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Audrey Lucero

Lengua Académica in First Grade: Expectations, Instructional Practices,
and Teacher Resources

Audrey Lucero

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Abstract

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Audrey Lucero

Chair of the Supervisory Committee:
Dean Tom Stritikus
College of Education

This study investigated the instructional practices of a team of first grade dual language teachers as they supported the oral academic language development of their Spanish-speaking students. Further, I explored the personal, conventional, and environmental resources that teachers used to facilitate such practice. Using a qualitative case study methodology, I collected data over the course of one academic year in three classrooms to better understand instructional practices that have the potential to support oral academic language development for language-minority children in general. The study was premised in sociocultural learning theory, such that academic language was viewed not only as a set of structures, but as a system of communication and means of participation in literate, mathematical, and scientific classroom communities. Therefore, the social and cognitive dimensions of academic language are discussed as well.

Findings from this study indicate that academic language demands were similar across classrooms within this dual language program. Nonetheless, teachers had varying levels of knowledge about academic language and a limited repertoire of instructional moves to support its development. They engaged in both micro and macro level scaffolding but struggled to integrate content and language goals into their teaching. Their instruction also was not coherent in that it did not explicitly enable cross-language transfer for students who received instruction in both Spanish and English. Teachers drew differentially on personal and environmental resources, which may have contributed to the different instructional practices they undertook.

Findings from this study are relevant in terms of what they contribute to theories of teacher pedagogical content knowledge and to the practical implementation of teacher education programs. Implications include the need for: nuanced definitions of academic language; the preparation of teachers to successfully integrate content and language; and further exploration of oral to written connections in the education of primary level Spanish-speaking children.

CHAPTER 1

Introduction

Context and Description of the Problem

The number of language-minority children in our nation's public schools has grown tremendously over the past twenty years, and continues to increase annually. Today, more than one in nine children nationwide qualifies for ESL (English as a Second Language) services due to low English proficiency (Goldenberg, 2008). These children speak more than 400 different home languages, and have varied schooling experiences, but more than 50% were born in the United States and nearly 80% of qualified ELL (English language learner) children in the U.S. speak Spanish as a home language (Capps, Fix, Murray, Passel, & Herwanto, 2005).

As a group, language-minority children at all grade levels compare unfavorably with native English speakers on academic tests such as the National Assessment of Educational Progress (NAEP) and state standardized tests (Goldenberg, 2008). Their underachievement in classrooms is well documented, although researchers have suggested different root causes (Genesee, Lindholm-Leary, Saunders, & Christian, 2006; Goldenberg, 1996; Ladson-Billings, 2006). Spanish speakers, in particular, struggle academically, generally doing poorer in school and exhibiting higher dropout rates than children from other immigrant groups (Goldenberg, 1996; Suárez-Orozco, Suárez-Orozco, & Todorova, 2008). For them, language issues are undoubtedly compounded by the fact that immigrant families from Mexico and Central America generally come from lower socioeconomic and educational backgrounds than other immigrant groups (Capps et al., 2005).

In part because of misunderstandings about language development, and in part because of the ongoing political backlash against the use of languages other than English in public schools (Cummins, 2000; Freeman, 1998), most language-minority children nationwide receive all of their instruction in English only, spending most of their time in mainstream classrooms and being pulled out for short periods of ESL instruction (Goldenberg, 2008; Malagon & DeLeeuw, 2008). A small minority of ELL students are enrolled in dual language (DL) programs, giving them the opportunity to become bilingual and perhaps more importantly, biliterate. DL is one way to provide comprehensible input to children who might otherwise not be able to access academic content.

What differentiates DL programs from other forms of ESL or bilingual education is that they are designed for both majority and minority-language speakers, and they are at least theoretically additive in nature, with the stated goal of developing bilingualism and biliteracy in all children (Lindholm, 1990, 1991). Children are not only learning language, but also acquiring academic content at the same time.

From a sociocultural perspective, the DL classroom is a place where knowledge is jointly constructed, in large part through language (P. Gibbons, 2002; Vygotsky, 1978). Speakers of both languages are seen as resources – as emergent bilinguals rather than only English language learners – who can provide expert models to peers who are new to the target language (Christian, 1994; Ruíz, 1984). Teachers therefore create environments in which children have ample opportunities to engage in meaningful, structured interaction with proficient speakers of both languages. Children’s ability to communicate

effectively and appropriately in both languages is enhanced by such authentic communication (Krashen, 1982; McDonell, 1992).

Biliteracy, in this conception, is “the acquisition of a more comprehensive set of language skills” than simply reading and writing (Gutierrez, 1993, p. 85). It comprises not only oral and written communication, but also social and participatory norms around language use in given contexts and communities. One of the great potential benefits of dual language education for emergent bilingual students is that it opens possibilities for them to add the registers of schooling without requiring them to give up their home language and culture.

Much of the research on dual language programs has focused on the equitable distribution of instruction in English and the minority language across the curriculum (Amrein & Peña, 2000; Lindholm, 1990; Lindholm-Leary, 2001). While such equity is undoubtedly important, many have argued that too much attention has been paid to the amount of each language used and that the quality of language use has been underinvestigated (Escamilla, 1994; Freeman, 1996; Hadi-Tabassum, 2006; Valdés, 1997; Wiese, 2004). As a result of this gap in the literature, we know little about how *academic language* – the decontextualized register of language necessary to participate in the literate community of school – is supported within dual language programs. Multiple studies have underscored the importance of academic language proficiency for the success of all children, and the need to study it specifically within ELL populations has been identified (Arreaga-Mayer & Perdomo-Rivera, 1996; Freeman, 2000; Goldenberg, 1996).

A central argument of this study is that we must look at the instruction teachers provide in order to understand what opportunities for academic language development exist in DL classrooms. Findings from previous research suggest that merely creating a language-rich environment is not enough to support optimal academic language development and that we need more research on the language learning opportunities provided by teachers (Goldenberg & Coleman, 2010).

Empirical evidence supports the notion that instructional practice matters for emergent bilingual student achievement, regardless of language of instruction. In a massive longitudinal study commissioned by the U.S. Department of Education, Ramírez (1992) followed 2,000 ELL children from kindergarten through third grade in Structured English Immersion (SEI), early-exit, or late-exit transitional bilingual education programs. At the end of four years, he found that the children in SEI and early-exit programs demonstrated, “comparable skills in mathematics, language, and reading when tested in English” (Ramírez, 1992, p. 23), with no notable benefits for children receiving home language instruction¹.

While these findings run counter to other large scale studies that have shown academic benefits for emergent bilingual children in programs that use the home language extensively (Lindholm-Leary, 2001; Thomas & Collier, 1997), they are logical in light of Ramírez’s observations that teachers in all types of programs used similar instructional methods, providing limited opportunities for students to engage with complex language or use it for meaningful purposes. He characterized classrooms in all types of programs as “passive language learning environment(s)” (p. 10). Lyster (2007) reported similar findings in his survey of studies conducted in elementary immersion

¹ Data limitations did not allow him to compare late-exit students to SEI and early-exit children

classrooms, wherein teachers reported that their instructional strategies were not tailored to meet the needs of children learning a second language; most considered themselves teachers of content and considered language merely the medium through which they delivered it.

In order to better understand the specific instructional practices of DL teachers and their potential to improve bilingual academic language outcomes for students, in this study I investigate how teachers in one urban elementary school supported the academic language development of Spanish-speaking first graders. Further, I describe the conventional, environmental, and personal resources these teachers have access to and how they use them in their instruction. The issue of resources is an important one because there is a wealth of survey data highlighting the many ways in which teachers of emergent bilingual students are underresourced (Gándara, Maxwell-Jolly, & Driscoll, 2005; Gándara & Rumberger, 2006), but we lack concrete information about the formal and informal resources teachers do have and the how they harness those resources specifically to target bilingual academic language development.

In this study I address the following research questions:

1. What are the academic language demands of first grade at this dual language school?
 - b. How do teachers describe and seek to address these demands?
 - c. What tensions arise in terms of academic language development and instruction?

2. What instructional moves do first grade dual language teachers make to develop Spanish and English oral academic language proficiency in Spanish-speaking first graders?
3. What resources do they use to do access and use in their instruction?
 - b. What factors mediate their ability and willingness to use these resources?

Significance of the Research

This research is valuable because schools around the country are increasingly implementing dual language education as a way to foster academic success and biliteracy, yet an overly simplistic attention to language of instruction underestimates the complexity of bilingual and biliterate development within such programs. In particular, teachers' instruction of academic language likely plays a role in the biliteracy outcomes of children.

Although the importance of academic language proficiency for all students is emphasized in the literature, little is known about how teachers in mainstream and DL classrooms can facilitate it through their daily practice. As Genesee et al. note, "there is virtually no U.S. research on how classroom instruction might best promote more academic aspects of oral language development" for language-minority students (2006, p. 19). Further, we have limited information about the formal and informal means of support teachers draw on to provide such instruction. As I investigate the specific instructional moves that my focal teachers undertook in their classrooms, I highlight possibilities for Spanish and English academic language development within such programs, as well as the challenges to doing so. Through the findings of this study, I

present information about how specific instructional practices play out in classrooms, as well as generate ideas about how to systematically support DL teachers in their work with emergent bilingual children. Answers to my research questions can guide us toward a deeper knowledge base about the connection between resources and academic language instruction that benefits emergent bilingual children in our public schools.

Theoretical Framework and Informing Literature

The Role of Oral Language in Learning

A focus on oral language for young language-minority children has been justifiably criticized because it may be rooted in the belief that such children cannot competently perform writing tasks (Gutierrez, 1993). Nonetheless, a large amount of research indicates that oral language is a critical component of academic language development and subsequent literacy achievement, and I have chosen to focus on it in this study for two main reasons.

First, in line with Vygotsky's sociocultural learning theory, I take as a starting point that human learning is the result of social processes, and that children develop intellectually as the result of joint activity and conversation with others (P. Gibbons, 2006; Vygotsky, 1962, 1978). When children are challenged to orally negotiate meaning with peers and teachers, their ability to produce comprehensible output improves, likely improving their understanding of the concepts themselves (Jacob, Rottenberg, Patrick, & Wheeler, 1996; Krashen, 1982). As Langer et al. (1990) concluded from their study of bilingual student performance of school tasks, "literacy learning results from understandings that grow in social settings where reading and writing and talk about language occur" (p. 431).

Second, specific elements of oral proficiency that index academic language (like breadth of vocabulary and complexity of grammar used) have been shown to correlate positively with measures of academic achievement. In contrast, other studies have shown limited correlations between general oral abilities and literacy achievement for both language-minority and language-majority children (Dickinson & Sprague, 2001; Genesee et al., 2006; Goldenberg & Coleman, 2010; Saunders, Foorman, & Carlson, 2006).

The ability to give formal definitions is one area where research has pointed to the existence of nuanced oral conversational and academic abilities (Carlisle, Beeman, Davis, & Spharim, 1999; Ordoñez, Carlo, Snow, & McLaughlin, 2002; C. E. Snow, Cancino, DeTemple, & Schley, 1991). Snow et al. (1991) have argued convincingly that formal definitions constitute decontextualized academic language because they require language to be used “in ways that eschew reliance on shared social and physical context in favor of reliance on a context created through the language itself” (C. E. Snow et al., 1991, p. 90). Informal definitions are considered to be contextualized and therefore less academic in nature. Snow and her colleagues found that oral formal definition scores were significantly correlated with reading and language test scores, whereas informal definition scores were not.

In another study, Lindholm and Aclan (1991) conducted a study designed to examine the relationship between oral bilingual proficiency and academic achievement in DL students. Using oral language performance on a bilingual battery of tests (that measured comprehension, fluency, vocabulary, grammar, pronunciation), they categorized first through fourth grade Spanish-English students into high/medium/low groups. When they compared children’s levels of oral bilingual proficiency to academic

achievement as measured by standardized tests in both languages, they found that those classified as highly bilingual proficient outscored the medium and low orally proficient students in both reading and math. Given these findings, understanding how teachers can support oral academic language development is of the utmost importance for schools that seek to facilitate bilingualism and biliteracy for Spanish-speaking students.

Linguistic Interdependence Theory

A major cognitive theory that justifies the L1 (home language) instruction of academic language is the linguistic interdependence theory, sometimes referred to as common underlying proficiency (CUP). In this theory certain “aspects of a bilingual’s proficiency in L1 and L2 (target language) are seen as common or interdependent across languages” (Cummins, 1981, pp. 23-24; 1992; Howard, Sugarman, Christian, Lindholm-Leary, & Rogers, 2007). Language-minority children who learn complex content and academic language in their home language have been shown to have little difficulty transferring that knowledge into English as they progress through school (C. E. Snow, 1987).

In addition to the interdependence of both language and content knowledge, there is evidence in current educational research that bilingualism itself confers cognitive benefits on children (Bialystok, 2001, 2007; Bialystok & Herman, 1999). For this reason, DL programs have the potential to facilitate students’ development of advanced cognitive development as well as high levels of bilingual proficiency. However, this may only be true given “optimal instructional practices that nurture the relationship between language development and content learning” (Lyster, 2007, p. 3), which is the focus of this dissertation.

In dual language-specific studies, Howard et al. (2004) and García (2005) found that students enrolled in either Spanish-English or Cantonese-English DL programs improved concurrently in L1 and L2 writing and oral proficiency. Furthermore, by the end of the three-year study period, a majority of students from both language groups were at or above grade level in English reading and oral proficiency, despite the fact that the vast majority of them had received initial literacy instruction in their home language.

Lindholm (1991) also found that for second and third graders enrolled in an 80:20 DL program, Spanish reading achievement was highly correlated with English reading achievement.

In a similar vein, García (2000) determined that children's ability to transfer reading knowledge from one language to another was a primary predictor of their L2 reading proficiency. Other findings indicate that early oral literacy experiences in either language support subsequent literacy achievement in both languages (Reese, Garnier, Gallimore, & Goldenberg, 2000).

In addition to general transfer, interdependence has also been investigated at the level of specific literacy-related skills. For example, studies have compared children's performance on a variety of oral tasks across languages, hypothesizing that children's performance on the conversational and academic tasks would be unrelated, but that their performance on the same task would be related across languages. Justification for this type of research is that, "children develop an array of language skills each related to a different set of purposes" (C. E. Snow, 1991b, p. 7) and that knowledge is interdependent across languages (Cummins, 1981).

Indeed, researchers studying definitions as a measure of academic language found that the quality of oral formal definitions was related across languages, whereas the quality of informal definitions was not (Carlisle et al., 1999; Ordoñez et al., 2002). Children profiled in those studies ranged in grade level from first through fifth, and were predominantly low-income Spanish-speaking children, a population that closely mirrors that in my own study.

Another area where interdependence may exist is in strategy use: students who consistently use successful strategies in L1 reading also tend to do so in reading in the second language, and they are more likely to understand reading as a unitary process than less successful bilingual readers (Jiménez, García, & Pearson, 1996; Langer et al., 1990). Such findings lend further support to the notion that bilingualism and biliteracy can serve as a primary support for student success, especially when conceived of in broad terms.

Finally, it may be true that students learning to read and write in two languages have a unique pool of bilingual skills to choose from. An example of this is the use of cognates for Spanish-English bilinguals. Successful Spanish-speaking emergent bilingual students have been shown to be able make use of their L1 vocabulary knowledge to figure out the meaning of unknown vocabulary when reading in their L2 (Jiménez et al., 1996; Nagy, García, Durgunoglu, & Hancin-Bhatt, 1993). These findings, however, must be interpreted in the context of L1/L2 similarity. Obviously, cognates can only be of use to students from certain language backgrounds.

The Threshold Hypothesis

The Threshold Hypothesis highlights the importance of adequate levels of proficiency in both the home and the second languages required to attain the cognitive

and academic benefits of bilingualism (Cummins, 1981). Cummins and others proposed the existence of two thresholds: first, a basic level of language proficiency that enables a child to avoid cognitive disadvantage; and second, a higher threshold that enables the child to achieve long-term cognitive growth as a result of bilingualism. The continued development of both L1 and L2 enhances academic and cognitive development, and a second language is best acquired when the L1 is firmly established or facilitated in concert with ongoing L1 development. Dual language education seeks to reinforce children's conceptual base in their first language as the foundation for long-term growth in L1 and L2 academic skills (Cummins, 1992; Genesee et al., 2006; Lindholm, 1990).

Studies from both dual language education and late-exit transitional bilingual education programs have lent support to the Threshold Hypothesis. Genesee et al. (2006) report on a study that found, perhaps surprisingly, that strong Spanish-speaking students who were considered to be poor English speakers nonetheless wrote long, syntactically and semantically complex essays in English as well as in Spanish. This suggests they were able to transfer literacy skills from their L1 to English even before their L2 oral skills were equally well-developed, and points to the importance of a strong first language base in order to reap the benefits of bilingualism in school. Genesee et al. (2006) concluded that, "L1 oral proficiency and emergent literacy in the L1 can fill gaps in L2 oral proficiency as it develops" (p. 70).

Reese et al. (2000) noted that in one transitional bilingual education program, the more oral Spanish literacy experience children had in their early years, the faster they were able to begin English reading instruction. However, Reese et al. also noted an important caveat: that students with *both* greater emergent Spanish literacy development

and oral English proficiency were the best at maintaining grade level performance in Spanish reading and attaining a higher level of English reading proficiency once they transitioned out of L1 reading. Thus, they argued that emergent bilingual student success, “in learning to read in English does not rest exclusively on primary language input and development nor is it solely the result of rapid acquisition of English” (p. 656). In line with the threshold hypothesis, it is possible that bilingual thresholds affect interdependence – “students can only demonstrate the transfer once they have acquired sufficient language skills to do so . . .” (Lindholm & Aclan, 1991, p. 111).

Lastly, it could be argued that some of the strongest support for the Threshold Hypothesis actually comes from the literature on underachievement of ELL students in mainstream schools. Historically, bilingual outcomes have differed based on the kind of bilingual child being studied. Those from majority-language backgrounds enrolled in additive programs such as dual language education have consistently had more positive outcomes than those from minority-language backgrounds in subtractive contexts where they have been transitioned away from the home language before they have a chance to develop it fully. It was this reality that led to the development of the Threshold Hypothesis in the first place (Cummins, 1981; Lindholm & Aclan, 1991).

Academic Language and its Development

I have argued that academic language is an important area of study in the education of emergent bilinguals, and it has been established that it does not develop quickly nor without instruction. More than five years may be required for second language learners to attain grade-level academic language proficiency, even though they are cognitively ready for complex content much earlier than that (Cummins, 1981, 1992).

The opportunity to receive quality, cognitively-appropriate instruction in the home language is a defining feature of dual language education. Therefore, investigating the specific instruction that supports academic language is central to this study.

Exactly what constitutes academic language continues to be a matter of some debate in the research literature (Bunch, 2004; Valdés, 2004). Researchers agree that it is different from conversational (or everyday) language, although the distinction is no longer considered to be as sharp as it once was. Contemporary scholars have begun to argue for more nuanced, hybrid approaches to conversational and academic language, which more closely mirrors the reality that register shifts are frequent and purposeful in both school and social contexts (Goldenberg & Coleman, 2010). Even within this framework, however, language that is more academic in nature is required for students to be successful in school situations (Cummins, 2000; J. Gibbons & Lascar, 1998; P. Gibbons, 1993; Goldenberg, 2008; Scarcella, 2003; Stahl & Nagy, 2006); beyond that, however, there are many individual elements to consider. In the sections that follow, I advance the definition of academic language that guided this study; it is based on theoretical and empirical work that has been done in this area. Because I have analyzed instructional academic language scaffolding in both Spanish and English, the literature that informed this study addressed the development of academic language in both a child's first and second languages. My focus is on teacher scaffolding of oral academic language only, but a deeper understanding of academic language as a construct is important for this dissertation.

Components of Academic Language

In general, researchers have agreed that the mastery of specific components of language is central to academic language proficiency. For example, facility with content-specific vocabulary (Echevarría, Vogt, & Short, 2008; Goldenberg, 2008); complex grammatical structures (Cummins, 2003; Stahl & Nagy, 2006); morphological word parts (Echevarría et al., 2008); and linguistic features specific to particular academic disciplines (Cummins, 2000; Scarcella, 2003) are considered to be essential to the definition of academic language.

From this perspective, academic language is difficult because it draws on vocabulary, sentence structures, and rhetorical forms that are not usually encountered in nonacademic settings. An additional element that is sometimes included is its function – whether language is used to justify an opinion, compare two objects, or transition between ideas, for example (Bunch, 2004; Echevarría et al., 2008; P. Gibbons, 2002; Goldenberg, 2008; C. E. Snow, 1991b). While these tasks are undoubtedly undertaken in everyday communication (such as explaining to a friend why baseball is better than basketball), the level at which they need to be completed is considerably higher in academic settings, as is the level of accuracy and explicitness required. As noted by Scarcella (2003), “academic English requires a much greater mastery of a range of linguistic features than ordinary English” (p. 28).

Contextualized and Decontextualized Language

It would be hard to argue that the mastery of specific components of language is not important to school success, but it is also true that differences between conversational and academic language go beyond just linguistic form. What a solely component-based approach to academic language misses is attention to context. Context is important first

in terms of the amount of environmental support available for communication and second in terms of how it allows people to participate in various literate communities (Bunch, 2004; Gutierrez, 1993; Stahl & Nagy, 2006; Valdés, Bunch, Snow, Lee, & Matos, 2005).

On the first point, Cummins' theory of contextualized and decontextualized language (1981, 2000, 2003) has been highly influential. He conceptualized communication as existing along a continuum from context-embedded to context-reduced. At one extreme, participants can actively negotiate meaning based on shared understanding, and are supported in doing so by visual and situational cues. Cummins termed this context-embedded language *conversational language*. At the other extreme of the spectrum, understanding relies completely on language, and may even, "involve suspending knowledge of the 'real' world" (Cummins, 1981, p. 11). This he termed *academic language*. In reality, of course, communication occurs all along the continuum, and rarely exists exclusively at one end or the other (C. E. Snow, 1987). It is frequently the case in classrooms that discourse shifts back and forth between more "spoken-like" and more "written-like" discourse, and there is evidence that this constant register shifting may be supportive of academic language acquisition (P. Gibbons, 2006). In general, however, communication that is more context-embedded falls closely in line with conversational language and communication that is more context-reduced is associated with academic tasks.

Context-reduced communication may be conceptually abstract as well as linguistically dense (J. Gibbons & Lascar, 1998; Goldenberg, 2008; Stahl & Nagy, 2006). It often includes reference to people, events, or situations that are not present or

observable at the time or concepts that are not observable at all. It could therefore be considered language as reflection rather than language in action.

Goldenberg (2008) posits that full academic proficiency likely requires a student to have command of enough appropriate language to participate effectively in interactions that involve complex, abstract concepts. Thus, Cummins and others have theorized that there is a cognitive dimension to academic language as well (Cummins, 1981; P. Gibbons, 1993; Scarcella, 2003; C. E. Snow, 1991a). According to Gibbons (1991), “it is the language associated with the higher order thinking skills” and is “related to learning and the development of cognition” (p. 3).

Purposes for Using Academic Language

A second point that is raised in the literature about the role of context in academic language is how proficiency enables a person to become part of a “culture of literate English” (or any other language) (Stahl & Nagy, 2006, p. 139). Beyond just the level of visual or situational support, speakers must understand the requirements to participate in particular conversations or activities. In other words, “academic English arises not just from knowledge of the linguistic code . . . but also from social practices in which academic English is used to accomplish communicative goals . . . the particular conventions and norms that characterize the people who use it” (Scarcella, 2003, p. 29).

Academic language is that which is privileged in educational contexts and consequently required to successfully complete academic tasks (Cummins, 2000; Valdés et al., 2005). For native speakers of a language, a strong conversational base may facilitate academic language. However, the relationship between conversational and academic language in second language learners is more complex than that. For some

emergent bilinguals, the two registers may develop side-by-side, and improvement in one may facilitate improvement in the other. It is likely, however, that as in first language speakers, the development of academic language depends heavily upon basic conversational language proficiency (Scarcella, 2003; C. E. Snow, 1987).

There is also a need to understand the acquisition of academic language as being developmental in nature. Cummins' theory of second language acquisition was originally presented as a challenge to theories that saw language as unidimensional and its development as having a defined endpoint (Cummins, 1981). He and others have argued that this may, in fact, be true for certain aspects of language competence, such as pronunciation and knowledge of sentence structure. However, other aspects of language proficiency (those more closely associated with academic language) continue to develop over many years, even in native speakers of a language (Cummins, 2000; Stahl & Nagy, 2006). Academic language is never fully acquired, and looks different at different educational and developmental levels (Scarcella, 2003).

In practice, the distinction between conversational and academic language proficiency is sometimes confused as the difference between spoken and written language. It is true, particularly in primary classrooms, that spoken language is typically highly contextualized, and that written language is less so, but class discussions can be just as cognitively and linguistically demanding as written work, and they may be more or less contextually supported, depending on the instruction provided. Even in primary classrooms, there are many situations that require children to have a solid grasp of oral academic language (C. E. Snow, 1987). Therefore, "it is clear that the

contextualized/decontextualized distinction is not the same as the oral/written distinction” (Stahl & Nagy, 2006, p. 38).

Instructional Moves that Facilitate Academic Language Development

In this study, I seek to better understand how first grade teachers within a particular dual language program facilitate oral academic language. Research on schoolwide best practices for ELL children is abundant (August & Hakuta, 1997; Miramontes, Nadeau, & Commins, 1997), but research that expands our knowledge base about how specifically to facilitate oral academic language development is still in its early stages (Goldenberg & Coleman, 2010).

Because of dual language education’s attention to equitable language distribution across the curriculum and school day, there has been little focus on the quality of minority language development in the academic register. Indeed, several researchers have raised concerns about the quality of academic language instruction within dual language classrooms that serve large percentages of language-minority children (Freeman, 1996, 2000; Hadi-Tabassum, 2006; Hickey, 2001; Smith, 2002; Valdés, 1997; Wiese, 2004). These researchers have emphasized the need to better understand the connection between instruction and academic language skills (Arreaga-Mayer & Perdomo-Rivera, 1996; Gersten & Baker, 2000; Goldenberg, 1996; Reese, Goldenberg, & Saunders, 2006). Little is known about the kinds of instructional practices currently taking place in dual language classrooms, but a few studies suggest that targeted instruction in decontextualized oral language for very young children may lead to improved academic outcomes over time (Dickinson & Sprague, 2001; Saunders et al., 2006).

Furthermore, much of the research on oral academic language development has been done on adult second language learners or older adolescents (Scarcella, 2003). Scant research has looked at the development of oral academic language in young learners at all, and the studies that exist do not present clear definitions of academic language or justify the measures used to assess it (Dickinson & Sprague, 2001; Saunders et al., 2006). Nevertheless, some general principles of effective second language learning relevant to this study – and to DL education – have been established.

Although I focus much of my analysis on actual instructional moves, the conception of teaching I use in this study is in line with Ball et al. (2008) in that it includes all of the work teachers do in planning lessons, preparing for instruction, and reflecting on student language practices. This comprehensive attention to all aspects of teaching enables me to make connections among the class content, instruction, and resources.

In particular, I have drawn five areas of instructional moves from DL, second language, and academic language theory, as well as existing research in those fields. I have chosen these five because of their relevance to my research questions and to oral language development in particular. The categories are: simultaneous focus on language and content; instructional scaffolding of oral academic language; the ways in which their instruction provides different degrees of context as appropriate; and norms around the explicit instruction of language. These five areas guided my data collection and analysis.

Simultaneous Focus on Content and Language

Much contemporary research has highlighted the fact that learning language and content simultaneously is more beneficial than learning language in isolation (Fillmore &

Snow, 2002; P. Gibbons, 2002; Lucas & Grinberg, 2008). Dual language programs are partly premised on this idea, as all children learn content in both the home and second languages. It has generally gone uncontested in ESL education that language and content should be combined for instructional purposes (E. García, 1996; P. Gibbons, 2002; Lyster, 2007), and we now know that the extent to which content instruction is also rich in language likely affects second language learning outcomes. Logically, then, teachers need to be able to analyze language demands as a first step to incorporating language goals into their content teaching.

Bigelow and Ranney (2005) argued that the field has not adequately defined effective content and language integration, and in response proposed a set of criteria for integration themselves. Among those criteria, three are salient for this study: “1) the language instruction is contextualized in content; 2) the tasks in the lesson require that the form be used appropriately; 3) the language lesson fits with overall curriculum” (p. 185). However well established these are in principle, however, there has not yet been empirical research investigating how mainstream classroom teachers actually integrate the two disparate goals, especially if they are not knowledgeable about language acquisition. A small amount of research with pre-service ESL teachers has shown that even they struggle to integrate content and language objectives into lesson plans even they are specifically asked to do so (Bigelow & Ranney, 2005). Further, when ESL teacher candidates did try to integrate language objectives, they were typically overly broad and did not target appropriate linguistic forms. From this, Bigelow and Ranney concluded that teachers’ knowledge about language does not happen automatically and that the teacher educators need to explicitly teach how to integrate language and content

needs. Given these findings, I expected my focal teachers to also struggle with the integration of language and content in their instruction.

Linguistic Scaffolding

It is widely accepted in literacy education research that young children need to be immersed in language and print-rich environments in which reading, writing and conversation are used for authentic purposes. However, it is also increasingly clear that simply immersing second language learners in such an environment is not enough (Freeman, 2004); students also need frequent opportunities to engage in meaningful interaction with more proficient speakers of the target language, like teachers and peers (Genesee et al., 2006; P. Gibbons, 2002; Téllez & Waxman, 2006). The concept of linguistic scaffolding is particularly salient in terms of the instruction teachers provide through this interaction, potentially integrating “the current level of learners’ knowledge and L2 abilities, and the broader knowledge and specialist language of the (academic) community into which the students are being apprenticed” (P. Gibbons, 2003, pp. 249-250).

The relationship between the language teachers use and that which students use can be conceptualized in terms of the zone of proximal development (Vygotsky, 1978) – too close a match between teachers and students would not provide students access to unknown language, while too large a difference might not enable students to understand at all (P. Gibbons, 2003). Students also need to be supported in using longer stretches of language where there is a ‘press’ on their linguistic abilities. This study investigates how teachers create classroom contexts that are facilitative of academic language learning by providing the appropriate scaffolding at the appropriate time.

At the micro level, linguistic scaffolding happens within a single interaction or class session. The teacher may repeat or rephrase a student's contribution, or prompt for more specificity and elaboration. At the macro level, the teacher may adjust the amount and type of linguistic scaffolding over a number of lessons to correspond to children's evolving understanding and use of key academic language within the unit. This sustained linguistic scaffolding over a school year not only helps children understand new language but also enables them to work toward producing their own oral and written language. In my analysis of the data, I attended to both micro and macro-level linguistic scaffolding.

Dialogic Interactions

Dialogic interactions are structured conversations facilitated by the teacher. Such discussions may take place as a whole class or in small groups, but they have as a defining feature that student contributions determine the course of the interaction to some extent (P. Gibbons, 2006; Haneda & Wells, 2008). The teacher always maintains an overall purpose and structure for the interaction, but there is considerable room for students to initiate topics or issues of interest to them. Dialogic interactions differ from the traditional IRF pattern in that teachers pose open-ended questions rather than those with prescribed answers and that their responses are contingent upon student contributions. Their primary goal is to help students elaborate, articulate, and clarify their ideas; this fact makes them a fruitful venue for oral academic language development.

One well-known method of providing this scaffolding for language-minority students is the *Instructional Conversation*, in which teachers elicit extended student contributions using a variety of instructional techniques. True to their name, instructional

conversations are both ‘instructional’ in that they are specifically intended to promote conceptual learning and ‘conversational’ in the sense they are somewhat spontaneous and informal (Goldenberg, 1991). They are premised on the sociocultural notion that thinking happens through language and that the ability to express knowledge and share ideas occurs through interaction with more proficient speakers and thinkers (Tharp & Gallimore, 1991). Such conversations have a strong direct teaching component, and research has shown that when direct teaching does not accompany instructional conversations, they do not lead to benefits for language-minority children (Gersten & Baker, 2000).

Movement Along the Context Continuum

An additional way that teachers can support the development of content and language proficiency is by attending to the amount of context they are providing such that students are cognitively challenged but also provided with the support required to complete tasks successfully (Cummins, 1981, 2000).

A major issue for this study is the relationship between conversational and academic language for Spanish-speaking children. In order to build a supportive relationship between the two registers, teachers can structure lessons to reflect points along the mode continuum (P. Gibbons, 1998). At the most context-embedded level, small group interactions early in a lesson permit students to understand key concepts in everyday, practical language. If teachers follow these small group interactions with class discussions – maybe in the form of dialogic interactions – they can build facility with academic language that corresponds to the newly learned concepts. Linguistic scaffolding within these discussions also acts as a ‘bridge’ to written language, which is

frequently the last step in the cycle of inquiry Gibbons' proposes. This written work typically occupies the least contextualized spot on the continuum, as it reports on generalizations rather than the specifics of any given experiment.

At a theoretical level, this inquiry cycle provides a linguistic rationale for the sequencing of tasks within a given lesson. However, as with linguistic scaffolding, it is important to consider context across a unit in addition to each lesson independently. There is evidence that the level of success students achieve in developing oral academic language depends to a large extent on how contextualized their early instruction on a given topic is (P. Gibbons, 2002). Therefore, when planning a unit with the needs of language-minority children in mind, teachers may design initial activities that maximize the degree of context-embeddedness, making new content comprehensible while at the same time pushing children's thinking. Later lessons could continue to challenge children's thinking but also move them toward clear and appropriate decontextualized uses of language (Freeman, 2004; Lyster, 2007; Stahl & Nagy, 2006).

A second major issue to consider in terms of context is the relationship between a child's two languages. In line with interdependence theory, it has been shown that if children can develop an understanding of concepts in their stronger language first, they can then also express that understanding in L2 conversational language. This can be a critical step in the process of developing academic register in the second language (P. Gibbons, 1998). In arguing for contextual scaffolding that relies to some extent on interdependence, Lyster (2007) pointed out that, "learners can be prompted . . . only to retrieve knowledge that already exists in some form" (p. 119). Within DL programs,

then, the potential for cross language transfer of academic language is solidly theoretically grounded.

Explicit Instruction of Language

The literature suggests a final instructional move that may be significant for oral academic language development in young second language learners – explicit attention to language itself, even within DL classrooms. Goldenberg (2008) noted that, “effective second language instruction provides . . . explicit teaching that helps students directly and efficiently learn features of the second language such as syntax, grammar, vocabulary, pronunciation, and norms of social usage” (p. 13). Others (Gersten & Baker, 2000; Lyster, 2007) have stressed the importance of alternating instruction that is designed to make input more comprehensible and that which is designed to make the language through which content is learned more noticeable.

To make connections between language and content explicit, teachers can give students frequent opportunities to investigate the language of academic texts in order to learn how various discourse communities use language and to learn to use decontextualized language (Freeman, 2004). Some scholars have argued that explicit instruction of linguistic forms and structures is one of the most effective ways to help second language learners acquire academic language (Fillmore & Snow, 2002).

This attention to explicitness has arisen in the past twenty-five years largely in reaction to the Krashen’s acquisition-learning hypothesis (1982). In his conception, children learn best in natural settings through authentic language, without a specific focus on language. While contemporary researchers agree that it is important to create DL classroom environments that are welcoming and supportive for language-minority

children, many also now recognize the shortcomings of a solely natural approach to language learning. When only incidental attention is paid to language, children likely do not get sufficient information about how language works to function in the academic register (Bunch, Abram, Lotan, & Valdés, 2001). Thus, they remain unable to tap into the second language system well enough to improve their grammar or academic vocabulary.

The results of at least one recent empirical study on young language-minority children supports this contention, showing that ELL children's literacy-related oral outcomes in English were better if they received separate, targeted language instruction in addition to their literacy block (Saunders et al., 2006). While this study lacked of a clear definition of academic language, it is noteworthy for its attention to different aspects of oral language and the potential importance of targeted instruction in each of those aspects.

Further evidence in support of explicit instruction comes in the form of an unsuccessful intervention using instructional conversations. Negative effect sizes were found for both narrative retellings and literal comprehension even after students engaged in instructional conversations. The authors attributed this negative effect to the minimal importance teachers placed on direct instruction, which they argue is a necessary component of effective instructional conversations. Without such explicit instruction, students were unable to fully process language the way they might have with more specific guidance (Gersten & Baker, 2000).

In this study, I considered instruction to be explicit when teachers explained the meaning of academic language, gave students information about how and when to use it,

and guided them as they practiced using it. This approach to instruction is both metacognitive and metalinguistic in nature.

Resources Available to Teachers

In addition to exploring academic language demands and teacher practice in this study, I have also investigated the resources my focal dual language teachers had available to help them understand and facilitate oral academic language development. I chose to investigate resources through an instructional study because “the central focus in research on resources should . . . be the instruction in which resources are used – and how they are used, and to what effect” (Cohen, Raudenbush, & Ball, 2003, p. 133).

This stance acknowledges that the availability of resources is only one of many factors that influence teacher practice, and as such its effects are likely to vary from teacher to teacher, even within the same school or program. It also recognizes that resources can both enable and constrain certain instructional practices. Previous work in the study of resources for the education of language-minority students has shown that this can be especially relevant in dual language school settings (Elfers et al., 2009), where resources may be unevenly distributed.

Given my focus on the availability and use of resources, an essential question for this dissertation, is “what resources matter, how, and under what circumstances?” (Cohen et al., 2003, p. 134). In the sections that follow, I’ll highlight the categories of resources that may be meaningful for teachers like those in this study using a scheme proposed by Cohen, Raudenbush, and Ball (2003). Their framework includes three broad categories of resources available to educators: conventional, personal, and environmental. All three types are important. I used these categories – which I call streams – to identify the

resources that this team of teachers had available to them and to make analytical connections to the instruction they were able to provide with regard to academic language development. I began the study with a resource framework in mind, but throughout data collection and analysis I remained open to the possibility that other resources played a role in my focal teachers' instruction.

Conventional Resources

Conventional resources are those traditionally considered in discussions of educational resources – most notably money and everything it buys. For example, this category includes curriculum and associated materials, facilities, time, and class size. It also includes formal teacher certifications and professional development. While resources within this stream are undoubtedly necessary as a foundation for the work that teachers of second language learners do, they are not inherently related to student learning or achievement. Research has shown that they are insufficient by themselves to support the complex work of teaching (Cohen et al., 2003). Instead, they matter only when they are effectively used in the service of providing enhanced instruction.

Within the area of ELL education in particular, conventional resources have been widely studied, especially in terms of professional development and access to level-appropriate materials (Gándara et al., 2005). Nonetheless, some of the most important resources that contribute to student learning – such as teachers' pedagogical content knowledge (Ball et al., 2008; Shulman, 1997) and knowledge about language (Bigelow & Ranney, 2005; Fillmore & Snow, 2002) – are not captured by the notion of conventional resources.

The following conventional resources were most relevant to this study of a dual language program: opportunities for professional development, material resources, and program structure.

Professional development

Ample research has shown that teachers need ongoing opportunities to learn at a level that matches their existing understanding and expertise (Elfers et al., 2009; Gándara et al., 2005), and that in order to be meaningful, professional development should be “closely tied with the specific context of individual schools and teachers” (Berry, Smylie, & Fuller, 2008, p. 15).

The importance of quality professional development for teachers of ELL students in particular has been widely recognized (August & Hakuta, 1997; Miramontes et al., 1997), and research has shown that it can affect teacher practice. For example, in large scale surveys of practicing teachers, those who had more professional development about ELL issues reported stronger feelings of professional competence in preparing and delivering instruction for those students (Gándara et al., 2005; Gándara & Rumberger, 2006). When teachers recognize their own need for information, they may pursue learning opportunities independently, seeking out classes or materials that fit their changing professional needs (Johnson & Birkeland, 2003).

Material resources

Adequate and appropriate material resources are important in any school program, and for DL teachers the need is amplified by the fact that minority language materials are less readily available than those in English. Because the focal program in my study is conducted in Spanish, which is widely spoken and taught in the United States, many

grade-level curricular materials are available. However, second language researchers warn that, “immersion and content-based teachers should consider a textbook as only one of many resources, supplementing it appropriately” with authentic literature and realia (Lyster, 2007, p. 44). Some contemporary curricula and educational reading series highlight features of academic language that teachers should attend to, and that was the case with the materials in use at my study site. Teachers might use the curriculum as a guide for which academic language to teach and ways to do so.

Another type of material resource used at the study site was GLAD (Guided Language Acquisition Design). Along with other strategy programs like SIOP (Sheltered Instruction Observation Protocol), GLAD has become increasingly common in American public schools, yet “surprisingly little is known about the effectiveness of these approaches” (Elfers et al., 2009, p. 16). What is known is that these programs and others like them include a focus on the development of academic language, albeit in limited ways that attend mostly to vocabulary and sentence structure. Beyond the professional development aspect of GLAD training, materials and ideas presented through the program acted as an ongoing resource in my focal classrooms.

Program structure

The structure of the dual language program was the third conventional resource I considered in this study. The structure of dual language programs can serve as a resource primarily in terms of the time allotted to each language. Because a defining feature of DL education is equal time given to both languages, children theoretically have equal access to Spanish and English during the school day. While there are a host of assumptions about this equal time structure, it is at least possible that teachers’ ability to

provide instruction in both languages acts as a resource for L1 and L2 academic language development (Freeman, 2004; Lindholm-Leary, 2005). Given the discussion at the beginning of this chapter, however, it is important to think specifically about how instructional time is used. Furthermore, because of the newness of DL education at this site, the amount of time teachers have to plan and implement focused instruction and access personal and professional resources matters a great deal. As Gándara et al. (2005) pointed out in the results from their large-scale teacher survey, many teachers felt that they needed more time to plan, observe successful teachers, and collaborate with their colleagues. Time is often in short supply, but can also arguably be a resource to the extent that it is available to teachers.

Personal Resources

Personal resources include teacher will, skill, experience, and practical and theoretical knowledge. The personal resources that individual teachers bring to their practice mediate conventional resources and student achievement. The critical knowledge and skills that effective teachers of emergent bilinguals need differ in some ways from those needed for successful instruction of mainstream students. Although general principles of instruction may serve as a solid foundation for the education of ELL students, the academic language needs of such children go beyond those of the general student population.

As such, researchers in the field of ESL have begun to outline a knowledge base for teachers of such children. It includes: an understanding of first and second language development, how the processes are similar and different, and what to expect from second language learners as they progress through the stages (deJong & Harper, 2008;

Fillmore & Snow, 2002; Lucas & Grinberg, 2008); a clear understanding of what constitutes academic language and how it develops, as well as the ability to identify the academic language demands of the curriculum (Fillmore & Snow, 2002; Gándara et al., 2005; P. Gibbons, 2002; Harper & deJong, 2004; Lucas, Villegas, & Freedson-Gonzalez, 2008; Valdés et al., 2005); an understanding of how to differentiate instruction based on individual students' language proficiency levels; and knowledge of how to scaffold students linguistically within their zone of proximal development (Krashen, 1982; Vygotsky, 1978).

However, the existence of a professional knowledge base in ELL education or any other area is not necessarily a useful resource for teachers. The issue for this study is how that knowledge base is taken up as a personal resource, and subsequently harnessed in academic language instruction. In my analysis, I explore the interrelatedness of resource access, use, and instructional practice, leading to the formation of a practice-based theory of linguistic knowledge necessary for successful academic language instruction in primary-level dual language programs.

This integrated approach to studying personal resources and their use corresponds to some extent to what has been called “pedagogical content knowledge”, or the intersection of teacher knowledge and actual practice (Ball et al., 2008; Shulman, 1987). This knowledge is pedagogical in the sense that teachers not only know their content well, but also how to make it accessible to students. Pedagogical content knowledge guides teachers as they plan lessons, organize instruction, frame tasks, and evaluate student work. In this study, my focus is on teaching practice rooted in teacher knowledge rather than on the knowledge itself.

Environmental Resources

Environmental resources include professional leadership and collaboration, as well as relationships with colleagues, families, and students. Such resources provide guidance for instruction, opportunities to understand academic norms, and collegial and community support. These resources can operate at a macro [global] level, as in the case of different levels of leadership and cohesion among them, or at the local level, as in the case of student-teacher classroom interactions.

The three types of environmental resources I consider in this dissertation are leadership (at various levels), colleagues, and students. In recognizing the importance of environmental resources to inform instruction, I also emphasize the primacy of the context in which this study was conducted.

Leadership

On a large scale state, district, and school-level leadership can exert a great deal of influence over teacher practice because such leaders have the ability to set priorities and allocate conventional resources accordingly. Although teachers have little control over the availability of these conventional resources, they can “notice or ignore them, capitalize on them or leave them unused” (Cohen et al., 2003, p. 127). The role of leadership in teachers’ ability to work effectively in classrooms is well-documented (Berry et al., 2008; Johnson & Birkeland, 2003), and there is evidence that it may be even more important in schools with high concentrations of language-minority students or in schools with innovative programs such as dual language education (Freeman, 2004; Lindholm-Leary, 2001, 2005). Such leadership may come from the school level (principals or other administrators), the district level (ESL directors or coaches, for

example), or even the state level (ESL or bilingual administrators). It may manifest itself in the provision of other types of resources, such as providing money to buy materials and curriculum, offering structured time for staff collaboration, and making opportunities for professional development available (Morrissey & Cowan, 2004). Since, “no one single model of leadership appears to be appropriate for all teachers in a given school,” (Berry et al., 2008, p. 14), the leaders at these different levels may be differentially meaningful as resources for my focal teachers, or they may not act as resources at all for individual teachers.

Colleagues

At the local level, teachers have varying levels of collegial support and opportunities for meaningful professional collaboration. Relationships with colleagues – fellow teachers, ESL specialists, and bilingual paraeducators, in particular – and meaningful collaboration with them constitute one type of environmental resource, since collaboration has long been cited as key for those working with language learners (Gándara et al., 2005; Miramontes et al., 1997). I look beyond the existence of opportunities to explore how (and whether) teacher collaboration and shared knowledge are actually used to facilitate academic language development.

To this end, some qualitative research has shown that when teachers work together in structured ways, they are able to develop a collective expertise, thus improving their teaching effectiveness (Berry et al., 2008). Recent research reports that when teachers worked in supportive and collaboration-oriented schools, they were able to use their own and others’ accounts of classroom experiences to foster instructional change. For those teachers, discussions about classroom experience constituted, “a

resource for learning and instructional decision making anchored in the particularities of classes and curricula” (Little, 2007, p. 21). While such studies have been small in scale, the findings are in line with the sociocultural orientation of the current study in their focus on the construction of meaning within local contexts. In concert with personal resources, then, sharing classroom experiences and pedagogical expertise with colleagues may act as a resource for teachers as they work with emergent bilingual children.

Students

Because dual language education is a model designed for both minority and majority language speakers, students proficient in both languages can be an important resource for teachers. The main way in which students act as such is in their linguistic interactions with the teacher and with one another. Effective academic language instruction depends on teachers’ ability to understand the range of student language and content proficiency in their classroom, and oral interactions are a key way for teachers to accomplish this.

Conversations among students are recognized as a crucial contributor to enhanced linguistic development in second language learners (E. García, 1996). In his unpublished dissertation, Bunch (2004) studied groups of middle school ELL students as they prepared presentations for their social studies class. Based on his lengthy observations of their interactions, he concluded that, “it is unlikely that students would have been able to engage with the level of texts . . . without the help of each other” (p. 227). Nonetheless, there is a great deal of evidence in the research literature that grouping L2 learners with proficient L2 speakers during instruction will not necessarily promote their oral language proficiency (Bunch et al., 2001). Rather, teachers should pair students mindfully so that,

for example, English speakers work with ELL students who are proficient enough in English that meaningful communication is possible. Also, the tasks students are asked to perform should be instructionally meaningful and provide opportunities for students to participate at a level appropriate to their proficiency.

Methodologically, I can understand teachers' use of professional resources first through interviews; then through observations of teacher meetings where joint planning, reflection, and assessment of student work happen; and finally through analysis of relevant documents. Observation of instruction also helped me connect what teachers say (and what I ascertain from documents) about their access to and use of resources to their practice. It is this connection that constitutes the bulk of my answer to my research question.

Summary of Chapter

In this chapter, I have presented the context and description of the phenomenon I am studying in this dissertation. Further, I have outlined my theoretical approach to the study of academic language, biliteracy, and instruction to facilitate them. In doing so, I have highlighted the relevant research literature that forms the basis for the research questions I seek to answer with attention to the context of dual language education for Spanish-speaking children. In chapters that follow, I will describe the methodological choices I made in conducting this research, as well as my findings, conclusions, and implications for the field of bilingual and biliteracy studies.

CHAPTER 2

Methodology

This is a qualitative case study of a team of first grade dual language teachers. I chose to conduct a qualitative study because of my interest in the everyday instruction that facilitates academic language development within this particular model of bilingual education. The potential of qualitative research to “provide a different set of instructional strategy recommendations for English language teachers working in a wide variety of settings” (Téllez & Waxman, 2006, p. 250) has been recognized.

Further, a qualitative approach to educational research helped me articulate usable hypotheses for future research on the basis of my findings (Merriam, 1998). Although I examine the work of only three teachers over one school year, my focus in the larger sense is on how these examples of instruction can provide insight into the work of other dual language teachers. On the topic of academic language in particular, we need qualitative research that analyzes the practices teachers use to mediate the linguistic demands of schooling (P. Gibbons, 2003).

Findings from this study begin to address that need by articulating principles of instruction that support the dual goals of content and language development, with the recognition that teachers contend with multiple demands on a day-to-day basis. They also illuminate the ways in which differential access to and use of various types of resources matters for the education of Spanish-speaking children. The research questions addressed in this study, as well as the data sources used to inform each, are outline in the table below.

Table 2.1: Research Questions and Data Sources

Research Question:	Data Source:	Analyzed for:
<p>1. <i>What are the academic language demands of first grade at this dual language school?</i></p> <p>1b. <i>How do teachers describe and seek to address these demands?</i></p> <p>1c. <i>What tensions arise in terms of academic language development and instruction?</i></p>	<ul style="list-style-type: none"> • Participant observations of classroom instruction • Interviews with teachers and ESL specialists • Documents 	<ul style="list-style-type: none"> • Curricular expectations • Teachers' stated expectations • Observed expectations and practices
<p>2. <i>What instructional moves do first grade dual language teachers make to develop Spanish and English oral academic language proficiency in Spanish-speaking first graders?</i></p>	<ul style="list-style-type: none"> • Participant observations of classroom instruction • Interviews with teachers and ESL specialists • Video analysis with focal teachers (as part of the interview process) • Documents 	<ul style="list-style-type: none"> • Instructional practices that support the development of oral academic language • Evidence of academic language development in children
<p>3. <i>What resources do they access and use in their instruction?</i></p> <p>3b. <i>What factors mediate their ability to use these resources?</i></p>	<ul style="list-style-type: none"> • Interviews with the principal, teachers, and ESL specialists • Video analysis with focal teachers (as part of the interview process) • Documents 	<ul style="list-style-type: none"> • Availability and accessibility of resources • Participant perceptions of the availability, accessibility, and usefulness of resources • Relationship between resources and instructional practice

Setting and Participants

The setting for this study is a public k-5 elementary school in the Pacific Northwest, Hurley Heights International School². I chose this site strategically because it provided me with an information-rich, in-depth understanding of a particular phenomenon – a practice often called purposeful sampling (Glesne, 2006; Merriam, 1998; Patton, 2002). It is an ideal site for my study because it met the following criteria: 1) it serves a large number of Spanish-speaking language-minority and emergent bilingual students; and 2) it has a dual language Spanish-English immersion program; and 3) it had a schoolwide focus on academic language the year the study was conducted. Because of these characteristics, this site provided me with the opportunity to explore instruction aimed at academic language development for Spanish-speaking children who receive academic content instruction in both Spanish and English.

Hurley Heights International School is located in a racially diverse neighborhood near downtown in a large city in the Pacific Northwest. It enrolls approximately 440 students. Twenty-five percent speak Spanish as a first language, and an additional 40% speak other languages at home – notably Cantonese, Vietnamese, and various African languages. In a typical year, 42% of students receive ESL services, and 69% are eligible for free and reduced lunch. It has the second largest ESL population in the district.

This was a backyard study of sorts (Glesne, 2006). I am a former first grade teacher at the school, and two of the teacher participants were my former teaching colleagues. However, by the time I began this study it had been more than four years since I taught at the school, and it was not a dual language school during my time there. In preparation for this study, I spent the academic year prior to data collection

² This and all other names in the dissertation are pseudonyms

volunteering in kindergarten with the Spanish dual language teacher, Señora Gregor, who looped to first grade with those students in the fall of 2009, when this study began. I also taught in a biliteracy program for first through third graders at the school in the summers of 2009 and 2010. Because of my ongoing connection to the school, I needed to be continually aware of my own possible biases.

At the time that this study was conducted, Hurley Heights was in its second year of implementation of a dual language education (DL) model. As part of its international school designation, the school offers 50-50 dual language immersion in Spanish and partial immersion in Mandarin Chinese, as well as an English-only strand. In 2009-2010, the language component of the international school model had only been implemented through first grade, and all three first grade classrooms participated in my study.

I chose to focus exclusively on the Spanish-English strand not only because Spanish is the largest language-minority group in the United States (Goldenberg, 2008; Malagon & DeLeeuw, 2008), but because I am a fluent Spanish speaker and certified k-12 Spanish teacher, so I was able understand classroom dynamics in that strand and interact effectively with Latino children and families.

Individual participants for this qualitative case study were also selected using purposeful sampling methods (Glesne, 2006; Merriam, 1998; Patton, 2002) based on how much they could contribute to the outcome of the study. Participants included: first grade Spanish and English-medium teachers; the principal; a school-level ESL specialist; and a district-level ELL consulting teacher. As at most public elementary schools, classroom teachers provide the bulk of content and language instruction to Spanish-speaking children, and were therefore the central focus of the study. The ESL specialist and ELL

consulting teacher who participated in my study worked with first grade teachers and students on issues related to language development.

Focal Teacher #1 – Señora Gregor

At the time of this study, Señora Molly Gregor was in her second year of teaching at Hurley Heights. She was the first teacher hired for the Spanish immersion program, and therefore began with the first cohort of students in kindergarten in 2008. In the 2009-2010 school year, she taught both kindergarten and first grade for a half a day each. In line with the district's implementation of DL, she only taught literacy and social studies. She provided all instruction in Spanish, and also conversed with children socially only in Spanish. Although much of the research on DL has found code-switching to be somewhat common in Spanish-medium classrooms (Escamilla, 1994; Palmer, 2009; Potowski, 2004), I did not observe any instances of Sra. Gregor using English with her students at all.

Sra. Gregor was new to teaching young children, but had almost ten years of experience as a high school Spanish teacher in a nearby district. She often reflected on the differences between the two teaching situations, but maintained that her focus was always on “communicative goals, that the students can actually communicate with the language” [interview, 11/3/09]. She majored in Spanish and elementary education as an undergraduate at a small midwestern college, and was in the process of completing a master's degree in education during the data collection period. She was a White, native English speaker. She was the only Spanish-proficient certified teacher at the school. The other Spanish-speaking staff members were four bilingual paraeducators.

Because of the structure of the DL program at Hurley Heights, the Spanish and Chinese immersion students are grouped into a cohort that moves through the grades together. Sra. Gregor therefore loops with her kindergarten students to first grade and has all of her students for two years before they continue on to second grade. The year I collected data was her second year with this cohort of children – there were twenty-seven students in her first grade class, twenty-four of whom had also been in her kindergarten class the year before.

Cultura Unit

The unit I observed in Sra. Gregor's class was a social studies unit on *cultura*. The unit was developed by the three first grade social studies teachers (including another study participant, Ms. Cortez) and incorporated a number of elements from GLAD (Guided Language Acquisition Design), a language-focused strategy program that is widely used throughout the district and school. GLAD doesn't come with ready-made materials; teachers have to make them themselves. All of the posters and charts used during the unit were handmade by Sra. Gregor. The books she read were either handmade or trade books she already owned.

This was the first time Sra. Gregor had taught the *cultura* unit, which consisted of ten lessons over three weeks. The average length of a lesson was forty minutes, and most were a combination of whole class instruction and small group work. Toward the end of the unit lessons became much more whole group oriented. There were no instances of independent work observed during this unit.

The culture unit was taught in November and December 2009, and culminated with a gradewide cultural celebration that included international foods, music, and dance.

I observed and audiorecorded nine of the ten lessons. Because I could not observe the final lesson, I had Sra. Gregor audiorecord it for me. I videorecorded the seventh lesson of the unit to discuss with Sra. Gregor in our final interview.

Table 2.2: *Cultura* Unit Overview

Session Observed	Topic/Activities	Participation Structures
1	Making predictions about the meaning of <i>cultura</i>	Small group, whole class
2	Writing sentences with <i>cultura</i>	Small group
3	Sharing <i>cultura</i> sentences; Read aloud: <i>Lo Importante de la Cultura</i>	Half class, pair shares
4	Making predictions about the meaning of <i>ancestro</i>	Small group, whole class
5	Writing and sharing sentences with <i>ancestro</i>	Small group, whole class
6	Read aloud: <i>Baila, Nana, Baila</i>	Whole class
7	Introduction to the world map; Read Aloud: <i>Todo los Colores de nuestra Piel</i>	Whole class, pair shares
8	World map vocabulary	Whole class, pair shares
9	World map vocabulary, Read Aloud: <i>Corduroy</i>	Whole class, pair shares
10	Review of world map vocabulary	Whole class, pair shares

Focal Teacher #2 – Mr. Riley

At the time of this study, Mr. Brad Riley was in his seventh year of teaching at Hurley Heights. He had previously taught third and fourth grade at the school, and had experience teaching second grade at another school in the district prior to that. This was his fifth year of teaching first grade at Hurley Heights. He shared his job with another teacher, and was only responsible for teaching math and science. He taught mornings and his partner taught afternoons.

Mr. Riley was a White, monolingual English speaker who conducted all instruction and conversation with students in English. He had little formal knowledge about language acquisition, but since he had worked in linguistically diverse settings for a number of years, he had many questions and concerns about the language development of his students. He expressed frustration about his lack of knowledge and did not feel like he had anyone to ask, saying “I’d like to know more, but I don’t think like anybody has sort of a rubric or a framework for kind of what norms are and what we’re expecting (from kids)” [interview, 10/28/09].

Balls and Ramps Unit

The unit I observed in Mr. Riley’s class was from the district inquiry-based science curriculum. It included a kit of materials and an instructional guide with specific focus questions and investigations to guide each lesson. The unit consisted of fourteen lessons, nine of which focused on the properties of balls and five on the behaviors of balls when run down ramps. Because of my observation timeframe I was only able to observe the first nine lessons, which focused on balls and their properties. Mr. Riley taught those nine lessons in twenty-three sessions over six weeks. He had taught the unit every year since moving to first grade, so the content was very familiar to him, and he felt comfortable teaching it.

The average length of a session in the balls and ramps unit was an hour, and several sessions ran longer than that. Because of the inquiry-based nature of the unit, most sessions followed a cycle that included review and orientation; setting up a new task; doing the task; and reflecting on the task (P. Gibbons, 2006). The unit was taught in January and February 2010. I observed and audiorecorded fourteen sessions. I

videorecorded the twentieth lesson of the unit to discuss with Mr. Riley in our final interview.

Table 2.3: Balls & Ramps Unit Overview

Session Observed	Focus Question/Activities	Participation Structures
1	“How can you describe different balls?”	Whole class, pair shares
2	Observations of balls’ properties; drawing and labeling of balls	Whole class, pair shares, individual
3	Observation of balls’ properties	Whole class, pair shares
4	“How are balls the same and how are they different?”	Whole class, pair shares, pair investigation
5	Creation of individual word bank, comparing how different balls bounce and roll	Whole class, pair shares, pair investigation, individual
6	“Which properties affect how a ball bounces?”	Whole class, pair shares, pair investigation
7	“Which properties affect how a ball rolls?”	Whole class, pair shares, pair investigation, individual
8	“Which balls are easier and harder to start moving?”	Whole class, pair shares, pair investigation
9	“How can we measure the bounciness of balls to find the best bouncer?”	Whole group, pair shares, pair investigation
10	Journal writing	Whole class, pair shares, individual
11	“What is the same about good bouncers?”	Whole class, pair shares, pair investigation
12	“What properties affect a ball’s movement?”, Making balls	Whole class, accountable talk pair shares, individual
13	Changing homemade balls to make them better bouncers and rollers	Whole class, pair shares, individual
14	Testing changes made to balls	Whole class, pair shares, individual

Ms. Rebecca Cortez had been teaching at Hurley Heights for seven years, spending the entire time in first grade. Before that, however, she had several years of experience as a fourth grade teacher in the same district. Her experience as an intermediate level teacher had a profound effect on her thinking about academic language and her teaching practices overall. For example, she justified the weekly time she spent developing oral language with her first graders in the following way: “everybody knows that kids need to be able to explain their thinking, but that experience (teaching fourth graders). . . anyway, that’s why I do that once a week with them” [interview, 4/29/10].

Ms. Cortez was a White, native English-speaker. However, she was married to a Mexican man and her son, a bilingual first grader, was in the Spanish immersion program at the school. She conducted her class primarily in English, but frequently used her low-intermediate Spanish to clarify and reinforce concepts for the Spanish-speaking children in her class – “I always do a little bit just to, just to, like I’ll say what I’m saying once in English and once in Spanish, just to help cement it a little” [interview, 4/29/10].

Geometry Unit

The unit I observed in Ms. Cortez’s room was from the Everyday Math curriculum, which had been adopted by the district the year prior to data collection. It included a teacher’s manual with stated content objectives and suggested activities for each lesson. The unit consisted of eight lessons, which Ms. Cortez taught in eleven sessions over three weeks. I observed and audiorecorded eight of those sessions.

The average length of a session in this unit was forty minutes, but it varied widely with some sessions being as short as twenty minutes. The unit was taught in April 2010. A typical session included whole group discussion with frequent opportunities to pair

share. Once a week during math Ms. Cortez and community volunteers facilitated centers. I videorecorded the eleventh lesson of the unit, but for logistical reasons I was unable to discuss the video with Ms. Cortez in our final interview.

Table 2.4: Geometry Unit Overview

Session Observed	Topic/Activities	Participation Structures
1	Sorting attribute blocks by property	Whole class, Pair information gap
2	Sorting attribute blocks by property	Whole class, pair shares
3	Comparing shapes	Whole class, pair oral sharing
4	Explaining your thinking in writing	Center groups, pair shares
5	Reviewing polygons and introducing solids	Whole class, individual
6	Reviewing solids	Whole class, pair shares, individual,
7	Representing a story problem in words and symbols	Center groups, pair shares
8	Understanding symmetry	Whole class, individual, pair shares

The Students

Since the focus of this dissertation is on Spanish-speaking children, the data I'll present is drawn from teacher instruction of the whole class, small groups, or pairs that included Spanish speakers, or from interactions with individual Spanish-speaking children. Thirteen first graders were identified as Spanish-dominant, and all of these children were enrolled in the Spanish immersion program. The criteria for establishing Spanish dominance at this school was twofold: 1) their parents indicated on a home language survey that Spanish was the first language spoken; and 2) they lives in homes where Spanish was the only or primary language spoken.

Table 2.5: Spanish Immersion Students

TOTAL	Spanish speakers	English-speakers³	Boys	Girls
27	13	14	17	10
100%	48%	52%	63%	37%

Table 3.5 shows the breakdown of students who were enrolled in the first grade DL Spanish immersion class. All of these students were in Sra. Gregor’s afternoon class for the *cultura* unit. In the morning, seven went to Mr. Riley for math and science and six to Ms. Cortez. As is typical of linguistically diverse classrooms, students’ levels of oral proficiency in both Spanish and English varied widely. At one end of the spectrum was a girl, Jocelyn, who was a highly-functioning bilingual and biliterate reader. At the other end was a boy, Leo, who had recently arrived from Mexico and spoke barely any English despite his high Spanish speaking and reading levels.

Data Collection and Analysis

This is a qualitative case study of a first grade team of dual language teachers as they use resources to facilitate oral academic language development in their Spanish-speaking students. I had four primary sources of data for this study: audiorecordings of all classroom observations; interview transcripts; videorecordings of select classroom observations; and relevant documents. Having multiple sources of data allowed me to triangulate my findings, guard against bias, and make claims beyond what would be possible with fewer data sources (Patton, 2002).

These diverse data sources also enabled me to consider the many resources that play a role in teachers’ instruction, and weigh them accordingly. Those that appeared

³Some children in the Spanish immersion class were also speakers of other languages, but they were also deemed proficient in English in order to be in the program.

across data sources carried greater weight than those that appeared in only one data source. Through iterative analysis, therefore, resources that are of the greatest importance for these teachers were accorded the appropriate influence.

Observations

I conducted this study as a participant-observer, observing and participating in the academic lives of three first grade dual language classrooms for the 2009-2010 academic year (Becker & Geer, 1969) – the Spanish-medium classroom as well as the two English-medium classrooms that served the same children. Since I was especially interested in teacher practice around the development of academic language and the learning opportunities afforded Spanish-speaking children in both languages, it made sense to observe instruction in both languages.

The degree to which I participated in classroom activities in addition to conducting formal observations varied throughout the year depending on immediate circumstances. Emerson and Pollner (2001) have noted that decisions about whether to emphasize the participant or the observer role in ethnographic research are, “not unilateral but a collaborative achievement of host and researcher” (p. 241), and this was the case in my study as well. In general I refrained from active participation during whole group instruction and independent work. I was most likely to engage directly with students during small group activities when children sought Spanish clarification of tasks or concepts presented in English, or when their off-task behavior led me to intervene and redirect individuals or groups.

Additionally, because a purpose of this study was to explore how teachers scaffold academic language over time and provide instruction along the context

continuum, I observed entire units rather than only individual lessons. This enabled me to observe changes in the teachers' instruction at the macro level, as children became more proficient in the register of the content area and in academic language overall. The theoretical importance of observing sequences of lessons has been articulated in the research (Ball et al., 2008; Christie, 1995; P. Gibbons, 2003; Lin, 1993). Lin (1993), for example, discussed how observing cycles of activity in classrooms allows a researcher to understand how key events are shaped by and related to other events within the same cycle. Christie (1995) noted that shifts in language use occur across lessons as students build knowledge together – a shift that is particularly relevant to this study of academic language.

I originally planned to conduct observations of two units in the Spanish-medium classroom and one unit in each of the two English-medium classrooms. Because of time constraints, however, first grade teachers were unable to teach the second social studies unit I was planning to observe. Therefore, my Spanish data comes from only one unit, on the topic of *cultura*. The English-medium units were in the areas of science (balls and ramps) and math (geometry).

During observations, I focused on key events in which the teachers provided instruction that facilitated oral academic language in some way, although in many cases the instruction was not explicit or targeted specifically at Spanish-speaking students. Key events that I analyzed included whole group instruction, interactions with individual students about unit content, and the facilitation of small group work. Bunch (2004) makes the compelling argument that focusing on group interactions within classrooms

allows researchers to gather information about language norms and opportunities for both ELL and English-proficient students as they learn academic language together.

Key events also included student-to-student interaction in cooperative group work. These interactions not only played an important role in second and academic language development, but research suggests that language proficient students potentially constitute an environmental resource for teachers serving ELL students (Cohen et al., 2003; E. García, 1996; Gersten & Baker, 2000). I paid special attention to student use of academic language in such interactions as related to the instructional moves I observed on the part of the teacher.

All classroom observations were audiorecorded, which provided me with naturalistic speech data in which to ground my analysis. I also used a structured observation protocol (Appendix A) for classroom observations to hone my focus on relevant aspects of classroom practice and keep my own assumptions in check. I took descriptive written field notes, detailing as much as possible the classroom environment, teacher instruction, and student uptake of that instruction (Dyson & Genishi, 2005). I often also audiorecorded post-observation reflections, which went beyond objectivity in the direction of perception and interpretation. Listening to these recordings was one way that I ascertained what to focus on in future observations.

Finally, I conducted observations of meetings related to the units I observed. All participants in these meetings were consented into my study.

Videorecording

One lesson from each unit was videorecorded using a FlipCam. During whole group instruction, the camera was focused on the teacher and during small group work, it

was focused on his or her facilitation of individual groups. Video footage served as a primary data source in the same way that fieldnotes, audiorecordings, and interview transcripts did, but also functioned as a point of reference in interviews with focal teachers (Erickson, 2006). Some researchers have argued that the analysis of classroom video footage is a potentially powerful way to explore the educational context of academic language development, particularly in culturally and linguistically diverse classrooms (Rosaen, Degnan, VanStratt, & Zietlow, 2004). This is so because it offers a real-time window into the complexity of teacher-student instructional interactions.

Video analysis was used in concert with other data sources to address my research questions, especially the second one - how teachers use resources to facilitate oral academic language development. I followed steps outlined by Erickson (2006) to analyze video footage inductively in addition to coding fieldnotes, analyzing audiorecordings, and reading relevant documents. As such, in interviews with two of the focal teachers, we watched sections of video from their class together and I asked them to explain the instructional strategies they were using, how they thought those strategies contributed to academic language development (or at least were intended to), and how, where, or from whom they learned those strategies. That process helped me understand which resources teachers harnessed in their instruction and the factors that mediated their ability and willingness to do so.

Interviews

Interviewing was another important part of the methodology for this study. Qualitative interviewing allows researchers to understand the experience of others and the meaning they make of their experience (Brenner, 2006; Seidman, 2006). Because I

was interested not only in teachers' instructional practice but also in their use of resources to create learning opportunities for children, it was critical for me to understand their perceived access to and use of resources. Primarily through interviews, therefore, I sought to better understand the pedagogical moves teachers emphasize in their practice with language-minority children, why they make those moves, and the resources they use to support their practice.

I conducted initial interviews with all participants at the beginning of data collection in October 2009 to get an overview of their understanding of academic language and its development in young emergent bilinguals. These interviews were semistructured, allowing me to follow up on key points and build rapport over the course of the year (Brenner, 2006). I used prepared interview guides (Appendix B) to highlight the issues of focus and to indicate topics on which I may need to probe or follow-up (Patton, 2002). These guides helped me maintain attention to key research and analytic questions, while also allowing me to take advantage of the flexible nature of semistructured interviews.

In addition, the three focal teachers were interviewed either once or twice more, usually at the beginning and end of the unit I observed. The school-level ESL specialist was interviewed twice during the course of the study, but declined to be audiorecorded. The district-level bilingual coach was also interviewed near the end of the study period. Participants were interviewed individually, and all interviews were audio recorded and transcribed in full, except in the case of the ESL specialist as noted above. Additionally, I had several informal conversations throughout the year with all participants, which were

either summarized in my field notebook or audiorecorded in my post-observation reflections.

As part of the interview process with focal teachers, I sometimes asked them to retrospectively discuss the videos I took of selected lessons. As discussed in the previous section, this joint video analysis was a powerful way for me to understand teacher practice while at the same time giving me insight into teachers' understanding of the academic language needs of their students and the resources they use to meet those needs.

Documents

To supplement the data I gathered through observation, video, and semistructured interviews, I collected fifty documents relevant to my research questions. These documents ranged from instructional and professional development materials to samples of student writing, and included materials given to me by all participants.

Data Analysis

Because this case study was conducted inductively, emerging constructs became more focused as I collected and analyzed my data (Brenner, 2006). In order to build on these constructs, I engaged in ongoing analysis throughout the data collection period, in addition to conducting a focused analysis upon leaving the field. The process of returning to the data as insights develop and constructs change is what Glaser and Strauss (1967) referred to as the constant comparative method.

The first step in my analysis was open coding to identify the academic language demands of the first grade curriculum. Understanding these demands is central to this study because they influenced teachers' decisions about what to teach and how to teach it.

Next, I identified emerging patterns related to teachers' resource use and instruction of academic language (Emerson, Fretz, & Shaw, 1995). This open coding allowed me to group data collected from fieldnotes, transcripts, and documents into categories. As Miles and Huberman (1994) note, researchers can "understand a phenomenon better by *grouping* and then *conceptualizing* objects that have similar patterns or characteristics" (p. 249). In line with my research design, I only coded and counted the five instructional moves that fit my theoretical framework. At the whole class level, I coded all relevant instructional moves whether they were specifically targeted at Spanish speakers or not. At the pair and small group level, I only analyzed instruction the teacher provided to pairs or small groups that had Spanish speakers in them. I also conducted quantitative counts of each type of instructional move teachers made during classroom observations. I did this in order to identify patterns of instruction in a concrete, measurable way. I report means and percentages in chapter four, when I discuss my findings related to instructional practices.

Through this process of analytic coding (Glesne, 2006; Merriam, 1998) and quantitative counting I highlighted the themes that appeared most frequently and significantly across data sources. I elaborated on these themes in analytic memos for each of the units I observed. This was a useful way for me to identify central issues and points to follow up as I continued collecting data, and as I synthesized my findings.

Another element of data analysis that I undertook in this study was member checking (Brenner, 2006; Merriam, 1998). Because a primary goal of this study is to understand resource availability and its use in instruction, I felt it necessary to confirm that my interpretation of participants' reflections on and explanations of their own

instruction matched the information they give me. Therefore, throughout the course of this study, I shared analytic memos and drafts of this dissertation with participants as appropriate and to the extent that they were interested. Member checks were another way to check my own interpretations and assumptions in this backyard setting (Merriam, 1998).

Summary of Chapter

In this chapter, I have described the qualitative case study methodology I used to guide my analysis of the data collected. I have also introduced the setting and participants in the study, as well as the four data sources I had: observations, interviews, video analysis, and documents. I ended the chapter by explaining my process of data analysis, moving through the stages of open coding, analytic coding, and member checking.

CHAPTER 3

Academic Language Demands of First Grade at Hurley Heights

The goal of this chapter is to address my first research question: what are the academic language demands of first grade at this dual language school? I begin by analyzing the curricular academic language demands of units in social studies, science and math. Throughout the analysis, I consider participants' understanding of and expectations about the use of oral academic language in their classrooms. I also explore the tensions that arose for participants as they sought to address the oral academic language needs of their Spanish-speaking students.

It is important to understand this context in order to make sense of the instructional moves my focal teachers made. This is so because, “the degree of facility of second language learning in a classroom depends largely on how classroom discourse is constructed” (P. Gibbons, 2002, p. 16). Further, understanding commonalities and differences in teacher expectations is valuable as a way to begin highlighting connections between content and language.

This chapter is organized into five sections that address different components of academic language that I presented in chapter one. First, I discuss purposes for using academic language in these units. Next, I foreground the three key language functions that were embedded in the units. Third, I explain the ways in which teachers used the terms ‘bricks’ and ‘mortar’ in their talk about academic language and in their instructional planning. Fourth, I explore the role of the context continuum in framing these demands. Finally, I discuss the tensions that existed around the instruction of academic language for Spanish-speaking students within this program.

Purposes for using academic language

In each classroom, academic language was used for specific purposes, which were sometimes explicitly articulated for students and sometimes not. One purpose commonly discussed in the literature is to participate in a literate community (Gutierrez, 1993; Stahl & Nagy, 2006), and this was also highlighted at Hurley Heights. A second purpose was to present oneself as an expert on a given topic.

Participation in an Academic Community

Principal Maggie Scott defined academic language in part as: “language that helps children become successful in school and ultimately, successful in the world of work and continued schooling . . . It’s really more the language that, that one gets as one becomes more and more literate” [interview, 11/5/09]. She also equated teaching children academic language with empowering them to access content, solve problems, and have their academic needs met.

Dr. Scott attended workshops in the summer of 2009 that raised her awareness of the importance of academic language especially for emergent bilingual children. For that reason, one of her professional development initiatives for the 2009-2010 school year was to arrange for a district ELL consulting teacher, David Goldberg, to work with the staff on the topic of academic language. This involved a daylong professional development (PD) session in early October and ongoing collaboration with first grade teacher Brad Riley. At the PD session, David focused more on the linguistic components of academic language than on its potential to enable meaningful participation, but it was apparent from my interviews with teachers that they shared Maggie’s more global understanding of academic language. For example, all three first grade teachers

emphasized clear communication as a purpose for using academic language, and Ms. Cortez specifically noted the way it could help her students “navigate themselves through their academic journey” and “take an active role . . . to be able to learn what they need to learn at school in a given situation” [interview, 11/5/09].

Even though there was considerable overlap in participants’ understandings of the construct of academic language, there was not necessarily recognition that they shared this understanding, and therefore they had no common framework for discussing or planning for it. When I asked Dr. Scott about the level of knowledge she thought her teachers had, she said “I would hazard a guess that most of the staff defines academic . . . or has defined academic language as vocabulary. So they teach kids the vocabulary for math, the vocabulary for science . . . they’re teaching it in that specific context and not getting that more global view” [interview, 11/5/09].

This speculation was not borne out in my findings. Rather than focusing only on the individual components of language, participants seemed to be aware of the importance of students hearing and understanding academic speech, as well as using it in structured ways. Mr. Riley noted that students need to know that oral language is “the way that people communicate and it’s the way that people get their needs met” and that “there are like protocols for how it works, that we all sort of generally agree on” [interview, 10/28/09].

In line with this, in all three classrooms, academic language was presented as a way for children to engage identities as learners and participants in various content areas (C. E. Snow, 1991b; Stahl & Nagy, 2006). They were considered scientists in Mr. Riley’s class, mathematicians in Ms. Cortez’s class, and readers and writers in Sra.

Gregor's class. They were encouraged to be part of a community that used language to communicate knowledge and understanding to one another. In Mr. Riley and Ms. Cortez's classrooms, in particular, children were consistently encouraged to "talk like scientists" and "use good math words". Academic language was positioned as an essential part of being a scientist or mathematician, along with appropriate behavior and scholarly ideas. In one lesson in the second week of the unit, for example, Mr. Riley showed a video of scientists working together and explained that they were "talking about what . . . they're observing with other scientists" [observation, 1/15/10]. He also modeled working with a partner to conduct an investigation, and reminded students that part of being a good scientist is being a good partner both in terms of sharing information and listening when appropriate.

It has to be noted, however, that a central tension this team of teachers dealt with was the disconnect between what they said they expected from students and what students actually produced in terms of oral academic language. As Sra. Gregor expressed in our initial interview:

"In some perfect world, I'm aware what oral language component I am focusing on in every lesson, in every time that I'm doing a read aloud, in every time that . . . you know, we're doing anything, so, yeah, I feel that's there's a gap because that's not happening every single time."

[MG interview, 11/3/09]

In terms of oral language use, Ms. Cortez frequently recognized academic language as evidence of sophisticated thinking, as when she praised an English-speaking boy for asking about the relationship between diamonds and rectangles by saying, "you're just thinking like a second grader" and noting to the class that this was "the question of a very intelligent thinker" [observation, 4/19/10].

Being an Expert

Another purpose for using academic language that was emphasized by all three teachers was to be an expert on a given topic. This was evident in one of two primary ways: to either be the holder of knowledge in an in-class activity or to explain a concept to someone outside the class. As an example of the first, during Mr. Riley's balls and ramps unit, pairs of students investigated the properties of one type of ball, then orally contributed to a whole-class chart comparing the properties of many types of balls. In order to elicit contributions, Mr. Riley said "raise your hand if you're a (ball name) expert please" and then thanked them accordingly, with something like "thanks very much, (ball name) experts" [observation, 1/15/10].

The importance of being able to explain a concept to someone outside the class was often highlighted by Ms. Cortez, who used small group math centers as a venue for engaging in dialogic interactions with her students on two occasions. As she worked with students to help them more clearly articulate their knowledge about the properties of shapes, she encouraged them to include as much detail as possible, as if they were "writing this for someone who has no idea what a rectangle is" [observation, 4/21/10].

Finally, as part of Señora Gregor's *cultura* unit, the class created a poster dictionary of key content vocabulary for the unit. They were encouraged to use their background knowledge in concert with academic language structures to co-construct the knowledge displayed on the poster, in the form of predictions of word meaning, actual definitions, and examples of the words used in sentences. Although Sra. Gregor was not as explicit with students about how this drew on their expertise as the other two teachers were, she encouraged them to use the dictionary – and therefore their own and others'

ideas – as a resource in their class discussions and shared writing. In some sense, then, they had an authentic purpose for using academic language, and were positioned as knowledgeable enough to do so.

Language Functions

A second major element of academic language that played a role in these classrooms was the functions that it served in learning key unit concepts. Gibbons (1993, 2002) and others define language functions as the goals a speaker is trying to accomplish through specific language structures and vocabulary. Functions could therefore be considered a subset of purposes, as when a student trying to “talk like a scientist” makes a prediction about an experiment using specific language.

In general, my focal teachers were much less knowledgeable about functions than they were about purposes for using academic language. What I mean by this is that they were less able to identify the functional demands of the unit they were teaching, or articulate them to students. However, from my observations and document analysis, it seemed that there were three categories of language functions that were commonly expected and reinforced across content areas and over the entire school year: defining and describing; comparing and contrasting; and predicting and hypothesizing (Bunch, 2004; Echevarría et al., 2008; P. Gibbons, 2002; Goldenberg, 2008; C. E. Snow, 1991b). Across content areas and teachers, first grade Spanish-speaking students at Hurley Heights were asked to understand and produce oral academic language related to these three functions.

The fact that these were central language functions is an unsurprising finding, since these are common uses for language in schools across grade levels. Nevertheless, looking more deeply at how each of these categories was presented, reinforced, and

assessed in my focal classrooms guided my analysis of instruction. At a theoretical level, it is a way to broaden our understanding of the complexity of academic language in primary classrooms, which has mostly been studied at higher levels of schooling (Valdés et al., 2005). At a practical level, it can inform instruction within primary dual language classrooms beyond Hurley Heights.

For the purposes of clarity, I have presented my operationalized definitions of each function category, as well as examples, in table 3.1 below.

Table 3.1 Academic Language Functions

Function	My Definition	Example
Define/describe	Language that formally or informally defines a word or concept; language that names the properties of a word or concept; any use of a word in a descriptive sentence; language that asks someone else to define or describe a word or concept	Sra. Gregor: Lo que significa cultura es ‘la manera de vivir . . . de cierta gente en cierto tiempo o época.’ [What culture means is ‘the way people live together in a certain time or time period’.]
Compare/contrast	Language that identifies the similarities and/or differences between two objects or concepts; language that asks someone else to identify similarities and/or differences	Ms. Cortez: When you compare something, you think about what’s alike and what’s different.
Predict/hypothesize	Language that predicts a future event or the meaning of an unknown word or concept; language that suggests alternate possibilities; language that asks someone else to predict or hypothesize	Mr. Riley: Which ball do you think is going to bounce more times?

These functions can of course be accomplished in conversational language as well as in academic language, and children at Hurley Heights undoubtedly used them in everyday communication. Nonetheless, the level at which they were expected to be used during class discussions and groupwork was considerably higher than it was on the playground, as was the level of accuracy and explicitness required.

Define and Describe

The first function that was central to the findings of this dissertation was define/describe, which was by far the most common language goal I identified in first grade classrooms at Hurley Heights. Defining and describing played a central role in all three units. I have combined these as one function because teachers considered them to be related and they were often confounded in practice, especially in the balls and ramps unit.

As discussed in chapter one, the ability to give formal definitions is considered to be a key indicator of oral academic language (Carlisle et al., 1999; Ordoñez et al., 2002; C. E. Snow et al., 1991). Research findings in this area are relevant to my analysis of the *cultura* unit, of which vocabulary development was a major element. Nine of the ten lessons focused at least in part on defining or understanding the meaning of content-specific words like *cultura*, *ancestro*, and *continente*. In their October planning meeting for the unit, the first grade team explicitly identified defining *cultura* as a learning target. The kid-friendly objectives they created at that meeting, however, did not use the term define. Instead, they were “I can learn what culture means” and “I can use the word culture in a sentence” [meeting observation, 10/9/09]. These objectives were never communicated to students in the Spanish immersion social studies class with Sra. Gregor,

but a primary task of the unit was to create a class Cognitive Content Dictionary⁴, so they did get oral practice defining key words and using them in sentences.

When I talked to Sra. Gregor about the define/describe language function, she noted that this year, which was her second with this group of students, she was trying to be more intentional about using the word *significado* [meaning] and asking “qué significa _____?” [what does _____ mean?] instead of the more colloquial “qué quiere decir _____?” to move their oral academic language forward. She also explained the value of having students create sentences that showed they really understood the meaning of the word, without simply restating the definition. For example, she wanted students to produce sentences more like “el perro estaba corriendo detras del gato” [the dog was running after the cat] than “un perro es un animal con cuatro patas y una cola” [a dog is an animal with four legs and a tail] [interview, 12/3/09]. She acknowledged that the distinction between defining and describing was difficult to teach, even to the high school students she worked with prior to coming to Hurley Heights.

In some sense, theoretical and real functional demands came together more in the *cultura* unit than in the others, mainly because all of the writing was done in groups, and therefore being able to orally define key content vocabulary and use it in an appropriate and descriptive sentence was essential to being successful. On the other hand, it was impossible for Sra. Gregor to monitor all of the small group conversations, and only a subset of students shared their group’s work in front of the class, so there were undoubtedly students who were exempt from having to participate in the production of the target oral academic language.

⁴ This is the name of a GLAD strategy that was used throughout the school. It included new words, predictions of their meaning, actual meanings (taken from a dictionary), and examples of sentences containing the word.

In the balls and ramps unit, defining and describing were also important. Mr. Riley's approach to introducing new language and concepts was similar to Sra. Gregor's in that he guided students to accomplish the functions without explicitly telling them what those functions were. However, the line between defining and describing was especially blurred in this classroom. For example, on several occasions Mr. Riley asked students to tell him "what makes a ball a good bouncer". Sometimes this was a prompt for a definition, as in "it bounces high" or "it bounces a lot of times" [observation, 2/1/10]. On other occasions, it was a prompt to describe the properties of balls that are good bouncers, such as "it is made of rubber" [observation, 2/8/10]. At times it seemed that students did not understand whether he was asking for a definition or a description, and there were at least a few occasions on which he and the class experienced shared frustration because of the confusion. The following class discussion about the properties of balls is a good example of this:

Mr. Riley (to whole class): What could that ball do . . . that made it the best bouncer? Okay? Go ahead. What could it do that made it the best bouncer? (invites children to pair share)

Dulce (to her English-speaking partner): Is . . . it is bouncy.

RP: It's bouncy? And it's made of rubber. And . . . let me think.

Dulce: Is . . .

RP: It's rubber.

Delia: It's red.

(later in the same discussion)

Mr. Riley (to whole class): What could your ball do that let you know that it's the best bouncer? Beatriz?

Beatriz: Because it's not . . . hollow.

Mr. Riley: But the question is what did it do? Is being hollow something that your ball did? Or is it something that your ball is? (pause) Today we're really thinking about what does the ball *do*? What does the ball do? What did your ball do, CJ, to let you know it's the best bouncer?

CJ: It bounced many times.

[observation, 1/27/10]

This confusion seemed to arise because at the beginning of the unit the class had spent several lessons describing the salient properties of various balls (see Table 2.3 for an overview of the lessons in the unit). The focus questions presented in those early lessons honed in on the describing function, asking children to ponder such questions as “how can you describe different balls?” and “what kinds of balls are good bouncers?” [Balls and Ramps Instructional Guide]. The shift to defining good bouncers and rollers was conceptually difficult for children, and it may have been exacerbated by the fact that they did not understand the implicit language expectations.

Ms. Cortez's geometry unit also included defining and describing as language goals. The Everyday Math instructional guide listed the following as key concepts and skills for the unit: identifying, describing, comparing, and contrasting [Everyday Math grade 1 instructional guide]. These are fairly standard math skills that can also be language functions, and it is not surprising that defining is not among them, since it is usually considered strictly a language goal. Nonetheless, Ms. Cortez incorporated definitions into her instruction, as well as focusing on language goals above and beyond the curriculum. She did so largely because of her previous experience as an intermediate grade teacher; she explained that when many language-minority students start taking state tests in third grade, they struggle to explain their thinking because they “just don't think

that they need to say it (what they know), because it's obvious" [interview, 4/29/10].

Guiding her students as they orally defined terms was a tool that she used consistently to support both academic language production and conceptual understanding. The following excerpt is from one of the very few dialogic interactions that Ms. Cortez had with six children during centers one morning in the middle of the geometry unit:

Okay. What else, LK? What can you tell me about a rectangle?

LK: It's long.

Ms. Cortez: It's long. What do you mean by long? So, it has four sides. 1,2,3,4. Are these, are these, is this long, right here? (points to left and right sides)

XJ: No.

Ms. Cortez: No. Where, where's the long part? (pause) Right here? And so, how can I explain that? If I wanted to write that down, what could I say? (pause) Can you think of a way to say that?

HK: The top and the bottom is long.

Ms. Cortez: What if I had a rectangle that looked like this? (flips rectangle)

CM: No way!

Ms. Cortez: I could have a rectangle that was facing this way. Now the top and bottom are short. So . . .

CM: ((Or the sides))

Ms. Cortez: Could I say two sides? (pause) Two sides what?

XJ: Two sides is long.

Ms. Cortez: Two sides *are* long. And . . . ?

LK: Two sides are short.

Ms. Cortez: Two sides are long. That's a great start. And two sides . . . are what?

HK: Are short.

Ms. Cortez: That's a great way to describe it.

[observation, 4/21/10]

This example also highlights how Ms. Cortez frequently emphasized to students the need to be explicit and give as many details as possible, pushing them farther along the context continuum than either of the other teachers.

Compare and Contrast

The second academic language function that was reinforced in first grade at Hurley Heights was comparing and contrasting. These language functions were more prevalent in the science and math units than they were in the social studies unit. There was only one occasion on which I observed Sra. Gregor asking students to compare two groups of people, and she did not provide any instruction focused on accomplishing the task. Therefore, for analysis purposes, I did not consider comparing a function that children were asked to accomplish in the *cultura* unit.

As with defining and describing, I combined these two functions into one category because of their related nature. In balls and ramps, both comparing and contrasting were incorporated into focus questions on multiple occasions, as in “how are balls the same and different?” and “what is the same about good bouncers?” [Balls and Ramps Instructional Guide]. Again, Mr. Riley did not clearly articulate to children when they were comparing, even when he provided somewhat extensive support for the linguistic process of comparing through a simultaneous focus on content and language, as in the following example:

Mr. Riley: (to whole class) Turn and whisper with your partner, what is something, what are some of the properties that you noticed are the same about these two? What did you notice are *the same* about these two?

(opportunity for students to pair share)

Mr. Riley: What did you notice, when you were whispering with your partner, how did your sentences start when you were talking about ways that these properties were the same? How did your sentence *start*? What did your sentence start like, JJ, when you talked about how these were the same? How did your sentence start? How did your sentence *begin* when you were talking about how these properties were the same, Pedro?

Pedro: They both . . .

Mr. Riley: Okay, stop there. They both. They both. Did anybody else notice that their sentences started with “they both . . .”? Did you notice that, Javier? Did yours start with “they both . . .”? Yours did. Pedro, finish the sentence. They both what?

Pedro: They both have a line through them.

Mr. Riley: Thank you, thank you, thank you. How else are these properties the same? Jesenia?

Jesenia: They both is a sphere.

[observation, 1/11/10]

Notably, this interaction did much to support students in making comparisons using academic language, as can be seen in Jesenia’s response to his final question. Even without a clear understanding of the function she was attempting to accomplish, this intermediate Spanish speaker met the content goal of comparing two balls and the language goal of doing so in a full – if not completely correct – sentence. It is worth mentioning that Mr. Riley expressed to me his desire to move students beyond low-level skills like identifying and describing, but he was uncertain how to facilitate that. He felt that his language-minority students in particular were “doing okay at the kind of really lower level, um . . . just like knowledge . . . but when we start to sort of compare or start to analyze, or look deeper, . . . um, we need to take a step backwards, ((I guess))”

[interview, 1/19/10]. Several researchers have argued that teaching language and content in concert is one way to develop critical thinking skills in language-minority children (P. Gibbons, 2006; Lyster, 2007).

In contrast to balls and ramps, on the first day of the geometry unit, Ms. Cortez told students they were going to practice comparing objects during the unit, and even reminded them of the meaning of compare, calling it a “great math word”: “when you compare something, you think about what’s alike and what’s different. That’s, that’s all comparing is. Finding the things that are *alike* and *different*” [observation, 4/15/10]. Students then had a chance to compare their block with another student’s, and to share out what they discovered about similar or different properties.

Predict and Hypothesize

The third and final focal language function that frames the data in this dissertation was predicting and hypothesizing. The ability to make predictions and formulate hypotheses was reinforced in both the balls and ramps and *cultura* units, but it was only explicitly instructed in Sra. Gregor’s *cultura* unit.

Sra. Gregor used predictions in two main ways over the course of the *cultura* unit: to make guesses about the meaning of unknown words; and to predict what was going to happen next in a book or story. The first use of predicting corresponded closely to the GLAD tool she was using (the Cognitive Content Dictionary) but was not what we typically think of when we think of making predictions. The second was a commonly taught literacy strategy and something her students regularly practiced during read-alouds as well as guided reading. The example below corresponds to the first type of predicting, which was more representative of the role predicting had during this unit. On the first

day of the unit, Sra. Gregor told children that in order to create a class dictionary, “vamos a predecir el significado de la palabra *cultura* . . . van a adivinar, van a predecir” [we’re going to predict the meaning of the word culture . . . you’re going to guess, you’re going to predict] and asked if they knew what it meant to predict:

Sra. Gregor: (to the whole class) Saben lo que quiere decir predicción? O predecir? Andrés?

Andrés: Que, que no sabe si es verdad.

Sra. Gregor: No sabemos la respuesta, pero vamos a decir lo que pensamos, si tenemos una idea. Quizás tenemos razón o quizás no, pero vamos a decir lo que pensamos.

[Sra. Gregor: Do you know what prediction means? Or predict? Andrés?

Andrés: That, that you don’t know if it’s true or not.

Sra. Gregor: We don’t know the answer, but we’re going to say what we think, if we have an idea. Maybe we’re right and maybe not, but we’re going to say what we think.]

[observation,

11/30/09]

Students repeated the cycle of predicting, defining, and using a different content-specific word (*ancestro*) in a sentence one more time over the next several lessons. As support, Sra. Gregor provided small groups of students with written sentence structures to guide their discussion and subsequent sharing with the class. Each time they were called upon to make predictions, Sra. Gregor named the function, using its various forms as appropriate: *predecir* (to predict), *predicción* (prediction), *predijimos* (we predicted), whereas Mr. Riley never used the word ‘predict’ during the observations I made of the balls and ramps unit, despite its conceptual importance to the balls and ramps unit.

Bricks and Mortar

Both content-specific vocabulary (bricks) and general academic language (mortar) were used and expected to be understood in all three classrooms. I discussed earlier the professional development session that David Goldberg, the district ELL consulting teacher, facilitated for Hurley Heights staff at the beginning of the school year. The focus of the session was how to integrate academic language objectives into content lessons across grade levels, and it seemed to become the basis for much of the first grade team's instruction of academic language throughout the school year. It was not specifically focused on the needs of emergent bilingual children, but because they made up such a large percentage of the first grade class (and no doubt because of the immersion program in that grade), my focal teachers applied the information to their instruction for those children.

The academic language framework David presented to the staff was based on the work of Dutro and Moran (2003) and was used districtwide. The bulk of the presentation was on the importance of teaching what Dutro and Moran call bricks and mortar. In line with their framework, David's PowerPoint defined bricks as "vocabulary specific to a discipline" and mortar as words "used to create coherent sentences or paragraphs" [PD observation, 10/9/09]. From my analysis, these definitions were consistent in documents produced and disseminated by the district's bilingual department, including the lesson planning template used in the session and eventually in joint planning with Mr. Riley.

Additionally, this terminology seemed to resonate with the first grade team. When they met together the afternoon of the PD session, Mr. Riley's teaching partner, Taryn Kincaid, said the idea of teaching mortar was new to her, but the necessity of

teaching more than just vocabulary to children seemed clear. I heard similar statements from my focal teachers when I asked them about their understanding of academic language. What follows is a sample of their thoughts about the matter:

Dr. Scott: It has to do with content-specific vocabulary as well as the syntactical structure of language. [interview, 11/5/09]

Sra. Gregor: That (PD session) really struck a chord with me, not just having an awareness of the academic terms, or the important photosynthesis words, and that kind of thing, but of the accompanying vocabulary, the little prepositions and things, that you need to understand to get the whole picture. [interview, 11/3/09]

Mr. Riley: To use, yeah, the not just the target words and the vocabulary words, but the actual, um, how to ask a question, how it starts, what the inflection is and what it sounds like at the end and how it's different from just telling someone something. That sort of thing. [interview, 10/28/09]

This awareness of the importance of both bricks and mortar was also borne out by Mr. Riley's stated language objective for the balls and ramps unit: "to be able to use content-specific vocabulary in meaningful sentences" [meeting observation, 2/9/10 & interview, 3/4/10]. As he prepared and taught the balls and ramps unit, Mr. Riley worked with David to develop instructional practices aimed at supporting oral academic language. One of the main tools he created was an accountable talk checklist for partners to use when engaging in structured pair shares. Both Mr. Riley and David told me that the purpose of the checklist was twofold: to provide language structures for students to use while also holding them accountable for not "just saying a bunch of bricks" [DG interview, 3/4/10].

The need to develop such an accountable talk checklist was identified by Mr. Riley when he noticed that students were using the word wall as a resource, but ostensibly only to find individual content-specific terms. He also felt strongly about the importance of oral language practice for young language-minority children, and therefore

wanted a way to facilitate the frequent pair shares he had students do to make them conceptually deeper and more linguistically dense.

However, Mr. Riley's first attempts at creating sentence structures for his students were only partially successful, likely due to his limited understanding of the different elements of academic language. His accountable talk checklist included ten sentence structures to help guide pair share conversations, but in reality only a few of them were supportive enough. For example, he included starters like, "Good bouncers have . . ." and "I made it by . . ." mixed with structures like, ". . . roll better if they are . . ." mixed with individual words, ". . . wobbled . . ." and ". . . straight . . ." [accountable talk checklist document]. The result was that students did not always understand how to use the language they were given, especially since it was their first experience using such a tool.

The difficulty of using such a tool for instruction was compounded by the fact that both David and Mr. Riley struggled to know how much language was appropriate to provide to language learners without lightening the cognitive load. As Mr. Riley wondered during one of his planning meetings with David, "How do you grow content knowledge and content language usage, and still make sure you have an eye on language development?" [meeting observation, 2/9/10]. This is a common challenge for educators working with language-minority children, and has been a guiding idea in the work of James Cummins (1981, 2000).

My data shows that this limited understanding of bricks and mortar and how to use them was not unique to Mr. Riley. When my focal teachers talked about mortar, they were often referring to the quantity of language children produced or the use of complete

sentences. They all felt that these were two important indicators of oral language proficiency. However, none of them talked about the increasing complexity of academic sentences, nor indicated that they had specific knowledge of the syntax of the discipline they were teaching (social studies, science, and math) beyond first person statements. This suggests that teachers themselves were not always aware of the language demands of the curriculum they were teaching.

An example that illustrates this point was when Ms. Cortez was guiding a small group of students to write out the definition of a rectangle. She began by encouraging students to think about their own understanding of what the essential properties of a rectangle are. She instructed them to write “so that we understand your thinking”, emphasizing that they should write their own thoughts. Leo, a newcomer from Mexico who was a highly proficient reader and writer in Spanish, began writing almost immediately when instructed to do so. He began with “I think . . .” but was stopped by Ms. Cortez, who chastised him in stumbling Spanish, “No, Leo, no tienes que poner ‘I think.’ No más empieza con ‘a rectangle tiene . . . a rectangle has’” [No, Leo, you don’t have to put ‘I think’. Just start with ‘a rectangle has . . . a rectangle has] [observation, 4/21/10]. From my perspective as an observer, Leo’s confusion was clear. He had been told to write his own thoughts and therefore likely thought he was giving an opinion. Ms. Cortez, on the other hand, understood that mathematical writing should be declarative and generalizable. This knowledge was ingrained in her as an educated English-speaker. It was not, however, obvious to newcomer Leo, and the lack of clear expectations caused difficulty for Leo and frustration for Ms. Cortez. Fillmore and Snow (2002) have argued that teachers need to have deep knowledge of the role that language plays in education,

and my data certainly supports their argument. Nonetheless, my findings about language demands also indicate a need for teachers to be conscientious about how to act on that knowledge and impart it to students.

In each unit I observed, there were specific vocabulary terms – or bricks – that were important for students to understand and use with varying degrees of sophistication. Both Sra. Gregor and Ms. Cortez described their units as vocabulary-heavy and spent a lot of class time and instructional energy on reinforcing the meaning of content-specific words. These words ranged from concrete to abstract (Dutro & Moran, 2003), with the most important words being at the abstract end. For example, *cultura* and *ancestro* were essential to the *cultura* unit, while polygon and symmetry were major concepts and key terms in the geometry unit.

In addition, there were a small number of general academic terms and sentence structures – or mortar – that were used and actively reinforced in first grade classrooms. This general vocabulary is important for students because it is “the language associated with the higher order thinking skills” and is “related to learning and the development of cognition” (P. Gibbons, 1993, p. 3).

Given the three common language functions emphasized across classrooms, it would be logical that many of the same bricks and mortar would be taught. One might expect, for example, that words like define and predict were commonly used in these three classrooms, but in fact they were unevenly distributed such that one teacher might have used them multiple times and another teacher not at all. In general, teachers did not use common vocabulary or structures. There was a disconnect between language functions and the structures associated with them that once again points to the challenges

general educators face in working with emergent bilingual children even within dual language programs.

Perhaps unsurprisingly, the overlap in general academic language use that did occur was mainly evident in the science and geometry units, which were also both conducted in English. This was partly a result of the similarity of the two content areas, but it was also because of conversations that occurred between Mr. Riley and Ms. Cortez. Midway through the year, when they began looking forward to the geometry unit, the two teachers decided to continue to reinforce the term properties because kids were already familiar with it from two previous science units. The overlap is logical because of the distance between social studies and the other two content areas, but it does raise questions about the interdependence of language that is so central to dual language education.

Tensions

Throughout this chapter, I have raised tensions that existed in the ways that academic language was understood, used, and taught in first grade at Hurley Heights International School. In this section, I'll explain in greater depth the most salient tensions and their significance to this study.

Theoretical vs. Real Demands

One of the primary tensions that arose during data analysis centered on how the language demands I have identified in this chapter actually played a role in classroom instruction and discourse. I gleaned information about expectations and demands from interviews with participants and document analysis, but when I analyzed my observation

transcripts and fieldnotes I became aware of some discontinuities in terms of oral academic language use. For example, a central language goal of the *cultura* unit was for each student to define the term *cultura*. In practice, however, students did the defining in small groups and only a few shared their ideas with the whole class. It could be argued that the majority of students could have opted out of oral participation in those small group interactions, and some did.

In Mr. Riley's class, he often gave Spanish-speaking students a choice of whether to participate in whole group discussions or not. In our interview halfway through the balls and ramps unit, he justified this practice by saying that "it's just kind of about not wanting to put anybody on the spot" [interview, 1/19/10]. He felt this was especially important for lower proficiency English-speakers, who he hoped would eventually become comfortable enough to share aloud.

While Mr. Riley's concern for children's socioemotional well-being is notable, it does raise questions about how much press is needed for academic language to develop. If children in early grades are able to participate as members of an academic community without having to use academic language (or any language at all), then perhaps there is a lost opportunity to develop language and conceptual understanding concurrently. This may manifest itself later, when these Spanish-speaking students get to the intermediate grades unable – or unwilling – to engage in cognitively and linguistically appropriate discussions in either language. There was evidence that at least one struggling Spanish speaker took advantage of this practice, and rarely opted to share out at all. As a result, he was often disengaged from classroom conversation and activities. This may have

undermined Mr. Riley's key message that being a scientist (in this case) includes using sophisticated language.

Nonetheless, Mr. Riley was aware of the discrepancy between his expectations and reality and took steps throughout the year to press on oral academic language in pair shares, which he considered a more comfortable arrangement for student sharing. He noticed early in the unit that students were using disconnected bricks to describe their thinking, and therefore developed the accountable talk checklist I described earlier. However, because of the way the pair shares were conducted, there really was no accountability to him, since it was not possible for him to listen to every pair share.

On the Spanish side of the program, the issue was somewhat different. Sra. Gregor also expressed concern about the difficulty of raising real expectations to the level of her theoretical expectations: "I feel like it's something I constantly have to remind myself to be conscious of, but when we're sharing, when we're brainstorming, and things like that, to say thing in complete sentences . . . producing language instead of simply gestures or movements" [interview, 11/3/09]. Because of her background as a language educator, she was more aware of the need to develop facility with language for her students, and she was focusing on facilitating academic language for Spanish speakers in their home language. However, as a relatively new first grade teacher, she was struggling to balance the demands of language and content, especially with two groups of students with very different Spanish levels and needs.

Interdependence Across Languages

The potential for cross-language transfer is considered one of the primary benefits of dual language education, and as I have explained throughout this chapter, there was

overlap in the Spanish and English classrooms in purposes for using language, language functions, and the ways in which teachers accounted for context. However, there were tensions that arose in the area of interdependence as well. The similarities in terms of vocabulary that occurred were evident between math and science, but not social studies. This is logical given the related nature of the content, but the fact that those units were both taught in English meant that there was little possibility of Spanish being used as a resource in any structured way. Further, it raises questions about the likelihood of cross-language transfer at the brick and mortar level when disparate content areas are separated by language of instruction, as is the case in most elementary dual language programs.

However, it seems possible that other elements of academic language, such as understanding purposes for using it and improving one's ability to use specific language functions, do have the potential to transfer. These first graders did not use the word 'predict' in their science class, but they nonetheless worked on their predicting skills, just as they did in social studies, therefore deepening their conceptual knowledge and cognitive skills. It seems then, that the facilitation of some degree of interdependence was possible at this site; it simply did not happen in any structured way.

Conclusion and Implications

In this chapter I have explained the language demands of first grade at Hurley Heights with regard to purposes for using academic language, language functions, and bricks and mortar. Within each of these areas, I have presented findings related to participants' understanding of the role of academic language in their curriculum and in

the conceptual and linguistic development of their students. I have also highlighted some of the key challenges and tensions that arose because of differing priorities or levels of knowledge about language issues for Spanish-speaking children.

This analysis of academic language demands has elucidated several key findings with regard to the education of Spanish-speaking first graders at Hurley Heights. First, it was clear that all of my focal teachers had language goals and expectations of those students. They were not always able to articulate those goals to me, nor did they usually do so in their lesson planning and preparation, but they did communicate to students various purposes for using academic language.

Second, due to a shared professional development experience, these teachers had some understanding of the components of academic language – the bricks and mortar – and all were in agreement about the value of teaching both. Despite this shared understanding, teachers had little communication about academic language, and therefore did not have a common framework for discussing or teaching it. This is potentially problematic in light of the fact that there was overlap in language functions across all three classrooms, and therefore an unfulfilled opportunity for cross-language and cross-content academic language development.

Finally, although all three first grade teachers were mindful of and concerned about language issues in their classrooms, they were not always aware themselves of the academic language demands of their curriculum or how to support students in facing them. This may be related to their lack of communication about such issues, and was most certainly affected by their knowledge and understanding about language development overall and the construct of academic language in particular.

In chapter four, I begin to explore the instructional practices each of my focal teachers undertook to facilitate academic language development, using this chapter as a backdrop for understanding how those practices mattered for the Spanish-speaking students in their classrooms.

CHAPTER 4

Instructional moves to support oral academic language development

The goal of this chapter is to address my second research question: what instructional moves did first grade dual language teachers make to develop first graders' Spanish and English oral academic language proficiency? Much of the extant research on dual language education has privileged program model as the determining factor in student learning. However, I argue that instruction within such programs needs to be more closely examined in order to understand how teachers support emergent bilingual children in developing the high levels of language proficiency that will help them become successfully biliterate as they progress through school. A focus on instruction is therefore central to this study, and I take the position that, "the characteristics of instruction (context) will determine the functionality or 'adequacy' of an individual's proficiency in the language of instruction" (Cummins, 2000, p. 67).

As such, I analyzed patterns of instructional practice through the frame of effective instruction for second language learners laid out in the informing literature section of this dissertation. I identified five instructional moves that have been theorized to promote academic achievement for second language learners in mainstream U.S. classrooms: simultaneous focus on content and language; linguistic scaffolding; dialogic interactions; movement along the context continuum; and the explicit instruction of language. Although such a frame is limited by the fact that it does not specifically account for bilingualism and biliteracy, my thorough analysis of interviews with focal participants, classroom observations, and relevant documents enables me to make claims

about the nature of instruction in these first grade classrooms that may further our understanding of the development of bilingual academic language acquisition.

This chapter is organized into three sections that highlight: 1) the “go to” instructional moves that my focal teachers were most likely to use and their reasons for using them; 2) the ways in which they linguistically scaffolded children as they used academic language in Spanish or English; and 3) the moves they used infrequently. The chapter ends with a discussion about the implications of these findings.

The first grade teachers at Hurley Heights undertook each of the five practices listed above at different times and with varying degrees of confidence. Table 4.1 shows the total number of instructional moves that were coded for each teacher, as well as the mean number observed per session and per hour. I have chosen to present the data in this way because simply counting the total number of moves would not be sufficient to understand teacher practice. This is partly the case because I observed a different number of sessions and total hours in each classroom. Most notably, I observed more than twice as many hours in Mr. Riley’s room as I did in either Sra. Gregor’s or Ms. Cortez’s. It is therefore not surprising that I observed many more instances of academic language instruction in his classroom.

Conversely, the table also shows that Sra. Gregor had both the lowest number of coded moves overall and also the lowest mean number per hour. This data is somewhat deceptive, however, because of the fact that Sra. Gregor’s classes tended to include more small group work time and were much less teacher-centered than those of Ms. Cortez, whose instruction was typically highly teacher-directed. I highlight other examples and give a more detailed analysis of these differences in the sections that follow.

Table 4.1: Coded instructional moves by teacher

	Total number of coded moves	Mean number of coded moves per session	Mean number of coded moves per hour
Sra. Gregor	72	7.2 (N=10)	10.8 (6.66 hours)
Mr. Riley	233	16.6 (N=14)	16.6 (14 hours)
Ms. Cortez	156	19.5 (N=8)	29.3 (5.33 hours)

“Go-to” moves

In general, the teachers in this study were aware of their own level of understanding about academic language development and thoughtful about the limitations of the instruction they provided to Spanish-speaking students. However, it became apparent through both my interviews with them and qualitative analysis of their practice that each teacher had moves they felt comfortable using to support oral academic language, and used those more frequently and confidently than other moves.

As table 4.2 shows, the most widely used instructional move by far was linguistic scaffolding. All three teachers commonly provided linguistic scaffolding either in print or spoken form, and for both specific vocabulary and for sentence structures.

Table 4.2: Percentage of different types of instructional moves by teacher

	Total number of coded moves	Integration of content and language	Dialogic interactions	Movement along the context continuum	Explicit Instruction	Linguistic scaffolding
Sra. Gregor	72	36%	10%	17%	5%	32%
Mr. Riley	233	10%	10%	21%	2% ⁵	57%
Ms. Cortez	156	18%	6%	26%	4%	46%
<i>Overall (average)</i>	<i>461</i>	<i>(21%)</i>	<i>(9%)</i>	<i>(21%)</i>	<i>(4%)</i>	<i>(45%)</i>

⁵ All of the Explicit instruction codes for Mr. Riley were negative, indicating that he was not explicit when I thought he could have been and it would have been beneficial to students

I did not consider linguistic scaffolding to be any of the teachers' "go to" move, however, for several reasons. First, it was likely overrepresented in the data because it included written scaffolds such as charts, notes on the whiteboard, or sentence strips. For example, print scaffolding accounted for almost fifty percent of Sra. Gregor's coded moves. It also included instances of peer scaffolding such as when a more proficient English-speaking partner clarified a concept for a Spanish-speaking peer in Spanish. Second, many instances of linguistic scaffolding occurred at the micro level and therefore the code frequently overlapped with other instructional moves. An example of this would be when a teacher pressed for elaboration during a dialogic interaction. Third, micro level rephrasing, repetition, and prompting are somewhat natural behaviors for teachers and therefore were somewhat more likely than other instructional moves to be unconscious or unintentional on the part of the teacher.

I do not mean to suggest by these caveats that linguistic scaffolding is not an important instructional practice, but simply that I found my analysis of "go to" moves to be richer when I attended to the other four moves instead. Later in this chapter I delve more deeply into my findings around linguistic scaffolding. However, in the next few sections I describe and explain "go to" patterns of instruction for each teacher.

Señora Gregor

Of the three focal teachers, Señora Gregor most consistently provided instruction that integrated content and language goals (see table 4.2). She felt strongly about the need for students to produce more, and more sophisticated, language as the unit and school year progressed. Therefore, she undertook instructional practices that were

designed to support students as they participated orally in academic activities and small group discussions.

In our interviews, Sra. Gregor consistently emphasized the importance of her own conscious awareness of the language she used with students. She felt that “instead of expecting and hoping that simply through the fact of being in the classroom they (the students) will pick up the language,” it was paramount that she as the teacher “be conscious of the vocabulary” and “show a variety of the language” [interview, 11/3/09]. Therefore, she sought to be intentional about her choice of academic vocabulary and syntax, and expressed a desire to communicate that intentionality to her students.

In my observations of her instruction, I noted that Sra. Gregor did indeed tend to give content and language more equal weight than did the other two teachers. This integrated instruction was especially notable as it related to the language functions that played a key role in her unit. For example, she wanted students to be able to both define *cultura* and use it in appropriate descriptive sentences – “una oración completa con una letra mayúscula y un periodo” [“a complete sentence with a capital letter and a period”] [observation, 12/1/09]. Her focus was therefore not only on student understanding of the concept of culture, but also on the process of defining and describing it using appropriate academic language. The following exchange, which occurred in a small group on the second day of the unit, illustrates this dual focus on content and language:

Sra. Gregor: (to small group): Cuál es una oración con la palabra *cultura*? Pedro dijo que comen arroz, comen pollo también . . . entonces, quizás podemos escribir una oración con, acerca de la cultura y la comida. Quién puede pensar en una oración completa?

Alicia: Yo me como cereal para . . .

Abigail: . . . antes de la escuela.

Abigail: Sí, antes de la escuela.

Sra. Gregor: Pero yo no escuché la palabra *cultura* . . . ustedes tienen que pensar en una oración con la palabra *cultura* en la oración, y ‘como cereal antes de la escuela’ no tiene la palabra *cultura*.

[Sra. Gregor: What is a sentence with the word culture? Pedro said that they eat rice, and they eat chicken too . . .so maybe we can write a sentence about culture and food. Who can think of a complete sentence?

Alicia: I eat cereal . . .

Abigail: . . . before school.

Alicia: Yes, before school.

Sra. Gregor: But I didn’t hear the word culture . . . you need to think of a complete sentence with the word culture in it, and ‘I eat cereal before school’ doesn’t have the word culture in it.]

[observation, 12/1/09]

This example illustrates the attention Sra. Gregor placed on both the concept of culture as related to the foods people eat and students’ ability to use this key vocabulary term in a complete sentence. As she facilitated this small group discussion, therefore, she supported students in developing a nuanced understanding of culture – one that included both personal and societal elements – as well as in practicing the language skills needed to express that understanding.

Señora Gregor’s expectation that students would use complete sentences was something she emphasized both in her conversations with me and in her classroom instruction. She indicated on more than one occasion that she thought it was critically important for students to produce language in addition to hearing it, and that one of her main responsibilities was to “try to elicit more oral language” from children [interview,

12/3/09]. As a knowledgeable and experienced language teacher, she understood both the receptive and productive dimensions of language acquisition.

Despite a high level of awareness of the importance of content and language integration, Sra. Gregor struggled to fit both kinds of instruction into a limited amount of time. She explained the difficulty she had in prioritizing language development in the following way: “It seems simple, but a lot of times, for the sake of the time or the way that it’s flowing, you say, ‘oh, and who has been to California?’ and kids say ‘me! Me!’ so I just write down their names instead of having them say ‘I have been to California’ [interview, 11/3/09]. Given that Sra. Gregor was the most knowledgeable of the first grade teachers about the role of language in learning, some of the difficulty she experienced in this area was likely related to the fact that she was a first-year first grade teacher and largely unfamiliar with grade-level content.

Mr. Riley

In contrast to Señora Gregor, Mr. Riley’s primary means of providing instruction to support the development of oral academic language was through linguistic modeling and the creation of opportunities for students to use it in increasingly decontextualized tasks (see table 4.2). He saw himself as a language model whose responsibility was to “show them (the students) that it works, model for them, and have them repeat it” [interview, 10/28/09]. His attention to modeling was not limited to language, as he felt strongly that in all areas, first graders needed lots of modeling “of the activities . . . and also of the kind of thinking and also of the discussions” [interview, 1/19/10]. Therefore, it seemed that his approach to teaching language was similar to his approach to teaching content.

In my observations of his instruction, I noted that Mr. Riley did frequently model academic language and even briefly explain its meaning, although his explanations fell far short of what I considered to be explicit instruction of language. For example, he often paraphrased general academic terms as in “how could you *describe* . . . how could you *talk about* . . . what could you *say* about these different kinds of balls?” [observation, 1/15/10] or “What *affects* how it rolls? What *makes it* roll well or makes it roll not so well?” [observation, 1/19/10]

In half of the lessons I observed (seven of fourteen), he followed an inquiry cycle similar to that described by Gibbons (2006). I considered this to be evidence of movement along the context continuum as defined by both Gibbons and Cummins (1991, 2000) in the sense that Mr. Riley first introduced new language in a highly contextualized way, often using word cards, charts, and concrete materials like balls. As lessons progressed, he guided students through pair and small group investigations using those materials to learn new information about the key concepts of the unit. Finally, students were called back together as a whole group to reflect on their learning. This process often resulted in the generation of new, more general understandings about scientific concepts, as well as the use of more decontextualized language.

In order to concretely illustrate this movement along the context continuum, I conducted an in-depth analysis of one lesson taught over two sessions of the balls and ramps unit. The sessions were the ninth and tenth I observed, and fell roughly in the middle of the unit. The focus of the sessions was on comparing the bounciness of two balls – a small rubber ball and a ping pong ball.

Mr. Riley began the first session with the whole class on the rug, reviewing the definition of a “good bouncer” they had formulated the day before. There was ongoing confusion, and possibly even disagreement, about the definition because they had collaboratively created a poster which listed three criteria for determining a ball’s bounciness: 1) bounces a lot of times; 2) bounces in one place; 3) bounces high. For the purposes of this investigation, however, Mr. Riley wanted them to focus only on the number of bounces and not height. Mr. Riley also did not make it explicit to children that they were, in fact, defining the term “good bouncer”. Instead, the question he asked children repeatedly was “what makes a good bouncer?”

Once he had orally established this definition (with only some degree of success), he introduced the focus question from the district instructional manual, “How can we measure the bounciness of balls to find the best bouncer?” [Balls & Ramps Instructional Guide]. His lesson introduction included writing the question on the whiteboard and having students identify the key words in the question, a process they were familiar with. He then explained the notion of a fair test and modeled examples of unfair tests in order to solicit student ideas about fair test criteria. At this stage, he was the one who recontextualized students’ contributions, as shown in the exchanges below:

Mr. Riley: What did I do wrong in my test?

EL: Because you put the ping pong ball so up high and then you put the small rubber ball so down.

Mr. Riley: So what could I have done to make this more . . . fair? What could I have done to make this more fair?

EL: By maybe putting them both down or putting them both up high.

Mr. Riley: So I can’t just drop them from anywhere. **I have to make sure that I drop them from the same . . .**

Student: Height.

Mr. Riley: **The same height. The same distance from the ground.** Okay. So I'm going to do a little change here. I'm not just going to say drop it. I'm going to say I have to drop it . . . from the same . . . drop from the same height.

(later in the same conversation)

Cyrus: You need to do one only on the table, or actually, you should do both on the table and both, or both on the carpet.

Mr. Riley: **Okay, so we need to do them both . . . on the same surface.** We need to do them both on the same surface. Otherwise, its not . . .

Many: Fair.

[observation, 1/27/10]

These examples highlight the way in which Mr. Riley recontextualized students' contributions at the introductory stage of a lesson. When EL suggested that it was important to drop both balls from either high or low, Mr. Riley rephrased it as "dropping them from the same height." Likewise, when Cyrus suggested they should bounce both balls either on the carpet or on the table, Mr. Riley rephrased it as a general statement about the need to bounce both balls on the same surface. This was a frequent instructional move made by Mr. Riley, and seemed to line up closely with his belief about the importance of modeling academic language.

The next step in setting up the task was that Mr. Riley modeled conducting the investigation and completing a T-chart with the data from three trials. Throughout this modeling, he thought aloud. He then sent students off in pairs to conduct an investigation of relative bounciness of the small rubber ball and the ping pong ball. In my observation of pair behavior, I noted that most pairs with Spanish-speaking students completed the investigation and the T-chart, but that there was very little oral interaction while doing so.

Instead, they either did not engage linguistically at all, and worked side by side to fill in the data themselves, or they used only single words – often numbers – to communicate. When I had talked with Mr. Riley about this issue previously, he expressed frustration about the lack of oral academic language he heard during pair investigations and suggested that “one thing that could be effective, or could be helpful, is having more specific questions that they have to answer for the investigations” [interview, 1/19/10].

To conclude the first session of this lesson, the whole class met back at the rug with their recorded T-chart data in hand. Mr. Riley guided pairs as they orally added their data to a double line plot chart in order to establish which of the two balls was the better bouncer. This discussion presented a higher level of cognitive challenge than the introductory discussion not only because students had to interpret the data presented in a different form than they had seen before, but also because they had to synthesize the results of all the student pairs in the class. In other words, they had to move from relying on their own experience in the investigation to using the class data chart to draw conclusions. An opportunity for increased linguistic complexity also presented itself, as students were asked to explain their interpretation of the class data set. However, as the following examples from that discussion show, Mr. Riley did not provide enough press on student answers to truly increase the academic language demand:

Mr. Riley: Did anybody notice anything about our line plot there? Xavier?

Xavier: Um, that, I found that it looked like the, um, the small rubber ball, um, bounced less.

Mr. Riley: **Bounced fewer times. Bounced less.**

(later in the same discussion)

Mr. Riley: **What else did you notice, Beatriz?** (pause) Anything about how the ping pong ball, the small rubber ball, which one seemed to bounce more?

Beatriz: Small rubber ball.

Mr. Riley: **Seemed to be more bouncy?** Okay.

[observation, 1/27/10]

In these exchanges, Mr. Riley filled in most of the critical information himself, thus reducing the productive academic language demand on students, but in the second session he reduced the level of context by having students write in their science journals about the previous day's investigation. Theoretically, writing "relies primarily on linguistic cues to meaning, and . . . heavily on knowledge of the language itself" (Cummins, 2000, p. 68). Nonetheless, Mr. Riley provided support for students as they completed the task. He set up the writing task by modeling the completion of part of a cloze paragraph on the whiteboard. When students went to their seats to complete the independent writing, that same paragraph (or a shortened version of it, depending on the student) was available at their tables so they could copy it, inserting brick terms as appropriate.

When I asked Mr. Riley in our post-unit interview about his reasons for structuring the lesson in this way, he said, "that was where I was like, oh my gosh, we don't understand any of the vocabulary, so what I'm going to do is I'm going to write a whole paragraph and you're just going to put in the word." So it seemed that he mindfully provided written mortar to students as a response to what he was noticing in terms of vocabulary acquisition. He did not ultimately feel that the writing portion of the lesson was successful, however, explaining that "the problem was that they weren't, it did not make any, it was not as meaningful to them, I don't think, because it was just filling

in the blank. It was just using one word. They weren't doing the connecting on their own. The connecting was being done for them. So it was still kind of like learning those words, kind of in isolation" [interview, 3/2/10].

This quote makes visible the challenges Mr. Riley faced as he taught a conceptually dense science unit and attempted to also address the language needs of his Spanish-speaking students. Through my detailed description of this one lesson, I have elucidated the ways in which he sought to move his instruction along a context continuum both conceptually and linguistically, and why he thought it was important to do so.

Ms. Cortez

Of the three focal teachers, Ms. Cortez devoted the most energy to language-specific instructional moves, especially in the way she supported students in making their oral language and writing more explicit (see tables 4.1 and 4.2). In our final interview, she explained the value she placed on students being able to explain their thinking in the following way: "I try to show them all the information that they know already in their head, and how to say it. And then later how to write it and draw it." She felt strongly that "kids need to be able to explain their thinking" [interview, 4/29/10]. Thus, she mindfully built opportunities for this kind of learning to occur in her classroom. The way she did so was through instruction that moved along the context continuum, especially as it related to the language function of defining. As Snow et al. (1991) noted, good definitions require "analyzing one's own knowledge of word meaning to distinguish 'definitional' from incidental information about the target concept, as well as control of

the conventional form for giving definitions” (p. 90). Much of Ms. Cortez’s language-specific instruction was aimed at helping students develop that control.

Ms. Cortez shared the “go to” move of manipulating context with Mr. Riley, and like him, she often rephrased students’ oral contributions into more general language, as in the following exchange with an English-speaking student as part of a whole class discussion:

Ms. Cortez: What kind of property could a ball have, MD?

MD: Could be big.

Ms. Cortez: Could be big. **So big is what? What is that telling us? It’s the size; the size of the ball is a property.**

[observation,
4/15/10]

Her overall approach to instruction along the context continuum, however, was very different than that of Mr. Riley. In the inquiry cycle Mr. Riley followed, students were learning new concepts and new academic language simultaneously. In contrast, Ms. Cortez began her academic language instruction with a concept that was already known to students. Her purpose, therefore, was not to introduce them to a new concept but rather to teach them a new way to explain their understanding of it. In this sense, her instruction was designed to improve students’ “access to and command of the oral and written academic registers of schooling” (Cummins, 2000, p. 67).

The primary venue she used for such instruction was the weekly “think” center she facilitated with small, heterogeneous groups of students. For example, on one occasion she used the center to talk students through the process of developing an oral definition of a rectangle and then writing it out. Like Mr. Riley, Ms. Cortez did not use

the word define in her work with students. Rather, she told them they were going to write an answer to the question “what is a rectangle?”; she framed it more as an explanation than a definition. The introduction to the task she gave students was:

“What is a rectangle? What *is* a rectangle? You know what, you’ve seen lots of rectangles. But when you are writing about your math thinking, how do you explain what a rectangle is?”

[observation, 4/21/10]

Ms. Cortez’s purpose for framing the task this way was to push students to be as explicit as possible, using complete and detailed sentences. Her instruction was also related to one of the purposes for using language I discussed previously – to be an expert on a given topic. What was compelling about the way she supported students in this task was that she moved instruction along the context continuum even within the small group lesson. She began by providing written scaffolds in the form of a model math journal page and a list of key content-specific terms. She then facilitated a conversation with the small group about what they understood about the defining features of rectangles. The group collaboratively developed an explanation, and then each student wrote his or her own math journal entry. Through this process, Ms. Cortez sought to help students improve not only the explicitness of their writing but also to deepen their understanding of the shape. The following conversation from one group’s “think” center provides evidence of this two-pronged goal:

Ms. Cortez: The more details you include, the better of an answer you will be giving, and the better we can understand what you are thinking. So we want you to really show us what you’re thinking by telling us all the details that are in your mind. So, who can tell me, what is a rectangle? Who can get our conversation started? AL?

AL: A rectangle has four sides.

Ms. Cortez: A rectangle has four sides. SM already told us one thing. She said a rectangle is a . . . shape. A rectangle is a shape. It has *four sides*. Allegra?

Allegra: ((Four angles))

Ms. Cortez: And four angles. What can you say, here, if this was the rectangle we were looking at right here, what can you say about this rectangle, Javier?

Javier C.: Um, um, . . .

Ms. Cortez: It's a shape.

Javier C.: It's long.

Ms. Cortez: It's long? What's long? Ah, he said it's long.

Javier C.: The shape.

Ms. Cortez: Javier said it's long. Do you know what he means by that?

AL: Long means it's bigger.

RC: Bigger, but . . . but I want him to be more clear. I want him to really explain what he's thinking. What is long about this rectangle, Javier? Is this long right here? (points to short side of a drawn rectangle) And this, is that long?

Javier C.: Short.

Ms. Cortez: Oh, that's short. So these two . . . sides are short. But what's this?

Javier C.: Long.

Ms. Cortez: Is this the part you were talking about?

Javier C.: Uh, yeah.

Ms. Cortez: And how many sides are like that?

Javier C.: (long pause) Two?

Ms. Cortez: Two sides. Two sides are . . .

Javier C: Um . . . long.

Ms. Cortez: And two sides are . . .

Javier C.: Short.

Ms. Cortez: Okay, can you say that to me, Javier? Two sides . . .

Javier C.: Two side is long, long and two is . . . short.

[observation, 4/21/10]

The math journal entries that Spanish-speaking students produced as a result of this conversation also closely approach what Snow et al. (1989; 1991) would characterize as a formal definition. Entries included:

“a rectangle is a long shape an it has 4 sads” [Isaiah, Math Log B, 4/21/10]

“A rectangle es a shape what has 4 angles and 4 sides” [Kalvin, Math Log B, 4/21/10]

“A rectangle is a shape that has four corners and four angles and it is long and it is straight and it is sort of a polygon and it is a kind of square and 2 sides are long and the other two are short.” [Jocelyn, Math Log B, 4/21/10]

Clearly students were at different levels of English language proficiency and understanding of the essential elements of rectangles, but the fact that they were all able to write accurate (if incomplete) definitions after targeted contextualized instruction speaks to the influence of Ms. Cortez’s “go to” move on her students. Specifically, students were able to write definitions that included only essential features of rectangles in a recognizable definitional structure.

Linguistic Scaffolding

In all three classrooms, focal teachers consistently provided linguistic scaffolding for Spanish-speaking students. In fact, it was the most frequently coded instructional move overall. This scaffolding took many forms, and occurred at various levels. At the

most basic level, for example, I considered environmental print, written scaffolding, and the use of peers for academic language support. In terms of teacher-student oral interactions, I investigated linguistic scaffolding at both the “micro-discourse” and macro levels (P. Gibbons, 2006). Micro discourse refers to linguistic exchanges that occur between teacher and students within a single conversation or instructional episode. Macro discourses are those that continue across lessons within a unit.

Environmental Scaffolding

In general, focal teachers in all three classrooms provided written support for academic language through the use of words walls, sentence strips, class charts, and math or science journals. First grade teachers introduced and reinforced vocabulary in various ways, but in general they were far more likely to provide individual terms in written form than they were to present sentence structures in that way.

In Sra. Gregor’s class, the Cognitive Content Dictionary was a poster that included all of the focal content-specific vocabulary terms. It stayed up throughout the unit, and was added to on a regular basis as the class learned new words. In Mr. Riley and Ms. Cortez’s rooms, the primary way that content-specific vocabulary was displayed visually was on word cards, word walls, or written on whiteboards. For example, Mr. Riley maintained a large, well-organized, color-coded word wall that contained terms like sphere, texture, and color. Ms. Cortez, for her part, showed word cards or wrote lists of unit words on the whiteboard for virtually every lesson, and often manipulated them in the service of organizing conceptual ideas. All three teachers referred students to these written resources often, as the following statement from Mr. Riley to the class illustrates:

“I moved our properties chart up here to the front so you could see it. Now, the wiffle ball is not on here, but I thought maybe it would be helpful just to remember what properties are.”

[observation,
1/19/10]

Additionally, all three focal teachers attempted to understand and integrate support for academic sentence structures into their instruction despite the fact that it was challenging for them. In fact, Señora Gregor was far more likely to provide targeted support for syntax than she was for content-specific vocabulary, and she often gave oral structures for students to complete or repeat. She also wrote structures like “creo que cultura quiere decir _____” [I think culture means _____] or questions like “Qué quiere decir ancestro?” [What does ancestor mean?] on sentence strips and made them available for students during small group work. The groupwork itself could also be considered a form of scaffolding, since it enabled students to make meaning collaboratively in a highly contextualized situation. Within lessons, she often followed group work with whole class teacher-guided reporting sessions in which she supported individual students in reporting their group’s ideas.

Although Mr. Riley made frequent use of pair shares, he infrequently gave students oral support for general academic vocabulary development and made infrequent use of small group work in this unit. However, he recognized the need for more structured mortar support, and in session 12 (near the end of the unit), he provided students with the accountable talk checklist I discussed in chapter three.

Ms. Cortez, in particular, emphasized the importance of providing students with linguistic structures and creating ample opportunities for students to practice those

structures. To that end, she followed a cycle of modeling oral structures, writing them on the whiteboard, then giving students brief periods of time to engage in pair or small group conversations using those structures. The following example is from the third session of the unit, and it shows one such cycle. It highlights the success three Spanish-speaking boys had in using mortar when it was presented in such a clear, systematic way:

Ms. Cortez (to the whole class): I want you to find somebody in the room . . . and I want you to say to this person . . . I'm going to give you a sentence to say. You can have a choice. You can choose, you can say . . . (writing on whiteboard) "my . . . shape . . . is . . . the same . . . as . . . yours." Or you can say, or you can say (writing on whiteboard) "our shapes . . . are . . . alike." Remember that word? Here's what you do. You're going to take your shape . . . you're going to take your shape, and you're going to go around the room, walking. Looking for somebody who has the same shape. And then you stand up, and you see that person and you shake hands. You say "hello" (shakes NB's hand)

NB: Hello. I got the same shape as you.

Ms. Cortez: That's very good, actually. Can you say, 'my shape is the same'?

Noah: (reading whiteboard) My shape is the same as yours.

Ms. Cortez: Thank you. And I'm going to make my sentence. I'm going to say the other one, since he said that one. I'm going to say, 'our shapes are alike.' And then we're going to say bye bye.

Noah: Bye bye. Adios.

Ms. Cortez: Adios. And then you're going to look for another person to meet. We're going to look for another person to meet that has the same shape.

(later, children are circulating around the room)

Leo: (to Javier C.) Hi! My sha . . . my shape is . . . My shape is, huh, a ver? (reading whiteboard) My shape is the same . . . as yours. Vamos a decir, ((dile a ese))!

Javier C.: Our shapes, our shapes are alike?

Leo: Yes! Bye! Bye! (to Calvin) Ahora, tú dime. Oh, yo te voy a decir.

Calvin & Leo at the same time: My shape is the same . . .

Leo: . . . of yours.

Kalvin: . . . as yours.

Javier C.: Our shape are . . . alike?

Leo: Ahora tú dime la de abajo!

Kalvin: Yeah, that is.

Leo: No, a tí! Our shape alike, dime.

Kalvin: Ya la dije!

[observation, 4/19/10]

In this conversation, there were a number of environmental scaffolding factors at play. First, students received clear oral and written modeling of the academic structures they were expected to use. Second, students had access to the written structures throughout the conversations, and my field notes indicate that they did look at the whiteboard to guide them. Third, these three boys used code-switching in ways that were clearly supportive of their conceptual and language development. Leo was an academically strong newcomer from México, and Javier and Kevin were struggling academically and in terms of English language development. Therefore, the fact that Leo helped guide his peers to use the correct language could be considered a major benefit of both written linguistic scaffolding and the use of more proficient peers to facilitate learning. The fact that code-switching was allowed, and even encouraged in this dual language program enabled students to make use of all of their resources for learning.

Micro Discourses

In my data analysis, I considered micro-discourse moves such as orally repeating key terms, restating or rephrasing student contributions, and handing responsibility for

communication to individual students. These moves are by definition contingent upon and responsive to student contributions, and as such they enabled teachers to accept the content contributions of children while at the same time providing “alternative linguistic forms to encode the learner’s meaning in more context-appropriate ways” (P. Gibbons, 2006, p. 128). While teachers’ use of these moves alone did not teach children academic language, nor did it teach them about academic language, it did represent some attention on the part of the teachers to the issue of language in content teaching.

Teachers use micro-discourse scaffolding to repeatedly expose students to key language, and an analysis of it was important for this study because “language input that is spoken clearly and contains a considerable amount of syntactic and semantic redundancy is easier to understand than input that lacks these features” (Cummins, 2000, p. 72). Appropriate scaffolding within students’ zones of proximal development is considered by many language scholars to be a critical support for the development of academic language in particular (Genesee et al., 2006; P. Gibbons, 2003). Thus, instruction within this zone might be considered to be one of the most effective moves a dual language teacher can make and likely supported the development of academic language for Spanish-speaking first-graders at Hurley Heights.

Mr. Riley was the teacher who most adeptly engaged in micro-discourse moves. Likely because of his perception of himself as a language model, he often repeated key terms, adjusted his rate of speech, or rephrased new academic language into conversational language for children. In some cases, this scaffolding overlapped with movement along the context continuum, as when he generalized student contributions beyond the immediate classroom context. In the following short snippet from an

interaction with a Spanish-speaking boy as part of a whole class discussion, Mr. Riley made several micro-discourse moves:

Mr. Riley: Tell me about one of the properties you noticed of the ping pong ball.

Oscar?

Oscar: It's hard.

Mr. Riley: **It's hard.** Is that a color, or a size, or shape, or texture? What do you think? Hard. **That's how it looks, or how it feels?**

Oscar: How it feels.

Mr. Riley: **How it feels.** So, when you're talking about how something feels, you're talking about the . . . texture. **You're talking about the texture.**

[observation, 1/6/10]

First, he repeated Oscar's answer. He then identified four possible property categories to which Oscar's answer could belong: color, size, shape, or texture. When Oscar did not respond immediately to his general prompt of "what do you think?", Mr. Riley narrowed down the choices while also rephrasing them as "how it looks, or how it feels." In doing so, he shifted from academic back to everyday language, illustrating that linguistic scaffolding does not necessarily progress in a one-way, linear progression. Rather, this and other examples given in this section highlight the ways in which teachers provided message abundancy, or repetition of key terms and concepts through the instructional choices they made. This interplay between conversational and academic registers also highlights the complexity of the construct of academic language and challenges a dichotomous approach to separating them.

Indeed, the shift back to conversational language helped Oscar answer, and once he did, Mr. Riley repeated his answer for the class once again. He then defined texture

and recontextualized Oscar's contribution into a general statement about a possible property of any ball, not just the ping pong ball. In his final statement – “you're talking about the texture” – he modeled the academic brick term he wanted students to use. This opportunity for teacher modeling of key terms is one of the primary benefits of micro-discourse moves such as the ones Mr. Riley made in this situation.

Ms. Cortez used micro-discourse moves somewhat differently than Mr. Riley. In addition to register shifts and recasts, she also often used Spanish to communicate key concepts and new academic language to Spanish-speaking students. For example, during the last session of the geometry unit, she was teaching the term symmetry to students. In her less-than perfect Spanish, she tried to explain the concept to Leo and his partner, Isaiah by saying, “It's the same. Los dos lados son los mismos. Que tiene en este lado, tienes que tener en este lado” [observation, 4/29/11]. This was typical of how she used Spanish in small quantities to communicate information she thought might be confusing for her Spanish speakers.

In one of our interviews, she explained that she was code-switching more this year partly as a specific support for newcomer Leo and partly because of the implementation of the dual language program. Nonetheless, she noted that she has used some Spanish in her class for several years. She felt it was important because, “this is math, and there's a lot of new terminology, and they don't need to be hearing everything, just everything in English. I think it supports them a little bit if they can hear it in Spanish” [interview, 4/29/10].

Ms. Cortez's use of Spanish and Sra. Gregor's lack of English run counter to some of the existing research on dual language education that suggests that Spanish-

medium teachers are far more likely to code-switch into English than the other way around (Amrein & Peña, 2000; Valdés, 1997). The issue of how to balance languages within the program was salient for this group of teachers because the following year, in second grade, students would start receiving literacy instruction in English for the first time and switch to studying math and science in Spanish. As Principal Scott told me regarding the switch:

“We have had some discussion, we had some last year, but I didn’t follow up with it with Molly about the fact that at the end of first grade the children are going to go into second grade and they’re going to be receiving math and science content and there are specific math and science vocabulary that could be reinforced in Spanish and they could be introduced in Spanish. Children are learning them right now on the English side” [interview, 11/5/09].

She indicated in that interview that she wanted Sra. Gregor to be somewhat intentional about reinforcing the math and science concepts children were learning in their English classes, but did not say that she wanted her to use English. Nor did she say anything about whether she wanted or expected Mr. Riley and Ms. Cortez to also reinforce literacy concepts in English in preparation for the switch. It seemed, however, that Ms. Cortez’s use of micro-discourse code-switching was designed to do just that.

Macro Discourses

Analyzing my data at the micro level was important, but it was insufficient to enable me to investigate shifts in discourse over time. I mindfully observed entire units of study so that I could observe changes in the teachers’ linguistic scaffolding as children became more proficient in the register of the content area and in their use of academic language. I also agree that “classroom discourse cannot . . . be fully understood except as a single long conversation . . .” (P. Gibbons, 2006, p. 170). I posited that shifts in language use might occur over time as teachers and students built knowledge together

(Christie, 1995). Therefore, a second level of linguistic scaffolding I considered was how teachers provided support for academic communication that was attentive to students' changing level of conceptual understanding and language proficiency over the course of the unit. This most frequently took the form of teacher-guided reporting or differential press on students to produce more, or more articulate, oral language within their zone of proximal development, and often co-occurred with the use of micro-discourse moves.

One way in which linguistic scaffolding across lessons mattered was in teachers' support for the development of bricks, or content-specific vocabulary terms. Early in the unit, teachers introduced new terms that they were then expected to use in academic discussions and writing throughout the unit. 'Sphere' was one such brick in the balls and ramps unit, and as such I analyzed how it was taken up by students and reinforced by Mr. Riley as a way to illustrate the appropriate and timely withdrawal of linguistic scaffolding.

In the exchanges that follow, I have illustrated this sequence across three sessions of the balls and ramps unit. The first is from a whole class discussion that took place during the first lesson of the unit, wherein Mr. Riley introduced the term 'sphere' to students using a concrete object (an inflatable globe):

	STUDENTS	TEACHER
1		What is the shape that this globe ball is in right now? What would be the name . . . what would be the name of this shape?
2	A circle	
3		A circle. Now I would like to know if this shape stays the same or if it changes when I blow it up. We all agree this

		is a circle, right? (blows it up) All right, is it the same? Or has it changed?
4	Changed!	
5		It has changed. For our purposes, this shape, you can tell, is different than when it had no air in it. This shape . . . has a different name than when it was flat. It's very . . . an important science word is coming.
6	Square	
7		Please do your best to keep track of it. A circle, when it's inflated, is not a circle anymore. Oscar, this is not a circle. The name of this shape . . . is called (crosses out 'circle' on the word wall and changes it to 'sphere')
8	Xavier: (reading) Sphere	
9		A sphere. The name of this shape is called a sphere. Let's say it together.
10	Sphere	Sphere.

[observation, 1/5/10]

In this lesson, Mr. Riley only held students responsible for repeating the new term. He related the word to a known concept (circle) and wrote it on a card that was added to the science word wall. I considered these moves to constitute a high level of linguistic scaffolding. As the unit progressed, he provided less scaffolding and expected more oral academic language production from students. In session five, for example, he was guiding students to create a word bank in their science journal when the following exchange occurred:

	STUDENTS	TEACHER
1		All right, there's one more property up there. Who might know what it is?
2	AT: Size!	
3		AT?
4	AT: Sphere.	
5		Sphere talks about shape. It's a word that describes the property of shape.
		[observation, 1/12/10]

In this exchange, Mr. Riley took the responsibility of clarifying the meaning of sphere when AT suggested that sphere was a modifier of size rather than shape. He did not go so far as to redefine sphere for the class, but merely reminded them – through the use of a micro-discourse move – that a sphere is a kind of shape. This example also shows a public interaction between a teacher and a student that had the purpose of communicating with all students. Although Mr. Riley was ostensibly directing his response to AT to clarify his misunderstanding, he did so aloud to the whole class. Gibbons has called this “conversation as performance” (P. Gibbons, 2006), and there was evidence throughout my data that such conversations did influence the oral academic language production of Spanish-speaking students who observed them.

In the very next session, an opportunity for an English-speaking student to use the term ‘sphere’ presented itself. However, he did not spontaneously do so. In response, Mr. Riley pressed him to come up with it on his own:

Mr. Riley: What was the shape? The shape, Cyrus?

Cyrus: Um, small and round.

Mr. Riley: What's our describing word for the shape?

Jaime: Sphere!

Cyrus: (repeating) Sphere.

Mr. Riley: Sphere, okay.

[observation, 1/15/10]

There are two important things to note about this interaction; first, Mr. Riley provided significantly less scaffolding for the term than he did in either of the first two examples. Rather than using the word 'sphere' himself, he asked Cyrus a question that was designed to elicit the word. Second, Jaime, a Spanish-speaking student, stepped in to help immediately, and Cyrus repeated his contribution. This is an example of how linguistic scaffolding offered for the benefit individual students can serve to benefit other students as well. It also illustrates a functional shift from defining in the first two exchanges to using the term in a descriptive context in the last one.

Another way in which linguistic scaffolding occurred as units progressed was in teachers' support for the development of mortar, or general academic language. Señora Gregor frequently provided targeted support for the development of mortar in the *cultura* unit, and actually structured her lessons so that academic language learning built on itself from day to day. In the first day of the unit, for example, she put students into small groups and asked them to predict the meaning of *cultura*. The exchange below is from one small group conversation, which Sra. Gregor facilitated:

STUDENTS

TEACHER

1

Quién más tiene una idea?
Vamos a hacer así con la
primera. [Who else has an

		idea? Let's start with the first one]
2	Beatriz: Creo que cultura es, um, es, um, de Dios. [I think culture is, um, is, about God]	
3		Beatriz cree que cultura quiere decir Dios. Y por qué piensas que la cultura tiene algo que ver con Dios? [Beatriz thinks culture means God. And why do you think culture has something to do with God?]
4	Jocelyn: Yo sé! [I know!]	
5		En tu familia te vas a la iglesia? [In your family, do you go to church?]
6	(Beatriz nods)	
7		Okay.
8	Jocelyn: Yo también. [Me too]	
9		Tú también? Okay, parte de la cultura de su familia es ir a la iglesia. [You too? Okay, part of the culture of your family is going to church]
		[observation, 11/30/09]

What is notable about this small group interaction is the way Sra. Gregor took primary responsibility for clarifying the message that Beatriz wanted to communicate. In line 2, Beatriz equated culture with God, and in line 3, Sra. Gregor repeated her statement without recasting it for clarity. After a bit more discussion about why Beatriz and Jocelyn associated culture with God, she herself rephrased the overall definition they had created collaboratively as “part of the culture of their families is going to church”. This

was a subtle but significant shift in terms of refining students' understanding of the meaning of culture.

The next exchange is from another small group conversation that took place in the following lesson, after groups shared their predictions with the whole class and Sra. Gregor told students the dictionary definition of culture. In this example, there was a notable shift of responsibility away from Sra. Gregor and toward individual students, suggesting that she was adjusting the level of linguistic scaffolding as the unit progressed:

	STUDENTS	TEACHER
1	Pedro: Pollo es cu . . . cultura? [Chicken is . . . culture?]	
2		No, pollo es comida. Pero la comida es parte de la cultura. Entonces, qué puedes decir de pollo? En mi cultura, en mi cultura, quizás . . . [No, chicken is food. But food is part of culture. So, what can you say about food? In my culture, in my culture, maybe . . .]
3	Pedro: En mi cultura, pollo es . . . cultura [In my culture, chicken is . . . culture]	
4		Pollo es . . . no sé. [Chicken is . . . I don't know]
5	Pedro: Pollo es . . . [Chicken is . . .]	
6	Jesenia: No, cultura es . . . comida. [No, culture is food.]	
7		Muy bien. En mi cultura, pollo es una comida.

[Very good. In my culture,
chicken is food.]

[observation, 12/1/09]

In this example, English-speaking Pedro clearly struggled to express his understanding of the relationship between chicken and culture. Like Beatriz in the previous example, he confused one element of culture (food) with its overall meaning. Unlike in the first example, however, Sra. Gregor pressed Pedro to be clearer, and even provided oral mortar for him to do so when she said “en mi cultura . . .”. Pedro took this sentence structure up, but was unable to complete it appropriately. Spanish-speaking Jesenia tried to help, but she too was unsure about the conceptual relationship between food and culture. Eventually, therefore, in line 7, Sra. Gregor rephrased the sentence to say, “In my culture, chicken is a kind of food.”

In the final example from this series of lessons, taken from lesson 3, Sra. Gregor engaged in “teacher-guided reporting” (P. Gibbons, 2006) with students in a whole class setting. The context, therefore, was one step removed from the small group discussions and therefore called for slightly more explicit and decontextualized language. The exchange below illustrates the moves Sra. Gregor made as she supported Spanish-speaking Leo in reporting his group’s sentence to the whole class:

Leo: Creo que la cultura es como la música de reggaeton.

Sra. Gregor: Creo que cultura . . .

Leo: Creo que música es de reggaeton.

Sra. Gregor: Dime otra vez. Creo que cultura . . .

Leo: Es . . .

Sra. Gregor: Es como . . .

Leo: Es como . . .

Sra. Gregor: Como . . .

LA: La música reggaeton.

Sra. Gregor: La música reggaeton? Bien.

[Leo: I think culture is like reggaeton music

Sra. Gregor: I think culture . . .

Leo: I think reggaeton music.

Sra. Gregor: Tell me again. I think culture . . .

Leo: Is . . .

Sra. Gregor: Is like . . .

Leo: Is like . . .

Sra. Gregor: Like . . .

Leo: Reggaeton music.

Sra. Gregor: Reggaeton music? Good.]

[observation, 12/2/09]

In this example, Señora Gregor used micro-discourse moves to press Leo to clearly communicate his entire thought; even though he said it correctly from the outset, she supported him in repeating it step by step. In citing a similar example, Gibbons (2006) noted that such teacher probing may seem redundant given that Leo's message was clear early on. However, she argued that such scaffolding serves both pedagogical and linguistic purposes, since it was designed to support Leo (and those listening to the interaction) in producing language that is 'more written-like'. In this case, she was

supporting him as he learned to master the predicting structure “yo creo . . .” in concert with his developing understanding of the meaning of *cultura*. Since this move toward written-like language is a key feature of academic language, it seems likely that such instruction has an important role in facilitating academic language development within dual language programs.

These examples of ‘long conversations’ underscore the value of analyzing teacher-student interactions over extended periods of time in order to elucidate the ways in which language use changes as a result of both teacher and student language use.

Infrequently Used Moves

There were two instructional moves that were infrequently used by all three teachers: dialogic interactions and the explicit instruction of language, which together accounted for only about thirteen percent of all coded instructional moves (see table 4.2).

Dialogic Interactions

For the purpose of this study, dialogic interactions were those in which teachers enacted conversations with clear academic goals with one or several students. Such interactions are designed to elicit student thinking and support their oral expression of that thinking, and they frequently occur as formal or informal instructional conversations (P. Gibbons, 2006; Goldenberg, 1991; Tharp & Gallimore, 1991). They are important because, “a classroom program that is supportive of second language learning must . . . create opportunities for more varied and dialogic interactional patterns to occur” (P. Gibbons, 2002, p. 17).

Although I observed many instances of teachers leading discussions with the whole class or small groups, those discussions often fell short of true dialogic interactions

because teachers did not press students enough to truly gauge or enrich student learning. This seemed to especially be the case when English-medium teachers were interacting with Spanish-speaking students. In such cases, knowing when and how to press on students' language ability was difficult. Mr. Riley, for example, felt strongly that language-minority students should not be pushed to participate orally in the whole class context until they were ready to do so. In practice, this meant that he did not typically have extended interactions with students who struggled with English. The following exchange provides one of many examples in which Mr. Riley abandoned a potential dialogic interaction with Javier T., a struggling English speaker (who was also behind in the Spanish-medium class):

Mr. Riley: What else could affect how it bounces? Any of these properties. Javier, what do you think?

Javier T.: Size.

Mr. Riley: The size. So do big balls bounce well and small ba . . . tell me more.

Javier T. Size . . . (long pause). Um, I forgot.

Mr. Riley: Okay. Can we come back to you? Do you want to tell us, maybe think more about how the size affects it?

[observation, 1/15/10]

This interaction began with an open-ended question that could theoretically be conducive to a dialogic interaction. Mr. Riley even seemed to catch himself starting to give the answer and instead prompted Javier for more information. However, it stopped short of being dialogic because of Mr. Riley's unwillingness to push Javier beyond his current level of proficiency in the interest of learning. Despite his suggestion that he would return to Javier later in the lesson to give him a chance to share, he did not. I would argue that this exchange also shows linguistic scaffolding that did not fall within

the student's zone of proximal development. Rather, the interaction kept Javier squarely within his comfort zone rather than moving him forward.

As I noted earlier, there were several instances of Mr. Riley stopping short of truly dialogic interactions with Spanish speakers in the whole class context, but he did occasionally facilitate more successful dialogic interactions during pair work. For example, here's an exchange that took place between him and Jaime and Alicia – two more proficient bilingual students – as they worked on a bouncing investigation:

Mr. Riley: Which one are you testing?

Jaime: Red one.

Mr. Riley: And what are you testing it for?

Jaime: That it bounce.

Mr. Riley: So how, like how . . . show me how you're doing it. (they show him)
So what did you observe about them?

Alicia: Like this one do it better.

Mr. Riley: It's a better bouncer? What, um, what do you think makes it a better bouncer?

Jaime: What?

Mr. Riley: What makes it a better bouncer?

Jaime: ((indiscernible))

Mr. Riley: What about the *ball* makes it a better bouncer?

Jaime: A better bouncer. That one is kind of squishy. And this one is kind of ((. . .))

Mr. Riley: So you think the texture makes it . . . a better bouncer or a worse bouncer? Something about how it feels makes it into a better bouncer? Or not as good a bouncer?

Jaime: Yeah.

[observation, 1/12/10]

A comparison between the two interactions clearly highlights the more active participation of Spanish speakers in the second dialogue, as well as the amount of press Mr. Riley applied in the interaction. Even though Mr. Riley still provided most of the information himself, he encouraged Jaime and Alicia to think deeply about their findings and supported them in communicating over the duration of a brief conversation. This example much more clearly shows evidence of instruction within Jaime's zone of proximal development. However, this kind of dialogic interaction was the exception rather than the rule in Mr. Riley's classroom.

In the multiple examples I have shared from Ms. Cortez's classroom, I have focused mostly on her facilitation of the "think" center, which was explicitly focused on providing opportunities for oral academic conversations. Outside of that weekly center, however, she used dialogic interactions infrequently. Despite the fact that she was the very conscious about the need for children to use oral language as much as possible, her whole class instruction tended to be heavy on teacher talk such that she often left little room for extended student contributions. On only a few occasions did she engage the whole class in lengthy conversations that could be considered dialogic. In our informal conversations, she told me that my presence was making her more aware of language issues, and on the last day of the unit she facilitated the following dialogic interaction with the whole class:

Ms. Cortez: Levi, do you know another way that I can know that my shape is symmetrical?

Levi: Because all the things on the shapes is the same.

Ms. Cortez: All the things on what part of the shape?

Levi: On the whole shape. The whole shape is the same.

Ms. Cortez: Okay, I think you're on the right track. The things on this side . . . are the same as what?

Levi: The other side.

Ms. Cortez: The other side. (pause) Okay, NB, you've got your hand up.

NB: Because mine looks like a rocket ship.

Ms. Cortez: Yours looks like a rocket ship. NB, NB, are you saying that 'I know my shape is symmetrical because it looks like a rocket ship?'

Some students: No!

Ms. Cortez: Does that make my shape symmetrical?

Some students: No!

Ms. Cortez: NB, look, here's a rocket ship, okay? You're right, actually, rocket ships usually are symmetrical, aren't they? But what if my rocket ship looked like this? (draws crooked rocket) Is this symmetrical? Is this a symmetrical shape? HR, is that symmetrical?

HR: No.

Ms. Cortez: Why not?

HR: (goes to wb and points) Because this side is pointing that side.

Ms. Cortez: Okay. Tell everybody . . . what you're saying. Because?

HR: This side is pointing that side and this side pointing that side.

Ms. Cortez: And this side is pointing, what way is this pointing?

Several students: Down.

Ms. Cortez: Down. And is this pointing down?

Few students: No.

Unknown student: It's pointing sideways.

Ms. Cortez: Sideways? Do you guys remember the word for this? What's this called? What's this called?

Few students: Vertical!

Ms. Cortez: This is vertical. And this is what?

Few students: Diagonal/horizontal.

Ms. Cortez: Diagonal. This side is diagonal. So, even though we have a beautiful rocket ship . . . I don't think anybody would build a rocket ship that was not symmetrical, probably, NB, you're right. But, um, but if they did, it's possible that you could have a rocket ship that was not symmetrical. So therefore I disagree with you. I don't think we can know, I can know my shape is symmetrical because it looks like a rocket ship. Leo, Leo, can you read this with me?

Leo: I know my shape is sem-trical because . . .

Ms. Cortez: Why? How do you know your shape is symmetrical?

Leo: Because this is the same as to this one.

Ms. Cortez: Okay. What is that, what is that up there?

Leo: Same . . .

Ms. Cortez: It's the same. Right. I love it when you say it's the same. What is it?

Leo: Point.

Ms. Cortez: This point is the same as . . .

Leo: The other point.

Ms. Cortez: The other point. Very good. (to whole class) Okay, I want you to pick one shape . . . boys and girls, let's practice saying this together, right now. Ready, ready here we go.

All students: I know my shape is symmetrical because . . .

NB: Because it looks like a rocket ship.

[observation, 4/29/10]

In this rather lengthy conversation, Ms. Cortez engaged with three students in particular. It is evident from the data, however, that many more students participated, answering Ms. Cortez's questions and sharing their ideas about the meaning of symmetry. This example highlights once again the potential of whole class academic language instruction on Spanish-speaking students even when they are not directly involved.

Of course, being passive participants in such teacher-guided conversations is not enough in itself to allow students to develop academic language. Teachers also need to mindfully create opportunities for students to practice what they have learned in ways that require the negotiation of meaning (Jacob et al., 1996; Krashen, 1982). Ms. Cortez did just that when she provided a written structure – “I know my shape is symmetrical because _____” – and had students practice using the new structure in pairs to end the lesson.

Explicit Instruction of Language

Dutro and Moran (2003) and others have argued that metalinguistic awareness arises as a result of explicit teaching of language: “through instruction that makes explicit the tools needed for different academic language functions, students learn the vocabulary and sentence structures needed for a range of cognitive tasks and uses of language” (Dutro & Moran, 2003, p. 234).

In interviews, teachers emphasized the importance of intentionality and explicitness in providing academic language instruction, but their instruction of language was rarely explicit. In practice, all three teachers frequently modeled its use, but I did not observe them explaining the construct to children or telling them what it might be used for. There

were few instances of Sra. Gregor and Ms. Cortez making language explicitly transparent to students, and Mr. Riley did not do so a single time during my observation period. Additionally, and significantly, teachers were rarely explicit with children about the functions they were learning. Notable exceptions were the way Sra. Gregor presented ‘predicting’ and the few occasions on which Mr. Riley and Ms. Cortez explained ‘comparing’.

This finding suggests that even though these dual language teachers were aware of some of the language needs of their students, they struggled to enact supportive instruction. Sra. Gregor, for example, was knowledgeable about second language development but new to working with young children and teaching content in addition to language. She provided various forms of linguistic scaffolding and much instruction that could be considered supportive of oral language development, but this infrequently meant explicit instruction.

When she and I discussed her understanding of academic language and what she wanted students in her dual language classroom to accomplish using Spanish, one of the main topics that arose was that of making predictions. This was, of course, a key concept in both the *cultura* and balls and ramps units. She explained that children had a great deal of experience making predictions when reading stories together as a class. However, the way she was using predictions in this unit was somewhat different, by asking students to make guesses about the meaning of unknown words. She described her thoughts about this language function in the following way:

“Most of their other experience with predictions is in read-alouds, interactive read-alouds and predicting what’s going to happen next in the story. So I feel like that’s a totally different . . . that’s the only way I’ve done predictions with them. So I think they know what it means, ‘what’s going to happen next’. I mean, that’s

how they, I think that they understood it. So I'm hoping that this gives them a broader way of understanding the word prediction because in my mind, for them, up to this point I've only used it is synonymous with 'what's going to happen next in the story? What do you *predict* is going to happen next in the story?' And obviously when I say 'what's your prediction about what this word means?' that's not exactly the same. This is more that a prediction is a guess in what you think, even though you don't know. So . . . hopefully that'll broaden their knowledge of the word prediction."

[observation, 12/3/09]

From this quote, it is apparent that Sra. Gregor had thought about how she was teaching predictions in the culture unit, and she was mindful of the fact that this was a new way of thinking for her students. She was quite clear about wanting to expand children's understanding of the concept of predicting. However, she did not take the extra step of connecting this new kind of prediction with what they had previously been doing, nor did she point out the differences. It seemed to me that all of the pieces were there, and that explicit instruction around the linguistic and conceptual construct of predicting would have pulled them all together for students.

For his part, Mr. Riley was less convinced of the need to be explicit about language, or how he might go about doing so. He said in our initial interview that there were certain "protocols" he wanted his students to understand about language, but when I asked him how he communicated important aspects of that protocol to them, he said "mostly by modeling the correct usage because, um . . . the sort of meta doesn't, they're not really into that. It doesn't make sense, and it's really, it doesn't seem like it's developmentally appropriate" [interview, 10/28/09].

Mr. Riley's focus on content and exclusion of explicit language instruction sometimes led to confusion for students. This was especially true in the case of polysemous words – words that have multiple meanings. There were at least two

polysemous words or phrases that caused significant difficulty for Spanish-speaking children in the balls and ramps unit, and Mr. Riley did not sufficiently clear up confusion on either one. This may have been due to his content focus and not wanting to get off track, or it may have been because he did not realize that polysemy was causing difficulty for his students.

An example of this polysemy was the word ‘middle’, which became a key term in the unit when students were asked to conduct an investigation that required them to count the number of bounces for a particular ball. In order to conduct a fair test, they had to repeat the process three times. They were then asked to record their data on a t-chart that they then shared orally as a contribution to a class chart on the relative bounciness of several balls.

Because of the way the data was recorded in their science notebooks (vertically), there was widespread confusion among Spanish-speaking students about which number was in the middle. Mathematically, the middle number was that which was numerically in the middle (as it would be on a horizontal number line). Visually on the t-chart, however, the middle number appeared to be the data point for their second trial. The conversation below, which occurred when Mr. Riley asked a pair of students to share their middle number with the class, illustrates this confusion. Xavier was an English-speaker and Jaime was a Spanish speaker:

Xavier: Eight!

Jaime: Nine! Nine!

Xavier: Ours is eight. Eight.

Jaime: No, nine. Nine!

Mr. Riley: Did you guys talk to each other? You don't have to convince me.

Xavier: (pointing to the t-chart) He thinks it's the middle of the second number.

Mr. Riley: So the ones you had were 7,8,9?

Xavier: Yeah.

Mr. Riley: What's the middle number?

Xavier: Eight.

Jaime: Noooo.

Mr. Riley: You had 7,8, and 9. Which one is in the middle?

Xavier: Eight.

[observation, 2/1/10]

The numbers on their t-chart were 7, 9, 8, so Jaime was of course right that nine was the middle number, at least as he understood the meaning of the word middle. He eventually gave in to Xavier in this whole group discussion, but continued to disagree under his breath about which was the middle number. It was unclear to me whether Mr. Riley understood Jaime's confusion, since he treated it as a situation of miscommunication between the partners rather than a lack of clarity of a polysemous word. This confusion persisted as other pairs shared their data, resulting in a skewed representation of which balls were the bounciest.

Conclusion and Implications

In this chapter I have explored the instructional practices of this team of first grade dual language teachers as they facilitated the development of oral academic language for Spanish-speaking students. I have done so by considering the moves they used most frequently and confidently, the ways in which they provided linguistic

scaffolding, and the moves they used infrequently. In doing so, I have uncovered patterns of practice that shed some light on overall academic language instruction within the program.

First, all of the three focal teachers were aware to some extent of the linguistic needs of their Spanish-speaking students and all provided instruction that facilitated oral academic language development. However, each of the teachers had preferred “go to” moves that differed from those of their colleagues. These were the moves he or she was most likely to use and felt most confident using. In most cases, their instructional choices were consistent with the priorities they discussed in interviews and informal conversations with me. Additionally, those moves were influenced by their beliefs and understandings about language development and how best to support it.

Second, all three teachers provided oral and written linguistic scaffolding for both bricks and mortar, but with varying levels of sophistication and success. Teachers admitted that they struggled to know effective ways to provide the right level of support for Spanish-speaking students. In general, they provided ample support for content-specific vocabulary, and valued language production from their students. The micro and macro discourse moves they made flowed back and forth between conversational and academic language, providing the message abundance that is so critical for students to hear. However, teachers’ understanding of complex academic language was somewhat limited to the quantity of language children produced.

Third, there were two moves that were used infrequently across classrooms. The teachers in this study rarely engaged students in sustained dialogic interactions. They frequently engaged with students in ways that approached dialogic exchanges, but then

failed to press on students' language abilities within their zones of proximal development. Therefore, these interactions may not have reached their full potential in terms of language development. For many reasons, teachers also infrequently taught language explicitly. Some of the reasons for this were proposed in chapter three and some others will be explored in chapter five.

A final compelling finding from this analysis was that although none of the teachers provided specialized language instruction for the Spanish speakers in their classrooms, I have provided evidence that instruction they provided to the whole class or small groups made a difference in the language Spanish speakers produced orally and in writing. Through 'conversation as performance' and other instructional moves, these teachers supported the development of students even when they were not directly involved in the interaction. This finding has great potential for mainstream classrooms in which most instruction for language-minority children takes place in the whole class or small groups.

In chapter five, I discuss the role of resources in teachers' instructional practice, as well as the factors that mediate their use of those resources. I do so with a full consideration of the instructional context of this dual language program.

CHAPTER 5

Resource Use by Focal Teachers

The goal of this chapter is to address my third research question: what resources do these teachers access and use in their instruction? I also discuss the factors that mediate teachers' ability and willingness to use certain types of resources. The framework I use in my analysis was proposed by Cohen, Raudenbush, and Ball (2003), and considers three primary resource streams: conventional, personal, and environmental. Because of the central focus on instruction in this study, I attended to resources both in terms of access and use. This stance is consistent with Cohen et al's position that "because resources become active when used in mutual instructional adjustment, they are unlikely to have a fixed instructional value" (2003, p. 138). Like those researchers, I argue that the value of any resource depends on the ways it is used in planning and teaching. In this study, I was particularly interested in how my focal teachers harnessed various resources to provide academic language instruction for Spanish-speaking first graders.

I analyzed teachers' use of resources in relation to the academic language demands of the units I observed and the instructional moves teachers used to support Spanish-speaking students' oral academic language development. To that end, data included in this chapter comes from observations, interviews, and relevant documents. Some of the examples given will be familiar from previous chapters, with an added layer of analysis that underscores the role of various resources in the provision of instruction. This approach to studying resources begins to answer questions about which resources matter for instruction and under what circumstances they are most effectively used.

The chapter is organized into three primary sections that highlight: 1) patterns of differential access to resource streams; 2) the interactivity of multiple resource streams for each teacher; and 3) tensions within each of the resource streams. The chapter ends with a discussion about the implications of these findings.

Differential Access

When considering differential access to various types of resources for the purposes of this analysis, I focus only on personal and environmental resource streams. It was the case that conventional resources such as trade books, curriculum materials, and professional development opportunities were distributed differently within this dual language program, as in many others (Elfers et al., 2009). However, research has shown that conventional resources are only weakly correlated with instruction and even less with student learning. In contrast, teacher quality is more likely to be related to knowledge and environmental context than to conventional resources such as formal qualifications (Cohen et al., 2003). Therefore, in terms of differential access I made the decision to investigate personal and environmental resource streams, which were more likely to directly influence teacher practice around issues of academic language development.

When I conducted such an investigation, I found that teachers in my study had differential access to resources within the personal and environmental streams. In some cases, this meant that one teacher had access to resources that were not available to the others at all. In other cases, what differed was the level of access to a given resource. In the sections that follow, I describe the resources that were most salient and useful for each of my teachers within personal and environmental resources.

Personal Resources

Personal resources include content knowledge, pedagogical knowledge, and personal and professional experience (Cohen et al., 2003). They are considered important because they are the filter through which teachers process new learning and interactions with others around teaching practice. At Hurley Heights, this team of first grade teachers relied on different personal resources to help them understand oral academic language and how to provide appropriate instruction to support its development.

Señora Gregor, for example, had the most experience with teaching and learning language and cited that experience as her main source of information about oral language development. This was unsurprising, since she was a certified K-12 Spanish teacher who taught high school Spanish for a number of years before taking her current position. When pressed about how she learned specific instructional moves to support oral language development, she stressed experience first and foremost, saying, “I can’t say that it’s come from any, I don’t remember any coursework in my university days of how to promote oral language” [interview, 11/3/09]. She did note the professional development session offered by David Goldberg early in the year, but indicated that the session served more as a reminder and extension of what she already knew rather than the primary source of her knowledge about language.

In contrast, Mr. Riley’s most salient personal resource was his knowledge base as an experienced first grade teacher. The balls and ramps unit was one he had taught numerous times before, and he therefore felt confident about the content in the unit and the conceptual understanding he expected students to develop. Despite the fact that he had taught at Hurley Heights – a traditionally linguistically diverse school – for several

years, he did not have strong foundational knowledge about language development in young bilinguals. He was aware of gaps in his knowledge and expressed frustration about it, especially in terms of how to support students in using both bricks and mortar, which were new terms to him the year this study was conducted.

Like Sra. Gregor, Ms. Cortez was mostly influenced by her professional experience. However it was not her experience as a teacher of language, but rather the several years she spent as an intermediate grade teacher of linguistically diverse students. She explained her intentional instruction of decontextualized language as the result of her experience in preparing fourth graders for high-stakes state tests: “kids in those tests over and over again skip over little obvious details because they just don’t think they need to say it, because it’s obvious” [interview, 4/29/10]. Her language-specific instruction was intended to help students clearly communicate their understanding in a way that would help them be successful throughout their academic careers, not only in first grade.

Looking across first grade teachers, then, it was notable that all three of them cited professional experience as a primary personal resource. This is analytically important because each of them had very different levels and kinds of experience and therefore approached academic language instruction from different starting places. Additionally, this differential access made them more likely to take up conventional and environmental resources differently. I argue in later sections of this chapter that this is exactly what they did.

Environmental Resources

Environmental resources include professional leadership, colleagues, and students – essentially the people a teacher works with or learns from (Cohen et al., 2003). They

are important because they provide teachers with guidance for instruction as well as collegial and community support around shared academic norms. Environmental resources can operate at a macro [global] level – as in the case of district and school leadership – or at the local level, as in the case of student-teacher classroom interactions.

Señora Gregor’s most solid environmental resource was the composition of the student population in her immersion class. Because of the structure of the program, she looped with all twenty-seven students from kindergarten to first grade so that she knew her students quite well by the time I began data collection in fall 2009. Additionally, of the three teachers in the study she had the most balanced class in terms of language proficiency. Thirteen of her students were native Spanish speakers (with varying levels of English oral and reading proficiency) and fourteen were deemed English-proficient⁶ (with almost no Spanish oral or reading proficiency before they began the program). Therefore, she had almost equal numbers of Spanish and English proficient speakers, which was beneficial to her in terms of grouping students for oral interactions. She frequently paired and grouped students based on their stronger language.

Mr. Riley had a less balanced class linguistically, but unlike the other two teachers, he had access to a key environmental support in the person of David Goldberg – the district ELL consulting teacher. When David led the professional development session at Hurley Heights in early October, he offered to provide support to willing teachers as they went through the process of incorporating language objectives into selected lessons. Mr. Riley was the only teacher in the school who volunteered, and therefore worked one-on-one with David to plan and enact two lessons during the balls

⁶ At least two of the English speakers in the program spoke other languages at home, but were assessed as being ineligible for ELL services based on their high scores on a language proficiency test.

and ramps unit. I will discuss the outcomes of this joint planning in later sections of this chapter.

The most salient environmental resource for Ms. Cortez was also her access to a leader in the area of language development, but at the school rather than the district level. Carol Brekke was an ELD (English Language Development) teacher assigned to work with first grade during the year in which this study was conducted. She had been an ELD teacher at Hurley Heights for seven years, but 2009-2010 was the first year she was solely responsible for working in first grade. Her official role was to provide a mix of teacher and bilingual student support, and she did so in her work with Ms. Cortez, although their working relationship was not without complications. The main ways I observed her providing support were by sitting with individual students or pairs as they completed tasks or by taking notes of Ms. Cortez's instruction to share with her later. One of the main complications of her work with Ms. Cortez was the lack of structured time they had to meet and the resulting fact that they therefore rarely discussed Carol's observations or the ways in which she supported students.

It should also be noted that in terms of environmental resources for all three teachers, principal Scott was a strong leader in her advocacy for language-minority children and their need to receive high-quality language and content instruction. While she admitted that there were limitations in her own understanding of academic language, she made it a schoolwide priority for teachers to learn more about it the year I conducted this study. This manifested not only ideologically but also practically when she arranged for David Goldberg to facilitate the daylong professional development session at the beginning of the school year. She explained her decision to provide such training by

saying, “we hadn’t had much around language, oral language development. And we hadn’t had much around academic language. The focus had been almost entirely on written language development and working on helping children become readers or writers” [interview, 11/5/09]. This professional development session serves as the backdrop for the next finding in this chapter.

Interactive Resource Streams

A central tenet of my approach to studying resource access and use is that a teacher’s capacity to provide rich academic language instruction is not a fixed attribute, but rather the result of interactions among multiple resource streams. In other words, I consider teacher practice to be influenced by the resources they have access to as well as how and why they use them or choose not to. This is true with regards to conventional, personal, and environmental resources. As Cohen et al. argue, teachers have little control over the allocation of some resources, but they can “notice or ignore them, capitalize on them or leave them unused” (Cohen et al., 2003, p. 127).

Given this conceptual orientation, it was unsurprising to find that teachers drew on multiple, interactive resource streams. Nonetheless, a thorough analysis of the ways in which these streams interacted for different teachers highlights the importance of understanding the many possible ways that resources can be harnessed as well as the challenges associated with resource use for dual language teachers and teachers of emergent bilingual students.

In the previous finding, I highlighted disparate personal and environmental resource streams, and in this section I discuss how a shared conventional resource was taken up differently due to the multiplicity of resource streams teachers accessed and

used. I considered Sra. Gregor and Mr. Riley's responses to an academic language professional development session as an illustrative example. I argue that their differential understanding of the professional development led to inconsistent instruction of academic language across classrooms, which may have compromised the crosslinguistic transfer goals of the dual language program.

Mr. Riley and Professional Development

Mr. Riley had several years of experience working with language-minority children. However, the year I conducted this study was the first time he had received any formal professional development on academic language, and as I noted earlier, his knowledge of its meaning and relationship to content was still developing. Logically, he considered himself a teacher of first grade rather than a language educator. Nonetheless, he was very interested in learning more about language as an issue facing his students and cited this as his reason for volunteering to work with David on an ongoing basis. Within personal resources, therefore, he had the will to learn and a deep knowledge of science content. This knowledge acted as a primary resource in the sense that he understood the conceptual goals of the balls and ramps unit and felt prepared to teach to those goals.

When I asked Mr. Riley about what he learned from the professional development session, he said "the big thing was making sure I had two objectives in teaching, and one of them is the science target, and the other one is the language development target" [interview, 3/2/10]. Planning was the central focus of the professional development session, and therefore Mr. Riley was right on target with his assessment of its content. However, when I pressed him to give me a specific example of a language development

goal he might provide instruction for, he did not move beyond general statements: “you know, to be able to use the science words and say a whole sentence” [interview, 3/2/10]. He seemed to equate academic language with complete sentences without recognizing it as comprising complex, decontextualized, and explicit language (Cummins, 2000; P. Gibbons, 2006).

To Mr. Riley’s credit, the approach David took to teaching academic language was largely components-based, with little attention to the other elements of academic language I have outlined in this dissertation. He said to the faculty during the session that, “if you get nothing more out of today than that academic language has bricks and mortar, then that’s fine” [observation, 10/0/09]. David did not guide teachers to actually provide instruction to support oral or written academic language development, as the session was designed only to provide foundational planning information to teachers. Dr. Scott intended to provide a follow-up session with David and the staff later in the year, but for a number of reasons unrelated to this study was unable to do so.

In taking up and using what he learned from David, Mr. Riley struggled in two main ways: getting specific about the vocabulary – both content-specific and general – that were relevant to the unit and might be worth explicitly teaching; and actually integrating language objectives into his instruction. Of the three teachers, he was the least likely to make the instructional move of integrating content and language, and he was the only teacher for which I recorded no instances of explicit instruction of language. However, when I analyzed his instruction across the balls and ramps unit at the macro level, I noted that Mr. Riley did begin to provide integrated instruction more frequently in

the second half of the unit, likely due to the fact that he began co-planning with David before the twelfth session I observed.

From a resources perspective, then, it seemed that Mr. Riley's limited understanding of academic language and his lack of experience in teaching it – his personal resources – hindered his ability to expand upon what he learned from a professional development session – a conventional resource – to support and facilitate the development of oral academic language for Spanish-speaking emergent bilingual students in his classroom. Instead, he continued to privilege science content, which was something he had much more familiarity and experience with.

Señora Gregor and Professional Development

Like Mr. Riley, Sra. Gregor was unfamiliar with the terms brick and mortar before the session with David. She later described them as important constructs and said that thinking about language in that way really “struck a chord” with her [interview, 11/3/09]. However, despite this new terminology, her deep professional knowledge of the components of language was evident even in her early interactions with other teachers. For example, in my fieldnotes from my observation of the professional development session, I noted that she acted as a leader during grade-level discussions, helping other teachers identify academic language in sample passages and even clarifying the concept of mortar for them.

She also had a more complete understanding of the functions underlying the academic language she wanted students to use. In our interviews, for example, she explained how she wanted students to be able to define concepts in the *cultura* unit and the actual language forms they might use to do so (i.e. “*Cultura* quiere decir _____”

[culture means ____]). She also identified predicting as one of the central goals students would need to accomplish with language during the unit. When contrasted with Mr. Riley's very general language development goal of being "able to use this stuff effectively in a whole sentence" [interview, 3/2/10], it became clear that Sra. Gregor was better positioned by her personal resources to understand the nuances of academic language even after both teachers attended the same professional development session.

In addition, my observations of her instruction suggested that she had a more complete understanding of how to integrate language into content instruction than Mr. Riley. As I described in chapter four, the integration of content and language was an instructional move that I characterized as Sra. Gregor's "go to" move – one that she felt confident about and used frequently. Additionally, she engaged in the explicit instruction of language more often than Mr. Riley (who never did so), but not as often as Ms. Cortez.

From a resources perspective, therefore, Señora Gregor's personal experience as a language learner and professional experience as a language teacher led her to process the professional development differently than Mr. Riley (and likely many other teachers in the building). Instead of staying at the planning level, she was able to use her new knowledge about the elements of academic language to provide integrated and more explicit instruction to her emergent bilingual students.

Lack of Coherence

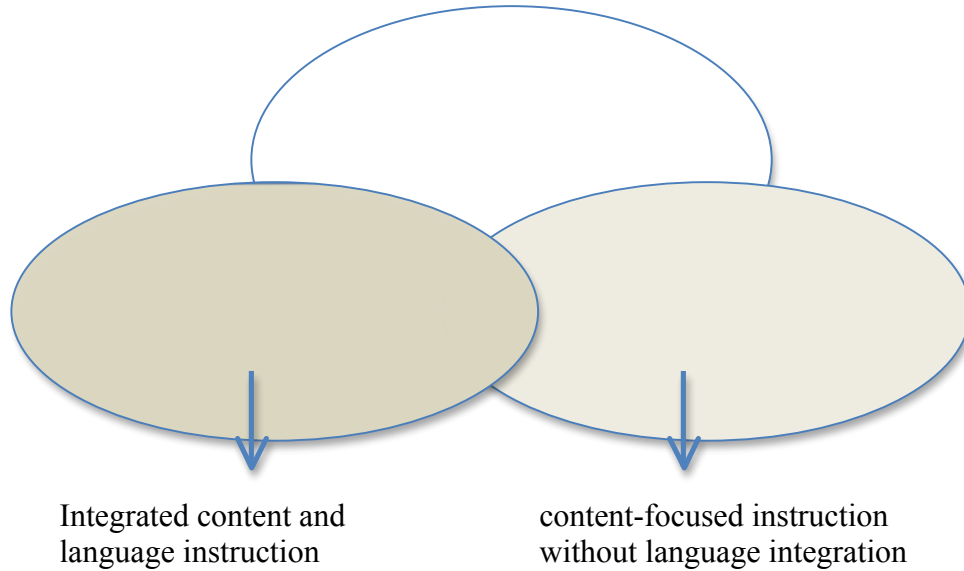
To illustrate the disparate instructional approaches to academic language instruction taken by Mr. Riley and Señora Gregor in part due to their differential uptake of the professional development session, in this section I consider representative samples of their instruction related to the language function of predicting. To do so, I reexamine

Conventional:
 Señora Gregor: Professional Development
 • Experience as a language teacher and learner (personal)
 Sra. Gregor: Knowledge of science content (personal)
 Mr. Riley: Knowledge of science content (personal)

one of the examples given in chapter three of Sra. Gregor’s instruction and analyze it in comparison to an example from Mr. Riley’s classroom.

Figure 5.1 shows how each teacher’s multiple and interactive resource streams led to very different kinds of instruction around academic language.

Figure 5.1: Sra. Gregor and Mr. Riley’s interactive resource streams



On the first day of the *cultura* unit, Sra. Gregor began a vocabulary activity with students called the Cognitive Content Dictionary. This was essentially a class poster dictionary that included not only actual definitions of key content vocabulary in the unit, but also students’ initial predictions about what those words meant. Since being able to make valid predictions was an important part of the activity, Sra. Gregor was quite explicit with students about what it means to make a prediction and how to use language to do it:

Sra. Gregor: (to the whole class) Y entonces cada persona en la mesa va a responder, ‘creo que cultura quiere decir _____’ y van a adivinar, van a predecir. Saben lo que quiere decir predicción? O predecir? Andrés?

Andrés: Que, que no sabe si es verdad.

Sra. Gregor: No sabemos la respuesta, pero vamos a decir lo que pensamos, si tenemos una idea. Quizás tenemos razón o quizás no, pero vamos a decir lo que pensamos.

[Sra. Gregor: And so each person at the table is going to respond, “I think culture means _____”, and you’re going to guess; you’re going to predict. Do you know what prediction means? Or predict? Andrés?

Andrés: That, that you don’t know if it’s true or not.

Sra. Gregor: We don’t know the answer, but we’re going to say what we think, if we have an idea. Maybe we’re right and maybe not, but we’re going to say what we think.]

[observation, 11/30/09]

In this example, Señora Gregor’s instruction around the term ‘predict’ was notable not only in its explicitness, but also in the way that she provided a sentence structure to support students in making predictions. Her attention to the language function of predicting was also seamlessly integrated into her content instruction, as students moved right into making predictions about the meaning of the word *cultura* as this lesson progressed. Although explicit instruction of language was rare in all three classrooms, each time Sra. Gregor called upon students to make predictions during the *cultura* unit, she named the function, using its various forms as appropriate: *predecir* (to predict), *predicción* (prediction), *predijimos* (we predicted), thus exposing the students to the function’s name. In all, she used forms of the word predict more than twenty times during my observations.

Because of the inquiry nature of science in first grade at Hurley Heights, children in Mr. Riley’s class were frequently called upon to predict the behavior of balls under certain circumstances and to hypothesize about what properties might affect a ball’s movement, for example. Predicting and hypothesizing are typical of the kinds of tasks

young scientists are asked to accomplish, and students in the class were able to do them with varying levels of sophistication, both conceptually and linguistically. This overlap with the goals of the *cultura* unit created a situation where cross-language transfer was possible had teachers provided strong support for it.

However, despite the fact that children engaged in the practice of predicting in Mr. Riley's classroom, he did not talk to children about the process or call their attention to the language they were using to make predictions. This was somewhat surprising given that it was necessary for them to make sound predictions in order to meet the content goals of the unit, as the following example illustrates:

Mr. Riley: (to the whole class) Which one do you think is going to bounce more times? The ping pong ball or the small rubber ball?

Several students: Rubber ball!

Mr. Riley: Do a quick whisper.

Oscar: (to his partner) The small rubber ball. The small rubber ball.

[observation, 1/27/10]

What was notable about his instruction in this example from an academic language perspective was that he did not explicitly articulate to students what they were trying to accomplish linguistically, nor did he integrate instruction about language into the discussion, which was squarely focused on the properties of two balls. Predicting was an important conceptual focus, but the academic language structures that could accompany it were not emphasized. As was characteristic of Mr. Riley's instruction – especially early in the unit – he did not provide sentence structures for students to use in conjunction with the vocabulary terms they were learning. As a result, Oscar's answer was a valid prediction but its lack of linguistic completeness or complexity suggests he

may have missed out on an opportunity for the development of more sophisticated language.

Oscar had been making predictions in Sra. Gregor's class, and therefore might have benefitted from being exposed to appropriate English to use alongside what he had learned in Spanish (i.e. "I think the _____ will bounce more times"), along with an explicit connection between predicting in the two languages and content areas. The balls and ramps unit began in early January, right after winter break. The culture unit had ended just before winter break, so Spanish-speaking children's experience in predicting with Sra. Gregor was recent, and their understanding of what it meant to predict was evolving.

Coherence is especially important in dual language programs because of the fact that Spanish-speaking students received instruction in two languages from two teachers everyday. It stands to reason, therefore, that instructional moves to facilitate oral academic language could most benefit students if they are complementary and enable cross-language transfer. Programatically, the dual language program at Hurley Heights was intended to capitalize on cross-language transfer as a way to support emergent bilingualism, and Dr. Scott felt strongly about consistent language being used across contexts. In our interview, she told me that she had urged Sra. Gregor, in particular, to be intentional about reinforcing math and science language in her Spanish instruction as a way of building general academic language in Spanish speakers, but as the examples above indicate, I did not see evidence of this actually happening other than incidentally.

Overall, my findings indicate that this transfer may not have reached its full potential in first grade due to the lack of explicitness with which it was presented to

students. Researchers have argued that cross-language transfer needs to be explicitly taught (Goldenberg, 2008; Lyster, 2007), but due to their different resource streams, each teacher in my study had strengths and challenges in their understanding and instruction of academic language, and therefore were explicit in different and often non-overlapping ways.

Tensions within Resource Streams

In addition to interactions among conventional, environmental, and personal resource streams, another key finding of this dissertation was that there were interactions within resource streams as well. These frequently manifested as tensions in the sense that they did not combine to facilitate coherence or cross-linguistic transfer, and in some cases may have actively worked against it. As with the first finding of this chapter, I focus my analysis here on personal and environmental resource streams because of the weak correlation between conventional resources and instruction.

Within Personal Resources

Within personal resources, there were two pieces of teacher knowledge and experience that were most salient – one conceptual and the other pedagogical. The primary tension for all three focal teachers was the gap between what they understood about academic language conceptually on the one hand and what they knew about academic language instruction on the other. This issue has been raised in previous chapters, especially as it relates to the general infrequency of dialogic interactions and explicit instruction. As I have argued throughout this dissertation, focal teachers could articulate an understanding of academic language that incorporated several of its key

elements but nonetheless were challenged by the task of providing targeted instruction or even knowing what such instruction might entail.

This finding builds on Shulman's (1987) notion of 'pedagogical content knowledge', especially as elaborated by Ball, Thames, and Phelps (2008), who argued that teachers not only need to know their content well, but also how to make it accessible to students. Señora Gregor had more sophisticated knowledge of language development than the other two teachers, but even she equated complex language with complete sentences rather than level of explicitness or syntactic variety, for example. In fact, all three teachers privileged complete sentences over one-word answers, but with little awareness of how to increase the specificity of academic language students produced within the content areas they were teaching. Therefore, they struggled to support students in producing those structures orally. They also had a limited understanding of the functions they were asking students to accomplish with language – only emphasizing those that were highlighted in their curricular materials, which overlapped with content functions.

Tensions between conceptual and pedagogical knowledge within the personal resource stream were particularly relevant to instruction in cases where there was significant confusion about language that went unaddressed by teachers. For example, there was a language clarity issue in the balls and ramps unit that was exacerbated by the fact that Mr. Riley did not know how to instructionally differentiate between two linguistically-similar concepts. Two key goals of his unit were: 1) for students to be able to identify essential properties of different balls; and 2) to understand that only some of

these properties affect a ball's movement. Confusion arose when the phrases "is different" and "makes a difference" were presented in the same session.

The two phrases correspond to different conceptual goals, but they are very similar linguistically. Mr. Riley recognized them both as mortar, or general academic vocabulary used to make complete sentences. He used "makes a difference" and "affects" interchangeably in oral language, but all written prompts and materials used "affects". There was little instruction around the meaning of "affects" other than his paraphrasing it as "makes a difference", so it is not clear how well students understood that particular term. What was clear, however, was that at least some of the Spanish speakers struggled to understand the nuance that separated the two phrases, even in Spanish. However, students did better when I guided them in Spanish, as the following excerpt illustrates:

Audrey: Color? Hace una diferencia? El color?

Javier T: (in Spanish) Color.

Audrey: Entonces, por ejemplo una pelota roja va a rebotar mejor que una pelota . . . de azul?

Javier T: Sí.

Audrey: Por qué?

Javier T: Porque la azul es chiquitita . . .

Audrey: Sí, la azul es chiquitita, entonces es el color o el tamaño que hace la diferencia?

Javier T: El tamaño.

[Audrey: Color? It makes a difference? Color?

Javier T: Color.

Audrey: Okay, so for example a red ball is going to bounce better than . . . a blue ball?

Javier T: Yes.

Audrey: Why?

Javier T: Because the blue ball is small . . .

Audrey: Yes, the blue ball is small, so is it the color or the size that makes a difference?

Javier T: The size.]

[observation, 1/15/10]

My conversation with Javier was more explicit than anything that Mr. Riley said to the students, even though he ostensibly knew the difference in meaning between the two, and expected students to understand the difference as well.

Javier was not the only Spanish speaker to struggle with this language issue. On a written assessment children did midway through the unit, they were asked to draw and label one ball. In addition, they made two lists, one of the properties that affected how the ball rolled and one of properties that did not matter. Of the six Spanish speakers in this class, only two successfully completed both lists. Only one of those students accurately identified five properties that may have affected rolling behavior and two properties that likely would not [Balls & Ramps instructional manual, assessment 1 student samples]. I can't say for certain that this was only a language issue, but it is notable in the context of the larger tension between content and language in this

classroom. It also provides an example of the tension between knowledge about language and knowledge about how to teach language that was relevant to these teachers.

Within Environmental Resources

The most important tension within the environmental resource stream was the way in which school-level and district-level staff supports did not work together for dual language teachers at this school. In particular, there was discernible difference between the perceived contributions that the school-based ELD teacher, Carol, made to the program and those which the district-level ELL consulting teacher, David, made. They were considered by focal teachers to have different, noncomplementary roles and were recognized as resources (or not) very differently by first grade teachers.

As I noted earlier, Carol was assigned to work with the first grade team exclusively during the year in which this study was conducted. In practice, however, she really only worked with Ms. Cortez and very occasionally with Mr. Riley. She did not work with Sra. Gregor at all during my time at Hurley Heights. Dr. Scott explained Carol's lack of participation in the Spanish portion of the dual language program in the following way: "I think because Carol doesn't speak Spanish, she tends to shy away from Molly's corner of the world. And it's not a criticism, it's just, you know, 'Molly is doing her thing in Spanish and you know, I don't understand it, so . . .'" [interview, 11/5/09]. This lack of equitable environmental support for English- and Spanish-medium teachers is worth noting, but the more interesting issue in terms of this finding was how even Ms. Cortez failed to see Carol as a meaningful instructional resource.

Carol declined to have our interviews audiorecorded, but my fieldnotes indicate that she was conflicted about her work in first grade, and concerned that the language

development issues she viewed as critical were seen as extraneous by teachers, especially Ms. Cortez. She therefore said she felt like an imposition every time she entered the classroom, and often sat only with individual language-minority children rather than working to support Ms. Cortez's instruction in any systematic way. She acknowledged feeling "underappreciated" and "frustrated" by the limited role she played in first grade classrooms [interview fieldnotes, 11/7/09].

In contrast, Ms. Cortez indicated to me that she wanted Carol to be more assertive in offering her expertise around language development for her bilingual students. She said, "I know that she knows exactly what I should be doing," and therefore wanted Carol to feel free to tell her what to do when she came in to observe [interview, 11/5/09]. There was a lack of communication between the two that likely arose from the limited conventional resources of time and structure. Carol and Ms. Cortez were supposed to arrange a regular weekly time to meet, but still had not done so by the time I observed the geometry unit in April. Ms. Cortez took responsibility for that, saying she felt "maxed out" and unable to set aside a consistent time each week.

Their relationship was further complicated by Ms. Cortez's perception of David Goldberg as providing the kind of structured support she needed. She indicated that she appreciated Carol's unwavering commitment to supporting language-minority children, but nonetheless felt that she was not getting explicit enough help from Carol. In order to improve her instruction across content areas, she felt that, "I really need someone to present it to me like David Goldberg" [interview, 4/29/10].

Similarly, she attributed the academic language instruction she did provide to the professional development session rather than her (admittedly limited) ongoing work with Carol, as she explained in our final interview:

Researcher: So where did the idea to do sentence starters and bricks and mortar really come from for you?

Ms. Cortez: I mean, I've known about that, and I've had it in various ways around my classroom. Carol Brekke encouraged me to do things like that, but no one ever really sat down and gave me a lesson on it, until that guy came.

[interview, 4/29/10]

This was particularly telling given that her only interaction with David was at the October PD session, and the fact that she did not even remember his name, referring to him as “that guy” in our final interview. It is also surprising because the professional development session focused only on planning for language objectives, and did not provide any guidance on accompanying instructional strategies; yet Ms. Cortez viewed this as the kind of help she needed to be more successful in her work with students. When I asked her if she thought it was possible for Carol to provide the kind of structured support she sought, Ms. Cortez reiterated that Carol should be more assertive in offering her services. This was unlikely to happen, though, since Carol felt unwelcome and undervalued.

The tension between district and school-level English language supports was familiar to David Goldberg, who noted that classroom teachers he worked with often sought him out rather than working directly with their school-level colleagues. He explained that, “even if their ELD teacher is telling them the same thing, they'd rather hear it from somewhere else” [interview, 3/4/10]. He also indicated that he wanted Carol

to participate in his planning meetings with Mr. Riley for the balls and ramps unit, but that he did not prepare accordingly and as a result she was unable to do so.

Further questions about this tension could be raised about the way in which the professional development session was planned and presented. Dr. Scott wanted staff buy-in and therefore asked David to work with volunteer teachers over the course of the year. Yet it might have been more fruitful to have David co-plan and facilitate the PD session with Carol and other ELD teachers at the school. Since all three focal teachers viewed it as an academic language resource, Carol's participation could have gone a long way toward positioning her as an equally valuable on-site resource.

Overall, this disconnect between language supports at different levels spoke to the larger issue at Hurley Heights that there was little communication or collaboration between bilingual departments, and likely led to further coherence issues in the dual language program and the academic language instruction that emergent bilingual students received.

Conclusions and Implications

In this chapter I have considered my focal teachers' use of conventional, environmental, and personal resources in their instruction of oral academic language. I have done so by analyzing the various resource streams to which they have access and the ways in which their use of given resources is constrained or enabled by multiple factors. Through this analysis, I have generated three primary findings with regard to resource use in first grade at Hurley Heights.

First, teachers had differential access to personal and environmental resource streams, and thus they understood oral academic language and instruction differently. In

terms of personal resources, all three teachers cited professional experience as primary, yet they had varied experiences and therefore different levels of knowledge and confidence about academic language instruction. Environmental resources were allocated differently such that Mr. Riley benefitted the most from a district-level ELL consulting teacher, Ms. Cortez worked mostly with a school-level ELD teacher, and Sra. Gregor worked with neither. These discrepancies became more relevant when I analyzed them in the larger framework of interactive resource streams, which was the second major finding for this research question.

Namely, I found that all three teachers had some combination of conventional, personal, and environmental resources, but that the specific combinations had a significant influence on the instruction teachers were able to provide with regards to academic language. I analyzed the interactivity of resource streams through the illustrative example of a professional development session on planning for language objectives. All focal teachers considered the PD a conventional resource, but they took very different understandings away from it based on their use of personal resources and their access to environmental resources. A key implication of this finding was that differential uptake led to instruction across classrooms that lacked coherence. I have argued that complementary instruction facilitates coherence within dual language education, and that such coherence is critical to the development of true academic bilingualism and biliteracy. In the field of teacher education, we often take for granted that PD builds on teacher knowledge without adequately accounting for the personal resources teachers bring to the PD experiences.

The third main finding presented in this chapter is that there were tensions even within personal and environmental resource streams. The general finding that teachers struggled to connect their knowledge about academic language with their knowledge about instruction raises questions about the depth of knowledge dual language and mainstream teachers need to facilitate language development.

My findings also indicate that school and district-level supports did not work together to support these teachers, and that this may have also contributed to a lack of coherence within the program. It is worth remembering that such supports are not inherently aligned, and yet they both have so much potential to provide teachers with the knowledge and tools they need to successfully teach academic language. This may be especially relevant in terms of how professional development initiatives are presented and sustained.

In chapter six, the final chapter of this dissertation, I draw deeper implications from the findings from this research question as well as the other issues I have addressed so far.

CHAPTER 6

Summary, Discussion, and Implications

In this study I investigated how first grade dual language teachers in one urban elementary school instructionally supported the oral academic language development of their Spanish-speaking students. I also described the conventional, environmental, and personal resources these teachers had access to and how they used them in their instruction. Specifically, I sought to answer the following research questions:

1. What are the academic language demands of first grade at this dual language school?
 - d. How do teachers describe and seek to address these demands?
 - e. What tensions arise in terms of academic language development and instruction?
2. What instructional moves do first grade dual language teachers make to develop Spanish and English oral academic language proficiency in Spanish-speaking first graders?
3. What resources do they use to do access and use in their instruction?
 - c. What factors mediate their ability and willingness to use these resources?

Through my answers to these questions, I begin to articulate a practice-based theory of linguistic pedagogical content knowledge for teachers of language-minority and emergent bilingual children.

This study was rooted in sociocultural learning theory and therefore the definition of academic language I used comprises not only oral and written communication, but also

social and participatory norms about how language is used in given contexts and communities. Because of the importance of social interaction to learning both language and content, I made instruction a central focus of this study, arguing throughout that researchers in the field must look at the instruction teachers provide in order to understand the opportunities that exist (or not) for oral academic language development in DL classrooms.

Throughout my analysis of specific academic language demands and instructional moves teachers made to help students meet them, I highlighted the possibilities for developing Spanish and English academic language within dual language programs, as well as articulating the challenges to doing so. In this chapter, I elaborate further on those possibilities and difficulties, with the goal of generating ideas about how to systematically support teachers in their work with emergent bilingual children.

Findings from this dissertation are important because existing research in the area of second language acquisition in public school contexts has shed little light on what kinds of instruction might promote oral academic language development for language-minority students (Genesee et al., 2006). Research on schoolwide best practices for ELL children is abundant (August & Hakuta, 1997; Miramontes et al., 1997), but research that expands our knowledge base about how specifically to facilitate academic language development is still in its early stages (Goldenberg & Coleman, 2010). This is especially true for emergent bilinguals – those who are learning content and literacy in two languages simultaneously – like the first graders at Hurley Heights. My findings therefore contribute to the field of bilingual and biliteracy education, while at the same time raising many new questions for future research.

Researching Academic Language Instruction

The first broad area that I will address in this chapter is how findings from this study potentially contribute to the methods researchers use to study oral academic language use in classrooms. I argued in this dissertation that academic language is a key area of study in the education of emergent bilinguals, and it is empirically well established that it does not develop quickly or without instruction. Therefore, through an examination of the instructional practices of three teachers over one school year, I attempted to provide insight into the work of other dual language teachers and begin to generalize to theory. On the topic of academic language in particular, the current research contributes to the qualitative research base that analyzes the practices teachers use to mediate the linguistic demands of schooling (P. Gibbons, 2003).

The Need for Nuanced Definitions

Goldenberg (2008) and others have suggested that full academic proficiency requires students to have command of enough language to participate effectively in interactions that involve complex, abstract concepts. This argument has been extended by others who believe that academic language includes cognitive and social dimensions in addition to the obvious structural components (Cummins, 1981; P. Gibbons, 1993; Scarcella, 2003; C. E. Snow, 1991b). However, much of the empirical research on academic language proficiency has not attended to these multiple dimensions, and has generally focused solely on its components, most notably vocabulary. I have taken a different approach that more accurately captures critical social and cognitive elements of academic language.

In terms of the social dimension, for example, I took a functional approach that assumes that all language serves a communicative purpose and is therefore situated within particular contexts (Purcell-Gates, Duke, & Martineau, 2007). This analytic approach is consistent with the sociocultural framing of the study and suggests new ways to investigate language use in classrooms. My decision to ground my analysis in language functions was driven by my preliminary data analysis, during which I realized that in order to truly understand instructional moves, I needed to begin with teacher expectations and the language demands of the curriculum. As I analyzed observation data across classrooms it became clear that there were at least three language functions that were critical to participating successfully in academic discourse: defining and describing; comparing and contrasting; and predicting and hypothesizing.

Further, in each classroom academic language was used for specific purposes, which teachers sometimes explicitly articulated for students and sometimes did not. In one way or another, all of the focal teachers encouraged participation in a literate community through the use of oral language. Organizing my data with these social and functional demands in view enabled me to move beyond the components of academic language to investigate how teachers facilitated oral participation from Spanish-speaking students as well as how language use in classroom met curricular demands or not.

In terms of the cognitive dimension of academic language, I investigated movement along the context continuum, through which Cummins (1981) conceptualized communication as ranging from highly context-embedded to mostly context-reduced. At the first extreme, speakers can actively negotiate meaning based on shared understanding, and are supported in doing so by visual and situational cues. At the opposite extreme,

understanding relies primarily on language and is therefore more cognitively and linguistically challenging. This continuum has been theorized to represent the relationship between conversational (context-embedded) and academic (context-reduced) language.

If the goal is only to move students steadily from conversational to academic language, then it would seem that teachers should be modeling the one-way progression toward more complex language. In my classroom observations, however, it was typical for teachers to shift back and forth between the two types of discourse in order to support their students' understanding and language development. These shifts were responsive to individual student needs and may therefore have been more supportive of academic language acquisition than if teachers had simply persisted in using academic language.

I used examples from my classroom observations to highlight the ways in which teachers provided message abundancy through the instructional choices they made. An example given in chapter four was illustrative of this back and forth movement. When conversing with Spanish-speaking Oscar about properties of a ball, Mr. Riley cued Oscar to think about categories using both academic and conversational language to solidify the concept for him, saying "It's hard. Is that a color, or a size, or shape, or texture? What do you think? Hard. That's how it looks, or how it feels?" [observation, 1/6/10].

The very supportive linguistic scaffolding Mr. Riley provided did not progress in a one-way, linear direction. Rather, the adaptive interplay between conversational and academic registers I observed on this occasion and on many others provides evidence of the complexity of the constructs of conversational and academic language and challenges a dichotomous approach to separating them. The implication is that we need to be

flexible in our definitions of what constitutes scaffolding and how it can be used as an adaptive tool rather than a static construct that moves in only one direction.

This approach to addressing the social and cognitive dimensions of academic language in addition to the structural components highlights the need for nuanced approaches to conversational and academic language research that more accurately mirror the ways in which these registers are purposefully used and instructionally facilitated in school contexts (Goldenberg & Coleman, 2010). This is likely true not only in dual language classrooms, but also in any classroom with language-minority students.

“Conversation as Performance”

A compelling finding to arise from this dissertation was that none of the teachers provided language instruction specifically targeted at the Spanish speakers in their classrooms, yet there was ample evidence that instruction they provided to the whole class or small groups made a difference in the language Spanish speakers orally produced. Through ‘conversation as performance’ (P. Gibbons, 2006) and other instructional moves, the teachers supported academic language development for individual Spanish-speaking students even when those students were not directly involved in the interaction. In many cases, these public conversations served the dual purpose of helping the specific student with whom the teacher was speaking and also communicating with other active listeners.

This finding suggests the need to consider instruction holistically (as opposed to that provided to homogenous groups) within classes that serve language-minority and emergent bilingual students. For this reason, it has the potential to influence research done in mainstream classrooms in which the majority of instruction for language-

minority children takes place in the whole class or small groups. Taking such an approach can also make the study of oral academic language less daunting to researchers whose focus is not solely on second language learners.

Studying Linguistic Scaffolding both Within and Across Episodes

The third important contribution this research makes to the field of classroom-based oral academic language research is the way I analyzed instructional scaffolding both within and across class sessions. Following Gibbons' (2006) lead, I explored how teachers' instructional discourse moves facilitated academic language development over entire units rather than only during individual lessons. It was clear that analyzing conversational data at the micro level – while important – was insufficient to investigate shifts in discourse over time. I posited that shifts in language use would occur over the course of a unit as teachers and students built knowledge and content-specific language together (Christie, 1995), and this was in fact the case.

Therefore, this attention to both micro and macro level scaffolding was methodologically important because it enabled me to observe subtle differences in teachers' instruction as children became more proficient in both the language of a specific unit and in academic language overall. The theoretical importance of observing sequences of lessons has been articulated in the literature (Ball et al., 2008; Christie, 1995; P. Gibbons, 2003; Lin, 1993), and findings from this study provide a small amount of qualitative support for such an approach.

Instructionally, this type of data collection and analysis is also important because of the necessity of appropriate linguistic scaffolding – that which falls within students' zones of proximal development. Responsive scaffolding at both the micro and macro

levels is considered by some language scholars to be a critical support for the development of academic language in particular (Genesee et al., 2006; P. Gibbons, 2003). Thus, instruction within this zone might be considered one of the most effective moves teachers of emergent bilinguals can make, and my findings lend support to its potential.

Directions for Future Research

The findings and implications I presented in the area of researching academic language instruction suggest a few key considerations for future studies.

First, I recommend that future studies of academic language instruction use nuanced definitions of academic language that integrate its structural, social, and cognitive elements rather than only attending to its surface structural components. This study has shown that it can be productive to investigate instruction by taking as a starting point the classroom and curricular expectations of what language should be used and how. I argue that such an approach will enable us to develop a better understanding of the interplay between conversational and academic registers that is rooted more in authentic classroom practices than in scripted ideas about what constitutes academic language use.

Second, given my findings about the use and value of macro discourse over the course of a single unit, it would be worthwhile to conduct research over longer periods of time with the same cohort of Spanish-speaking children. This could garner important insights into how teachers modify their instruction over an entire school year, for example, and also how classroom language use changes. In DL programs, children often stay in cohorts for a number of years, so it might be possible to conduct longitudinal

research on oral academic language development over long stretches of time and exposure to various instructional moves on the part of their teachers.

Teacher Knowledge and the Role of Teacher Education

The second broad area of findings I will discuss in this concluding chapter is what the teachers at Hurley Heights new about academic second language learning, as well as what this might suggest for teacher education. There is a broad professional knowledge base in the area of education for language-minority students, but there is there is less research that examines the instructional needs of emergent bilingual children. Empirical research on teacher knowledge of and instructional practices that facilitate academic language development is even rarer (Bunch, 2004; Bunch et al., 2001). Therefore, it was not surprising to find that my teachers had limited and sometimes even erroneous knowledge about academic language. Nonetheless, they all had some idea of its importance and made instructional moves designed to support its development. In the sections that follow, I discuss my central findings related to teacher knowledge about academic language instruction and implications of these findings for the field.

The Need to Understand Language Demands

As I noted earlier in this chapter and at various other points throughout this dissertation, I analyzed my data through the lens of curricular academic language demands and teacher expectations. I found these functional demands useful as a lens through which to view instruction, as well as to identify patterns of practice across languages and content areas that might support the acquisition of academic language in both Spanish and English. Researchers working within a functional linguistics framework have argued steadfastly for the need for teachers to be able to conduct

linguistic analyses, saying “even when teachers base their instruction on content-area goals, they still need strategies for dealing with language itself, as content is not separate from the language through which it is presented” (Schleppegrell & Achugar, 2003, p. 21). Based on my findings, I concur with these researchers’ assessment that analyzing the language demands of a unit can be a productive first step to incorporating language objectives into content teaching (Achugar, Schleppegrell, & Oteíza, 2007).

Nonetheless, when I asked my focal teachers to identify the academic language demands of the units they were teaching, they struggled mightily, and in general were unable to do so. Señora Gregor, a trained language teacher, was the most adept at doing this, and we had a rather extended conversation about how she taught predicting in the *cultura* unit. She also indicated that she was aware of the difference between defining focal vocabulary terms and describing them, but that she had difficulty communicating that difference to her students.

The other two teachers recognized only the language demands in their units that coincided with content demands, as in the case of comparing in Ms. Cortez’s geometry unit and predicting in Mr. Riley’s science unit. Predicting was a key content and language goal in the balls and ramps unit, but Mr. Riley never named it nor provided explicit instruction about possible language to use when making predictions. I argue that this was in part because of his limited understanding of the language expectations of the curriculum.

The need for teachers to be able to recognize and begin to analyze the language demands of their content areas is made all the more crucial by the fact that curriculum materials designed for mainstream English-speaking students often do a poor job of

presenting functional language demands or helping teachers decipher the purposes for using language in a given unit. This may be the case even when specific accommodations for language-minority students are included in planning materials. In this study, the teachers' manuals for both the science and geometry units used by my focal teachers included suggestions for assisting the language development of language-minority students, but they fell short of being truly useful environmental resources because of their vagueness or because of teachers' limited ability to follow up on the suggestions.

For example, the balls and ramps instructional manual recommended that teachers support language learning by “identifying the language objectives within the science lesson and providing and modeling to promote student understanding” [Balls & Ramps instructional guide], but the language objectives were not stated anywhere and a teacher like Mr. Riley with a low level of linguistic understanding was unable to discern them from those sparse directions.

The Everyday Math planning materials used by Ms. Cortez provided the following types of advice to teachers with language learners in their classrooms: “encourage children to use the mathematical terms in contexts of working with the 2- and 3-dimensional shapes” and “encourage children to use vocabulary related to plane shapes and solid figures such as *side, corner, surface, flat, circle, triangle, square, sphere, cylinder, and rectangular prism*” [Everyday Math grade 1 instructional guide]. The focus was clearly on the development of individual vocabulary words, and did not go far toward helping Ms. Cortez understand what children were truly expected to do with language beyond using isolated words in context.

In an interesting confluence of personal and environmental resource streams, Sra. Gregor was best positioned to understand and analyze the language demands of her unit not only because of her personal knowledge and experience, but also because of the fact that she and two colleagues (Ms. Cortez and Taryn Kincaid, Mr. Riley's teaching partner) taught the unit without a published curriculum. Rather, they created it using GLAD techniques and strategies, which meant it had a built-in language focus of sorts. This undoubtedly made the language demands more obvious to an already more experienced and knowledgeable teacher. The unit was largely built around learning new and somewhat abstract vocabulary terms, with predicting and defining as key language goals. In contrast, the science and math units were clearly content-oriented and the language foci were harder to identify.

Depth of Knowledge

All three of my focal teachers had some awareness of the linguistic needs of Spanish-speaking children in their classrooms and all provided some instruction that facilitated oral academic language development. However, their definitions of academic language lacked attention to either its components, social purposes, or cognitive dimensions. For example, all three teachers tended to equate complex language with complete sentences rather than level of explicitness or syntactic variety. They also privileged complete sentences over one-word answers, but had little awareness of how to improve the specificity of the academic language students produced within the context of the units they were teaching.

This manifested mostly when teachers were explaining how they approached the teaching of mortar, which are the words used to create coherent sentences. They

typically used the term mortar to refer to the quantity of language a child could produce, which they considered a key indicator of oral language proficiency. However, failing to discern the difference between complete sentences and complex sentences belies the difference between conversational and academic language. I did not find evidence that these teachers had knowledge of the specialized syntax of their content area, which some have considered critical to truly understanding and being able to teach academic language (Gebhard, Harman, & Seger, 2007; Valdés et al., 2005).

Teachers were thoughtful about how well they understood academic language development and the challenges of providing supportive instruction for Spanish-speaking students in particular. In general, the instructional choices I observed them enacting were consistent with the priorities they expressed in our interviews and informal conversations. Their instruction was undoubtedly influenced by their beliefs and understandings about language development and how best to support it. This meant that each of them had a relatively small repertoire of instructional moves they felt comfortable using rather than being able to flexibly use multiple strategies.

The general finding that teachers had differing depths of knowledge about the elements of academic language suggests that scholars in the field need to carefully examine the knowledge base that teachers of language-minority and emergent bilingual students need. This dissertation provides evidence that shallow understanding of academic language limited teachers' ability to analyze the demands of their units and subsequently provide appropriate instruction for Spanish-speaking students. This has broad implications for how we prepare teachers within teacher education programs. I discuss my recommendations for future work in this area later in this chapter.

Pedagogical Content Knowledge

The notion of pedagogical content knowledge (Ball et al., 2008; Shulman, 1987) guided this study in terms of my interest in the intersection between teacher knowledge and instructional practice. I therefore investigated not only teachers' depth of knowledge of academic language but also the instructional choices they made as they sought to teach academic language to Spanish-speaking students.

Within my framing of resources as personal, environmental, or conventional (Cohen et al., 2003), I considered pedagogical content knowledge as existing within personal resources. All three focal teachers cited professional experience as a driving influence on their instruction, but just as they had different depths of knowledge about academic language, they also had varied experiences teaching it. This led to quite different approaches to providing supportive instruction for academic language in their classrooms.

For example, in his work with district ELL consulting teacher David Goldberg, Mr. Riley expressed frustration about not knowing how much specific language support to provide to students while at the same time keeping the cognitive load high. In my assessment, he tended to err more on the side of providing too little rather than too much linguistic support in that he typically gave ample support for content-specific vocabulary but less for structures that would help students produce complex, decontextualized sentences.

Through his work with David, Mr. Riley began to develop a more sophisticated understanding of what constituted academic language (at least at the components level) and the oral development needs of his students. However, he continued to struggle with

the enactment of what he had learned throughout the science unit. From a pedagogical content knowledge perspective, he still did not have the tools to instructionally facilitate language development in any systematic or consistent way.

Señora Gregor, on the other hand, was better positioned by her personal resources – training and experience as a language teacher – to understand the nuances of academic language even though the professional development session all teachers attended did not present it in a highly sophisticated way. She described the session as a reminder and extension of what she already knew rather than a source of new knowledge about language. She was better able to integrate theory and practice, because her pedagogical content knowledge was on a different level than that of Mr. Riley.

Nonetheless, despite her deeper theoretical knowledge and previous experience, Señora Gregor, like the other two teachers, struggled to provide targeted instruction and in some cases was not able to even articulate what such instruction might entail. In general, even when these dual language teachers were aware of some of the language needs of their students, they struggled to enact supportive instruction. They rarely taught language forms and functions explicitly or engaged students in true dialogic interactions. From my observations and interviews it was clear that knowing when and how to press on students' language ability was difficult for these teachers, especially for English-medium teachers interacting with Spanish-speaking students. Therefore, such interactions likely did not enable students to fulfill their potential in terms of oral academic language development.

There are two main implications of these findings for teacher education and professional development. First, theoretical and practical knowledge about academic

language need to be integrated rather than taught as separate constructs. Teachers need to not only understand the construct of academic language well enough to identify it in course materials and plan lessons accordingly, but also to be able to provide meaningful and systematic instruction for emergent bilingual students. Second, in the field of inservice teacher education, it is often taken for granted that PD somehow naturally builds on teachers' existing knowledge without adequately accounting for the personal resources they bring to such experiences. This is an assumption that may work against the goal of providing rich, valuable professional development to teachers that meets their specific needs and consequently improves their instruction for language-minority children (Elfers et al., 2009; Gándara et al., 2005).

Directions for Future Research

The findings and implications I presented in the area of teacher knowledge and teacher education suggest key directions for future research.

First, it is clear from the data presented in this dissertation that teachers had generally shallow depths of knowledge about both the theoretical construct of academic language and pedagogical practices that would support its development. They had been teaching for an average of ten years, and although they had all graduated from traditional teacher education programs, none had received specific coursework in ELL methods. Therefore, all of the preparation they did have came from inservice professional development classes.

In the past ten years – and therefore too recently to influence my participants – prominent teacher education scholars have proposed “what teachers need to know about language” (Fillmore & Snow, 2002) in order to work effectively with second language

learners. Likewise, a number of strategy-oriented language acquisition programs like SIOP (Echevarría et al., 2008) and GLAD have become available to school districts. What seems to be missing is a link between the theory and practice that would support teachers in developing flexible pedagogical content knowledge.

At the level of teacher education, programs therefore need to support pre-service teacher candidates in learning about first and second language development and help them learn to view their curricula through a language lens. It would also require teacher education programs to explicitly teach pedagogical practices to develop academic language in concert with content learning. Thus, what I am proposing is an integrated approach to teacher education that clearly focuses on the needs of language-minority and emergent bilingual students by addressing what teachers need to know and do.

Of course, it is becoming increasingly common for university-based teacher education programs to offer (and in some cases even require) foundational and methods courses in second language acquisition and instruction. Therefore, a productive area for future research is to qualitatively and longitudinally follow new teachers graduating from such programs as they move into classroom placements – both mainstream and dual language – and investigate how their practices are related to the coursework they receive in teacher education courses. Will their practices look appreciably different from those of my focal teachers? What are the long-term academic language benefits to students of teacher education coursework in second language education, if any? Designing research to address these questions can go a long way toward helping us incorporate meaningful ELL coursework into teacher education programs, to the ultimate benefit of language-minority students.

This task is of course complicated by the fact that there is little agreement in the field about what that instruction should be. As I explained in the my theoretical framework, I identified five practices commonly cited in the literature as being facilitative of language and concept development, but I concede that in some cases those practices have not been empirically studied so much as established in principal. In fact, Bigelow and Ranney (2005) have argued that the field has not adequately defined effective content and language integration in mainstream classrooms, and I am inclined to agree. Like them, therefore, I argue that we need more qualitative research that brings us even closer to a clear set of measurable criteria for what constitutes effective instruction for oral academic language development.

Dual Language Education

To this point in the chapter, the implications I have presented are generally applicable to mainstream classrooms and teacher education. However, this study did generate some data that is specifically applicable to dual language programs and classrooms. This is especially true in two primary areas: coherence within the program and the potential for cross language transfer of academic language. In the next two sections, I detail what this study contributed to the extant research on instruction within dual language programs.

The Challenge of Coherence

One of the defining features of DL education is the opportunity it can create for language-minority and emergent bilingual students to receive quality, cognitively-appropriate instruction in their home language. To that end, there has been a lot of literature highlighting the importance of adhering to a structured program model (Amrein

& Peña, 2000; Lindholm, 1990; Lindholm-Leary, 2001) much of which presupposes that the equal distribution of time and conventional resources within DL programs is a determining factor in student learning. However, I argue that instruction within such programs should be the focus of more research so that we can learn more about how teachers support emergent bilingual children's language development through their everyday instruction.

I chose this focus in part because researchers have raised concerns about the quality of academic language use within dual language classrooms, particularly those that serve large numbers of language-minority children (Freeman, 1996, 2000; Hadi-Tabassum, 2006; Hickey, 2001; Smith, 2002; Valdés, 1997; Wiese, 2004). My data collection was oriented at the classroom level, but over the course of the year I spent at Hurley Heights, I also became aware of some coherence issues that superseded the individual classrooms. Coherence at various levels is critical in DL programs because emergent bilinguals receive instruction in two languages from two teachers everyday, as was the case at this site (G. E. García, 2003). It is also likely that complementary instruction facilitates the development of true academic bilingualism and biliteracy.

The first coherence issue to arise at my site was in the kind of instruction occurring across classrooms, and consequently across content areas as well. As I stated earlier, there was considerable overlap in teachers' understandings of the construct of academic language (although with different levels of depth and sophistication), but they had no common framework for discussing, planning, or instructing it. There was little discussion among teachers about academic language at all – with the exception of one meeting that took place during the fall professional development session – and none

about how to provide consistent or complementary instruction. Instead, each teacher used his or her “go to” moves and emphasized different elements of academic language. They did not regularly use common vocabulary or structures, even when the same functions were being used across classrooms.

I use the term complementary to describe the ideal relationship between instruction across different classrooms because I do not mean to suggest that all three teachers should have been instructing in exactly the same way. Rather, I am suggesting that a more coherent program would allow teachers to exercise flexibility in their instructional practice while at the same time complementing their colleagues’ work with children in the DL program.

This lack of coherence was especially notable because of the fact that there was overlap in language functions across all three classrooms, and therefore there seemed to be missed opportunities for cross-language and cross-content academic language and conceptual development. This was perhaps due to the fact that teachers were unable to articulate their linguistic goals, plans, and practices to one another in a way that would lead to more complementary, coherent instructional practices. As it was, teachers provided different types of instruction of key academic language functions and their lack of explicitness essentially meant that students had to do the hard work of making cross-language connections on their own.

Dr. Scott felt strongly about the importance of consistent language being used across classrooms and content areas but I did not see evidence of this actually happening other than incidentally. It might also have been attributable to the fact that there were no formal communication structures for DL teachers, nor was there time set aside for this

communication to happen. These are common challenges for dual language programs, and further research on how to facilitate coherence is needed.

The second coherence issue in the Hurley Heights program occurred within the environmental resource stream. It was the way in which school-level and district-level staff supports did not work together. In particular, first grade teachers did not perceive the work of the school-based ELD teacher, Carol, and the district-level ELL consulting teacher, David, to be complementary. Therefore, they recognized and appreciated the two language specialists as resources (or not) in very different ways.

The most salient example of this tension was Ms. Cortez's perception of David as an expert who could provide the structured support she needed. On the other hand, she viewed Carol as someone with a strong commitment to supporting language-minority children, but someone who was not able to help her in the ways she thought she needed to be helped. Unfortunately, this made Carol feel like an imposition in Ms. Cortez's classroom, and meant that she often worked individually with children rather than supporting Ms. Cortez's instruction in any systematic way. She was highly experienced and surely capable of doing so, but because of the lack of shared expectations about her and Ms. Cortez's roles in the professional relationship, she was severely limited in terms of what she could accomplish. It seemed that she was positioned more like a classroom helper than the language expert she was, possibly because she was school-based and therefore considered a colleague. In contrast, David was an outsider from the district who was positioned early on as an expert and spent very little time on site outside of the one PD session and his few visits to work with Mr. Riley.

The finding that David was more respected and trusted than Carol was confounding to me, but David indicated that it was common in his experience as an ELL consulting teacher. He explained that classroom teachers often went out of their way to talk with him instead of working directly with their school-level ELD colleagues. He also said they frequently privileged his opinion over that of their ELD colleagues, even when they were giving a consistent message, they were more prone to take his opinion.

It might have been fruitful for Dr. Scott to ask David co-plan and facilitate the PD session with Carol and other ELD teachers at the school, which could have gone a long way to legitimizing Carol's knowledge and positioning her as a valuable on-site environmental resource. Also, given that this kind of incoherence is likely common to other dual language programs (and programs that serve large numbers of language-minority students in general), my findings have implications for the ways in which staff supports are positioned and the way professional development is delivered.

Overall, the disconnects I have highlighted in this section serve as a clear reminder that instructional practices and staff supports are not inherently aligned – especially in dual language programs – and yet such alignment is a critical to providing teachers with the knowledge, tools, and environmental resources they need to successfully teach academic language. As my last example illustrates, this may be especially relevant in terms of how professional development initiatives are presented and sustained.

Fulfilling the Potential of Cross-Language Transfer

Within DL programs, the potential for cross language transfer is solidly theoretically grounded. It has been shown repeatedly that if children can develop an

understanding of concepts in their stronger language first, they can then also express that understanding in L2 conversational language (Cummins, 1981, 1992; Gibbons, 2008; Howard et al, 2007). However, the transfer of specific elements of academic language may only be possible given optimal, explicit instruction that intentionally nurtures the interdependent relationship between languages (Escamilla, 1994, 2010; Goldenberg, 2008; Lyster, 2007). In this study, therefore, I was interested in ascertaining the degree to which the instructional moves teachers made were complementary and thus potentially facilitative of cross language transfer.

As I explained throughout the findings from this dissertation, there were similar purposes for using academic language as well as language functions in both the Spanish and English halves of the DL program. However, there were tensions that arose in the area of linguistic interdependence as well. While there was some overlap between the use of math and science academic vocabulary, it did not extend to social studies. This was true even though it would have been possible given the similar language functions across all three units.

The fact that math and science were both taught in English meant that in reality there was little possibility of Spanish being used as a resource by students. It also raises questions about the plausibility of cross language transfer at the brick and mortar level when disparate content areas are separated by language of instruction, as is typical in elementary dual language programs. It is of course possible that other elements of academic language, such as understanding its purposes and improving one's ability to use specific language functions, can and do transfer. Learning more about the nature of cross

language transfer at various levels of academic language is a fruitful area for future research, which I will discuss in more detail in the next section.

Overall, my findings in this area indicate that the potential for cross language transfer was not fully recognized in first grade at Hurley Heights for a number of reasons, but primarily because of the lack of explicitness with which it was presented to students. The teachers in my study had different strengths and challenges in their understanding and instruction of academic language, and therefore were explicit in different and often non-overlapping ways, to the detriment of cross language transfer.

Directions for Future Research

The findings and implications I presented in the area of dual language education suggest key directions for future research.

First, questions arose about how to face the challenge of instructional coherence when emergent bilingual children receive instruction from two teachers in two languages every day, especially when those teachers have different levels of understanding about oral academic language development and instruction to support it. It was clear from my data that even when content areas share similar language functions and potentially build the same skills, coherence does not happen automatically. My observational data does not indicate that children in focal classrooms made connections across content areas in terms of language, and I contend that a primary reason for this was because teachers did not themselves either know nor make explicit to children what those connections could have been.

A related issue in terms of coherence is how DL schools in particular can harness district-level and school-level resources so that they build on rather than contradicting

one another. It is critically important for DL schools to have the financial and practical support of their districts, but up until now there have been few guidelines about how environmental – particularly leadership – resources at the two levels can, and should, interact. This seems especially relevant in terms of how professional development initiatives are presented and sustained. In the case of Hurley Heights, for example, I believe that a jointly facilitated PD session would have better positioned Carol as an academic language support that was available on an ongoing basis, rather than positioning the off-site David as the real expert. Carol’s participation could have also potentially helped David design a session that better met the needs of individual teachers given their previous experiences and knowledge of academic language, since she had been working at the school for more than five years and knew many of the teachers well professionally.

My findings around coherence lead to two main questions worthy of future research. At the program level, what can be done to make instruction within DL programs more coherent and systematic? At the district level, how can administrators provide staff and professional development supports that are responsive to the unique needs of DL teachers and school-level ELD teachers?

Second, this dissertation raises concerns about the feasibility of cross language transfer, a central tenet of dual language education. In this study, I found that opportunities for transfer between math and science were more apparent than were those with social studies. I believe it is worth building on existing research in order to empirically establish which elements of academic language transfer and under what circumstances, extending beyond structural components and into social and cognitive

domains. In other words, I believe that it would behoove the field of dual language education for us to learn more about the nature of academic cross language transfer at various levels, and across various content areas.

In addition to establishing possibilities for cross language transfer, further research is therefore needed to determine which instructional moves complement each other and therefore support academic language development for emergent bilinguals in both languages within DL programs. Although ample research shows that cross language transfer is possible, many have argued that it needs to be explicitly taught (Escamilla, 1994, 2010; Goldenberg, 2008; Lyster, 2007). In practice, however, we have little data about how explicit that instruction needs to be in order to facilitate the transfer of oral academic language. Research on optimal practices for the facilitation of cross language transfer is critical for the field, and will go a long way toward finishing what I have begun here: a practice-based theory of instruction that supports bilingual oral academic language instruction.

Literacy Education

In this dissertation, I focused on instruction that supports the development of oral academic language only, with no specific attention to literacy outcomes. However, my work is grounded in research that has shown that certain elements of oral academic language proficiency correlate positively with literacy achievement (Genesee et al., 2006; Lindholm, 1991; Lindholm & Aclan, 1991). These stand in contrast to studies that have shown very little correlation between oral conversational language and reading outcomes (Dickinson & Sprague, 2001; Goldenberg & Coleman, 2010; Saunders et al., 2006). Therefore, findings from this study do have implications for literacy research – and in

particular biliteracy research – and can suggest directions for future research in these areas.

Content Area Literacy

Because I conducted this study over the course of an entire school year and across three classrooms, my data give insight into the academic language demands and instruction in three separate content areas. I found that there were a small number of overlapping language functions and purposes for using language, and used these as the bases for my subsequent analyses. In addition, I also identified a number of functions that did not seem to cut across content areas, but instead were specific to a given school subject. I did not discuss these functions in depth in this dissertation because my interest was in the program and bilingual academic language development. However, the existence of so many unique functions in each area does warrant further research. This is so because of the potential that content areas themselves may have specialized language functions just like they do structures. It is well established in the literature that at the secondary level different content areas present distinct academic language challenges for learners (Dutro & Moran, 2003; Zwiers, 2008). However, since so little work has been done on academic language at the primary levels, this study is one of the first sources of classroom-based information about what the content-specific demands of different content areas may be.

If it is true that different content areas create different academic language demands for language-minority children as young as first grade, then it could have serious implications for literacy instruction in different subject areas. It might mean

teaching children specific strategies for approaching science discussions than those they would use in attempting to solve a math problem with a peer.

It is also possible that even the same functions may not have the same meanings and uses across content areas. A notable example from this study was the use of predicting in social studies, literacy, and science. Earlier in this dissertation, I gave examples of predicting within the *cultura* unit. The main way Sra. Gregor used the predicting function during the unit was to have students guess the meaning of a new word based on their prior knowledge and class discussion. She explained to me on one occasion that she realized this was different from the way she taught predicting as a literacy skill, when it was intended primarily as a comprehension strategy students could use to guess about what might happen in the future. While both were essentially the same in that they were educated guesses based on evidence, one was about the present and one about the future.

If I extend this line of thought across content areas to science, the question would no longer be about temporal relationships but rather about what constitutes evidence. This may vary widely among content areas (and even specific disciplines within the sciences, for that matter), and consequently the academic language needed to access and participate in discussions around a given set of information may also vary widely. We could not assume that learning to make a prediction in a literacy class would necessarily lead to a clear understanding of what it means to make a prediction in a science class.

Oral to Written Connections

Both general and content-specific language functions that are relevant to oral discussions are also likely to be important in reading and writing tasks within multiple

content areas. Ample evidence has suggested that oral conversations can act as a bridge to reading, both within specific functions and more generally (Genesee et al., 2006; P. Gibbons, 2003, 2006). Because of my focus on oral language development, I explored the connections between oral and written language only briefly in this study. That said, I do have a small amount of support for the contention that explicitly teaching students to orally master specific language functions may enable them to so proficiently in writing as well.

I gave a lengthy example of this spoken to written trajectory in chapter four, when I discussed Ms. Cortez's "think" center. She guided a small group of students through an instructional conversation about the fundamental attributes of a rectangle, explaining in some detail how to craft a definition of the shape. She then asked students to write their definition in a math journal. The student work samples I collected showed that their definitions did in fact closely mirror what Snow and her colleagues (1989; 1991) would call formal definitions.

Biliteracy

I chose to conduct this study in a dual language program because of my interest in bilingualism and biliteracy, and because I wanted to begin to fill the gaping hole in research on academic language learning in Spanish for native Spanish-speaking children. There is a small but growing research base on children learning to read in a second language. Likewise, some work has been done on bilingual children learning to read in two languages simultaneously. The contribution that this dissertation makes to these areas of research is the role of instruction in facilitating academic language learning, and consequently reading proficiency.

Additionally, a major question in the field of biliteracy at the current time is whether there is such a thing as bilingual proficiency, as distinct from proficiency in two languages separately (Escamilla, 2010). My findings with regards to the consistency of at least some language functions and purposes for using language between Spanish and English at this study site suggest that emergent bilinguals may in fact have the potential to develop a unique reservoir of knowledge and strategies that are not available to monolinguals. This bilingual proficiency may lead to true biliteracy if teachers are ultimately able to provide learning experiences that foster cross language transfer and the application of functions and strategies throughout the school day and over the entire school year.

Directions for Future Research

The findings and implications I presented in the area of literacy education suggest key directions for future research.

First, I took a functional approach to academic language learning and instruction, theorizing academic language as having specific social and cognitive purposes. I have given several reasons for this approach, and contend that it is a useful way to study oral academic language instruction. To that extent, this dissertation makes several notable contributions to the field of second language research. However, what this dissertation is unable to do on its own is to establish whether the functional approach I have taken is a productive way to study literacy beyond oral language. Others have taken such an approach in empirical investigations of formal and informal definitions (Carlisle et al., 1999; Ordoñez et al., 2002; C. E. Snow et al., 1991), but to my knowledge there are no studies of other functions nor of their direct correlations to literacy outcomes. A major

area for future research, then, is to clearly establish what, if any, role functional approaches to studying academic language can contribute to research on reading.

If the first area of research is fruitful, then a logical second area worthy of investigation is classroom-based research in primary dual language classrooms that specifically identifies the academic language functions that are salient in different content areas. Within such research, attention to the link between oral language and reading and writing is also critical. The present study only scratches the surface of possible oral to writing connections, and does not attend to reading outcomes at all. However, it can serve as a basis for further research that also springs from a functional perspective. For example, future studies may look beyond the three primary functions I used as illustrative examples in this dissertation. They should also examine how readily academic language instruction helps students generalize beyond specific functions and therefore potentially influences reading achievement and academic writing ability.

Study Limitations

As is the case with all studies, the research presented in this dissertation had limitations that need to be considered alongside its findings and implications. The nature of qualitative case studies is such that their findings cannot be assumed to generalize to all (or even most) other contexts. This was certainly true in this study in part due to the unique characteristics of the dual language program at Hurley Heights International School. At the time that data collection was conducted, the dual language program was only in its second year of implementation. Instruction within the program may not be characteristic of more established programs, where there may be more experienced dual language teachers or greater schoolwide knowledge about language development.

This same limitation could extend to the teachers who participated in the study. They were all experienced educators, but had different professional backgrounds that may or may not be representative of primary teachers in other dual language programs. Obviously, teachers in schools around the country have different levels of knowledge and experience and I have been able to provide only a snapshot of three teachers in one program.

A third limitation of this work was the differential amounts of time I spent observing each teacher's instruction. My original study design called for me to observe two units in the Spanish classroom along with the two English units I observed, but this was logistically unfeasible, so I have less Spanish data than I do English data. Additionally, because of the nature of the English units I observed I spent far more time in Mr. Riley's class than I did in Ms. Cortez's. The inquiry-based science unit was considerably longer and more involved than the Everyday Math unit, which is part of a spiraling curriculum and therefore included some activities that were not directly related to the geometry focus of the unit. As a result of discrepancies in the amount of data I have for each teacher, I have tried to be measured in any comparisons I have made about teacher practice.

A final significant limitation of this study is that I did not specifically account for student uptake of academic language instruction nor analyze their use of oral language beyond their instructional interactions with teachers. I provided examples of student talk or written work throughout the dissertation to support my claims about instruction and resource use, but an in depth analysis of student data was beyond the scope of the study.

I made the decision to exclude such data with the full knowledge that its presence may have enriched this study.

Even taking these limitations into account, my findings strongly indicate that there is an urgent need for more classroom-based research in DL and mainstream primary classrooms that investigates how the findings I presented here are (or are not) applicable to other primary classrooms and dual language programs around the country. This dissertation clearly leaves many questions unanswered, but it has opened to door for a plethora of other studies that can ultimately help educators provide better academic language instruction for Spanish-speaking children in American public schools.

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Appendix A

OBSERVATION PROTOCOL FOR INSTRUCTION

Participation Structures

How are students organized for learning (whole class, small groups, individually)?

If whole class, does the teacher engage students in extended conversation? What instructional moves does he/she make in order to do so?

If grouped, by what criteria? Are the groups homogenous or heterogeneous? Is there evidence that the teacher grouped students mindfully?

Are students engaged in cooperative learning? If so, do they have a shared goal that requires the active oral participation of all members?

Does the participation structure provide opportunities for frequent, meaningful oral language use?

Does the participation structure enable ELL students to practice their oral academic language?

Does the teacher scaffold language use by questioning? Clarifying? Restating?

How does the teacher press students to produce more, and more articulate oral language?

If engaged in cooperative learning or small group work, do children scaffold oral academic language for other students? If so, how? By questioning? Clarifying? Restating?

Classroom look-fors:

- *mindful grouping*
- *evidence of group norms around academic language use*
- *teacher-student interactions*
- *amount of student vs. teacher talk*
- *academic language use in various participation structures*

Nature of Academic Tasks

Are the academic tasks appropriately cognitively challenging? Does the teacher provide students with clear goals as well as the linguistic tools to complete the task?

Are the language demands of the task mediated by the teacher? In what ways? (e.g., modeling, demonstration, progression from simple to complex language, pairing kids, etc.)

Are students required to use oral academic language to process complex concepts? In what ways?

Are the academic and linguistic tasks clearly integrated into the broader unit? Do they build on knowledge learned in previous lessons within the unit?

What language and material resources are available to students during the class?

Does the teacher allow students to demonstrate their understanding in various oral ways? How does he/she scaffold students to increase the sophistication of their responses (e.g. short answer, extended answer)?

What do students need to be able to do to successfully complete the academic and linguistic tasks? Are they able to do so? Why or why not?

Classroom look-fors:

- *Frequent checks for understanding*
- *Appropriately challenging tasks*
- *Appropriately simplified language use by the teacher*
- *Appropriately complex language use by the teacher*
- *Relationship between content and language demands of the tasks*

Language Development

What opportunities exist for language development (e.g. specific vocabulary, scaffolding by the teacher, materials, etc.)?

(How) does the teacher model appropriate academic language? Are there opportunities for kids to use academic language to meet the content goals of the task?

(How) do the teacher make academic language and grammatical structures accessible to students?

Does the teacher pay explicit attention to the academic language needs of students? In what ways?

Does the teacher guide students as they practice using academic language? In what ways?

Does the teacher use language purposefully in the service of meeting content goals?

Are content and language goals pursued simultaneously? How do you know?

Classroom look-fors:

- *Teacher and student modeling of academic language*
- *Visual language support, such as sentence prompts and word walls*

- *Teacher scaffolding of academic language*
- *Amount and nature of student academic language use*

Appendix B

TEACHER INITIAL INTERVIEW PROTOCOL

As I explained during the consent process, I am not here to evaluate your instruction; I am here to learn from you. Particularly, I want to learn more about your instruction around oral academic language and the resources you have available to help you in your work with Spanish-speaking children. I have a series of specific questions to ask you. But maybe you can just start by telling me a little about your role here at the school...

1. Background Information

- How long have you been a teacher at this school?
- Do you have other experience working in dual language programs?
- How many Spanish-speaking ELL students do you have in your class this year?
- What other experience do you have working with Spanish-speaking children?

2. Academic Language Instruction

- What do you know about academic language development in young ELL children?
 - How would you define “academic language”?
 - How did you learn what you know? (probe for: colleagues, PD, books, etc.)
 - Can you tell me about any professional development or trainings around this issue that you have attended in the last 12 months?
 - How has participation in these activities influenced what you do? What have you taken away that’s been useful?
 - Are there things you still wonder about?
 - How do you think you might find answers to your lingering questions? (probe for: colleagues, PD, books, etc.)
- How confident do you feel facilitating academic language development with Spanish-speaking students in your classroom?
 - What has made you feel confident (or not)?
 - What do you wish you were better prepared to do in working with those students?
 - What would help you feel better prepared?
- Can you give some specific examples of instructional practices/strategies you have learned to support oral academic language development in your Spanish-speaking students?
 - Where/from whom did you learn these practices or strategies?
 - Have you used these strategies? Why or why not? How often and for what purposes?
 - How well do you think these strategies have worked for your students?
 - Where do you see gaps in your instruction for these children in terms of academic language development?

- Within your school, who leads the effort to support the academic language development of Spanish-speaking students in first grade?
 - How do you and other teachers participate in this process?
 - What resources do you have available to you because of this school support?

- Within your district, who leads efforts to support you as you develop academic language development in the Spanish-speaking students you work with?
 - How do you and other teachers access this support?
 - What resources do you have available to you because of this district support?

3. Professional Community

- In what ways and how often do you communicate with other teachers in your team about Spanish-speaking students and their academic language development?
 - Do parents or community members provide support for you in this regard? In what ways?

Is there anything else that I didn't ask that you think is important for me to understand about this topic?