based on two major assumptions regarding second language acquisition, bilingual education, and teacher professional practice. These assumptions were the result of my extensive experiences as a second language learner and educator. The first assumption was that a high level of second language learning and biliteracy development is achievable in instructed L2 learning settings. This assumption could not be conclusively assessed during a thirteen-week study. However, study results did provide reflections to inform the conversation. The DL initiatives illustrated that grade level content learning and production in the L2 was achievable, notwithstanding the awareness that students were not operating exclusively in the L2. As part of the process, they engaged their L1 for mediation and externalization of understanding. Additionally when the learning task supported the opportunity, students actively used metalinguistic awareness and knowledge of both L1 and L2 to generate L2 linguistic repertoires, and for the bridging of academic vocabulary. Several students reported experiences where they had fluent interactions with native L2 speakers, providing some indication of their confidence in having intermediate level L2 proficiency.

The second assumption on which the study was based was that teachers have deep practical knowledge of learners in bilingual settings and are therefore best positioned to explore practice and evolve pedagogy. This assumption resulted in the choice of the PAR methodology and generated insights with regard to the practical potential of site based professional learning and research. Teachers were able to gather prompt and context-specific feedback from students and make pedagogic adjustments based on the input. This resulted in data illustrating authentic

teaching and learning interactions. The close and ongoing interactions of the research team produced a substantial amount of qualitative data, however the time commitment related to data analysis limited the participation of the teachers during the final analysis portion of the process. Therefore, data interpretation was predominantly generated from the perspective of the researcher informed by the debrief and focused conversations with the teachers. This identified one of the challenges associated with PAR research; it is a highly time intensive process for the teachers and the researcher, thus producing challenges as a professional learning and research model. It was also assumed that this experience with action research would create the potential for future research within and beyond participants' school and professional networks, which remains to be determined.

Summary of Findings and Analysis

This chapter presented the experience of three bilingual program teachers as they explored the role of L1 in middle-years dual language instruction. The discussion of the findings drew attention to the complex and holistic nature of language learning, particularly in relation to adolescent development. The analysis revealed various roles for L1 in dual language content learning, in L2 language growth and biliteracy development, and in terms of its part in bilingual identity formation. This analysis signaled the critical role of agency with adolescent learners, and opened a discussion about its pedagogic potential through the creation of bilingual communities of practice in instructed language learning settings.

Chapter Five: Conclusions, Implications and Recommendations

The school and classroom are the real world language learning environment for participants in the Alberta additive bilingual program. Stakeholders have assumed that as learners advanced academically and progressed in their L2 skills, bilingualism would be the result, including proficiency in L2 academic learning and L2 communicative skills. This study was conducted in a middle-years bilingual educational setting, where contrary to assumptions, educators observed frequent use of the L1 during the L2 target language instructional time. Consequently, for some educators such observations have reinforced the theoretical and practical perspective that L1 is a problem for the learning of L2, in spite of substantial bilingual research demonstrating that L1 can be a resource.

The purpose of this exploratory study was to investigate dual language (DL) learning and the potential affordances of learner first language (English) as a resource in meeting middle-years learner needs, including Spanish language (L2) acquisition and biliteracy development. Bilingual program teachers participated in a participatory action research (PAR) process, which included planning, implementation, observations, interactions and adjustments over two cycles of DL initiatives in the classroom. They aimed to understand and expand intermediate level L2 production through dual language initiatives, specifically through investigating the role of the L1. The conclusions, implications and recommendations for this study were formulated in response to the three inter-related research questions and associated findings. The conclusions are presented thematically and include building a bilingual community, nurturing oral proficiency, and expanding conceptual capacity. The discussion and related implications section is followed by recommendations for bilingual educational practice as applied to educational

institutions and educators, to bilingual learners, and with regard to future research. Final researcher reflections and a study conclusion complete the dissertation.

Conclusions and Implications

      Building the bilingual community. Findings illustrated that academically and socially students identified strongly with their L1. They nevertheless wanted to become bilingual, and specified oral proficiency as an indicator of being bilingual. As well, teachers and students recognized that classroom norms impacted code choice behaviour.

      An initial conclusion is that the stakeholder goal of bilingualism requires a personal investment which goes beyond years of participation and academic progress in the program. Even after eight to 10 years in the bilingual program, many students expressed a lack of confidence in their use of the L2 and a wide range of attitudes regarding their sense of bilingual identity. Notwithstanding, some of the students were able to recount important experiences that reflected a strong sense of emerging bilingualism. What resonated for these students was their level of oral proficiency, which was also the named goal of students who felt less bilingual. Much as they do in the L1, students experienced a sense of personal power when they were able to interact spontaneously with native speakers of Spanish.

      This conclusion implies that explicit individual bilingual goals are needed; goals that reach beyond the current scope of secondary level academic course requirements. In this regard, Dörnyei's (2009) L2 Motivational Self System reported that representations of the ideal bilingual self reinforced by discreet short-term goals, can provide motivation and sustain investment in the L2 learning agenda. Pedagogically, educators can gain access to a motivational leverage point in the ZPD of emerging bilinguals, by helping them engage personal agency in the service of

achieving explicit short-term L2 goals. These bilingual self representations do not negate the presence of L1, instead they embrace the complex integrated nature of bilingualism.

A related conclusion involves the larger circle of influence including investment in the imagined/desired L2 communities and the related norms that evolve in the classroom. As adolescent learners exercise progressively more personal agency academically, socially, and behaviourally including L1/L2 code choice, peers and school environment relationships become an increasingly important affordance. Classroom behaviour norms that help unmark the L2 (choose more frequently) and mark the L1 (choose less frequently) should be made explicit and collaboratively nurtured. Levine's (2011) bilingual community of practice (CoP) framework is a means for evolving code choice norms in support of advancing L2. As students shape their personal responses to the author's L2 identity questions 'who am I in this language', and 'how am I me in this language', they become better positioned to self-regulate and offer collegial support within the CoP. A collaborative CoP could help mature the L1/L2 code choice behaviours and relationships of emerging bilinguals within the instructed environment.

A third conclusion related to building the bilingual community involves the role of all teachers in the environment. In this intermediate L2 level instructed bilingual context, teachers were often the only native or highly fluent speakers of the L2, which assigned them a significant mentoring role within the ZPD (Vygotsky, 1987) of learners. The related conclusion is that teachers must be explicit and deliberate in their modeling of conceptual languaging processes in the L2. Modeling should also include communicative language and the movement between various discourse types. When the second language instructional focus is limited to the academic course content language, it indirectly perpetuates unmarking the L1 for cognitive loading and interpersonal interactions. Instead, when teachers orally and explicitly model

mediation and externalization processes in the L2, and explicitly generate and use interpersonal and social L2 structures in the classroom, this enables the unmarking of the L2. This conclusion implies that there is an instructional as well as a social/collaborative aspect to a bilingual classroom community of practice.

Nurturing oral proficiency. Findings indicated that L1 was a semiotic resource for intermediate level second language instruction and provided authentic linguistic repertoires from which to generate relevant intermediate level L2 repertoires. Implicit L1 knowledge became explicit through language comparisons, and metalinguistic (ML) awareness and ML knowledge in both L1 and L2 were elevated.

A key conclusion with regard to nurturing oral proficiency at the intermediate L2 level is that educators should purposefully access the most authentic resources available, including the L1 (Lantolf & Thorne, 2006). Three outcomes arose from accessing the L1 as a resource for second language acquisition in the instructed context. First, implicit knowledge of the L1 served as a powerful model for how meaning relative to past events was structured linguistically in the L1 and then comparatively, how it would be structured in the L2. Second, making implicit L1 knowledge explicit and comparing to L2 forms built awareness of how L2 language structures created their own meaning and were produced outside of, and at times in contrast to, direct translation from L1. Third, in addition to increasing comprehension of the L2 language forms, students' increased awareness of implicit L1 knowledge created the potential for refinement of L1 skills. Comparison of the linguistic systems also enhanced ML awareness and initiated discussion regarding ML knowledge in relation to both languages, thereby providing foundational knowledge for biliteracy growth.

A second conclusion was that learner L1 awareness of discourse types and linguistic repertoires should be engaged in order to nurture sociolinguistic sensitivity and to help build authenticate L2 repertoires for adolescent learner use. The communicative skills learned during years of oral language development in the elementary program reflect beginner level social language structures. These have limited relevance when oral communication is based on adolescent identity formation. Building from current L1 repertoires allows adolescent learners to build L2 repertoires to which they relate emotionally, and would therefore be more likely to choose during peer interactions. Further, the intermediate language learning experience should include discourse types that go well beyond the production of academic content language. Twenty-first century communicative repertoires should include casual and collaborative language, as well as language suited to multimodal and digital discourse practices. By drawing on first language CUP and knowledge of discourse forms used in digital environments during the repertoire building task, the L2 was enabled as an empowering and authentic language choice for collaborative interactions (Hoechsmann & Poyntz, 2012).

These conclusions imply that intermediate level bilingual pedagogy should embrace ongoing development of oral foundations and balanced literacy (Hamayan et al., 2013), including digital literacy. Accessing L1 repertoires assures that the range of L2 literacy skills remains commensurate with the evolving discourses and language needs of adolescent users. Additionally, the ongoing development of oral foundations should include attention to elements specific to L2 learning, such as time needed for language processing and production of social speech in the second language.

The final conclusion regarding the role of L1 in intermediate L2 acquisition and biliteracy development is that fluently bilingual teachers are a critical instructional resource in

such settings. Having the knowledge and ability to lead and initiate investigations involving

both language systems enables the dynamic language learning processes that support the

development of advanced bilingualism. This implies that seeking fluently bilingual teachers

with knowledge of second language pedagogy must become an important criteria when hiring for

the intermediate level of L2 instruction.

Expanding conceptual capacity. Findings illustrated that there were a number of ways

that L1 (English) was an implicit and an explicit resource for the cross-linguistic transfer of

knowledge and skills in the context of the complex content learning occurring in the L2. These

included: accessing prior learning and personal L1 knowledge and skills to support L2 learning

processes; using L1 to share the cognitive load during mediation of unfamiliar L2 concepts;

deriving meaning and comprehension checking of L2 notions; and, externalizing understanding

(social speech) when ideas had not yet been languaged into the L2. Bilingual lexicon,

vocabulary knowledge and awareness of word morphology in the L1 enabled bridging to L2 and

vice versa.

The conclusion most associated with this finding was that L1 influence is a powerful and

intuitive resource that can either support, or inadvertently reduce L2 mediation and processing if

it is not purposefully guided. Students described the L1 default approach when saying that they

regularly processed the learning in the L1 and then translated to Spanish (L2) for assignment

completion. This implies that the locus of learning in this dual language setting should not be the

content per se, but rather, the processing of the content in the L2. Pedagogical task and process

design is critical to assure that L1 is purposefully engaged to support the growth of L2

processing, from the mediation and internalization of ideas (private speech) to externalization of

understanding (social speech) (Lantolf & Thorne, 2006). This pedagogical approach includes

diagnostic attention to the learner ZPD relative to the L2. Dual language activities provide a window on what learners are able to manage with L2 vocabulary, concepts and idea manipulation, as well as when and how they draw on L1 for support. The DL approach should facilitate context specific L2 language instruction including oral foundations that guide learners to elevate their L2 processing capacity, and ultimately L2 language choice for externalization of understanding.

Another conclusion to be drawn from these findings is that at the intermediate L2 level, pedagogical DL initiatives should exist to bridge and expand the potentially large bilingual lexicon and raise ML knowledge in both languages. The potential of interfunctional expansion of cognitive and linguistic abilities (Van Lier &Waiqui, 2012) has been demonstrated. The intermediate L2 level provides a rich terrain for accelerating such dynamic learning. Although the teachers attended to discipline-specific language, explicit strategies to bridge high utility general academic language (Roessingh, 2016) were not part of the process. Providing foundational support for students' broader L2 vocabulary needs by explicitly integrating across various subject areas in both English and Spanish could be the subject of future biliteracy initiatives.

A related conclusion was that learner awareness of the L2 development process is critical, particularly at the intermediate and advanced levels. Learners need to understand their role in the complex nature of the bilingual endeavor. It is not simply to memorize vocabulary words and language forms for reproduction in assignments, but to develop L2 competencies that enable them to conceptually process ideas (mediate and internalize) and language them (externalize) in the L2. Learner awareness is a precursor to accessing learner agency for the development and engagement of dual language processes and L2 conceptualization skills.

A final related conclusion focuses on the structure of the learning environment. At the intermediate L2 level, it is an asset to have bilingual teachers able to integrate content and language learning, e.g. Spanish LA and Social Studies (English) or English LA. L1 is an authentic affordance in every bilingual classroom setting and the dual language construct enables more complex pedagogic integration (vocabulary, CUP, concepts) and hence deeper levels of understanding. From a practical perspective, in times of extreme demand on learner and teacher time, multi-subject integration of learning is a desirable strategy.

Recommendations

Based on the findings, analysis, conclusions and implications derived from the data in this study, the researcher offers the following three sets of recommendations for practice. These recommendations are intended for bilingual program leaders and teachers, intermediate level second language learners, and future researchers.

The frame of reference for this study was a sociocultural perspective on language and learning, which acknowledges the dynamic nature of each ecology of language based on multiple factors in that environment. This study was conducted in a recently expanded additive language learning program for which there is a broadly defined program of studies, but relatively few other instructional resources. The recommendations are specific to this context, and should be considered and adapted for other uses with that understanding.

1. Bilingual program leaders and teachers. At the provincial level, it would be timely to engage with a broad spectrum of stakeholders to review bilingual program goals and implementation strategies at the secondary level. This review should include substantial school-base input regarding the expectations and experiences of the participants; in particular the

students, and the teachers designated to instruct the L2 at the intermediate bilingual level. A

bilingual program pedagogical investigation might also include:

- sourcing and sharing current professional resources specifically related to intermediate

  and advanced level L2 instruction in other dual language settings such as those referenced

  in *Advanced Language Learning* (Byrnes, 2008); and the CLIL context in Europe

  (Llinares, 2013); and,

- coordinating the expansion of school-based action research relative to intermediate level

  second language instructional approaches.

At the district or school level, an in-depth exploration of the dual language (DL)

approach in bilingual settings would inform practice. L1 scaffolding resources could be

collaboratively developed to assist intermediate level learners in increasing their use of the L2

during content learning. A few examples of potential scaffolding approaches follow.

- Oral foundations (Hamayan et al., 2013) could be included as essential elements in the

  design of learning sequences involving the L2.

- Students and teachers could generate L2 classroom discourse repertoires suited to the

  course content and type of learning activities used, and draw on L1 repertoires as a

  resource. Visual display of these L2 repertoires would provide prompts for learners.

- A review of the *Alberta Spanish Language Arts Grades 7-8-9 Program of Studies* for

  general cognitive, language learning, and language use strategies, including strategic uses

  of L1 could be initiated. Engaging with students in the exploration, practice and

  assessment of these specific strategies would be critical.

- Learning could be structured to offer content-integrated opportunities, with a clear focus on the scaffolding of content (in L1 or L2) to support conceptual processing in the L2. See resources such as Lyster's (2007) *Learning and teaching languages through content: A counterbalanced approach*, for instructional strategies.

- English and Spanish teachers representing various middle-years subject areas could generate a lexicon of intermediate level general academic cognitive vocabulary to be developed and nurtured across subject areas and across L1 and L2. Resources such as *Bringing Words to Life Second Edition: Robust Vocabulary Instruction* (Beck, McKeown & Kucan, 2013) could provide insights.

- Create PLC opportunities for teachers to allow for peer observation of dual language lessons, and follow-up with professional learning conversations regarding the strategies and processes observed.

A classroom level goal could be to create bilingual communities of practice (CoP) in partnership with students. Encouraging learners towards active agency in code choice and in the design of instruments for tracking language use is key: exit slip reflections; daily strategies for increasing L2 use; and, conversations about purposeful L1 strategies and transitions to L2. Active agency includes working with students to set individual language learning goals, tracking, assessing, and then celebrating their progress.

As a bilingual school CoP, administrators, teachers and students need to be engaged in redesigning the norms around code choice. Equal status of languages (Hamayan et al., 2013) could be the guiding concept to initiate a school-wide conversation regarding the nature of

bilingual communities and the deliberate instructional, collaborative and social ways that each language is nurtured within the community.

It is important to facilitate opportunities for authentic language use experiences. These might also involve non-academic aspects of schooling within the individual school, with other secondary and elementary level bilingual schools, in the city L2 community, and including the use of extended bilingual opportunities such as international excursions or exchanges.

2. Intermediate level second language learners. Ideally, each student should become the agent for the emergence of their own bilingual identity. Bilingualism is not only the result of 12 years of participating in the bilingual program at school; it is also the result of a personal journey including investment in, connections to, and experiences with the language and language community over time. Being bilingual involves English (L1) identity, language and culture intertwined with emerging Spanish (L2) identity, and intercultural learning and attitudes. What follows are strategies that could be used more frequently and intentionally by students:

- Participate in the school bilingual community of practice (CoP) by setting code choice objectives and tracking personal bilingual goals, as well as supporting peers in their CoP endeavours. For example if oral L2 proficiency is a desired outcome, set daily goals toward achieving that goal.

- Interact in Spanish with bilingual teachers.

- Read in Spanish.

- Seek out opportunities within and beyond the school setting for increased bilingual interactions and exploration of personal interests across languages.

- Use knowledge in English and of English to check understandings in Spanish. Complete the process with confirmation of the understanding or correction as needed in the L2.

- Note the ways that use of English assists or hinders L2 learning, and adjust L2 learning strategies accordingly.

3. Future research. The Alberta English-Spanish bilingual program began in 2002 and has now graduated five years of grade 12 bilingual program students. Ongoing research reviewing the conceptualization, implementation and results for this additive bilingual program at both the elementary and secondary levels would be timely. A mixed-methods research approach would gather quantitative data such as enrollment over time and student performance, while qualitative data could shed light on stakeholder perceptions regarding program achievements, challenges, and future directions. Teachers who participated in this study expressed a desire for clarity regarding the language learning program goals. Such clarity would help ensure that informed and thoughtful adjustments are identified and acted upon for the benefit of all stakeholders.

In terms of the broader scope of second language acquisition, instructional approaches in the area of intermediate level and advanced second language learning are not well researched. This applies to additive L2 settings such as bilingual or French Immersion, settings for newly arrived English language learners, or second language learning in a foreign language course. Research specific to the Canadian context of intermediate L2 level instructional approaches is needed to respond to growing linguistic diversity. Topics might include discourse analysis studies which could shed light on conceptual processing at advancing L2 levels, and could be relevant for various L2 instructional contexts. Interpretive research that explores learner agency, identity, and motivation theory related to advanced levels of L2 learning is needed. These would inform pedagogy in relation to emerging bilingualism in adolescence and young adults.

Finally, in context of the evolving multimodal and multilingual nature of literacy, it was clear that the adolescent bilingual students in this study were 21st century learners who actively engaged with social media and multimodal learning. Educational research focused on multimodal, multilingual, and translingual literacy practices of bilingual program students would provide additional insights in relation to 21st century multiliteracies.

Researcher Reflections

I am grateful for the commitment of the educators and students who traveled this participatory action research (PAR) journey with me. I discovered early on that observing and adapting the complex processes occurring in a bilingual intermediate L2 level classroom involved ongoing interpretation by the teacher and by the researcher. For example, teachers adjusted task design to meet learner needs that became apparent during the DL sequences. Similarly, the researcher modified data gathering techniques in order to assist teachers in their journaling process. PAR was an iterative research process that enabled authentic exploration of the classroom experience, and it required risk-taking and creativity by research team members. The professionalism of the research team was appreciated.

Although this bilingual ecology of language included numerous important affordances, I realized that it was necessary to limit the investigation. For example, not unlike first language instruction, technology is a tool that is powerfully present in the middle-years classroom. Teachers and students actively engaged with digital tools during the DL sequences. I anticipated valuable insights regarding the use of digital technology in middle-years DL communication. However, exploring the affordances of the L1 covered a broad scope, therefore it was not feasible to also explore the language learning relationship to digital technology. It will fall to

future studies to investigate the relationship between 21st century digital literacy and dual language middle-years education.

Conclusion

The purpose of this exploratory study was to investigate dual language (DL) learning and the potential affordances of learner first language (English) as a resource with middle-years intermediate level second language learners. This study demonstrated that first language can be a powerful resource for L2 learning when it is purposefully engaged. It also suggested that a bilingual program pedagogy is needed to provide a framework that will supports the zone of proximal development to enable the growth of intermediate level second language skills and biliteracy.

To help understand how the L1 can be a resource at advancing levels of L2 learning, three areas of language development were explored; conceptual development, oral proficiency, and building bilingual community. What was common among the three areas was that the L1 assisted in making implicit knowledge and processes more explicit. As well, acknowledging the role of L1 allowed participants to recognize and adjust the norms related to L1/L2 code choice. This insight provided educators with diagnostic information from which to scaffold for the language learning needs of intermediate level L2 students. It also helped increase learner awareness regarding their current language learning strategies, language use choices, and the importance of learner agency in the bilingualism agenda to which they continue to ascribe. What we investigated together was the nature and practices of being a bilingual in this instructed language learning context. This exploration will no doubt continue; it is the nature of teaching and learning.

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Appendix A: Teacher Participant Survey

Part 1: Educator demographics

<u>Education</u>

1. Years of post-secondary education: _____

2. Degrees and specific areas of specialization: _____

3. Other specialized training: _____

4. English education- number of years during K-12: ___ during post-secondary: ___

5. Spanish education- number of years during K-12: ___ during post-secondary: ___

<u>Languages</u>

6. Number of years living in Spanish environment: _____

7. Number of years living in English environment: _____

<u>Teaching experience</u>

8. Number of years: _____

9. Number of years in bilingual program: _____

Part 2: Perspectives on dual language learning in the bilingual program context

scale: 1 highly agree, 2 agree, 3 no opinion, 4 disagree, 5 highly disagree

Choose the number (1-5) that corresponds to your pedagogic   1   2   3   4   5
perspective on the following:

1. English and Spanish should be kept entirely separate

2. English can be a useful tool for learning content in Spanish

3. English can be a useful tool for the learning of the Spanish language

4. Strong language and literacy skills in both languages is a feasible goal in the program

5. I feel comfortable using Spanish in English classes

6. I feel comfortable using English in Spanish classes

7. I feel comfortable about students using English in Spanish classes

8. Intentional planning for Spanish language learning is a pedagogic priority in middle years

9. Middle years learners are enthusiastic about Spanish language learning

Part 3: Dual language learning practices

scale: 4 is often, 3 is occasionally, 2 is seldom, and 1 is never

How often do you employ L1 (English) to support L2 (Spanish) in the bilingual program context?	4	3	2	1	**When and why do you use this approach?**
1. I make comparisons between languages and help students see features e.g. root words, cognates, or comparisons in grammar (linguistic awareness)					
2 a. I translate into English or into Spanish					
2 b. I encourage student to translate into English or into Spanish					
3 a. I switch between languages to build vocabulary or develop concepts					
3 b. I encourage students to switch between languages (translanguaging)					
4. I use these other strategies …					

Additional Comments:_____

Appendix B: Student Questionnaire

Part 1: **Demographics**

1. M_____ F_____

2. How old are you? _____

3. What is your first language? _____

4. In what grade did you start studying Spanish? _____

5. Which schools have you attended and in which program? _____

_____

6. Do you use Spanish other than at school?

   Yes ____ No ____

If yes, when and with whom do you use Spanish? _____

_____

7. Do you speak, understand and write languages other than Spanish and English?

   Yes ____ No ____

If yes, which language(s)? _____

8. What languages do your immediate family members (with whom you live) speak?

_____

9. What languages do your relatives speak e.g. grandparents, aunts and uncles?

_____

10. Why do you continue to study in the Spanish bilingual program? _____

_____

11. Do you plan to stay in the bilingual program through to grade 12?

   Yes ____ No ____ Why? _____

Part 2: English in the bilingual program

12. Do you ever use English while you are in a class taught in Spanish?   For example, you might

translate, comparing languages, use English words when you don't know the word in Spanish,

help others in Spanish by speaking for them, or ask for help from others in English.

        Yes ___ No ____

If your answer is yes, please give some examples? _____

Part 3: Interest in study participation

                                                                                Yes   No

  13. Would you like to be a student participant in this study? This

        would include discussing your experiences regarding

        the use of English in bilingual learning with the researcher.

  14. Would you like to talk with someone about the study

        before deciding?

Appendix C: Teacher Journal Prompts

These prompts were offered as an initial guide for teacher journaling. As the documentation

process evolved, it included journaling and interactive conversation between the teacher and the

researcher.

Date **Learning Plan Specifics** **Objectives:** Content, skills, L1 & L2 form & function	**Teacher experiences, observations, reflections and questions** -detailed description of student-teacher dual language interactions -detailed portraits of student collaboration or individual work -quotes -teacher reflections about patterns and themes, and teacher questions
Dual language approach	
Student task/activities	
Formative assessment tool	
Date	
Date	
Date	

Appendix D: Student Focused-Conversation Questions

Students received a written copy of the questions and had an opportunity to write down thoughts that they would like to share. The questions were read aloud, and students were audio-recorded while they responded.

Perceptual information regarding being a bilingual learner, the language learning process and the ways that first language (English) is used.

1. When do you feel bilingual? What would be needed to help you feel bilingual more often?

2. How is English a help in your Spanish work? How is English a hindrance?

3. **Teacher – researcher question**
    Exploring the use of L1 related to the specific DL initiative in that class.

Additional questions:

What do your teachers do that help you improve your Spanish?

How is learning different and/or the same when you are working in L1 (English) or L2 (Spanish)?

When others speak English (or Spanish) do you join in? How do you choose which language to speak?

Appendix E: Teacher Focused-Conversation Questions

Teachers received the questions in writing and had an opportunity to write down thoughts that they would like to share. The questions were read aloud, and teachers were audio-recorded while they responded.

1. Objective Question - What DL task sequence did you administer with your students during Cycle 2 of the study?

2. Reflective Question - What is an example of something within the DL approach that well or something that was challenging for you or your students? … also with regard to the PAR process.

3. Interpretive/Analytical Questions-

a. How were students impacted (actions, behavior, performance, risk-taking)?

b. What insights have you gained regarding how students construct knowledge, how they engage the L2 (Spanish), and how biliteracy is influenced with these innovations?

c. How has your view of L1 in the bilingual context been impacted during this study? (pedagogic roles of L1, the bilingual community of practice)

4. Decisional Question- How will you use this approach again and what support do you need?

Appendix F: Potential School Bilingual CoP Strategies

The following list of ideas was a brainstorming activity generated during the cycle 2 debrief

session as the participants discussed ways to create a school-wide CoP.

- intentional planning intentionally of for casual conversations with students that can be as part of the Spanish LA classroom
- developed through the professional development committee
- and based on concrete strategies that can be applied quickly
- generate & support the regular and deliberate talk/use of Spanish in the halls in Spanish and casual conversation
- intentionality of what the pedagogy of the hallway could look like? … maybe a questions of the month - like the garbage pickup or math bulletin board
- pd to have a focus PD on creating joyful literacy practices using with Spanish: language strategies, grammar games, drills, repetition
- reinforce students for peers support for increased casual language use … & teachers too
- idea presented to question to bilingual principals: could we thoughtfully pilot something so that our experiments and innovations help others i.e. What is dual language in learning tasks?
- CTF week creates a space to put language expectations at the front of learning with tools like rubrics and personalized goals. How do we create a portrait or vignettes of what a bilingual program looks like?
- there was bilingual PLC awkwardness last year around trying to implement strategies and bring examples back to the group: challenges were the vagueness of the strategies in relation to the classroom study at hand & the lack of time to implement something and get samples before the next meeting
- a positive ex. was last year with pd on neuro-linguistic approach which was clearly shared and possible to implement the next day, similar to journal Qs in this study which led to quick follow-up adjustments in practice
- students need to establish very specific language learning goals at their current level (creating a metalinguistic (mla) space and immediate student ownership of it)
- there was reinforcement from students in interviews saying that they need to have oral Spanish practice first thing when Spanish classes start to bring them into that mindset (game, conversations, chorus, drill, etc.)
- bilingual PLC sharing should be around specific small strategies, not large projects and final products, eg. each of 25+ bilingual teachers implements one strategy and documents evidence of what happens, good & bad e.g. a thought circle or the daily conversational Q, then shares the experiential piece to demonstrate the strategy & specific description of what happened in the class & possibly some bit of student feedback about the experience

- take the time to increase teacher and student linguistic awareness and reflection about goals and language learning processes through feedback discussions, exit slips, self-assessments, etc.
- invite students into the conversation about choices in learning and communication about what students need in their learning & setting their language goals
- break-up the long academic tasks with an oral grammar break, drill, spontaneous repetitions, and energize students back into the L2 a few times during the class to build stamina in the L2 and refocus (appeal to the affective)
- we should be creating the affective relationship with our students using the L2 e.g. conversations about the weekend, student interests, hallway talk, etc.
- produce a folder of 10 informed practices to generate the Sierra School bilingual community of practice environment e.g. start every bilingual class with a 5 minute Spanish oral exercise to awaken and continue growing the L2
- use prof learning time to get the school behind creating the school strategies
- pull resources such as neuro-linguistic approach videos into an easily accessed location for teachers to refresh their thinking and get new ideas
- we can quickly make a list of fossilized language errors to address but maybe need to do a school based diagnostic (listen to teachers talking) to take note of the tenses and idiomatic expressions that our students need to carry-on casual interactions
- could teachers participate in bilingual classroom observations and 'listen' to how L2 (and L1) is being used to further inform the 'state of the L2' and the needs
- possibly the student voice in the student interviews that I've conducted will give insight and provide leverage for a conversation with teachers about relevance in language learning
- students say that grammar is the crack in their confidence and our SLA scope and sequence doesn't necessarily address the practical language needs of our students or build the repertoires that students would use in functional, interactive conversations … should we set up a professional conversation about the relevance of the scope & sequence for the SPB setting and together propose an alternative direction for our school?
- could we use current events to focus on the development of ethical, global citizens and the exploration of the Spanish speaking world instead of isolating countries to study in a specific grades and make linguistic objectives the major priority?
- Does the system voice and the parent stakeholder voice focus on language skills as a priority?
- Umberto Eco says culture is what we choose to keep, what we choose to discard and what we choose to include, so to be able to make the SPB culture meaningful, maybe we should have the conversation?
- Sierra School is a bilingual community with 25+ participants (teachers) who are potential expert resources about immigration, Latin American economics, and a myriad of other topics - how could the Spanish community of practice in the school be grown through drawing on these resources in our units of study?

Appendix G: Research Question 1 Summary of DL Scaffolding Strategies

Strategic Use of L2	Strategic Use of L1 and L2	Strategic Use of L1
Teacher models concept mediation in the L2 (using language for thinking) during Q:A, explanations & class discussions.	Students translanguage during concept mediation & internalization to check comprehension.	Teachers & students access L1 vocabulary & knowledge. Students access L1 private & social speech to mediate new ideas.
Teacher orally prompts in L2 for knowledge & skills from L1 (CUP).	Teacher & students collaborate on strategies for exploring CUP & transfer of knowledge & skills.	Teacher prompts CUP, e.g. pre-instruction reviewing of L1 linguistic knowledge.
Teacher provides planned & spontaneous L2 grammar instruction.	Teacher scaffolds complex L2 grammar & contrast L1/L2 linguistic elements.	Students translate to L1 to check comprehension.
Student peer edit written forms & collaboratively language concepts & ideas during task production.	Students translanguage to maintain interactional flow (social speech) while mediating concepts in group tasks.	
Teacher & students seek out L2 human (e.g. other teachers) & multimedia resources to support L2 content learning.	Teachers & students mediate L1 resources into L2.	Teacher & students access L1 human & multimedia resources to support L2 content learning.
Continual teacher modeling of language structures in the L2, recasting & explicit feedback on L2 usage.	Teacher does comparative analysis between L1 & L2.	

Appendix H: Research Question 2 Summary of DL Scaffolding Strategies

Strategic Use of L2	Strategic Use of L1 and L2	Strategic Use of L1
Provide planned and context driven L2 grammatical explanations.	Post L1/L2 comparative examples in the classroom & in student notes.	Deconstruct implicit L1 grammar knowledge for comparison to L2 during L2 instruction.
Create regular focused L2 oral peer interaction tasks to rehearse new structures and process and language concepts in L2.	Students translanguage and mediate evolving concepts in interactive settings.	
Use authentic L2 resources (e.g. teachers or film) to access idiomatic & sociolinguistic L2 resources.	Compare L1 & L2 idiomatic expressions.	Take time to analyze how L1 notions are derived and culturally situated.
Regularly deconstruct Spanish vocabulary to raise ML awareness.	Contextually elicit comparative knowledge of cognates and word morphology features.	Regularly deconstruct English vocabulary to raise ML awareness.
Practice oral repetition of L2 vocabulary & structures.		
Post a ready list of L2 verbs & expressions to facilitate social speech.	Post L1 & L2 CALP vocabulary, cognates & false cognates.	
Dialogically generating L2 expressions & repertoires by prompting for student L2 knowledge.	Compare & contrast L1 & L2 linguistic repertoires.	