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Academic Language Self-Reflection and Coaching Training of Pre-service Special Education

Teachers in the Context of Content Area Writing Instruction

A dissertation submitted in partial satisfaction of the requirements for the degree of Doctor of

Philosophy in Special Education

by

Anna Valentinovna Osipova

2015

ABSTRACT OF THE DISSERTATION

Academic Language Self-Reflection and Coaching Training of Pre-service Special Education

Teachers in the Context of Content Area Writing Instruction

by

Anna Valentinovna Osipova

Doctor of Philosophy in Special Education

University of California, Los Angeles, 2015

Professor Alison L. Bailey, Co-chair

Professor Diane Haager, Co-chair

The present study investigated the impact of an ongoing and contextualized professional

development (PD) model on the quality of academic language instruction delivered by pre-

service special educators to early adolescent English Language Learners (ELLs) at risk for

academic failure. The study investigated 1) whether a PD model combining coaching and video

self-reflection has a more powerful impact on improving the quality of academic language

instruction than PD models that implement coaching or video self-reflection separately; and 2)

how the changes in quality of academic language instruction in turn influence ELL students' oral

and written academic language. Using single subject design, the study examined the teacher'
quality of academic language instruction and students' use of oral and written academic language
at word, sentence, and discourse levels. Qualitative analyses of lessons' transcripts identified the
patterns in teachers' instruction and students' use and structure of academic language in oral and
written responses. Results indicated that coaching and video self-reflection interventions when
implemented separately have a potential for improving instructional quality. The lessons in the
combined intervention condition revealed higher and more stable instructional quality scores.
Most importantly, teachers initially resistant to coaching or video- self-reflection demonstrated a
positive change in their instruction. Qualitative analysis revealed changes specific to each
condition within the teachers' academic language instruction and students' oral and written
responses. Throughout the study, teachers increased attention to the multi-tiered nature of
academic language and demonstrated strategic approach to lesson planning. Teacher-student
interactions revealed a qualitative shift from authoritative to more dialogic style in intervention
conditions. Focus ELL students' oral responses increased in length and complexity of word and
sentence structure. Furthermore, teachers' questions and students' responses exhibited a
qualitative shift towards a wider arrange of increasingly more complex higher order thinking
skills in the combined intervention condition (Bloom & Krathwahl, 1956). Students' essays
improved in academic language use and structure at word, sentence and discourse levels. The
combined intervention resulted in the highest quality of students' written samples. These results
have implications for teacher training programs and for instructional approaches in teaching
early adolescent ELL students at risk for academic failure.

The dissertation of Anna Valentinovna Osipova is approved.

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SELECTED MANUSCRIPTS

Chen, D., Klein, M. D., & Osipova, A. V. (2012). Two is better than one! In defense of home language maintenance and bilingualism for young children with disabilities. In R.M. Santos, G. A. Cheatham, & L. Duran (Eds.),Supporting Young Children who are Dual Language Learners with or at-risk for Disabilities (Young Exceptional Children Monograph Series No. 14), (p. 133-147). Missoula, MT: The Division of Early Childhood of the Council for Exceptional Children.

Osipova, A., Prichard, B., Boardman, A., Kiely, M.T., and Carroll, P. (2011). Refocusing the Lens: Enhancing Elementary Special Education Reading Instruction through Self-Evaluation. *Learning Disabilities Research and Practice, 26(3),* 158-171.

CHAPTER I
Introduction

The present study aimed to address two major needs in the U.S. educational system: the need to enhance teacher preparation and the need to improve student achievement. Teacher attrition remains a critical issue within the U.S. educational system, with 30-50% of new teachers leaving within the first five years of practice (Bonich, Merlina & Porter, 2012; Ingersoll, 2003; Heitin, 2012). Beginning special educators represent a particularly vulnerable stratum of the new teacher population (Ingersoll, 2001; Prather-Jones, 2011). One of the central factors contributing to attrition is these teachers' lack of preparation to face specific demands of the special education profession (Billingsley, 2004). Traditional "one-shot" professional development (PD) workshops do not provide sufficient depth (Garet, Porter, Desimone, Birman, & Yoon, 2001) and lasting results (Urbach et al., 2013), thus constituting the need for on an ongoing contextualized PD. Among the ongoing PD models, coaching and self-reflection have been shown to demonstrate positive and promising results with significant effect sizes. For example, a study by Teemant, Wink, and Tyra (2011) reported high effect sizes of partial eta-squared of 0.8 for improvement in instructional literacy conversation for general education teachers who participated in seven coaching sessions. Similarly, a study by Baylor (2002) conducted with pre-service general education teachers reported .8 effect sizes for self-reflection as a method of raising teachers' metacognition about their instructional practices. Video self-reflection has been recognized as a powerful tool as it allows the teachers to analyze the key points of the lesson without relying solely on memory, without selectivity or compromising inaccuracy. Several studies focusing on the role of video self-reflection with pre-service teachers have shown positive results (Kong, Shroff, & Hung, 2009; Rosaen, Lundeberg, Cooper, Fritzen, & Terpstra,

2008). However, the majority of studies are carried out with general educators, and in special education the video reflection practice is a minimally explored area.

For decades, sources of ongoing support were virtually unavailable to special education teachers. However such support would help in facing the daily demands of high quality literacy and content area instruction, as well as the highly diverse needs of students in their classrooms (Barmby, 2006; Ingersoll, 2003; Knight, 2007). Within the last five years, research in the field of special education has begun to focus efforts on developing effective PD models for special educators that added reflection (and video self-reflection) and coaching components to the delivery of traditional PD content, and the results indicate that such contextualized and personalized PD can improve and diversify teachers' instruction, enhance their learning trajectory, boost confidence in their instructional approaches, and ultimately lead to meaningful sustainability of research-based practices (Dingle, Brownell, Leko, Boardman, & Haager, 2011; Osipova, Prichard, Boardman, Kiely, & Carroll, 2011).

Additional challenges faced by the teachers are constituted by high numbers of students at risk for academic failure, especially in the areas of literacy, and content literacy in particular. High academic expectations are in stark contrast with overall low literacy skills demonstrated by students in upper elementary, middle and high school. According to the National Center for the Educational Statistics, in 2013 only 35% of 4th graders, 36% of 8th graders and 38% of 12th graders performed at or above Proficient level in reading (Kena et al., 2014). Transition from elementary to middle school is a particularly vulnerable period in students' academic careers (Forgan & Vaughn, 2000). The "fourth grade slump" is characterized by steep increase in difficulty of academic materials that the students are expected to read and deceleration in students' reading skills (Chall & Jacobs, 2003). This results in a high number of students,

especially among early adolescents, being identified as at-risk for academic failure due to their overall literacy and content literacy struggles.

An additional crisis is presented by the steadily high numbers of ELL students at risk for academic failure (Roessingh & Douglas, 2012). In 2013, the achievement gap in reading between ELL students and non-ELL students was 38 and 45 points for 4th and 8th graders respectively, on a 500-point scale of the National Assessment of Educational Progress assessment (Kena et al., 2014). Equally alarming is the fact that this achievement gap has remained relatively the same since 1998 (Kena et al., 2014). The persistent trend for underachievement among ELL students is indicative of the lack of training among teachers in providing effective instruction to this population (Aguirre-Muñoz, Park, Amabisca, & Boscardin, 2009; Sullivan, 2011). Inability to effectively help these students overcome academic difficulties often results in calling upon special educators to participate in the prereferral process, consult with general educators and administration and assist with developing interventions (Klingner & Harry, 2006). However, special education teachers often feel equally underprepared to address the needs of this at-risk population and this contributes to further decline in ELL students' achievement even with extra support in special education settings (Sullivan, 2011). Thus, the gaps in teacher preparation are one of the multiple factors that lead to overrepresentation of ELL students in special education classes.

While ELL students at risk demonstrate diverse academic needs, research notes common trends in challenges exhibited by these students, namely processing and producing oral and written academic texts (Abedi et al., 2005; Bailey, 2007). Research identifies a number of factors that contribute to these challenges, such as lack of background and content knowledge (Short & Echevarria, 2004; Cho & Reich, 2008), gaps in vocabulary knowledge (Bailey, 2007;

Carlo et al., 2008), and difficulty with syntactic structures (Bailey, 2007), and particular academic language tasks (i.e., analysis, investigation, etc.) (Anstrom et al., 2010; Berber-Jiménez, Montelongo, Hernandez, Herter, & Hosking, 2008; Bailey, 2007; Risko, Walker-Dalhouse, Bridges, & Wilson, 2011). While in the last decade reading instruction for ELL students received a heightened attention to research, policy and practice (Abedi & Gándara, 2006; Carlisle, 2007; Lesaux, Rupp, & Siegel, 2007), other domains that require higher level cognitive skills, such as oral language development (including vocabulary development, academic discourse processing and construction), and written expression require further exploration.

The construct of academic language appears to hold the potential of bridging the domains of students' oral and written expression. Academic language is defined in this study as language that all students, including ELL students, encounter in academic settings in oral and written modalities (e.g., Bailey, 2007). It is used by teachers, students, and all other participants of the academic environment and found in the materials used for instruction and learning. Academic language is the medium through which students in school acquire, use, and demonstrate their knowledge (Bailey & Heritage, 2008). The multilevel structure of academic language with its word, sentence and discourse levels (Bailey & Butler, 2007) addresses students' needs in vocabulary, syntax/grammar and overall text structure, all the areas that present challenges to ELL students. Research of the last decade links academic language knowledge demonstrated in students' oral and written expression to greater academic success (Bailey, 2010a; Francis, Rivera, Lesaux, Kieffer, & Rivera, 2006; Short & Fitzsimmons, 2007). Interventions focusing on ELL students' academic language support and development hold a promise to reverse the resistant underachievement trend for this population. Another unique characteristic of academic

language is the interaction it establishes between the teacher- and student-talk. It is a unique component of the classroom environment that is co-created by students and teachers. Therefore, interventions focusing on academic language need to engage both students and teachers in targeted training while taking into consideration the interdependence of their academic language use. Research studies of the last decade have documented the need for explicit instruction of academic language as well as further investigation of teacher talk in content area classes and its impact on students' (particularly ELL students') learning. Another area identified for further research is enhancing teacher preparation with the sets of skills that are key for teaching content area specific aspects of academic language, as well as increasing teachers' awareness of their instructional talk that is often "opaque" and non-specific, and of particular demands of the specific academic areas that they teach (Ernst-Slavit & Mason, 2011). Furthermore, it is important to attend to teachers' use and students' comprehension of classroom instruction at word, sentence and discourse level of academic language in specific academic disciplines (Bailey, 2010; 2012).

The present study brought together the latest research findings on teacher- and student use of academic language within the context of the pre-service special education credential teacher training. The intervention combined coaching and video self-reflection as effective methods of teacher training with the focus on academic language use and instruction. The study explored how supporting beginning teachers in their use of academic language affects their classroom interactions with students, students' small group discussions and written work. It aimed to examine whether improvement in teacher participants' academic language instruction manifested in increased teacher use of academic language and its enhanced structure would lead

to improvement in early adolescent ELL students' use and structure of academic language and, ultimately, improvement in these students' oral and written language.

In the context of the educational system's crisis in the areas of teacher preparation and ELL students' academic achievement, the study responded to the need for research that supports both populations and is sensitive to their ongoing and evolving needs through an effective model of professional development. Such professional development is possible through intensive participatory models of teacher training, such as those that utilize coaching and video self-reflection. Implementation of an intensive professional development early in the career of special education teachers aims to give them the confidence and tools that they can employ when faced with the challenges of their profession. The present exploratory experimental study engaged its teacher participants in three types of ongoing collaborative professional development training: coaching, video self-reflection, and a combined model that put together coaching and video self-reflection. All three types of training allowed the teacher participants to experience the benefits and challenges of each model and to self-assess the quality of their academic language instruction, use, and structure in each condition, thus giving them a means of self-evaluation and heightening their awareness of their own teacher-talk. Additionally, the teacher participants were made aware of the impact of their instructional use of academic language at word, sentence and discourse level on students' oral and written responses.

Chapter II
Literature Review

The following chapter provides an overview of the research literature that served as the foundation for the development of the study. First, the state of the field of education along with the challenges faced by the two focus populations (beginning special educators and ELL students at risk for academic failure) are described to establish their needs that were targeted by the study's intervention. Next, academic language is defined, and the critical role of explicit academic language instruction for enhanced teaching and successful ELL students' learning is discussed. Further, professional development models for training special education teachers are reviewed, and the role that coaching and video self-reflection play in raising teachers' awareness of teacher-student interactions and the effects that their instruction has on students' learning is highlighted. Finally, the theoretical framework, conceptual model and the theory of action that tie together all the key constructs within the study are presented.

The Needs of Pre-Service and Beginning Special Educators

Statistics of the last decade indicate very high dropout rates among beginning teachers: 11 years ago, the National Commission on Teaching and America's Future (2003) indicated that teacher attrition rates grow faster than the supply of teachers. This alarming trend continues. Beginning teachers constitute the group of greatest concern: 30 to 50% of new teachers leave the field within their first five years (Bonich et al., 2012; Ingersoll, 2003; Heitin, 2012). Within the teacher population, as shown by the study by Ingersoll (2001) that analyzed the data from the Schools and Staffing Survey and the Teacher Followup Survey carried by the National Center for Education Statistics, special educators are recognized as one of the most vulnerable categories of teachers who are more likely to leave the profession due to stress, lack of preparation and dissatisfaction with the profession. These professionals not only face the stressors that are typical

for the first years of teaching carrier (time and behavior management, lesson planning, navigating the school structure, etc.), but also the additional challenges that are idiosyncratic to their specialization. These include: working with very diverse populations of students in a range of contexts from inclusive classrooms to self-contained programs, collaborating with numerous professionals (i.e., fellow general educators, related service providers, and paraprofessionals), and meeting the needs of their students in core and content area subjects while aiming to meet the high educational standards.

Within the current climate of high degree of accountability for student progress and success, beginning special educators face extremely high levels of stress caused by insufficient preparation in specific areas of special education and lack of ongoing support in numerous areas specific to their profession, including IEP paperwork, getting adjusted to school culture, and effective instructional strategies (Billingsley, Israel, & Smith, 2011; Martinussen, Tannock, & Chaban, 2011). Despite the intricate network of collaboration that is critical for their profession, special education teachers frequently report lack of collegial interactions: within the public schools' faculties, special educators often form the least numerous departments and feel isolated from their general education colleagues (Schlichte, Yssel, & Merbler, 2005). In the context of pull out models, special education teachers often run curricula that are different from their general education counterparts and service their students in the segregated settings on the school campuses. In the context of inclusion, special educators often report being perceived as support personnel and not as experts who are colleagues to general educators; many special educators report a lower social status (Fish & Stephens, 2010; Kennedy & Ihle, 2012). This physical and psychological remoteness of special educators within the school faculty contributes to a lack of collegial interactions between the general education teachers and their special education peers.

Given this isolated status, it is important for credential programs to equip beginning special educators with self-reflection and self-evaluation tools that will allow them to assess their instruction and thus prepare them for the everyday challenges of the profession.

Another challenge reported by many special educators is a lack of ongoing professional training, especially the kind that is tailored to teachers' individual needs as well as those of their students and curricular demands (Kaufman & Ring, 2011). Research of the last decade that focused on professional development models indicates the ineffectiveness of training in the form of lectures that does not offer continuous support and is generally decontextualized (Klingner, 2004; Penlington, 2008). In contrast to traditional approaches, studies emphasize the importance of teacher inquiry and context-based discussions as components of effective teacher training (Dall'Alba & Sandberg, 2006; Valli, 1997). Existing research indicates that traditional lecture-like forms of professional development do not lead to teacher change or sustainability of effective instructional practices (Klingner, 2004). Given the diversity of teaching contexts and the individualized nature of specific responsibilities held by special educators, their professional training must be a highly individualized sphere of education that needs be tailored to the specialized needs of these professionals.

Special education instructional contexts present beginning special educators with additional complex levels of challenge. Serving as case carriers for students with disabilities, special educators work as inclusion specialists and content area instructors and need to comply with demands for highly qualified instruction and hold their students to rigorous academic standards (No Child Left Behind, 2001). Increasing number of special education teachers work in inclusive settings (U.S. Department of Education, 2009), which requires that they understand developmental trajectories and the academic demands faced by *all* students, so as to be able to

support them alongside with their general education colleagues. Within the context of an inclusive classroom, special educators work with students of very different profiles. Among them are typically developing students who benefit from strategy instruction, struggling students are at risk for academic failure, who are not identified as students with special needs, students with disabilities who require differentiated methods of instruction due to the challenges rooted in the nature of their disabilities, and students struggling with access to the curriculum due to their insufficient knowledge of English.

The latter population is of a particular interest to this study. The numbers of ELL students continue to grow rapidly. In the 2010-2011 school year, 9.8% of the U.S. school-age population (4.69 million K-12 students) were ELL students receiving English language support services in public schools (NCES, 2013).   Additionally, with the backdrop of the overall literacy underachievement of U.S. students, ELL students are showing even lower achievement scores, persistently scoring lower than their English-only peers. In 2008-2009 academic year, ELL students were one of the at-risk subgroups who did not make adequate yearly progress across the nation (Lopes-Murphy, 2012). In 2013, achievement gap in reading between ELL and non ELL 4th and 8th graders was 38 and 45 points respectively, on a 500 point scale of National Assessment of Educational Progress assessment (Kena et al., 2014). Research identifies the lack of teacher training in working with ELL students and inadequacy of curriculum and assessment approaches as major factors contributing to persistency of this underachievement trend (Brown & Doolittle, 2008; August & Shanahan, 2006; Gil & Woodruff, 2011). This necessitates that teacher preparation programs include training specific to the needs of these students. Studies indicate that procedures used in schools for identification and support of struggling learners often call on special education teachers to facilitate ELL instruction and collaborate with student

support teams (Shealey, McHatton, & Farmer, 2009). Meanwhile, for decades, education training for teachers exhibits paucity of programs that combine courses in Teaching English as a Second Language (TESOL) with special education (Reeves, 2006). Thus, just like their general education counterparts, special educators are not always prepared to serve ELL students, as they lack the necessary preparation for instruction and assessment of this population. Due to inadequate support and imperfect methods of assessment, research recognizes a growing number of ELL students in special education classrooms (August & Shanahan, 2008; Baca & Cervantes, 2004; Sullivan, 2011). Research documents the difficulties educators have in separating learning difficulties stemming from the lack of language development and those caused by the underlying presence of a learning disability or a language related disorder, especially for students who are at the lower levels of English proficiency (Abedi, 2006). Studies identify the issues of language development, literacy development and academic language growth as the core problems that teachers need to address in order to support ELL students at risk for academic failure (Linan-Thompson, Vaughn, Prater, & Cirino, 2006; Moore & Schleppegrell, 2014) . Working with ELL students requires that teachers are well-versed in support and instructional strategies that take into account the developing language abilities of the ELL students. ELL students who have been diagnosed as having a learning disability and a language disorder require that special education teachers are prepared to serve their needs skillfully supporting both English development and academic progress. Additionally, ELL support in inclusive and special education settings necessitates integration of rigorous content area instruction and ongoing high quality literacy instruction (Kennedy & Ihle, 2012). Therefore, pre-service training of special educators should include specific approaches for working with diverse populations of students along the continuum of services from general education support to instruction in special education settings

(Hamayan, Marler, Sanchez-Lopez, & Damico, 2013) and teaching methods that promote careful analysis of their language and literacy development, strategy instruction, and formative assessment that monitors educational progress.

The review of the challenges faced by the beginning special educators and their students outlines the characteristics of professional development and training that can better prepare pre-service special educators for their difficult but rewarding profession. Figure 1 summarizes these challenges and aligns them with potential characteristics of an all-encompassing model of professional development.

Challenges Faced by the Beginning Special Education Teachers	Directions and Characteristics of Professional Development (PD) that could address
Insufficient preparation for specific areas of special education (i.e., IEP paperwork) (Billingsley, Israel, & Smith, 2011).	Special Education-specific training by the district of employment
Insufficient preparation for effective strategy instruction (Martinussen, Tannock, & Chaban, 2011)	PD with a focus on strategy instruction
Lack of ongoing training (Knight, 2007)	Ongoing models of PD
Lack of collegial interactions, feeling of isolation (Schlichte, Yssel, & Merbler, 2005)	Collegial ongoing models of PD involving
Perceived low social status within school social hierarchy (Fish & Stephens, 2010; Kennedy & Ihle, 2012)	PD that focuses on joint special education and general education training or leadership training to foster a collaborative school climate
Demands for high quality of instruction and implementation of research-based practices (NCLB, 2001)	PD with a focus on effective, high quality instruction
Demands for high quality of literacy instruction and implementation of research-based practices (NCLB, 2001; Kennedy & Ihle, 2012)	PD with a focus on high quality research based literacy instruction
Demands for content area support and instruction and implementation of research-based practices (Kennedy & Ihle, 2012)	PD with a focus on high quality research based content area instruction
Meeting the needs of diverse populations of students (Kaufman & Ring, 2011)	PD with a focus on needs of diverse students
Meeting the needs of increasing numbers of ELLs Baca & Cervantes, 2004; Sullivan, 2011)	PD with a focus on needs of ELLs
Insufficient academic preparation of students,	PD with a focus on strengthening the literacy

especially early adolescents (Blair, Rupley, & Nichols, 2007; Chall, 1996)	and content area skills for early adolescents at risk

Figure 1. Challenges faced by beginning special education teachers and possible directions and characteristics of the professional development that could address these challenges.

Thus, a powerful professional development model for pre-service special education teachers working with students with mild/moderate disabilities (primarily LDs) will have the following characteristics: 1) it will be ongoing and focus on teachers' individualized needs; 2) it will involve collegial interaction, 3) promote the sense of acquiring expertise among novice special education instructors, and 4) it will include a specific research based strategy in the areas of both literacy and content area instruction of diverse learners, including ELL students. This last point is particularly critical, since the discussion of teachers' needs and effective professional development is incomplete without a discussion of the needs of their students, as both groups are very much interdependent and continuously influence each other.

Academic Needs of Early Adolescent Students

Early adolescents can be defined as youth 10-14 years of age undergoing rapid growth and physical and psychological development and changes (U.S.Department of Education, 2005). While this section examines the challenges faced by this population in detail, Figure 2 presents a graphic representation of the academic demands that are presented to these students within the educational system, while comparing and contrasting the needs of all students with the needs of struggling ELL students.

Figure 2.
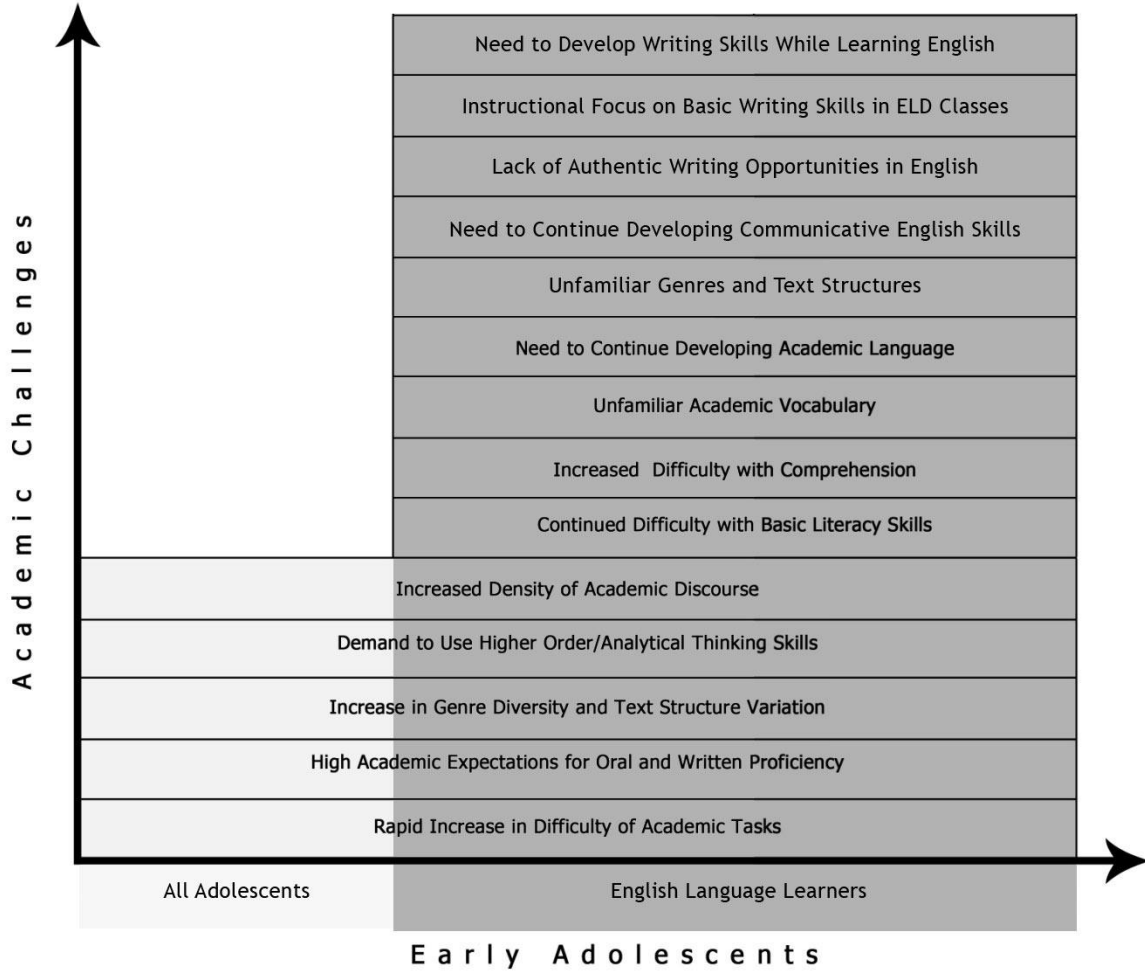
Figure 2. Academic challenges faced by all early adolescents and adolescent ELLs in particular.
See Appendix A for the literature upon which this figure is based.

Figure 2 presents a schematic of the academic challenges faced by adolescents, with an

emphasis on challenges specific to early adolescent ELL students. These challenges are

discussed in the reviewed literature.

School demands for all early adolescent students are characterized by a rapid increase in

the challenge of academic tasks (Fletcher, Lyon, Fuchs, & Barnes, 2007). Research notes that

literacy demands faced by adolescents are far different that those faced by primary grades

students, and the increase in the challenge of academic expectations as can be demonstrated by the academic standards that they are based upon (Bailey et al., 2007). This is particularly true for the tasks of reading and writing, but it also applies to the oral language expectations for these students. For example, the National Social Studies Standards for grades 3-4 and subsequently for grades 5-12 clearly differ in the hierarchy of critical thinking skills: while 3rd-4th grade standards ask students to "describe and compare," "investigate," "draw conclusions," "create historical narratives," "examine and formulate questions," and "interpret data," the 5th-12th grade standards for world history require that students "identify major characteristics," "explain fundamental principles and relationships," "analyze the effects," and compare abstract theoretical concepts, such as "democracy and aristocracy" (National Council for the Social Studies [NCSS], 2010). The rapid increase in task difficulty and academic expectations that has been recognized by research (Chall & Jacobs, 2003; Bailey, 2007) can also be seen in the qualitatively different standards' wording presented above: while early elementary grades focus on the basic academic skills, the upper elementary grades expectations are aligned with middle and high school grades and target higher order skills. Thus, 4th through 6th grades (the period of early adolescence) hold the unique position of a "bridge" between basic and higher order learning skills acquisition within the students' educational journey.

In addition to the rapid increase in cognitive and language tasks, research reports a rapid increase in the density of the classroom academic discourse in general and in content areas in particular (Bailey, 2007; Snow, 2010). Additionally, as students transition into secondary grades the language used in classrooms and in reading materials becomes distinctly different from conversational language (Spycher, 2007). As they move from the elementary grades to middle and high school, students encounter a variety of genres in oral and written language that are

qualitatively different, far more complex, and less practiced than the familiar personal narrative genre that they were used to in elementary school. In this context it is important to note that in order to support and scaffold students' acquisition and processing of the highly analytical and increasingly challenging academic language, it is imperative that their teachers provide clear models of academic discourse, followed by guided independent practice.

The difficulties described above are reflected in the overall low levels of literacy documented in the literature: for more than three decades research and policy have documented an overall crisis of adolescent literacy (Jacobs, 2008). The National Assessment of Educational Progress (NAEP) in 2002 indicated that approximately 25% of eighth and twelfth-graders read below basic levels (Alliance for Excellent Education, 2005, p.1). The same report showed that "69-77 percent of students in 4th, 8th, and 12th grades did not meet writing proficiency goals" (Jacobs, 2008). Seven years later, in 2009, only 33 percent of our nation's fourth graders were achieving at the proficient (25 percent) or advanced (8 percent) levels on the NAEP (Pullen, Tuckwiller, Ashworth, Lovelace, & Cash, 2011). This lack of progress in remediating literacy underachievement in U.S. adolescents is alarming and indicative of an educational crisis. This crisis is further exacerbated by the fact that the literacy demands placed on students who are getting ready to participate in the workforce have become more sophisticated and require complex communication skills (Levy & Murnane, 2004). In this context, the vast majority of modern adolescents appears highly unprepared in the areas of literacy and content area literacy, and requires intensive training and support in literacy activities. However, while reading interventions received more attention in research and teacher training within the last decade, writing instruction did not get comparable attention (Graham & Perin, 2007). This is why

research exploring strategies and techniques to support adolescent writing, as well as research on supporting teachers in writing instruction are necessary and timely.

Additional Academic Needs of Early Adolescent ELL Students

For early adolescents who are also ELLs, all of the above challenges hold true. However, the literacy crisis within this population is even more drastic than for overall adolescent population. According to NAEP (2009), only 3% of eighth-grade ELL students scored within the proficiency range. In addition to academic challenges that prevail for all adolescents, ELL students face difficulties presented by the fact that these students are "less than proficient in English" and are still actively acquiring this language (Rivera, 1994; Gersten & Baker, 2000).

The term "ELLs" is intentionally broad and includes a wide spectrum of students whose conversational English is either developing or adequate, but who struggle with the abstract language of academic disciplines (Rivera, 1994). The challenge of academic language acquisition is exacerbated by the fact that the importance of the development of communicational skills is overemphasized in discussions of effective teaching practices (Gersten & Baker, 2000). Meanwhile, students' use and practice of conversational and particularly academic language is extremely limited. Only 4% of ELL students' school day is spent engaged in student talk, only 2% is spent in discussions of focal lesson content (Arreaga-Mayer & Perdomo-Rivera, 1996), and the length of student responses in class discussions is limited to 1-2 word utterances (Lopez-Reyna, 1996; Perez, 1994; Ruiz, 1995). Among the factors that contribute to difficulties experienced by these students in class discussions are the continued development of communicative skills, and academic communicative skills in particular (Bailey, 2012), and challenges with acquisition and use of academic language, which preclude ELL students from spontaneous and active participation in conversations with peers and class

discussions (Lee & Buxton, 2013; Goldenberg, 2008). The gaps in overall vocabulary and particularly academic vocabulary documented in ELL students (Carlo et al., 2008) add to the challenge of comprehension, participation in discussions, and oral expression of these adolescents. At the same time, practices that have been traditionally shown to promote student communication and interaction, such as inquiry-based learning that requires students to explore, analyze, investigate often proves to be difficult for ELL students, unless these peer interactions are structured, explicit and scaffolded by trained peers or teachers (Echevarria, Richards-Tutor, Chinn, & Ratleff, 2011; Francis, 2006; Zwiers, 2005).

Written expression presents an additional challenge for adolescent ELL students due to multiple factors that come into play in this domain, such as the limited vocabulary that is typical for ELLs (Oller & Eillers, 2002; Proctor, Carlo, August, & Snow, 2005), insufficient grammatical structures (Jongjean, Verhoeven, & Siegel, 2007; Shin, 2009), difficulty with the organization of ideas and essay structure (Llosa, Beck, & Zhao, 2011), and trouble with unfamiliar genres and overall text structure (Anstrom et al., 2010; Berber-Jiménez et al., 2008; Risko et al., 2011). Despite the variety of struggles experienced by ELL students and the importance of balanced instruction that would address basic and as well as discourse-level writing needs of this population, the writing instruction that prevails in lessons provided to ELL students tends to focus on basic writing skills, often leaving the issues of genre, style, and rhetoric conventions unaddressed (Aguirre-Munoz, Park, Amabisca, & Boscardin, 2009). Furthermore, research recognizes that ELL students often lack authentic writing experiences (Barletta, Klingner, & Orosco, 2011), which precludes them from practicing writing skills outside of the classroom.

While research has documented written expression of ELL students as an area of particular weakness and poor quality, a few studies have been done to investigate how these students can be supported in their writing (Danzak, 2011; Geva, 2006; Geva & Genesee, 2006). Existing recommendations for instruction of ELL students in the domain of written expression often combine vocabulary instruction with sentence structure instruction. An example of addressing both sub-domains of vocabulary and sentence structure is presented by *sentence frames*, an instructional tool akin to graphic organizers, that is used to develop both vocabulary and sentence structure simultaneously (Donnelly & Roe, 2010). For example, a sentence frame "this argument suggests that…" compels students to create complex sentences and at the same time use two general academic words "argument" and "suggest." Additionally, research has shown that promising results in interventions where students encountered academic vocabulary in different contexts, had to spell it, and examined its morphological structure and syntactic structures in which the words occurred (Carlo et al., 2008). Some other strategies suggested by research include explicit instruction and student self-monitoring of the writing process (Hebe Wong Mei & Storey, 2006; Hartman, 2001). Research also has shown the benefits of revision and peer editing in small groups of dyads (Parsons, 2001; Yarrow & Topping, 2001).

Thus, existing interventions indicate that ELLs benefit from explicit teacher modeling of oral and written language tasks (Gersten & Baker, 2000) and structured peer interactions in which they can practice their academic oral and written skills (Parsons, 2001; Yarrow & Topping, 2001). ELL students' needs and challenges within the present educational scene underscore the timeliness of interventions that pursue a systematic and purposeful increase in the classroom time spent on the development of ELL students' oral and written academic language

through the provision of clear teacher-led models of language use and ample structured practice of student language use.

Positive Aspects of Adolescent Development: A Resource for Academic Language Instruction

Discussion of adolescents' academic profile would have not been complete without a brief mention of cognitive and linguistic strengths that emerge during this period of development. Bailey and Orellana (in press) provide an extensive analysis of aspects of adolescent development in general and the nuances of multilingual students adolescent development. Their review of research departs from the deficit model of adolescence as a period of asymmetric development and provides a balanced view on this developmental period that emphasizes cognitive, linguistic and academic strengths that emerge during adolescence. These include an increase in knowledge and use of pragmatic, syntactic, and semantic aspects of language (Nippold, 1998), increased metalinguistic awareness and ability to manipulate language at the level of word, sentence and text (Ely, 2005, as cited in Bailey & Orellana, in press). Such awareness is essential for mastery of the multi-tiered nature of academic language. Along with increased ability for abstract thinking, adolescents demonstrate heightened abilities for formal reasoning, persuasion and negation (Christie, 2012). These abilities are key to comprehension and use of the multitude of genres characteristic of academic language. Additionally, during adolescence, students begin to better understand and actively use abstractions (Christie, 2012) and figurative language (Tolchinsky, 2004, as cited in Bailey & Orellana, in press). Adolescent students also demonstrate better working memory and information processing (Steinberg, Cauffman, Woolard, Graham, & Banich, 2009). These newly acquired strengths are very useful for the rapid increase of vocabulary and its polysemy of meanings typical for academic language.

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Bailey and Orellana's (in press) input is particularly refreshing in their outlook on multilingual adolescents, a population that includes ELL students. While lots of studies recognize challenges experienced by these students, it is important to note their defining linguistic and cognitive strengths which (if effectively tapped into) can serve as a formidable foundation for their academic success. Conversational and often seen as controversial practices of translanguaging and language brokering not only expand ELL students' linguistic repertoire, but have also been recently shown to have a positive influence on their academic performance (Dorner, Orellana, & Li-Grining, 2007, as cited in Bailey and Orellana, in press). Additionally, knowledge of more than one language heightens these students' metalinguistic ability and ability to compare and contrast two or more language systems (Adesope, Lavin, Thompson, & Ungerleider, 2010, as cited in Bailey and Orellana, in press). Such awareness can be used as a vehicle in drawing parallels or contrasting conversational and academic language features. Furthermore, language brokering and codeswitching ability of ELL students indicate their acute audience awareness (Orellana, 2009). Such awareness can be tapped into during instruction that focuses on the genre conventions within academic language. Understanding of adolescent strengths, including strengths of ELL students, is an important step towards effective instruction because awareness of the students' abilities and their potential can serve as a foundation for further academic development.

Academic Language: The Bridge Between the Domains of Oral and Written Expression

In the context of the above described current needs of struggling early adolescent students, the construct of academic language may hold a solution for improving their literacy in both oral and written language domains. Within this study, academic language is defined following as the forms and functions of language which students encounter and use in academic

settings (Bailey, 2012). Although its roots are often traced back to Cummins's distinction between Basic Interpersonal Communication Skills (BICS) and Cognitive Academic Language Proficiency (CALP) (Cummins, 1980; 2008), academic language is no longer perceived as a part of dichotomous language structure and is currently viewed as a very timely and critical component of instruction and learning. The notion of academic language vs. "social language" dichotomy has recently been replaced by the idea of a linguistic continuum that features predictable structures and features by setting/context (Snow & Ucelli, 2009). This specificity of academic language features by context is critical for understanding of content area specific traits of academic language. Bailey (2007) pointed out that academic language is characterized by variation in frequency of grammatical structures, specialized vocabulary, and infrequent language functions.

Acute attention to this construct can be explained by three factors. First, research shows increasing evidence that academic language competence is key to academic success for diverse populations of learners including ELL students and their peers who are native speakers (Bailey, 2012; Bowers, Fitts, Quirk, & Jung, 2010; Kieffer & Lesaux, 2012; Meltzer & Hamann, 2005). Second, despite the documented benefits of academic language competence for a wide range of students, academic language instruction continues to be under-emphasized in school instruction (Scarcella, 2003; Moore & Scleppegrell, 2014) and in teacher preparation programs (Anstrom et al., 2010; DiCerbo, Anstrom, Baker, & Rivera, 2014). Finally, despite its long and evolving history of existence, the construct of academic language continues to be defined and redefined by scholars from different backgrounds whose difference in perspectives on the construct of language and language development led to co-existence of multiple definitions of academic language (Anstrom et al., 2010; Bailey, 2011).   The paradox of the current disconnect between

promising research findings and lack of practical implementations of these findings makes this construct very appealing for a study that focuses on innovative intervention that could alleviate the current challenges faced by teachers and students.

As a construct that bears educational and theoretical significance, academic language has received a great deal of renewed attention within the last decade, and conceptual works that focus on this construct have taken its definition, as well as the definition of its components, to substantially new levels of detail. However, even within the context of advances in the area of conceptualization, research underscores the continuing variability that surrounds the term "academic language" (Anstrom et al., 2010; Bailey, 2012). This variability of definitions reflects the difference in instructional approaches (i.e., the definition outlines the scope of parameters of academic language that are addressed in instruction). The following section positions the present study within the existing frameworks of academic language research and outlines the theoretical frameworks with which the present investigation was aligned.

One of the major key differences in the operationalizing of academic language is in the breadth of the approach to this construct. The two positions among the researchers who focus on academic language are to see it either as a construct largely lexical in its nature (Brozo & Flynt, 2008; Kinsella, 1997) or as a construct that is broad and multidimensional, as it covers lexical, grammatical, and discourse dimensions of language (e.g., Bailey & Butler, 2007; Bailey, 2007, 2012; Scarcella, 2003).). The latter approach distinguishes *word-level, sentence-level and discourse-level* features of academic language. Bailey (2012) delineates word level features as rules of derivational morphology, polysemous words integrated in context, content-area specific words, and hierarchical relationships between the words. This perspective appears to be more organic than earlier division of academic vocabulary into hierarchy of three tiers consisting of

words that are not strictly academic (tier 1), general academic terms (tier 2), and content specific

vocabulary (tier 3) developed by Beck, McKeown, and Kucan (2002) (as cited in Anstrom et al.,

2010). The present study adheres specifically to the broader, more situational/contextual

conceptualization of academic language suggested by Bailey (2012) because it views academic

language as a continuum rather than hierarchy and as such has important implications for

language development and acquisition trajectories of ELL students. This conceptualization

emphasizes the importance of consideration of academic context (in my study, social studies

lesson). The academic context determines the meanings of words polysemous in nature and

dictates their use. For example, the word "nature" in the expression "nature of conflict" in

social studies context as a slightly different meaning than in everyday speech. This increases the

lexical demands on ELL students. Sentence level features are sentence structures that are

complete, often complex, and frequently multi-clausal. Discourse level features are genre

conventions, sequential adverbs, subordinating conjunctions, as well as predictable text formats

in writing and reading. Bailey also includes in this category rules of participation in the academic

discourse and oral and written text structures that serve specific purposes typical for the content

areas: description, explanation, comparison, etc. (Bailey, 2012, pp.7-8). The present study

follows this multidimensional perspective on academic language. Interventions based on it have

a powerful potential to address many of the needs of the diverse population of struggling

adolescent learners. It also presents a unique framework that addresses both oral and written

language domains. Figure 3 presents the conceptual schematic that illustrating the

multidimentionality of academic language and its position as a link between oral and written

language.

Figure 3.
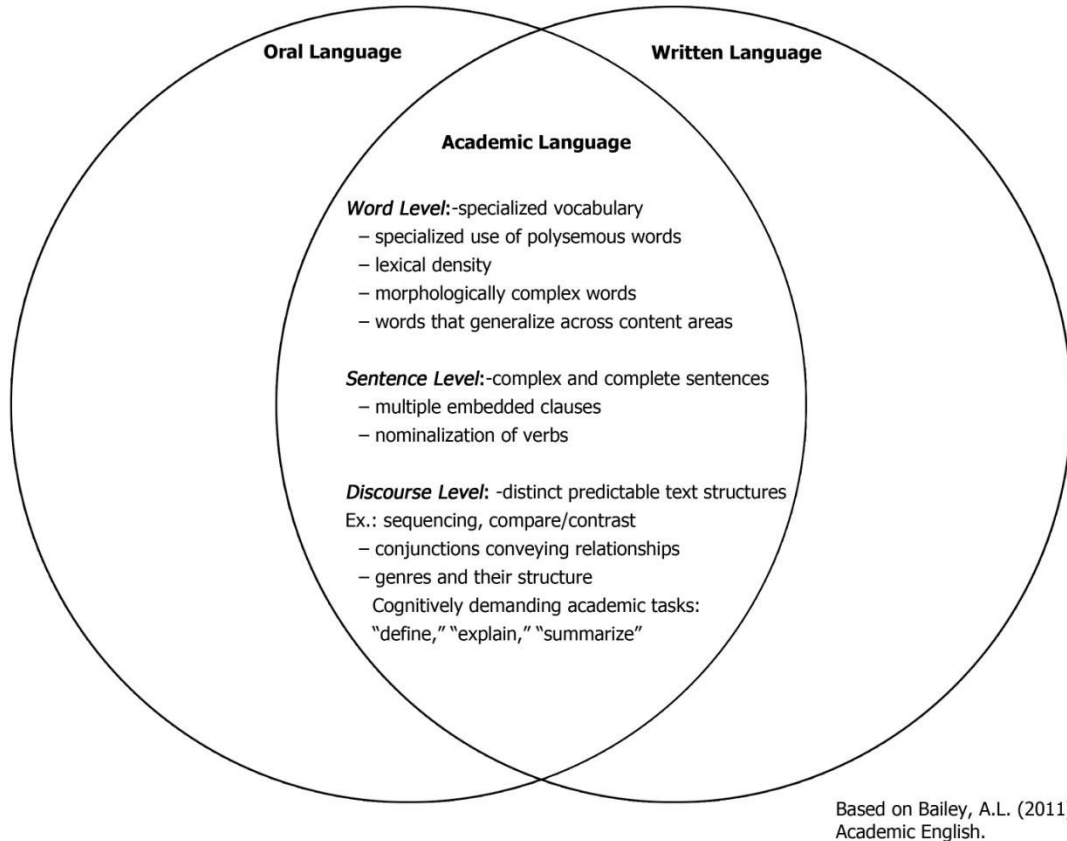
Figure 3. Academic language within the context of oral and written language.

Academic language research can be subdivided into roughly four strands of studies. The first strand of studies examines the instructional approaches for teaching academic language to specific populations, such as ELL students (Danzak, 2011; Shin, 2009), diverse young learners (Bailey, Huang, Osipova & Beauregard, 2010), and adolescents (Richardson Bruna, Vann, & Escudero, 2007; Danzak, 2011; Zwiers, 2005). The second strand of studies focuses on specific areas (subdomains) of academic language, such as vocabulary instruction (Kelley, Lesaux, Kieffer, Faller, 2010; Nagy & Townsend, Lesaux, & Schmitt, 2012), syntax instruction and

morphology instruction (Danzak, 2011) or approaches that combine these subdomains (Kieffer &

Lesaux, 2012). The third strand of studies spotlights subject specific varieties of academic

language and their instruction, including math (Irujo, 2007; Moschkovich, 2002; Schleppegrell,

2007), science (Bailey, Butler, Stevens, & Lord, 2007; Carr, Sexton, & Lagunoff, 2006), and

social studies (Schleppegrell, 2005; Zwiers, 2006). The fourth and the least numerous strand

encompasses the studies that focus on academic language in the context of professional

development (Bowers et al., 2010; Gersten & Baker, 2000; Szpara & Ahmad, 2007; Zwiers,

2007). The findings that are pertinent to the focus of my proposed study by strand are as follows.

Research on teaching academic language to English Language Learners: Why is it

difficult, what does not work and what works. Studies in this strand indicate that the existing

amount and types of academic language instruction/interventions may not be adequate for the

needs of ELL students (Scott, Jamieson-Noel, & Asselin, 2003). Additionally, many of the

interventions that implemented in the mainstream classrooms and target non-ELL students at risk

for low achievement and failure in literacy are not always successful in serving ELL students,

who difficulties are different from non-ELL peers. Some of the distinct nuances in ELL students'

academic skill development include the fact that some ELL students read better than speak, and

speaking and writing skills in ELL students often develop simultaneously and not sequentially as

they do in native speakers (Harper & de Jong, 2004). These idiosyncrasies of learning

trajectories specific for ELL population contribute to the challenges that mastering academic

language presents for ELL students due to its complex and multi-tiered nature in which it

combines cognitive, linguistic, cultural and content area-specific features of discourse (Zwiers,

2006). Thus, mere exposure to academic language (however rich) has been shown insufficient

for its acquisition and mastery, especially for adolescent ELL students in fast paced mainstream

classes where they are expected to comprehend, analyze, and synthesize abstract and complex concepts (Harper & de Jong, 2004). In order to develop academic language proficiency and successfully function in such settings, ELL students must simultaneously process grammatical, morphological, and phonological aspects of the English language (VanPatten, 1993). Therefore, instructional supports developed for scaffolding ELL students' learning must emphasize and make explicit the connections between the forms and functions of language used within the content area (Harper & de Jong, 2004).

Additionally, academic language interactions do not occur naturally between peers within classroom, and research shows that ELL students need a lot of support during cooperative activities (Klingner, Boardman, Eppolito, & Schonewise, 2012) which frequently are/ built upon academic discourse skills that ELL students are still developing (i.e., questioning, disagreeing, presenting an opinion, etc.). Studies also note that at times this lack of academic discourse proficiency precludes ELL students from learning: some ELL students have difficulty perceiving the functions of paraphrasing, citations, and teacher's indirect feedback (i.e., failing to recognize teachers' questions and suggestions as directions) (Harper & de Jong, 2004).

Research has identified a number of teaching approaches and strategies that might be effective for academic language instruction for ELL students. A number of studies focused on raising teachers' understanding of students' bilingual abilities, showing that teachers' knowledge of how their students' native languages contribute to English acquisition and their understanding of cross-linguistic variation at word, phrase, sentence and discourse levels results in more explicit instruction and more successful ELL students' acquisition of academic language (Harper & de Jong, 2004).

Additionally, studies have found positive effects of presenting information to ELL students through multiple modes, including supporting auditory input with visuals (i.e., writing directions on the board, providing models of completed assignments) (Harper & de Jong, 2004). Dunlap and Weisman (2006) stress effectiveness of concrete representations, such as real objects, charts, pictures as scaffolds used for construction of meaning. A study by Zwiers (2006) showed that multi-modal scaffolding for thinking and language (an approach that bolstered the use of graphic organizers) successfully developed cognitive and communication skills in 7-9th grade ELL students. The use of graphic organizers has been shown to be an effective support tool for understanding text structure and development of academic writing in social studies (Tang, 1992).

Research also shows that prefacing lectures with activities that linking new information to students' background knowledge, highlighting key concepts and vocabulary, as well as important questions is facilitates ELL students' academic language acquisition (Harper & de Jong, 2004). At the same time, some of the studies caution against over-simplified instruction that overemphasizes teaching of vocabulary at the cost of instruction of other aspects of academic language for ELL students (Richardson Bruna et al., 2007). Many authors emphasize the importance of integrated language and content area instruction, pointing out that learning occurs through extensive oral and written discourse (Harper & de Jong, 2004).

Focusing on finding methods for assisting ELL students with classroom discourse and small group participation, a few studies have identified that providing frequent structured and teacher supported opportunities for social peer interaction (Frey & Fisher, 2011) is crucial for ELL students' learning. Some of the approaches included reciprocal teaching (Palinscar & Brown, 1984) modified for ELL students (Klingner &Vaughn, 1996; 2000) that includes not

only attention to reading but also to language fortified with lots of modeling and scaffolding on behalf of the teacher has a positive effect on ELL students' academic classroom interactions. Studies also have shown that role playing within the content area facilitates and supports acquisition of academic discourse (Ovando, Combs, & Collier, 2006).

      Oral and written academic language connection. Of a particular interest for this study is the connection between the oral and written academic language for ELL students' academic development. While recognizing the importance of academic language development for all students', and ELL students' in particular, academic success (Bailey, 2012; Ernst-Slavit & Mason, 2011), very few studies have examined the links between oral and written academic language. Research syntheses on the topic, underscore that despite the emphasis given to oral English language development in policy, theory, and practice, the studies focusing on oral academic language in particular are relatively few (Genesee, Lindholm-Leary, Saunders, & Christian, 2005) and focus on very specific narrow aspects such as vocabulary and/or listening comprehension (Goldenberg, 2008). Existing research studies on the subject can be divided into three broad strands: a) studies that identify methods that are beneficial for development of both oral and written modalities of academic language in ELL students; b) studies that treat oral and written academic language as components of four modalities of academic language: reading, writing, listening and speaking; c) studies examining the interdependence of oral and written academic language.

      Within the first category, such methods as peer support and group work (Cole, 2013; Zwiers, 2013) and identifying and modeling linguistic features of content area discourse orally and in writing (Turkan, Di Oliveira, Lee, & Phelps, 2014) are shown to be highly effective for promoting ELL students' oral and written academic language development. The second group of

studies that examined oral and written language within the context of intervention models encompassing all modalities of academic language, reports positive results in specific targeted areas of achievement (i.e., word learning) Within the third group of studies (largely socio-cultural in nature), a few investigations have identified the interconnectedness in growth of oral and written academic language as parts of socially situated classroom discourse (Uccelli, Dobbs, & Scott, 2013). Studies in this category have demonstrated the benefits of activities that target information gaps in written and oral language and engaged students in actual communication (Pica, 2008; Lee, Quinn, & Valdés, 2013). Interestingly, studies in the third group have documented that scaffolded, intensive writing instruction and activities has positive effects on ELL students' oral academic language and overall language development (Williams, 2012). However, the last category of research remains to be less numerous than studies in the other two directions, thus warranting the need for further exploration.

      Research that focuses on specific areas (subdomains) of academic language. A vast number of studies in this strand focus on vocabulary instruction. These studies demonstrate that effective vocabulary instruction includes such strategies as pre-teaching vocabulary, pre-teaching key vocabulary in context, structuring the activities that necessitate the use of the vocabulary being taught, teaching authentic vocabulary and instruction of not only vocabulary meanings but also their use and structures in which they can be used (Irujo, 2007). Additionally, research in this area emphasizes the fact that vocabulary instruction alone is not enough for the successful acquisition of academic language, cautions against it as an overly simplistic approach (Richardson Bruna et al., 2007) and advocates for concurrent instruction of grammatical and discourse structures (Carr et al., 2006; Zwiers, 2009; Schleppegrell, 2005). A report by Anstrom

et al. (2010) points out that research in this domain is lacking studies that would explore effective academic vocabulary instruction and sustainability in school settings.

In order to control for the variability of academic language and discourse structures in various content areas documented in research (Schleppegrell, 2005), the present study focuses on the subdomain of social studies. The choice of this subdomain is due to the following reasons grounded in the nature of social studies academic tasks and in the observed tendencies of content area choice by teacher candidates in the Saturday school where the study took place. First, the preliminary literature review conducted for this proposal seems to have yielded more studies that focus on the academic language within the science domain. The focus on social studies expands the existing knowledge base. Second, within the area of social studies in comparison to the science subdomain there tend to be a lot of writing assignments, as well as oral discussions. Therefore, this area lends itself well to the exploration of links between oral and written language of early adolescent students that my study aims to investigate.

Research on teaching content-area-specific varieties of academic language, particularly focusing on social studies*. Research in this strand emphasizes the difference of content-area specific varieties of academic language. For example, Bailey (2012) points out that science texts often contain narratives of a sequential nature and that the discourse in science classrooms is reflective of the scientific method. This differs from social studies texts, heard, read and written by students because this content area gives particular emphasis to effective arguments, opinions, and comparisons. Predominant academic language functions within the area of social studies include explanation, justification, establishing cause and effect, providing examples and generalizations (DiCerbo et al., 2014). Research in the area of social studies domain links exploration of students' oral use and structure of academic language to their written

products (Shleppegrell, 2005; Verplaetse, 2008; Zwiers, 2006). In this context, the idea of genre

and genre instruction becomes central. Research by Schleppegrell (2005) cataloged language

features specific to different genres (compare and contrast, chronological expository narrative,

etc.) within content areas, such as science, math, and social studies. Other research that focused

on more narrow features of academic language within social studies, identified grammatical

traits typical for this content area, such as historical present and causative structures (Short,

1994). This type of study is particularly helpful for teacher training and can be extended by a

study of professional development that focuses on enhancing teacher awareness of the language

features in the context of genres and instructional strategies that support student use and

understanding of different genres. Such investigation is particularly timely, as some authors

(Anstrom et al., 2010) underscore that teacher preparation practices regarding academic language

are "in their infancy" (p. vii). Research on teacher use, structure and instruction of academic

language presents mostly descriptive studies that document the types of instruction that goes on

in the classrooms (Bowers et al., 2010). A study by Bowers et al. (2010) surveyed 108 fourth and

fifth grade teachers and asked them to note strategies that they use and find effective in their

teaching of academic language to ELL students. The teachers primarily named metacognitive

strategy instruction and direct instruction as effective methods, but only 26% of them reported

student practice as effective strategy. Meanwhile research studies focusing on classroom

strategies conducive to promoting academic language acquisition found that socially supportive

classroom environments (including small group student interaction and peer dyads), a

combination of study skills with content instruction, and strategies that reduce cognitive load

(pre-teaching, graphic organizers) are especially beneficial for a wide spectrum of learners

(Bunch, 2010; Szpara & Ahmad, 2007). In this context, once again a disconnect between

research and practice becomes apparent and this reiterates the need for research studies that would engage teachers in implementing both direct instruction and student collaborative activities and in actively reflecting on the effectiveness of both. The present study further explore teachers' and students' oral interaction as well as students' written samples while promoting active teacher reflection on this experience, thus extending the existing research base.

Professional Development Models

Existing models of professional development (PD) can be divided into two broad categories of traditional "receptive" models and more recent "participatory" models. In receptive models of PD, participants are introduced to expert knowledge through a lecture format with a few interactive activities built into the presentation. Participatory models utilize individualized feedback and the active engagement of the participants of the PD. In these models the trainers and the trainees work collaboratively and engage in the ongoing dialog. These models include mentoring, continuous throughout the academic year professional development, and monitoring of teaching practice (Burkman, 2012). The need for the participatory models became apparent when research studies focusing on PD revealed a frequent inefficiency of the receptive models of PD. Studies have shown that teachers do not always translate knowledge and skills gained from professional development to their classroom instructional practices (Brownell et al., 2006; Kazemi & Hubbard, 2008). Based on these findings, research, policy and practice call for a teacher training reform that will extend "beyond mere support for teachers' acquisition of new skills or knowledge" and provide teachers with opportunities "to reflect critically on their practice and to fashion new knowledge and beliefs about content, pedagogy, and learners" (Darling-Hammond & McLaughlin, 2011, p. 81). Research shows that teachers engaged in participatory models have been shown to gain teaching expertise by applying the knowledge and

skills gained from PD to the context of their classrooms and flexibly changing their teaching

approach, while taking into consideration the specific needs of their students (Smith & Strahan,

2004).

Coaching. The coaching model falls into the category of participatory models. Just as

with the construct of academic language, coaching is a popular term in the current educational

milieu. It is recognized as a very promising strategy for improving student achievement and

school practices (Teemant et al., 2011). It is also approved by policy makers who call for

"relevant coaching" as a strategy for increasing teacher effectiveness (U.S. Department of

Education, 2009, p.9). Coaching implies numerous functions and bears many attributes that

define its domains. Knight (2007) outlines ten of them, including collaborative analysis of data,

provision of resources, mentoring, curriculum support, instructional support, classroom support,

learning facilitation, school leadership, catalyst for change, and ongoing learning.

Within the context of this study, coaching is defined as a school-embedded professional

development model that is based on the ongoing collaborative review of concrete individual

examples of instruction with a focus on specific aspects of student learning with the goal of

improving teaching practices. This definition builds on the conceptual work of Garet and

colleagues (2001) and Zepeda (2008), who have defined the key components within this

definition, such as its ongoing collaborative nature and focus on student benefits. Another

distinguishing characteristic of coaching is its proximity to authentic classroom experiences and

the possibility for individualization and differentiation of support provided to each teacher who

is being coached (Knight, 2007).

Several authors stress the differences between coaching and mentoring, highlighting the

nature of partnership, bi-directionality and parity of coaching and contrasting it with the

hierarchy of expertise in mentoring (Teemant et al., 2011). Knight (2007) outlined the following defining characteristics of coaching: teacher choice in the content and process of learning; respect for difference in perspectives; reflection and action; genuine dialog; and reciprocal learning. Shidler (2009) summarized four components that made coaching effective in her study. These included 1) modeling techniques and instructional practices, 2) focus on specific content, 3) observing teacher practices and 4) consulting for reflection (p.453).

A number of studies focused on the benefits of coaching for teachers and students (Neuman & Cunningham, 2009; Ross, 1992; Shidler, 2009; Teemant et al., 2011). Some of these are particularly relevant as they focus on areas of content area instruction (history), and literacy and language (Neuman & Cunningham, 2009; Ross, 1992; Shidler, 2009). Research in the area of literacy and language indicates that participation in coaching leads to significant improvement in language and literacy practices for teachers (Neuman & Cunningham, 2009; Teemant et al., 2011). These findings are consistent with Shidler's study (2009) that demonstrated improvement in students' alphabet scores for teachers who took part in coaching. These measures were correlated with the time spent in coaching. Ross (1992) examined teacher efficacy and student achievement in history classes for teachers who participated in coaching. He found out that significant improvement in both areas, as well as a boost in confidence in teachers. A study by Teemant et al. (2011) reports particularly high effect sizes of partial eta-squared of .8 and above for improvement in language and literacy, instructional conversation, contextualization and challenging class activities for teachers who participated in seven individual coaching sessions. This existing research demonstrates the effectiveness of coaching as a professional development tool and its statistical power as an intervention.

Ongoing dialog between the professional coaches and the teacher participants often targets teachers' assumptions about their teaching ways and their beliefs, which shape instructional practices (Pajares, 1992). Addressing these can be a powerful vehicle for effective professional development and promoting change in teaching practices. Unveiling teachers' unexamined beliefs about teaching and learning and their thorough examination can bring about change in their actual practice (Guskey, 1986; Pajares, 1992; Richardson, 2003). This strategy fits particularly well with another tool for professional development: self-reflection.

Self-Reflection and Video-Reflection. While some studies have shown that changing teachers' beliefs is difficult (Klingner, 2004), research on the power of self-reflection in education has shown that reflective teachers are better able to recognize problems in their practice, which empowers them to reframe these problems in order to seek solutions (Lotter, Singer, & Godley, 2009). Self-awareness and critical reflection also have proven to be valuable tools for improvement in teaching practice (Ross & Bruce, 2007). As teachers examine and reflect on their teaching practice, they become more aware of ways in which their instruction can change (Collins, Cook-Cottone, Robinson, & Sullivan, 2004). This makes self-reflection suitable for being an organic component of coaching since it also aims to promote teacher identification of areas in their instruction that are in need of change.

In recent years, the use of video-recordings of instructional practice has been shown as promising means of improvement and deepening of teachers' critical reflection (Collins et al., 2004; Fook & Askeland, 2007; Jones & McNamara, 2004). Video-reflection provides teachers with a unique opportunity to analyze their instruction in real time, while having an opportunity to focus on particular moment and being able to rewind and re-live key points within the lesson. Within this, technology provides the teachers with a unique opportunity since relying solely on

memory for self-reflection compromises accuracy, is susceptible to selectivity, and colors the events within the lesson with a personal affect. Several studies focusing on the role of video self-reflection with pre-service teachers have shown positive results (Kong et al., 2009; Rosaen et al., 2008). Within the field of special education the practice of video reflection is a minimally explored area. The research base on self-reflection for pre-service special education teachers is particularly scarce. A longitudinal multistate project *Literacy Learning Cohorts* (LLC) focusing on improving quality of literacy instruction for elementary school special education teachers headed by Brownell, Haager and Klingner (2008-2012) incorporated the self-reflection as a means of special education teacher training. The process of video-reflection utilized a rubric that was titled "guided noticing" (Osipova et al., 2011) allowed the research team to guide teachers' attention to particular aspects of instruction. The total number of reflections that teachers engaged in was 3-4. The project documented growth in teachers' instructional literacy practices.

Coaching and guided video reflection as a vehicle for improving the quality of teaching. Having examined the characteristics and components of coaching and video self-reflection independently, I hypothesized that a professional development intervention model combining the two approaches would be especially powerful and meaningful for pre-service special education teachers. The combination of approaches is complementary: ongoing coaching provides substantial scaffolding for novice educators, while video recordings make the material for reflection more concrete. The rubric serves as a focus anchor guiding and directing the coaches and teacher participants' attention to specific aspects of intervention. The ability to analyze the exact words of the teacher and students lends itself effectively to the purpose of analyzing of academic language use and structure. The opportunity to view a sequence of lessons

within the teachers' initial teaching practicum creates a video portfolio of their practice and serves as a document of their learning trajectory within the teaching practice.

Theoretical Framework

Two theoretical frameworks- Mezirow's Transformational Learning Theory (1995; 1998a; 1998b) and the framework of cognitive coaching developed by Costa and Garmston (1989) form the theoretical foundation for the professional development model developed for this study. The combination of these frameworks allows for the maximum scaffolding of the process of learning and holds a potential for generalization. It also allows for the use of the coach-figure within the framework of Mezirow's Transformational Learning, which heavily relies on sole individual as the engine of transformation. I argue that the beginner status of the pre-service teachers necessitates additional scaffolding and guidance on behalf of the coach.

In his Theory of Transformational Learning, Mezirow (1995; 1998a; 1998b) suggests that at the beginning of the process of transformational learning there has to be a cognitive dilemma identified by an individual. This dilemma is often accompanied by a feeling of shock, disappointment, or any other acute realization of inaccuracy of one's perceptions of self, one's actions or beliefs. This dilemma then leads one to engage in critical reflection that reexamines the content, the process and the premise that led to the dilemma in focus. Challenges to the validity of one's assumptions are then tested through critical discourse. Transformational Learning, a developmental process, occurs a result of this.

The framework of Cognitive Coaching fits well with the Theory of Transformational Learning as it emphasizes *self-directedness* as a key characteristic of this model. Costa and Garmston (2002) describe self-directedness as a three-pronged construct of self-managing, self-monitoring and self-modifying, under the guidance of the cognitive coach, who provides

mediating questions and paraphrases intended to challenge the intellect of the individual being

coached (Costa & Garmston, 2002, 1989). Mediating questions serve to evoke more detailed

reflection. The central goal of cognitive coaching is to develop cognitive autonomy. This is a

crucial component of any teacher training, and special education teacher training in particular.

Given the isolation and lack of collegial support reported by many special educators (Schlichte et

al., 2005), it is important that their pre-service programs provide them with tools that will help

them critically reflect on their own practice and become independent thinkers.

Figure 4 presents a visual representation of the theoretical model that guided the study.
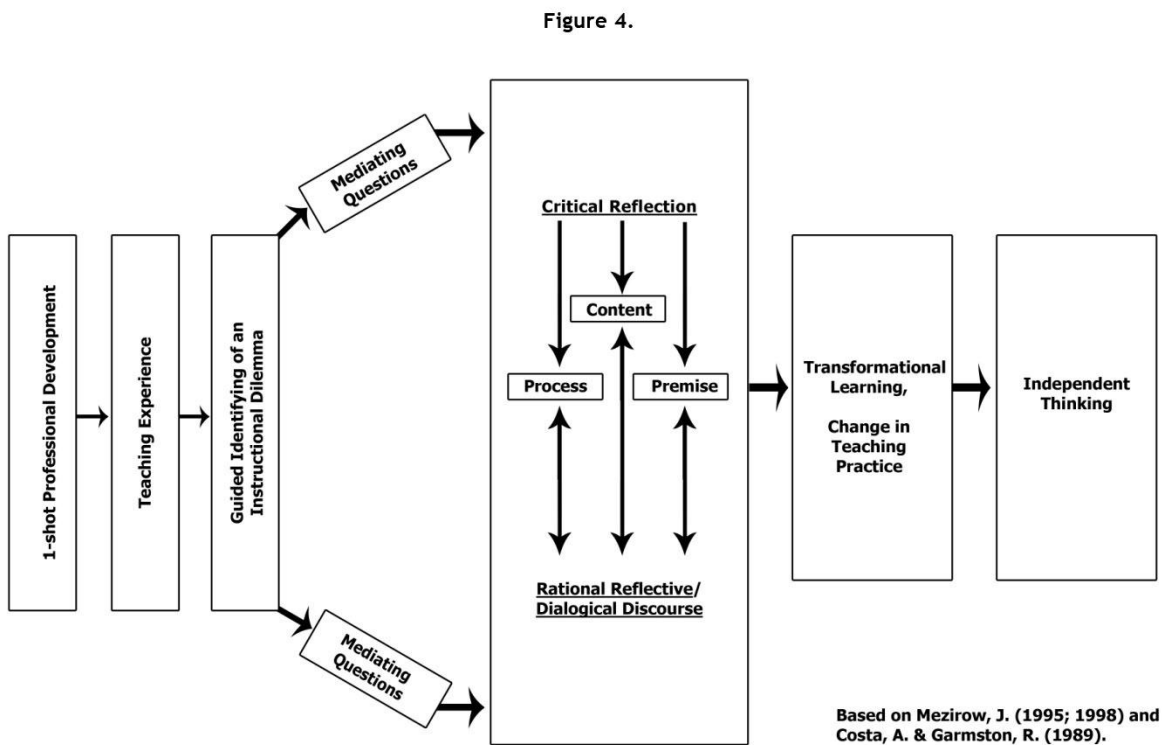
Figure 4.

Figure 4. Theoretical framework of the study: Transformational Learning and Cognitive Coaching

Conceptual Model

The literature review identified a few lacunae in the current research that pertain to both teacher training and struggling students' support. While present research identifies academic language as a unique classroom medium of teacher-student communication, recognizing explicitness of its instruction and mastery of its word-, sentence- and discourse- levels as key for effective teaching and learning, only a few studies focused on specific interventions that targeted both teachers' and students' use and structure of academic language. Additionally, the links between students' oral and written academic language are in need of further investigation. Finally, per author's knowledge, no studies up-to-date have focused on academic language training within the content area instruction for special education teachers who are supporting ELL students at risk for academic failure. With this focus, the present study extends the existing research base on the role of interventions focused on enhancing academic language expertise in beginning teachers and its impact on ELL students' oral and written academic language.

The conceptual model for the study followed the theoretical framework described above. In it, the initial professional development (PD) outlines the focus of the transformational learning that was expected to occur (teachers understanding of academic language construct and changes in teacher participants' use and structure of academic language). The video recording of the lesson along its viewing that follows the PD created a cognitive dilemma: based on existing research, teachers who view their own lessons necessarily experience surprise as they see themselves teach and interact with students (Osipova et al., 2011). A training session that combined video self-reflection and coaching created dialogical critical reflective discourse. During this session the coach and the teacher participants reexamined the content, process and premises of the lesson. The transformative learning that occurs as a result of this discussion can

be evidenced in changes in the teacher's instructional practice that is the focus of the reflection. In this study, I anticipated seeing a change in the teacher's use and structure of academic language. The next levels in this model aim to test the teacher's influence on students' oral and written use and structure of academic language.

Conceptual model of the project is illustrated by Figure 5.

Figure 5.
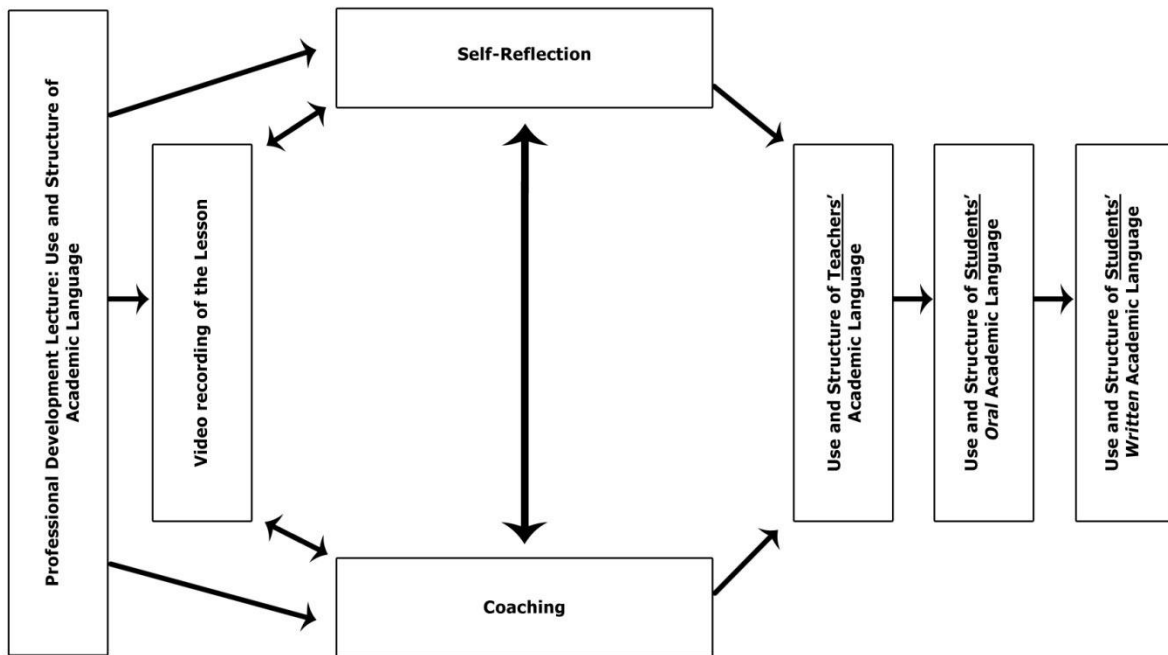
Figure 5. Conceptual model of the project.

Theory of Action

Based on the proposed theoretical and conceptual frameworks, I explored the following mechanisms at work. Proposed professional development model consisting of an overview of methods for enhancing teacher's and students' academic language use and structure within the

context of content area instruction followed by five coaching sessions combined with video reflection was expected to increase teacher participants' use of academic language and improve its structure. Coaches' guiding questions were expected to heighten teacher participants' awareness of their own and students' use and structure of academic language. Collaborative discussion and planning done by the teacher participants and the coach targeted the necessary changes in instruction with an aim of further increase of use and improving the structure of teacher's and students' academic language. The use and structure of academic language were made explicit for students through modeling during the direct instruction mini-lessons and through guided practice and scaffolding during the small group discussion. This explicit modeling and guided practice were expected to lead to an increase of students' use of oral and written academic language and improvement in structure of student-created oral and written texts. Additionally, it was expected that improvement in students' oral academic language will lead to improvement of students' written academic language.

Research Questions

The present study aimed to investigate whether a PD model that combines coaching and video self-reflection has a more powerful impact on improving the quality of academic language instruction than PD models than implementing coaching or video self-reflection separately, and whether the changes in quality of academic language instruction in turn influence ELL students' oral and written academic language. The study addressed the following research questions:

(1) To what extent does adding video self-reflection to coaching affect teachers' quality of academic language instruction?

a. Does the intervention that combines video self-reflection and coaching increase the quality of academic language instruction over and above the impact of an intervention that consists of coaching alone?

b. Does the intervention that combines video self-reflection and coaching increase the quality of academic language instruction over and above the impact of an intervention that consists of video self-reflection alone?

It was hypothesized that a professional development intervention model combining coaching and video self-reflection will improve the teacher participants' quality of academic language instruction more than coaching or video self-reflection taken alone.

(2) How does the increase in teachers' quality of academic language instruction influence English Language Learners' use and structure of academic language?

(3) How does the increase in teachers' quality of academic language instruction influence ELL students' academic language use and structure in their writing samples?

CHAPTER III
Method

Research Design

In order to explore the impact of an instructional coaching with video self-reflection intervention on the teachers' academic language instructional quality and to evaluate its impact on ELL students' oral and written language, the current study utilized both quantitative and qualitative data analysis. Specifically, the study employed a concurrent embedded mixed methods design (Creswell, 2003), in which the qualitative strand was embedded within the quantitative one point baseline, multiple probe, across-participants single subject study.

Single subject data analysis (Kazdin, 2011) was used to determine the change in quality of academic language instruction in response to changes from the baseline phase and subsequent contrasting phases of intervention (video-reflection or coaching, and video-reflection combined with coaching). Three lessons rated highest in quality for instruction of academic language within each phase of the study (baseline, video-reflection or coaching, and video-reflection combined with coaching) were selected and then systematically analyzed using a qualitative approach. Teacher-student interactions were coded to identify the qualitative changes in participants' (both teachers' and students') use of academic language at word, sentence and discourse levels. Teacher-participant' academic language instruction was also coded for instructional contexts that they created, strategy types that they employed, and academic language level focus of instruction (word, sentence, and discourse). Focus ELL student's oral and written responses were coded for the word, sentence, and discourse levels of academic language. The section below describes the nature of the setting of the study, participants, specifics of the study design, as well as the data collection procedures and data analysis.

Setting

     The Learning Center. The study was conducted at a large urban public state university's

Learning Center. The Learning Center is a Saturday program housed on the university campus

that offers inclusive classrooms for children with and without disabilities and a practicum

experience for pre-service special educators early in their teacher preparation program. On

average, 24 to 32 credential candidates take the course each quarter. While their professional

background experiences may vary (i.e., instructional assistants, classroom volunteers, etc.), the

credential candidates' educational profiles are usually homogeneous and at the participants'

teacher preparation institution consisted of four introductory special education courses and

passing scores on state required teachers' examinations. Homogeneity of credential candidates'

educational profiles in the special education credential program suggests comparable levels of

pedagogical skills and preparation levels.

     In the Learning Center, the credential candidates are matched in their experiences and

paired together into co-teaching dyads. In order to expand their professional experiences, they

are typically assigned to a class of students of an age range or a grade level with which they have

not had prior experience. This makes the teacher participants' sample for the study even more

homogenous in their experiences: none of the participants had extensive experience with the

grade level/age group of early adolescent students assigned to them. The course is comprised of

10 weekly 5-hour long Saturday meetings. The five hours are comprised of two hours of lectures

in special education pedagogy, 30 minute break and two and a half hour class that the credential

candidates teach to K-12 students coming from the nearby community. The instruction is

thematic and the credential candidates develop a 9-lesson unit dedicated to a specific theme.

Within the present study, as one of the factors ensuring experimental control, the themes of the

units developed by project participants fell within the content area of social studies to provide for homogeneity of content area discourse across the classrooms.

The Center typically has 15-16 K-12 classrooms with 12-16 children enrolled in each class. All classrooms are inclusive, and the student population is comprised of typically developing children, students at-risk for academic failure, and students with a wide range of disabilities. Over 90% of the students are English Language Learners. During the two quarters when the study was conducted, one percent of students in the Learning Center were African-American, four percent were Asian, and 95% were Latino. The overall demographic profile of the students attending the Learning Center is reflective of an inclusive general education classroom composition in urban schools within the East Los Angeles. In the surrounding public schools that serve children who come to the Learning Center on Saturdays, nearly 100% of students qualify for free or reduced lunch. In total, the Center serves 180-200 youngsters each quarter. Enrollment happens on the "first come- first serve" basis. The families pay a minimal fee of $20 per quarter. The program is advertised as an inclusive supplementary writing instruction program that supports diverse learners. The emphasis on diversity, high quality of instruction, and the special education professional background of teacher candidates result in a relatively balanced class composition of struggling learners, students with disabilities and typically developing students whose parents are interested in supplementary enriching instruction.

The context of the experiment within the larger context of the Learning Center activities. The usual lessons delivered by credential candidates consist of a) warm-up activities, b) whole group content area mini-lesson delivered through direct instruction model, c) students' small group discussions, d) a writing mini-lesson, and e) arts and crafts and other enrichment

activities. Each instructional component of the lesson takes five to fifteen minutes. The focus of

this study was on the 5-part lesson addressing "writing in the context of social studies,"

comprised of two short mini-lessons, two small group discussions, and a 20 minute writing

sessions. Figure 6 presents the breakdown of this lesson structure. The total amount of the

controlled lesson time took 70 minutes. The rest of the 2.5 hour teaching block was structured by

the teacher participants according to their preferences and students' needs.

Time Spent	Part of the lesson/Setting	Potential Activities	Teachers' Action
15 mins	Direct Instruction Mini-Lesson: Introduction and development of social Studies Topic/Whole Class setting, Teacher-led	PowerPoint presentations; reading of social studies materials; discussion of text features in social studies, vocabulary instruction; focus on word, sentence and discourse level of social studies material	Teachers within the dyad take turns delivering the content
10 mins	Guided Practice: small group discussion focused on the new material learned/small group setting, teacher-supported	Students recall what they learned, fill out KWL charts, work with graphic organizers reviewing the content that they just learned	Teachers take turns working with the small group of with focus ELL students
15 mins	Direct Instruction Mini-Lesson: Focus on writing within the social studies/whole class setting, teacher-led	Instruction focused on compare and contrast essay structure, sentence structure, writing strategies; focus on word, sentence and discourse levels	Teachers take turns delivering the content
10 mins	Guided Practice: small group discussion focused on the new material learned, teacher-supported	Students review what they learned, construct oral responses to prompts, work with pre-writing graphic organizers	Teachers take turns working with the small group of with focus ELL students
20 mins	Independent practice: writing a compare and contrast essay	Students work independently on a writing assignment	Teachers circulate the room providing support as needed

Figure 6. Typical lesson timeframe and structure.

Participants

      Teacher participants: Special education credential candidates. The ethnic, SES, and

educational demographic profile of the teacher participant sample (henceforth, "teacher

participants") reflected the demographic profile of the population of credential candidates attending the special education credential program within the university. Sixteen (8 per quarter) teacher participants were recruited from a pool of pre-service special education credential candidates registered to take the early directed teaching practicum course. All of the credential candidates registered for the course were invited to participate in the study via an e-mail containing information about the study and participant responsibilities. Out of 52 credential candidates enrolled in the course over two quarters, 26 expressed an interest to participate in the study. In order to match participants into dyads based on their educational background and similar levels of teaching experience (information available from their enrollment paperwork), 16 teacher participants were selected out of this pool. Teacher participants were then matched into co-teaching dyads. The resulting sample included 13 female, and three male participants. The 16 participants completed a brief survey that focused on their personal demographic information, professional teaching experiences in teaching writing, social studies, training and working with ELL students and early adolescents. They also described their educational experiences prior to the study, highest degree obtained, and languages spoken (refer to Tables 2 and 3). The participants' reported ages ranged from 24 to 45, with the mean age range of 30-34 and the median age range of 24-29 years. Fifty percent of teacher participants were Hispanic, 25% were White, 19% were Asian, and 6% were African American. Seventy five percent of participants were fluently bilingual, and 100% of the sample spoke more than one language. Seven out of 16 participants reported having an ELL status in childhood, but gaining proficiency in elementary school. All of the participants held Bachelor's degrees in humanities and two participants had Master's degrees in special education. Tables 2 and 3present a summary of

teacher participants' demographics, languages spoken, and educational degrees attained, as well as teaching and training experiences.

All of the teacher participants reported having minimal experience in working in education. The duration of employment in education across 16 participants ranged from "less than one year" to "less than five years" (mean 2 years, median less than 1 year) in the capacities of teaching assistants in special education classes, volunteer assistants, summer camp leaders, and afterschool instructors. One of the participants worked as an ASL interpreter in elementary schools. All 16 participants reported having no previous experience of teaching writing to a whole class of students, while two participants reported occasionally tutoring individual students in writing. Fourteen out of 16 participants (88% of the sample) reported not having had any previous training in teaching writing. Thirteen participants (81%) did not have any previous experience teaching social studies, and three had some experience in tutoring in the area of social studies. All 16 participants reported having no training in teaching social studies, but three reported taking some undergraduate courses in that field. Six participants (38%) reported having some experience in working with ELL students in the capacity of tutors from time to time, while 10 participants reported not having any experience in this area. Thirteen participants (81%) reported not having had any training for teaching ELL students besides some lectures within their credential program classes, three participants considered these classes as a sufficient training. Nine out of 16 participants (56%) reported having had experience interacting with early adolescents in the capacity of summer camp mentors, volunteers, and family/friends, but not formally teaching this population of students.

Table 1

Teacher Participants' Demographics (N=16)

Participants' Gender	Age Range	Ethnicity	Experience as ELL and age of beginning to learn English	Multilingual status and Languages Spoken		Highest Degree Obtained
f=13 m=3	19%: 20-24 (3 participants) 31% : 24-29 (5 participants) 19%: 30-34 (3 participants) 6%: 35-39 (1 participant) 25%: 40-45 (4 participants) Range: 20-45 Mode: 24-29 Mean age range: 30-34 Median age range: 24-29	Hispanic: 50% White: 25% Asian: 19% African American: 6%	44% (7 out of 16) of the participants; 6 years old	Bilingual English Spanish American Sign Language Armenian Arabic Mandarin Cantonese Filipino Italian German Korean	75% 100% 40% 12% 6% 6% 6% 6% 6% 6% 6% 6%	B.A.: 100% M.A.: 12.5%

Table 2

Teacher Participants: Educational and Professional Background

Social Studies Related Educational and Professional Experience		Writing Related Educational and Professional Experience		ELL Related Educational and Professional Experience		Working with early adolescents	Total years of working in education
Training in teaching social studies	Previous experience teaching social studies	Training teaching writing	Previous experience teaching writing	Training for teaching ELL students	Previous experience in teaching ELL students		

12% (2 out of 16 participants): some training as a part of B.A. major	19% (3 out of 16 participants): some experience: 2 of them tutored students in social studies; 1 of then taught social studies for less than a year	12% (2 out of 16 participants): some training as a part of their special education credential program	0% (16 participants): with whole class experience	19% (3 out of 16 participants): some minimal training at job sites	38% (6 out of 16 participants): Some experience as a part of their instructional assistants' tasks and some tutoring assignments	56% (9 out of 16 participants): some experience (i.e., summer camps, tutoring, volunteering)	100% (16 participants): less than 5 years as an instructional assistant (out of them, 14 participants with less than 1 year as an instructional assistant)
100% (16 participants): took some social studies-related courses in college			25% (4 out of 16 participants reported having tutored children one on one in writing)	100% (16 participants): took 2 courses that focused on ELL and language development in their special education credential program			
			12% (2 out of 16 participants) reported assisting with writing as a part of their instructional assistants' tasks				

Student participants: Early adolescent ELL students at risk for literacy failure. In order to assign dyads to condition, it was necessary to control the grade level assigned to dyads within each condition, to the extent possible. Purposeful sampling was used to select four 4-6th grade classrooms within the larger pool of 16 classrooms to achieve similarity of grade levels for dyads of teacher participants. This created a pool of 60 children who had been arbitrarily assigned to classrooms by Learning Center registration staff. Identification and selection procedures for student participants consisted of the following three steps: First, the intake registration paperwork for students in 4th to 6th grade was reviewed. The intake parent questionnaire identifies students who are ELLs, those who struggle with literacy (reading and writing), home language, and parents' concerns. The selection criteria included three parameters: 1) home language other than English; 2) parents' concerns about the child's English skills (i.e., "needs help with English"); 3) parents' concerns about the child's risk of failure in writing (i.e., "has trouble/needs help with writing"). Upon review of the students' intake paperwork, 6-8 students per classroom were selected as identified as ELL students at-risk by parental reports.

The second step in the student participant selection process involved conducting the whole class written expression screener. The Test of Written Language (TOWL, 2010; Story Construction subtest; Hammill & Larsen, 1996) was used for this purpose. The teacher participants conducted the assessment as a part of the routine in class assessment. The research team[1] scored the results and selected students with the lowest scores on the subtest. The lowest written samples were then checked against the list of at-risk ELL students selected based on the intake questionnaire. Students who met both parameters: a) parent-identified at-risk ELL status and b) the lowest scores on the TOWL subtest- were selected for further assessment in the areas

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[1] The research team for this study included 3 graduate Master's level students and the author of this dissertation.

of vocabulary and reading comprehension, the areas identified by research as closely correlated with literacy achievement and overall academic achievement (Snow & Biancarosa, 2003; Vaughn et al., 2009).

The third step in the student participant selection consisted of identifying two ELL students per class who met the four following selection criteria: 1) parent identified at-risk ELL status, 2) lowest scores in written assessment task, 3) the lowest scores in vocabulary and reading comprehension, and 4) (exclusion criteria) no reported disability status (the latter was included to ensure homogeneity of the student sample in regards to the nature of their academic difficulties). As a result of the three step selection process, 16 student participants (8 per quarter, 2 per class/teacher participant dyad) were identified.

Table 3 presents a summary of student participants' demographics, languages spoken, and the initial assessment results in vocabulary, reading comprehension, and written expression. Appendix B presents individual information about student participants. Sixteen student participants (eight boys and eight girls) were selected following the steps outlined above. Their ages ranged from 9:04 to 12:04 years. The mean, median and mode for the age were 11:02, the 11:03, and 11:03 and 12:03, respectively. Overall sample included four participants were in 4th grade, five participants in 5th grade and 7 participants in 6th grade. The grade levels ranged from early 4th to late 6th grade; the mean grade level was early 5th grade, the median grade was early 5th and the mode was early 6th grade. The majority of students (99%) were Hispanic and one

Table 3

Student Participants: Demographics and Initial Screening Results (n=16).

Student Gender	Age	Grade Level	Ethnicity	Multilingual status and Languages Spoken	Vocabulary Scores			Reading Comprehension	Written Expression
					PPVT-4	Crichlow English	Critchlow Spanish	CORE Maze Task	TOWL-3
F=8 M=8	Range: 9:04-12:04; 3 yrs Mean: 11:02 Median:11:03 Mode:11:03; 12:03	Range: early 4th-late 6th ; 2grades Mean: early 5th Median: early 5 Mode: early 6th	Hispanic: 15 (99%) Asian:1 (1%)	English: 16 100% Spanish: 15 (99%) Cantonese: 1 (1%)	Age Range: 6:3-10:01; 3:10 yrs Age Mean: 9:03 Age Median: 8:08 Age Mode: 8:03	N/A	N/A	N/A	Age Range: <7:0-10; 4 Age Mean: 8:08 Age Median: 9 Age Mode: 9
					Grade Range: K-4.5; 4.5 Grade Mean: 3.1 Grade Median: 3.1	Grade Range: 3rd-5th; 2 Grade Mean: 3rd Grade Median: 4th	Grade Range: K and below-7th; 8 Grade Mean:2nd Grade Median: 4th	Grade Range: K and below-Early 5th; 6 Grade Mean: Early 3rd Grade Median: Late 3rd	Grade Range: <2-5; 3 Grade Mean: 3.5 Grade Median: 4 Grade Mode: 4

	Grade Mode: 3.1	Grade Mode: 4th	Grade Mode: K and below	Grade Mode: Late 2nd, Early 3rd

student was Asian. All students were reported to be bilingual by their parents and 99% of them spoke Spanish at home, while 1% spoke Cantonese.

For the initial intake assessment, written expression in English, vocabulary in English and students' home language, and reading comprehension (English) measures were administered to students. The individual assessment tools are discussed in detail in the Instrumentation section of this chapter. Students' written expression was measured by the Test of Written Language (TOWL-3, Form A; Hammill & Larsen, 1996), Story Construction subtest. The assessment results indicated that students' written language performance ranged from lower than 7 years to 10 years of age (from lower than 2nd to 5th grade level). All students performed 1 to 4 years (1 to 4 grades) below their actual age/grade level. The student participants' written performance mean, median, and mode were 8:08 yrs (3.5^{th} grade), 9 yrs (4th grade), and 9 yrs (4th grade), respectively.

Initial intake vocabulary measures included Peabody Picture Vocabulary Test-IV (PPVT-IV; Dunn & Dunn, 2007)- an assessment of English receptive vocabulary, Critchlow Vocabulary Scale in English and Spanish (Consortium on Reading Excellence (CORE), 2004), and a translated Critchlow Vocabulary Scale in Cantonese were used to measure students' expressive language. The results of PPVT-IV indicated that the students' performance ranged from 6:3 to 10:01 years (corresponding to grade range from K to 4.5), performance mean age was 9:03 (mean grade level 3.1), with a median of 8:08 (grade median of 3.1) and mode of 8:03 (grade mode 3.1). Thus, according to PPVT-IV, all students in the sample performed one, two or three years/grades below their actual age/grade level. The results of Critchlow Vocabulary Scale in English indicated that the students' performance grade levels ranged from 3rd to 5th, also consistently below their actual grade levels. The mean, median and mode performance grade

levels for this scale were 3rd, 4th, and 4th grade, respectively. The students' home language

vocabulary knowledge measured by Critchlow Vocabulary Scale in Spanish (for 15 participants)

and in Cantonese (for one participant) resulted in a wider performance grade range from

Kindergarten and Below (K-Below) to 7th grade. The performance grade mean was 2nd grade, the

median was 4th grade, and the mode was K- Below. As measured by Critchlow Scales, five

participants demonstrated home language skills 1 grade level below their English vocabulary

performance, one demonstrated exactly the same vocabulary knowledge in English and Spanish,

two participants exhibited home language knowledge that was stronger than English, and eight

participants' home language skills were significantly lower than their English skills.

Students' reading comprehension skills were measured by the CORE Maze subtest

(CORE, 2004). This specific tool was selected as it measures reading comprehension in its

connection to vocabulary and grammar. The students' performance on this test ranged from

Kindergarten to early 5th grade performance. None of the students scored at their actual grade

level. The performance grade mean, median, and mode were early 3rd grade, late 3rd grade, and

late 2nd and early 3rd grades, respectively. All students performed from one to five grade levels

below their actual grade levels in reading comprehension, as measured by CORE Maze subtest.

Vocabulary and reading comprehension measures were administered both for the research and

practice purposes: in order to better describe the student participant sample and to provide the

teacher participants with a few details about their most vulnerable students' academic skills.

Specifics of the Study Design

Design Type. Mixed methods study design is particularly appropriate for educational

research in general (Creswell, 2012) and for the aims of the present study in particular. This type

of design allowed for the examination of statistical trends through quantitative methods, while

providing a deeper insight into the context and nuances of participants' responses. In this project, the quantitative part of the design fulfills the central aim of the study: to investigate whether an intervention combining coaching with video self-reflection improves the quality of teachers' academic language use and instruction with their students. It also allowed for investigation of what effects coaching and video self-reflection training taken alone have on academic language use and instruction. More specifically, the quantitative strand within the study was a single subject one-point baseline multiple probe design in which initial intervention conditions of coaching and video-reflection were counterbalanced, and the experimental condition of coaching combined with video self-reflection was replicated across eight participants. The design was well suited for the aims of the study, as it permitted for the careful examination of the intervention impact on the particular participant behavior (i.e., academic language instruction) and measurement of her/his individual growth in these areas. The qualitative strand allowed for an exploratory in-depth evaluation of teachers' and students' academic language use and structure on word, sentence, and discourse levels, as well as for a close examination of teacher-student interactions, investigated through the lens of conversation analysis.

Design Structure and Schedule. The study used single subject one-point baseline multiple probe design with replication across participants. Multiple probe design is "an adaptation of the multiple-baseline design in which… 'probes,' or baseline measures, are taken prior to intervention, and sometimes as follow-up measures, because prolonged baseline phases or repeated dependent variable measures are impractical or unethical" (Kazdin, 2011, p.150). In the present exploratory study, the multiple probes of the same variable-academic language quality of instruction-were taken from multiple participants. Due to the time constraints of nine weeks dedicated to teaching in the Learning Center, a longer baseline with more than one data

point per participant was not practical and the multiple probe (across participants) design

appeared to be a solution for the short-term intervention. To further strengthen the design, initial

intervention conditions of coaching and video-reflection were staggered and counterbalanced,

and each experimental condition of coaching and video self-reflection was replicated with eight

teacher participants (four teacher dyads). Replication of the condition clarifies the effects of the

intervention and strengthens the design (Kazdin, 2011). This design allowed for examination of

teacher participants' quality of academic language instruction in four different conditions: 1)

baseline; 2) coaching, 3) video self-reflection, 4) a combination of coaching and video self-

reflection. A detailed description of each of these conditions can be found below in the

Procedures section of the proposal. Figures 7A and 7B represent the schedule of the two phases

of the present study. The investigation took place during two consecutive quarters (Phase I and

Phase II). The main difference between the phases consists of the counter-balanced initial

intervention conditions (coaching for Phase I and video self-reflection for Phase II). The

consecutive structure of the experiment in which Phase I follows Phase II ensures that there is no

interaction of the initial intervention conditions, which adds to the experimental control of the

study.

2-week Condition 1 (Coaching) Followed by the Combined Intervention			
Week	Wk 1 Baseline	Wk 2-3 Coaching	Wk 4-9 Intervention: Coaching + Video Self-Reflection
Intervention	Introductory Overview of Academic Language Use and Pedagogy	Coaching of teachers' use of academic language during instruction and their explicit instruction of academic language with students	Intervention: Coaching + Video Self-Reflection
Dyads of Participants Quarter 1	Julia and Elise (P1 and P3); Lora and Tanya (P5-P7)		
3-week Condition 1 (Coaching) Followed by the Combined Intervention			

Week	Wk 1 Baseline	Wk 2-4 Coaching	Wk 5-9 Intervention: Coaching + Video Self-Reflection
Intervention	Introductory Overview of Academic Language Use and Pedagogy	Coaching of teachers' use of academic language during instruction and their explicit instruction of academic language with students	Intervention: Coaching + Video Self-Reflection
Dyads of Participants Quarter 1	Mike and Alondra (P2-P4); Jaime and Herman (P6-P8)		

Figure 7A. Study Design. Phase I. Quarter 1: Baseline- Coaching - Coaching + Video Self-Reflection

2-Week Condition 2 (Video Self-Reflection) Followed by the Combined Intervention

Week	Wk 1 Baseline	Wk 2-3 Video Self-Reflection	Wk 4-9 Intervention: Coaching + Video Self-Reflection
Intervention	Introductory Overview of Academic Language Use and Pedagogy	Video Self-Reflection done by teachers with the focus on academic language instruction quality in working with ELL students	Intervention: Coaching + Video Self-Reflection
Dyads of Participants Quarter 2	Beata and Gloria (P9-P11); Kate and Shanae (P13-P15)		

3-Week Condition 2 (Video Self-Reflection) Followed by the Combined Intervention

Week	Wk 1Baseline	Wk 2-4 Video Self-Reflection	Wk 5-9 Intervention: Coaching + Video Self-Reflection
Intervention	Introductory Overview of Academic Language Use and Pedagogy	Video Self-Reflection done by teachers with the focus on academic language instruction quality in working with ELL students	Intervention: Coaching + Video Self-Reflection
Dyads of Participants in Quarter 2	Carina and Alina (P10-P12); Serena and Jaen (P14-P16)		

Figure 7B. Study Design. Phase II. Quarter 2: Baseline- Video Self-Reflection - Coaching + Video Self-Reflection

During the first quarter (Phase I), the study examined 1) the quality of teachers' academic

language instruction during the baseline condition (without coaching); 2) the impact of coaching

on the quality of teachers' instruction of academic language to students in the coaching condition, 3) the change in teachers' academic language instruction to students when video self-reflection is added to coaching.

Following this structure, two dyads of the participants (Elise and Julia (P1-P3) and Lora and Tanya (P5-P7)) were assigned to two-week long initial intervention coaching condition. The other two dyads of participants (Mike and Alondra (P2-P4) and Jaime and Herman (P6- P8) were assigned to a three-week coaching condition. Elise's (P1's) performance was replicated eight times and compared to performance of participants P2, P3, P4, P5, P6, P7, and P8. The difference in the length of the initial intervention conditions strengthens experimental control, as it demonstrates that the change in teachers' quality of academic language instruction occurs due to the implementation of the intervention phase and not due to the number of initial coaching sessions/video-reflection sessions. Following the coaching condition, participants engaged in an intervention that combined coaching and video self-reflection. This intervention will occur over five or six weeks. I hypothesized that in both cases (after 2 and 3-week coaching condition) teachers' quality of academic language instruction would significantly increase during the combined intervention.

During the second quarter (Phase II, 2nd quarter of the experiment), the counter-balance of the initial condition was implemented. This time, following the baseline, the participant dyads engaged in video self-reflection. Beata and Gloria (participants P9-P11) and Kate and Shanae (P13-P15) were assigned to a 2-week video self-reflection condition, while Carina and Alina (P10-P12) and Serena and Jaen (P14-P16) were assigned to a 3-week video self-reflection condition. During this phase the study investigated 1) the quality of teachers' academic language instruction during the baseline condition (without video self-reflection); 2) the impact of video

self-reflection on the quality of teachers' academic language instruction; 3) the change in the quality of teachers' academic language instruction when video self-reflection is added to coaching. Beata's (participant P9) performance was replicated eight times and was compared to P10, P11, P12, P13, P14, P15, and P16. The counter-assignment of the initial conditions served as an experimental control and allowed for the examination of the quality of teachers' academic language instruction during the video self-reflection condition. It also allowed for a comparison of this condition to the quality of teachers' academic language instruction during the initial coaching condition. Just as in Phase I, following the initial intervention condition (video self-reflection in this case), the participants engaged in a five to six-week intervention that combined coaching and video self-reflection.

   Strengthening the study design. A number of measures were taken to strengthen the study design. These measures included a) careful selection of the sample (i.e., teacher participants were matched in their levels of teaching experience, training, grade assignment, etc.) b) controlling for the content area (social studies), genre (compare and contrast), c) length and specific rigid structure of focus lessons (70 minutes) to provide for homogeneity of content area discourse across the classrooms. Additionally, a few measures were taken to strengthen the specific type of single subject design. One-point multiple probe design was implemented, since return to baseline condition was undesirable and not feasible due to the shortness of a nine-week intervention. To strengthen the study design, the participants' performance was replicated eight times. These measures along with the counterbalance of initial coaching and video self-reflection conditions strengthened the design across multiple subjects and different initial conditions. The difference in the length of the initial intervention conditions further strengthened experimental control, as it demonstrated that the change of teacher participants' academic language use and

instruction occurred due to the implementation of the intervention phase and not due to the number of coaching sessions/video-reflection sessions in the initial intervention condition or other confounding variables. The consecutive structure of the experiment in which Phase I follows Phase II (quarter I and quarter II) ensured that there was no interaction of initial intervention conditions, which adds to the experimental control of the study.

Procedures

Baseline. The investigation was carried out over two ten-week university quarters (Phases I and II of the experiment). Both phases began with a week of a baseline condition, during which an introductory 1-hour overview session on academic language, its features (specific emphasis will be given to its discourse features), its importance to quality instruction, and its impact on students' learning (and particularly on ELL students' learning) was presented to teacher participants. The overview session focused specifically on academic language instruction and student support in the area of social studies. In order to maintain experimental control for the content of the lessons, the teacher participants were asked to select a10-week unit theme within the domain of social studies. This was done in order to avoid differences in the use and structure of academic language caused by differences in subject matter (i.e., science vs. social studies) that have been previously noted in research (Bailey et al., 2007; Schleppegrell, 2004). To further strengthen the experimental control, the teacher participants were asked to focus on the genre of compare and contrast in their writing instruction within the context of the social studies. Figure 8 presents students' placement in teacher participants' classes and the social studies theme they focused on throughout the quarter. Students' and teacher participants' names were changed to ensure their anonymity.

Teacher participant's name	Grade Level	Focus ELL students	Theme for the Instructional Unit
Julia Elise	4th/5th	Alina Oliver	Word History and Culture
Lora Tanya	5th	Edelina Evelyna	History of Staple Foods Around the World
Jaime Herman	6th	Leo Karina	History of Civil Rights Movement
Mike Alondra	6th	Alondra Adrian	History of Careers
Beata Gloria	4th	Giovanni Kevin	History of Foods Around the World
Carina Alina	5th	Irene Miko	Ancient Word History and Culture
Kate Shanae	6th	Daniel George	History of Educational Rights Around the World
Serena Jaen	6th	Delia Jenny	History of California Landmarks

Figure 8. Teacher participants' grade level assignments, focus ELL students, and unit themes

The overview presented during the introductory lecture provided examples of teacher participants' use of academic language, strategies for its instruction, and examples of activities that can facilitate teachers' and students' use of academic language. Appendix C presents examples of the activities developed for this introductory training. During the baseline week, the teacher participants were not trained individually or in dyads. They received the one-time professional development in the described form, after which they planned and implemented their first lesson. The first lesson was video-recorded. Video footage was transcribed and coded to measure the quality of teachers' academic language instruction, and teacher and student usage of academic language features at the word, sentence and discourse level (see Appendices 4-5 for an example of the study instrument used in this process). For example, teachers' and students' use of such sequencing discourse markers as "first," "next," "consequently," "in contrast," etc. were coded as one of the academic discourse features. Teachers' use of such instructional techniques,

such as provision of examples and non-examples, illustrations, definitions, use of visual

representations and artifacts, as well as use of guiding questions and sentence frames were coded

as academic language instructional strategies. The coaches who were trained to work with the

study participants on enhancing their quality of academic language instruction viewed the first

lessons and prepared for the follow up coaching session.

 Coaching. Following the introductory overview and one lesson baseline, teacher

participants in Phase I during the first quarter of the experiment engaged in coaching as an initial

intervention condition that lasted 2 or 3 weeks. During the weekly coaching sessions, the coach

(a trained graduate student with 1-2 years of teaching experience) and each dyad of teacher

participants met and reviewed their lessons focusing on academic language instruction mini-

lessons on writing within the context of social studies and focus ELL students' academic

language during small group instruction. The coach and the teacher participants discussed what

they noticed about the teachers' academic language instruction, their focus ELL students' use

and structure of oral and written academic language, and instructional strategies for supporting

academic language in all students, and especially in focus ELL students. The coach used the

same questions as were used in video self-reflection rubric (Appendix D) to guide the discussion

and make it uniform for all the teacher participants being coached, but no actual video footage

was used in this condition. Teacher participants and the coach recalled the evidence from the

lesson to support their discussion. For example, the coach asked the teacher participant how

she/he encouraged the students to use academic language. The teacher recalled that she modeled

a think-aloud for her students. The coach added that she also asked her students for specific

examples based on the class presentation that they viewed. Teacher participants were coached in

their dyads to ensure that both teachers in the same classroom were getting identical coaching.

Video Self-Reflection. Following the 1-week baseline, Phase II (2nd quarter of the experiment) began with video self-reflection (3rd distinct condition of the present study). During this condition, the teacher participants engaged in viewing video footage of their lessons and filling out the video self-reflection rubric (Appendix D). The teachers rated the quality of their academic language instruction during their mini-lessons on writing within the context of social studies, their support of focus ELL students' academic language during small group instruction. They provided evidence from the mini-lesson to support their ratings. For example, one of the components of the video self-reflection rubric is "The teacher uses academic language on discourse level" (Appendix D). The teacher participants self-rated their performance in this area during each lesson. They recalled analysis of the text structure on the PowerPoint slides that they presented to the students, their explicit instruction on how to use discourse markers ("similarly," "in contrast"), etc.

Coaching Combined with Video Self-Reflection. The fourth condition consisted of the focus intervention: a combination of coaching and video self-reflection (4th distinct condition in the present study)**.** During this stage, each dyad of participants and the coach viewed the video footage of the lesson and reflected on teachers' quality of academic language instruction, their students' use of oral academic language during the small group discussions, students' weekly written samples, and the teachers' instructional strategies for supporting academic language in their students. The coach and the teachers used the rubric for self-reflection to guide their discussion of teachers' quality of academic language instruction and select the aspects that needed to be improved (Appendix D). They compared their notes and came up with a plan for the following lesson. Coaching sessions and sessions combining coaching and video self-reflection were audio-recorded and examined for quality of coaching interactions. Two

independent raters used a fidelity checklist based on coaching quality rubric (see Appendix F) to ensure the integrity of coaching sessions and the fidelity of intervention implementation. A 90% interrater agreement was calculated fidelity checklists for 30% of coaching sessions.

Instrumentation and Measures

The investigation aimed to measure the impact of the combined intervention on the quality of teachers' academic language instruction and the impact that the possible change in teachers' academic language instruction would have on ELL students oral and written academic language use. The study employed a number of instruments to measure teachers' quality of academic language instruction and students' oral and written language skills prior to the intervention, as well as their academic language use and structure during the intervention (refer to Table 4). This section presents the instruments used, their development, and other measures used for the study. Table 4 presents a summary of the measures used in the study.

Table 4

Student and Teacher Measures

Participants	Assessment Area	Measure	Purpose
Students	Written Expression	Test of Written Language-3 (TOWL-3, 1996) Story Construction and Contextual Conventions subtests	Initial screening; identification of the students' sample
	Reading Comprehension	Consortium on Reading Excellency Assessing Reading (CORE, 2004) Maze subtest	
	Vocabulary	PPVT-IV Critchlow Vocabulary Scale (English) Critchlow Vocabulary Scale (Spanish/Cantonese)	
	Students' oral academic language	Student Oral Academic Language Word, Sentence, and Discourse Level Rubrics	Ongoing assessment
	Students' written academic language	Student Written Academic Language Word, Sentence, and Discourse Level Rubrics	Ongoing assessment

Teachers	Demographics, Educational and professional background	Teachers' Questionnaire	Identifying Teachers' sample
	Academic Language Instruction	Academic Language Instructional Quality Rubric	Ongoing assessment; teacher self-assessment
		Rubric for academic language instruction during writing instruction with the context of social studies	Ongoing assessment
	Academic language knowledge	Academic language questionnaire	Pre- and post-assessment
	Fidelity of Coaching	Rubric for coaching quality	Ongoing assessment
	Social Validity	Exit questionnaire	Post- assessment

Teacher measures. The battery of measures used with teacher participants focused on four domains: a) teachers' demographics, educational and professional background, b) teachers' initial and post-intervention understanding of academic language construct, c) quality and structure of academic language instruction, d) social validity and fidelity of implementation.

Teacher measures: Teacher demographics and educational and professional background questionnaire. Teachers' demographics, educational and professional experiences were evaluated using a questionnaire developed for this study. It was used to select the teacher participants from the pool of credential candidates taking the early directed teaching practicum and interested in study participation. The questionnaire solicited open-ended responses, and had three parts. The demographics part of it focused on participants' age (presented in 5-year segments), gender, ethnicity, languages spoken, and ELL status in childhood (if applicable). The educational background questions focused on degrees obtained previous educational experiences in studying the pedagogy of writing, social studies, and ELL pedagogy. The professional background questions focused on previous teaching experience, its length and context, as well as teaching experience in writing, social studies, and working with early adolescent ELL students.

Potential participants received the questionnaire via email and provided written responses. Appendix I provides a sample of a blank Teacher demographics and educational and professional background questionnaire.

Teacher measures: Academic language questionnaire. Academic language questionnaire was given out as a pre-test and a post-test measure at the beginning of each quarter prior to the 1-hour professional development session and at the end of the quarter. This questionnaire had one question that asked the participants to define academic language. This measure was created to evaluate teachers' initial understanding of academic language and their under understanding of this construct at the end of the study.

Teacher measures: Quality of academic language instruction and rubric for video self-reflection. The study used a rubric for video self-reflection and rating of teachers' instructional quality adapted from project LLC (Brownell et al., 2014). The primary purpose of this rubric was two-fold: 1) to guide teachers' attention to aspects of their instruction that are at the core of the intervention, and 2) to assess the instructional quality of each lesson. The same instrument was used by the teachers, coaches, and independent raters.   The present study's rubric guided teachers' attention to their instructional practices focused on academic language in order to enhance their use and structure of academic language and promote students' use of academic language. The rubric consisted of three parts: a) self-evaluation with the focus on academic language; b) reflection on what went well and what aspects of instruction need improvement; c) "commitment to implementation:" an ongoing list of goals that the teacher and the coach jointly planned for teacher to implement. The teachers and the coach used the rubric to rate teacher's performance, list the evidence, and compare the notes. The difference in opinions/ratings served as the basis for the cognitive dilemma and dialogic critical discussion that were at the heart of the

intervention. The teachers, coaches, and independent raters also used a common list of quality indicators that spelled out the anchor performance for each rating (of 4-point scale) and parameters of high quality performance in each of the rated areas. Appendix D provides a sample of a blank Quality of Academic Language Instruction rubric.

Teacher Measures: Exit questionnaire (Participant Satisfaction Measure). At the end of the study, the teacher participants were asked to fill out the Exit Questionnaire that focused on teachers' perceptions of the professional development that they received in the course of the study. The questionnaire consisted of ten open-ended questions that focused on project's perceived benefits and challenges, teaching experiences of academic language instruction in the context of teaching writing in the area of social studies, teaching ELL students, and teachers' plans for continued improvement and implementation of strategies and pedagogical approaches that they learned within the study. The questionnaire was sent out to the teachers via email. Appendix J provides a sample of a blank Exit/Participant Satisfaction questionnaire.

Rubric for coaching quality. The rubric on coaching quality focused on nine indicators of high quality of coaching sessions outlined in the existing literature (Knight, 2007; Shidler, 2009). These nine indicators include: teacher choice in the content and process of learning; evidence of respect for difference in perspectives; evidence of reflection and focus on actions; evidence of genuine dialog; evidence of reciprocal learning; modeling techniques and instructional practices by the coach; focus on specific content; the session is structured around observing teacher practices; the coach and the teacher engage in consulting for reflection. These aspects were rated on a scale from 0-5 and the total score approximated the quality of each coaching session and establish fidelity of implementation. Appendix F provides a sample of a blank Coaching Quality rubric.

Student measures: Written expression and written academic language at word, sentence, and discourse level. Four measures were used to assess students' written expression and written academic language skills. To assess students' written academic language, two subtests from the Test of Written Language- 3 (TOWL-3, 1996) and a Compare and Contrast Structure rubric adapted from Hammann and Stevens (2003) were used. To assess students' written use of academic language at word level, a rubric for the written academic vocabulary use was developed for the study.

TOWL-3 Story construction and contextual conventions subtests. For the initial (pre-intervention) assessment of students' written expression, a Story Construction subtest from TOWL-3 was used. The TOWL-3 is a norm-referenced battery of seven subtests developed to assess written language skills of 3rd-8th grade students (ages 8.5-14.5). The Story Construction subtest presents the students with a 15-minute timed written response task based on a picture prompt. It evaluates students' written narrative skills, ability to describe action in the picture, sequencing, and theme development. The subtest has a high coefficient alpha reliability of .90. The subtest provides grade and age equivalent scores. TOWL Story Construction subtest was administered to the whole class as a part of initial business as usual assessment conducted to identify focus ELL students with the lowest scores in written expression.

Another TOWL subtest- Contextual Conventions- was adopted for the study in order to assess students' academic language at the sentence level on the ongoing basis. This subtest evaluates sentence structure within a student written composition, distinguishing fragmentary sentences, run-on sentences, compound sentences and clauses within them, and the use of conjunctions. The subtest has a range of coefficient alpha reliability from .71-.75 for the ages 9-12. Students' weekly written samples written within the focus lessons were evaluated using the

TOWL-3 Contextual Conventions subtest. Thirty percent of students' written samples were scored by two independent scorers with a 95% interrater reliability.

Compare and contrast structure rubric adapted from Hammann & Stevens (2003). Since the TOWL-3 Story Construction subtest is not intended for the assessment of compare and contrast essays, students' weekly writing done in the genre of compare and contrast was assessed with a rubric adapted from Hammann and Stevens (2003) study. The rubric has seven subscales that focus on compare and contrast essay organization. These subscales assess students' written expression of main idea, similarities, differences, and compare and contrast discourse markers. Two trained independent observers scored 30% of the students' written samples and established 90% interrater reliability.

Rubric of students' academic vocabulary use in written samples. The rubric assessed students' use of academic vocabulary in students' written samples. Students' vocabulary in the weekly written samples was coded according to the three categories: a) content area specific vocabulary pertaining to social studies and compare and contrast genre (i.e., "pharaoh," "delta," "contrast," "contrary"), b) general academic vocabulary (i.e., "develop," "hypothesize", c) polysemic vocabulary that has content-specific meaning (i.e., "staple" (as in "staple food")). The rubric quantified students' use of vocabulary within separate categories and provided a total count of academic vocabulary within a sample. It also allowed for identification of vocabulary that was additionally used in students' oral participation during the lesson and in teachers' presentation. For example, if the teacher used the word "staple" as a focus vocabulary word and the student used this word in her writing the word was underlined. If the word was used in students oral response the word was bolded. The words used by the teacher and used by the student in oral responses were bolded and underlined. This was done to track the overlap of

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academic language in students' oral and written responses. Two trained independent observers scored 30% of the students' written samples and established 85% interrater reliability. Appendix G provides a blank Rubric of Students' Academic Vocabulary Use in Written Samples.

Student Measures. Oral Vocabulary Measures. Several measures were used to evaluate students' oral vocabulary skills. Initial pre-intervention assessment conducted for the purposes of student sample identification of ELL students most at risk included Peabody Picture Vocabulary Test-IV (PPVT-IV, 2007), and Critchlow Verbal Language Scale in English and Spanish (Critchlow, 1999; CORE, 2004). PPVT-IV is a norm-referenced receptive vocabulary measure developed to assess vocabulary in individuals from 2:6 to 90+ years of age. The measure provides age and grade equivalents. All reliability and validity coefficients for the PPVT-4 test are in the .90s range. The test was administered to students individually by trained graduate student assistants. Since PPVT-4 assesses students' receptive vocabulary, two Critchlow Verbal Language Scales (in English and Spanish) were administered to students to assess their expressive vocabulary in English and home language. For one student participant whose home language was Cantonese, the scale was translated and administered by a certified Cantonese translator. Critchlow Verbal Language Scales assess expressive vocabulary in students grades K-8. The task involves naming the opposite of the stimulus presented orally by the examiner (i.e., "boy"-"girl," "muchacho"-"muchacha"). The scale includes 75 stimulus words with increasing difficulty. The assessment provides grade level equivalents. While assessment manual does not provide any reliability information, the tool is useful for gaining some insight on students' linguistic ability and language dominance in English and home language.[2]

Student Measures: Reading Comprehension. Consortium on Reading Excellence Assessing Reading Multiple Measures (CORE, 2004) Maze subtest was used for initial

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[2] No reliability coefficients were reported for Critchlow Verbal Language Scales (CORE, 2004)

assessment of students' reading comprehension. This informal assessment measure evaluates students' ability to comprehend text when reading it silently by using the "cloze" procedure, in which students are asked to fill in the blanks in series of passages. The deleted words include prepositions, articles, auxiliary verbs, participles, and occasional contextual vocabulary (i.e., the student should answer "doctor" and not "nurse" based on the context). This subtest was chosen strategically as it is very sensitive to comprehension difficulties frequently experienced by ELL students, such as difficulty with prepositions and conjunctions, difficulty with verb tenses, etc. (Bitchener, Yong, & Cameron, 2005; Hinkel, 2013). It is a timed 15- minute subtest that consists of multiple passages at 2 levels: Upper Elementary (grades 2-6) and Upper Level (grades 7-8). The student participants in the study were given the Upper Elementary set of passages. The test was administered individually. Grade level equivalents for students' reading comprehension were obtained as a result of the assessment.

Student/Teacher Measure: Oral academic language at word, sentence, and discourse level observation protocol. The protocol consists of rubrics and field notes modified from an observational protocol by Bailey et al. (2010). The protocol captures the setting of the mini-lesson/activity. It differentiates between the whole class direct instruction and small group instruction. It also specifies instructional contexts within the lesson activities. The rubrics within the protocol focus on teachers' and students' use and structure of the academic language. Using these rubrics, the trained observers watching the lesson footage recorded examples of word-, sentence, and discourse-level instances of teacher's and students' academic language use and structure. Teachers/students academic language at word level is measured by the total count of academic words in three categories (Bailey, 2012): content specific vocabulary (e.g., "Freedom Riders"), general academic vocabulary (e.g., "discuss") and polysemous words that take on

content specific meaning (e.g., "inequality" in social studies is different from "inequality" in math, "argument" in a lesson on writing has a different meaning than in everyday English). The variable of academic language at sentence level was measured by a separate and total of simple, complex sentences in order to gain some insights into the growth of sentence construction skills throughout the intervention. Academic language at discourse level was measured by coding teachers' and students' engagement with the text-level features (i.e., analysis of text and paragraph structure, discourse markers, discussion of titles, text-level predictions, strategies for navigation of a content area texts, etc.). The protocol was utilized for both teachers' and students' use and structure of oral academic language and was filled out for every lesson for each individual teacher and student participants in their class. Appendix H provides a sample of a blank Oral Academic Language Observation Protocol.

Data Collection

Data collection for the study was carried out in two phases: quarter I- from April to June 2013 and quarter II- from September to December 2013. No teacher participant and no student participants were the same in both quarters. The study employed four primary data collection methods: 1) pre-intervention student screening, 2) video-recording of lessons (4 lessons a week, with footage of 8 teachers and 8 students), 3) compilation of teachers' academic language instructional quality ratings, 4) compilation of teachers' video self-reflection; 5) evaluation of teachers' and students' use and structure of oral academic language (through completing *Oral academic language at word, sentence, and discourse level observation protocol* while viewing the recordings), 5) compilation of students' weekly writing samples (compare and contrast essays), and 6) audio recordings of coaching sessions. The researcher introduced the study to potential teacher participants by email and met with interested candidates in person, explaining

the time demands and participation procedures. The researcher also met with students' parents

and spoke to them about the study, explaining data collection procedures (assessment and video

recording). Student and teacher participants took part in a number of initial and on-going tasks.

Figure 9 provides a graphic representation of all the tasks that students and teachers engaged in

for the duration of the study.

Participants	Task	Data Collected
Teachers	Initial Assessment: Demographics, Educational and Professional Background Questionnaire, Academic Language Understanding Questionnaire (pre-test)	-filled out questionnaires (electronic copies)
	Ongoing Weekly Tasks: Developing and conducting 70-minute weekly lesson with the focus on academic language instruction Self-reflection on the weekly lesson (completion of a rubric) Participation in a coaching session or a session that combined coaching and video self-reflection	-video footage of lessons -filled out self reflection rubrics -audio recordings of the coaching sessions
	Final Assessment: -Exit Questionnaire - Academic Language Understanding Questionnaire (post-test)	-filled out questionnaires (electronic copies)
Students	Initial Assessment: Written Language, Reading Comprehension, English Vocabulary and L1 vocabulary	-assessment Protocols, TOWL-3 --writing samples
	Ongoing Weekly Formative Assessment: -Weekly class participation in whole class/small group presentations and discussions -Weekly writing sample	-video footage of lessons -weekly writing samples

Figure 9. Teacher and student tasks within the study and data yielded from the tasks.

Teachers' data collection was carried out in three phases. First, the teachers completed

the Demographics, Educational and Professional Background questionnaire and Academic

Language Understanding questionnaire (pre-test). The second phase was comprised of ongoing

weekly participation. The third phase consisted of filling out the Exit Questionnaire and the

Academic Language Understanding questionnaire (post-test). Teachers completed most of the questionnaires and self-assessments electronically and individually in a distraction free environment. The only measure that was administered to teachers as a group was the Academic Language Understanding questionnaire. Filling out of the questionnaires took a total of one hour. Ongoing teachers' weekly participation in the project was comprised of three tasks: 1) conducting a 70 mins lesson while being filmed (fifty minutes of each were divided between the teachers who were taking turns delivering the content in whole class and small group setting), 2) completing an individual reflection on the lesson that took about an hour a week, and 3) attending an hour long coaching session. Video footage was collected by 4 graduate student assistants (one assistant filming per classroom) who were trained by the researcher. The coaching sessions were audio recorded by the coaches. The overall teacher participation in the project was 26 hours per teacher per quarter.

The written expression and reading comprehension measures used for initial student screening were administered to students as a group. The vocabulary assessment was conducted individually. The students met with the trained tester (graduate student assistant) in an empty classroom adjacent to the students' class. All assessments, except for the Critchlow Verbal Scale (Spanish/Cantonese) were administered in English. Every week, the teachers' compiled students' written samples of compare and contrast focus essays, and the researcher made copies for teacher analysis and research data collection. Completion of the initial screening took approximately an hour of students' time. Completion of the weekly in class written assignments was timed and took 20 minutes. The overall weekly student participation in the project's focus lesson was 70 minutes. The total time of students' participation in the project was 11.5 hours per student per quarter.

Overall, the study yielded 84 hours of video footage of lessons focused on academic language instruction within the context of teaching writing in the area of social studies (72 lessons, 70 minutes long). It also yielded 14 hours of audio recordings of coaching sessions. The student data included 16 initial assessment profiles (8 per quarter) and 140 sample essays (8 students' essays per week, 9 weeks per quarter; with four students (attending different classes) missing one session due to illness or family circumstances) collected weekly.

Data Analysis Procedures

This section outlines the quantitative and qualitative analyses procedures that were carried out for analysis of teacher and student data yielded by the instruments and measures used in the study. The data analysis procedures included single subject design analysis of all lessons within the study and a mixed methods approach comprised of a combination of descriptive statistics and qualitative analysis of 24 select lessons. Three lessons (one per each study condition, i.e. baseline, coaching or video self-reflection, and combined intervention) were examined for each of the 8 classrooms (each dyad of teacher participants). Figure 10 presents a visual representation of lessons that were selected for this closer exploratory analysis.

Baseline	Initial Intervention		Combined Intervention
	Coaching	Video self-reflection	Coaching and Video Self-Reflection
All 8 lessons analyzed	4 lessons with the highest scores are analyzed	4 lessons with the highest scores are analyzed	8 lessons with the highest scores are analyzed

Figure 10. Lessons analyzed within each experimental condition.

Within the select 24 lessons, all 8 baseline lessons were analyzed, along with 8 lessons with the highest quality scores within the initial intervention condition (coaching-alone or video self-reflection), and 8 lessons with the highest quality scores within the combined intervention condition (coaching and video self-reflection). The lessons with the highest scores were chosen

strategically for an exploratory detailed mixed methods analysis of teachers' and students'

academic language use and structure (for a more detailed overview of the data analysis of the 24

lessons see discussion of the research question two data analysis below).

Research question 1: Single subject design data analysis. Quantitative data analysis

that is used in single subject design studies was used to respond to Research Question 1: "To

what extent does adding video self-reflection to coaching affect teachers' quality of academic

language instruction? Moreover, does the intervention that combines video self-reflection and

coaching increase the quality of academic language instruction over and above the impact of an

intervention that consists of coaching or video self-reflection alone?" The individual scores of

teachers' quality of academic language instruction (discourse component) were recorded weekly

for each focus lesson using the *Quality of academic language instruction Rubric*. The rubric

consisted of a total of 19 items (13 pertaining to the whole class instruction and 6 pertaining to

the small group instruction). The rating scale consisted of six points (0-not observed, 1-

inadequate, 2-low average, 3-average, 4- competent, 5- mastery). Individual teacher's quality of

instruction was calculated for each teacher participant. The maximum raw scores that could be

obtained for the whole group instruction, small group support, and the entire lesson were 65, 30,

and 95, respectively. The scores obtained by each teacher were converted to percentages in order

to standardize teachers' performance. The percent scores were graphed.

Graphic analysis of the outcome variable (the quality of academic language instruction)

was used to assess the trends over time in teachers' scores. Several researchers, including Gay

(1987) and Kazdin (2011), report the appropriateness of the visual examination/graphic analysis.

The nine data points for baseline, initial intervention (coaching or video self-reflection), and the

combined intervention were examined for consistency and stability of trends, the change in

levels between intervention conditions, and the change in levels caused by the alternative

(counter-balanced) initial intervention conditions (coaching vs. video self-reflection). The results

of the intervention (the trends) were compared across participants and across the settings

(different classrooms). Descriptive statistics (mean, median, range, and standard deviations) were

calculated for all participants' data points in each condition of the experiment. The descriptive

statistics were compared across the conditions.[3]

Mixed methods data analysis. Descriptive statistics were used to analyze the data

yielded by the Teacher Demographics, Educational and Professional Background Questionnaire

and students' demographics and initial assessment scores (i.e., age and grade level equivalents

for PPVT-IV, TOWL-3, Critchlow Verbal Scales, and CORE Maze task).

Research question 2: Qualitative data analysis. To analyze data for research question

2: "How does the increase in teachers' quality of academic language instruction influence

English Language Learners' use and structure of academic language?" qualitative data analysis

was used. The *Student/Teacher Measure: Oral academic language at word, sentence, and

discourse level observation protocol* was used for this purpose. Filled out protocols of each of

the 24 select lessons were read closely by two independent observers coded using the coding

schema presented in Appendix O. The coding schema contained three categories of codes. The

first category contained instructional context codes that specified the position of an instructional

context within the lesson. Instructional context within the study was operationalized as cohesive

and finite lesson segment dedicated to a particular instructional goal. Some of the examples of

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[3]Additionally, effect sizes for each intervention condition were calculated using the percentage of nonoverlapping data (PND) to determine the treatment effects (Scruggs, Mastropieri, & Casto, 1987). Consideration was also given to other possible techniques, including percentage of all non-overlapping data (PAND) and improvement rate difference (IRD). Given the one-point baseline condition and the limited number of data points in the study, it was decided that identifying the effect size was not a meaningful approach. Instead, the analysis of effect was carried out through traditional single subject design analysis methods recommended by research (Mason, 2010).

instructional contexts include introduction of a topic, vocabulary preview, lesson closure, etc. For comprehensive description of examples of instructional contexts and strategies, see Appendix K.

The codes developed for instructional contexts category differentiated between whole class and small group mini-lessons 1 (social studies content) and 2 (writing focus) and identified the discourse-, sentence- or word-level focus of an instructional context. Additionally, the codes differentiated between teacher-led or student-led instructional contexts (i.e., **IC_WC_L1_DF_TL:** Whole class mini-lesson 1 Discourse Focus Teacher-Led). The second category of codes contained the codes for strategies used within the particular part of a focus lesson. Just like instructional context codes, strategy codes indicated the part of the lesson in which a particular strategy was used, the level of academic language that it targeted, and differentiated between teacher- and student-led strategies (**STR_WCL1_DL_T:**Strategy Whole Class mini-lesson 1 Discourse Level Teacher Led). Some of the example strategies included mnemonic devices, graphic organizers, and context clues. The third category of codes contained word-level codes for the three categories of academic language vocabulary (content area specific words (e.g., "rural," "totalitarian"), general academic words (e.g.,, "describe," "analyze"), and polysemous words used with a specific meaning in the content area (e.g., "period": in social studies referring to the time, "position": in social studies referring to one's point of view, Anstrom et al., 2010; Bailey, 2012) along with an indicator whether the word was used by a teacher or a student (i.e., **WLCST:** Word Level Content Specific Teacher Used; **WLGAT:** Word Level General Academic Teacher Used, etc.) Thirty percent of the lessons were coded by two independent observers, and 85% interrater reliability was achieved.

Conversation Analysis. Additionally, teacher student interactions were examined in each lesson with the highest score within each intervention condition (based on transcripts of the 24 select lessons) using the conversation analysis approaches described in a study of formative assessment conducted by Heritage and Heritage (2013). The transcripts of the focus lessons were examined to establish the "interactional sequences," and actions, understanding, meaning-making instances were identified in such teacher-student(s) conversational exchanges (Heritage & Heritage, 2013, p. 181). Within the coding schema used to analyze teacher-student interactions, teacher-student verbal exchanges are coded as IRE (initiation-response-evaluation, Cazden, 1988), IRFRF (initiation-response-feedback-response-feedback; Mortimer & Scott, 2003) and IRPRPR (initiation-response-prompt-response-prompt-response; Mortimer and Scott, 2003). Students' responses were also coded for general verbal acts (i.e., vocabulary responses, agreement/disagreement) and verbal actions critical for social studies (i.e., explanations, descriptions, definitions, etc. (Scarcella, 2003).Given the study limitations that not every word that the students were saying was clearly audible, only qualitative data analysis was used for research question 2.

Research Question 3: Mixed Methods Data Analysis. To conduct data analysis for research question 3: "How does the increase in teachers' quality of academic language instruction influence ELL students' academic language use and structure in their writing samples?" a mixed methods approach was used. Descriptive statistics (means, medians, modes and standard deviations) were used to analyze ELL students' written samples of compare and contrast essays collected for each of the 24 focus lessons. These essays were coded for the students' academic language use at word level (using three codes:" content area specific," "general academic" and "polysemous vocabulary with content- specific meaning"). The count of

academic language vocabulary words for each category (i.e., content area specific, general

academic and polysemous words) and the total count of academic language words were

calculated, and the descriptive statistics (means) were used to standardize the results across the

lessons with the highest instructional quality per condition. Additionally, the mean scores were

calculated for the sentence and discourse level scores in the writing samples obtained through the

use of TOWL-3 Contextual Conventions scoring rubric and the Compare and Contrast rubric

adapted from Hammann and Stevens (2003). While the academic word count and the Compare

and Contrast rubric did not have a finite score, the TOWL-3 Contextual Conventions Subtest has

a number of maximum points that can be achieved (n=18). Therefore, the mean percent of

Contextual Conventions scores were calculated for the focus lessons.

CHAPTER IV
Results

The following chapter reports the findings of the study. The results are presented in three sections based on the research questions outlined in the previous chapter and presented here at the beginning of each section. For the results obtained through qualitative data analysis, results and discussion are combined, providing an interpretive analysis, typical of qualitative research reporting (Miles & Huberman, 1984).

The Impact of Adding Video Self-Reflection to Coaching on Teachers' Quality of Academic Language Instruction

Research question 1: *To what extent does adding video self-reflection to coaching affect teachers' quality of academic language instruction? Moreover, does the intervention that combines video self-reflection and coaching increase the quality of academic language instruction over and above the impact of an intervention that consists of coaching or video self-reflection alone?* The study investigated the impact that an intervention that combines video self-reflection with coaching on teachers' quality of academic language instruction and to compare its effects to effects of coaching and video self-reflection implemented separately. The teacher participants' instructional quality scores for the lessons in baseline, two initial intervention conditions (coaching or video self-reflection), and combined intervention condition (coaching and video reflection, implemented concurrently) were examined within the framework of the single subject design analysis. Each phase (baseline-initial intervention- combined intervention, implemented within a quarter) was examined separately to establish whether or not the combined intervention increased the quality of academic language instruction over and above the impact of an intervention that consisted solely of coaching or video self-reflection. The scores were graphed and visually inspected. The effect sizes for each condition were calculated.

Figures 11-12 represent results based on the academic language instruction quality scores for all 16 teacher participants. In these figures, the trajectories of quality scores are displayed next to one another in two quarters with different initial intervention conditions. Figure 11 presents the results of for the participants whose initial intervention condition was coaching.
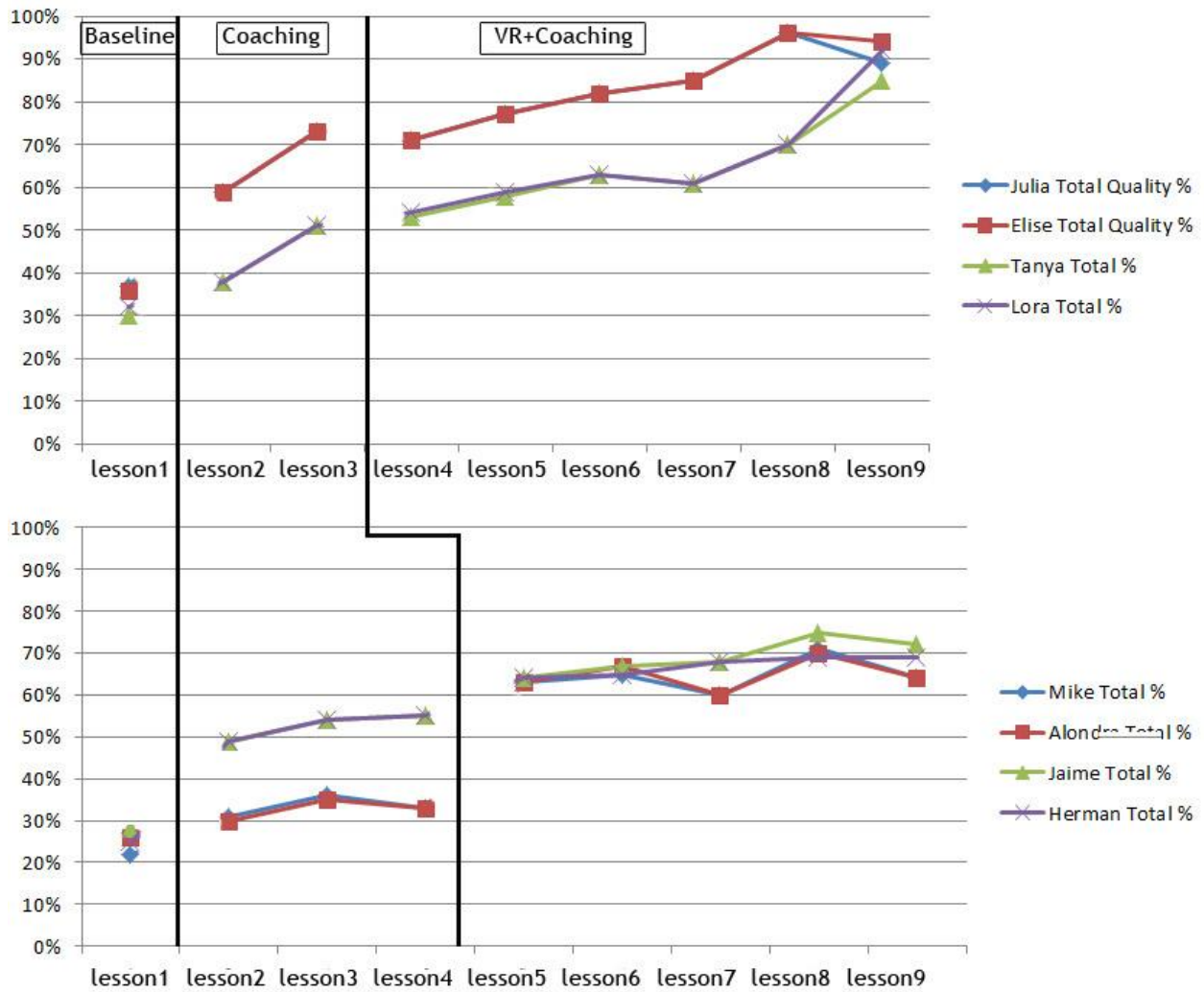
Figure 11. Phase I scores: Baseline-Coaching- Coaching and Video Self-Reflection
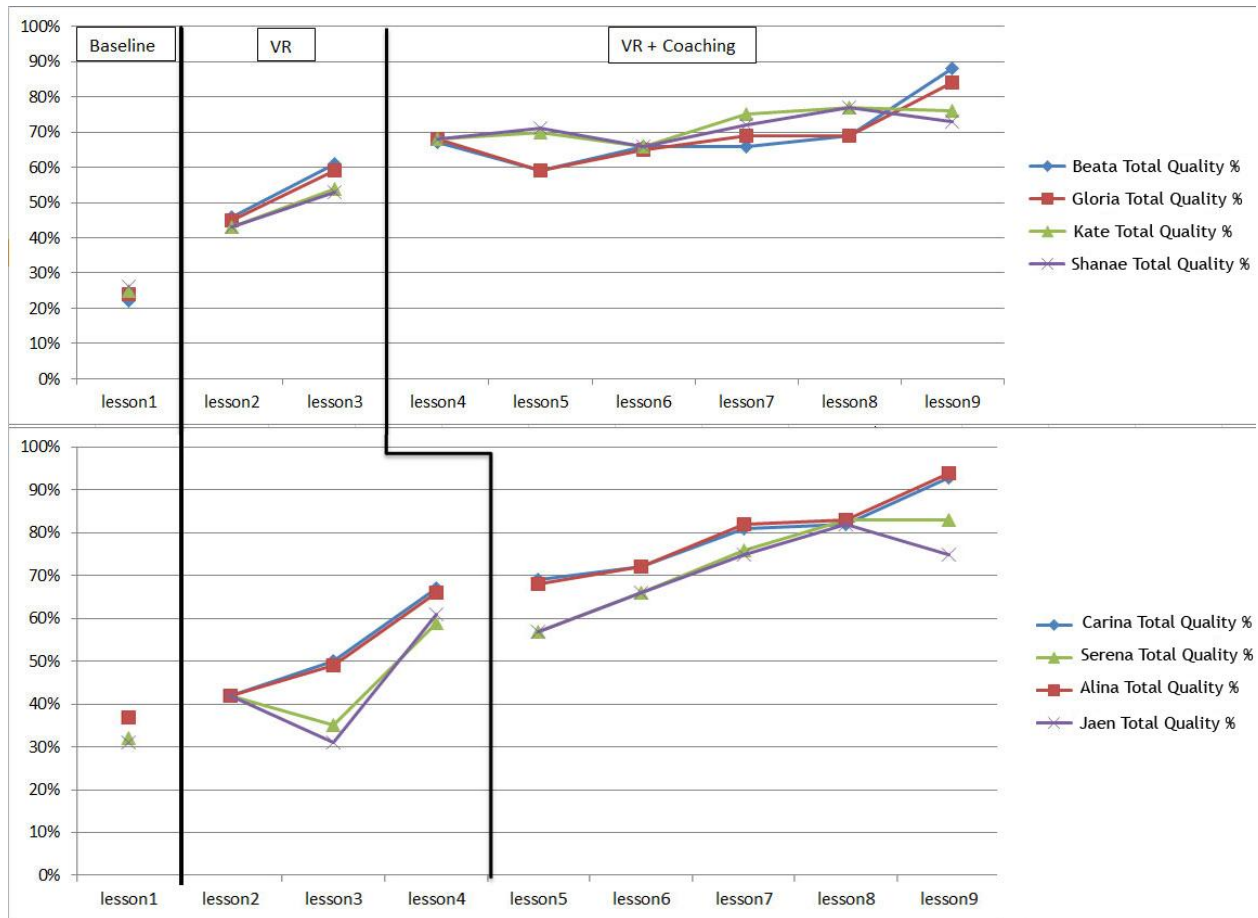
Figure 12. Phase II scores: Baseline-Video-Self-Reflection- Coaching and Video Self-Reflection

Figure 12 presents the results of for the participants whose initial intervention condition was video self-reflection. The scores for the baseline, initial intervention conditions and combined intervention for all of the participants are displayed. To standardize the participants' performance, their raw scores were converted into percentages: by dividing the original raw score by the total 95 points (maximum possible score for the rubric) and multiplying the result by 100. The baseline scores were established based on the first lesson that the study participants conducted after participating in a 1.5 hour long lecture-type professional development session that focused on academic language instruction. During the baseline phase, the mean performance for all participants was 29% (median=29%; $SD = 5.4\%$, range $= 22\%$-37%; 15).

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Right after one-point baseline, the initial intervention condition 1 began. For eight participants (Julia, Elise, Tanya, Lora, Mike, Alondra, Jaime, and Herman, spring quarter 2013) initial intervention condition consisted of 2-3 coaching sessions. During this stage the participants met with the coach and discussed the lesson following the questions in "guided noticing" rubric (same rubric that the teacher participants used in video self-reflection condition, but without having had an opportunity to watch the lesson video footage). For eight other participants (Beata, Gloria, Kate, Shanae, Carina, Alina, Serena and Jaen; fall quarter 2013) the initial intervention consisted of 2-3 sessions of guided video-self reflection. During this stage, the participants responded to a "guided noticing" academic language video self-reflection rubric while watching video footage of their lessons, but without the opportunity to discuss them with a coach (Osipova et al., 2011), see Appendix D).

Figures 13-16 display individual participants' replication of the combined intervention condition with counterbalanced initial conditions across eight participants. Figures 13 and 14 demonstrate the impact of initial intervention condition 1 (coaching) followed by the combined intervention for Julia, Elise, Tanya, Lora, Mike, Alondra, Jaime, and Herman. Figures 15 and 16 demonstrate the impact of the initial intervention condition 2 (video self-reflection) followed by the combined intervention for Beata, Gloria, Kate, Shanae, Carina, Alina, Serena and Jaen.
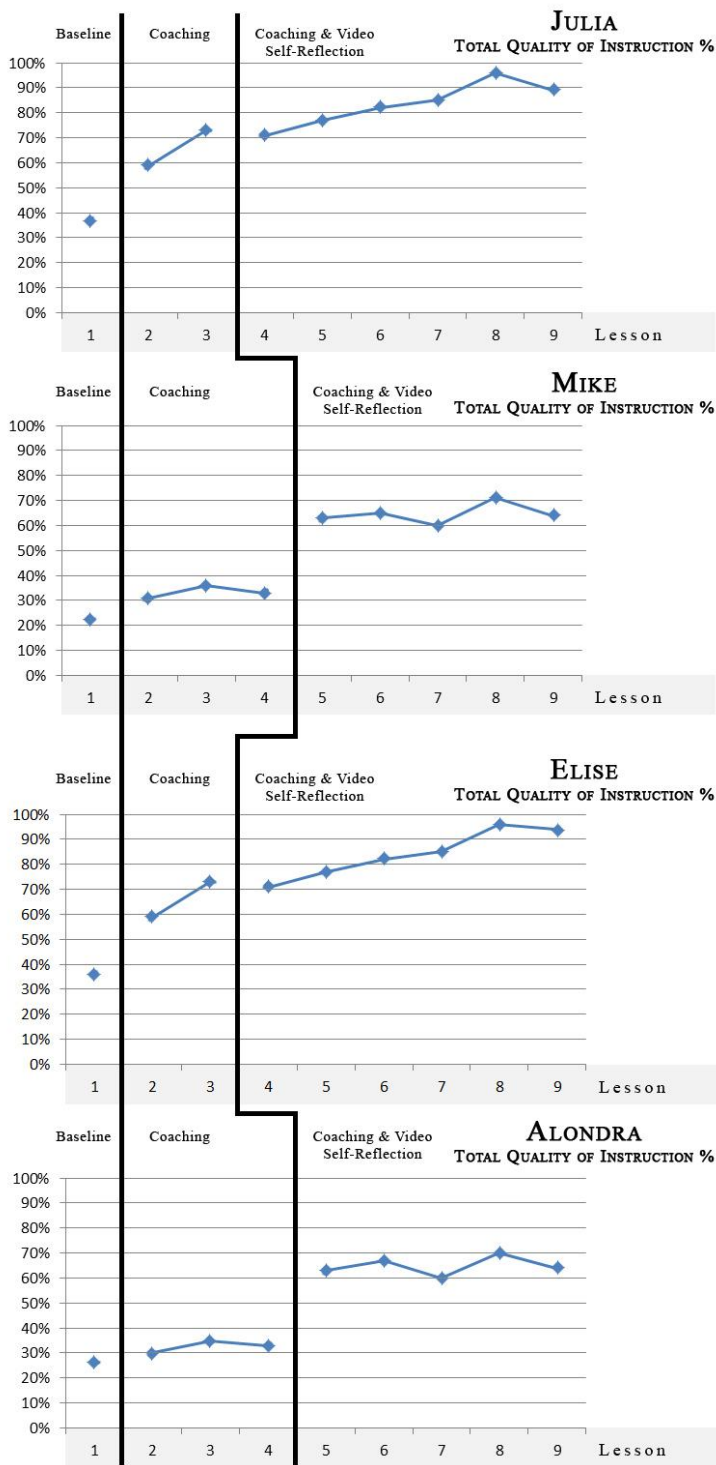
Figure 13. Replication of P1 (Julia's) condition across the participants in coaching condition (part 1)
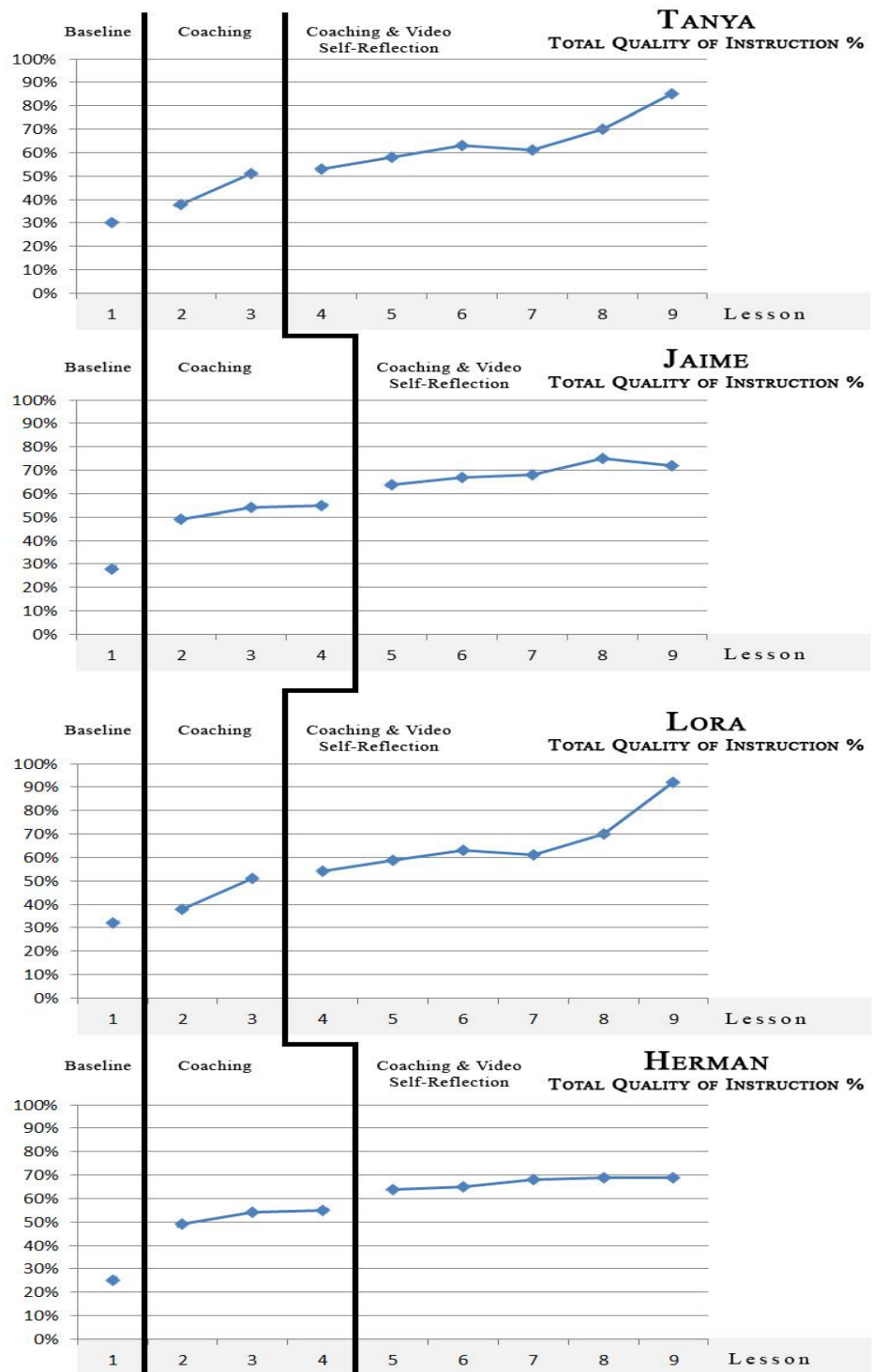
Figure 14. Replication of P1 (Julia's) condition across the participants in coaching condition (part 2)
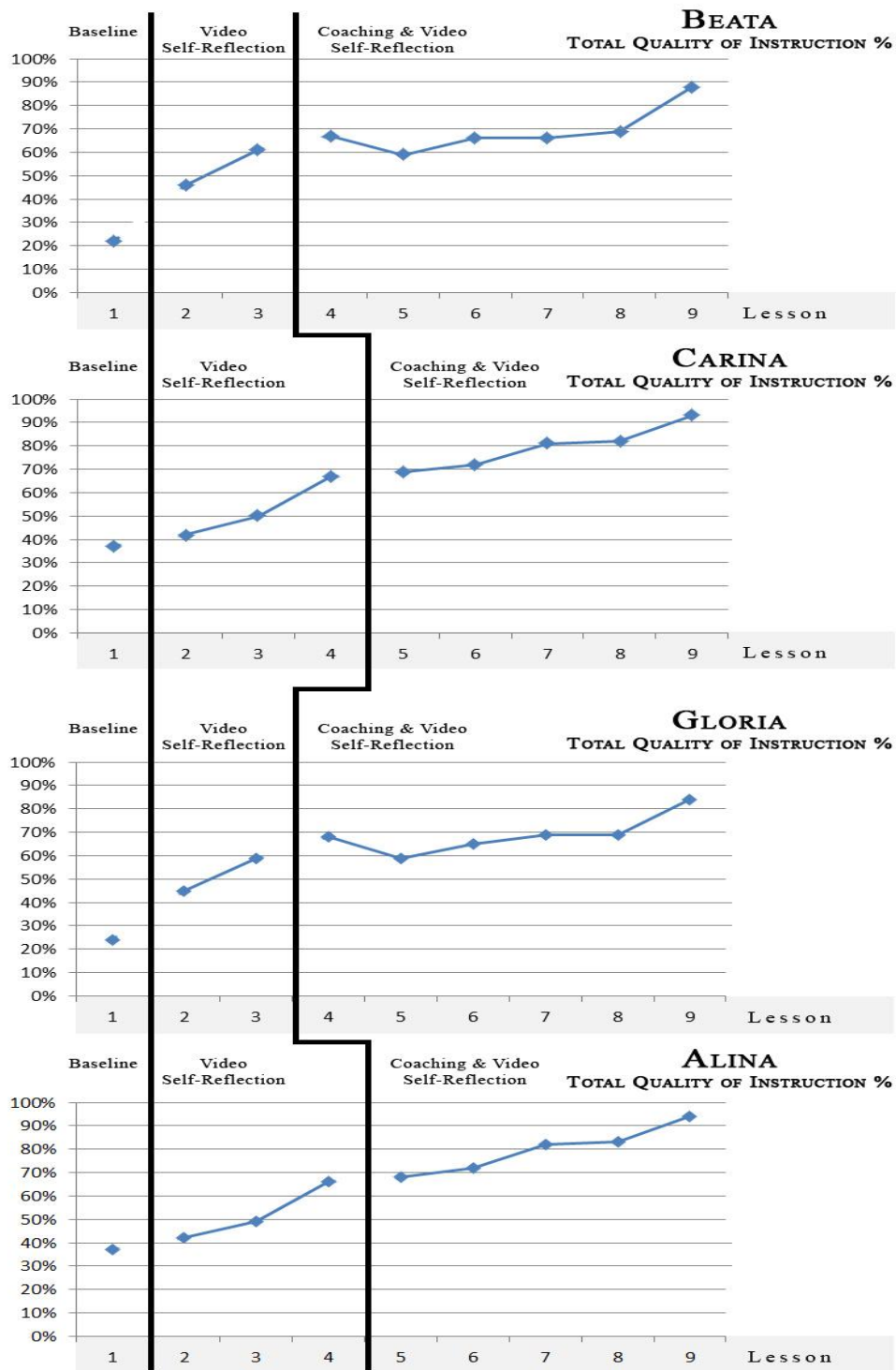
Figure 15. Replication of P1 (Beata's) condition across the participants in video self-reflection condition (part 1)
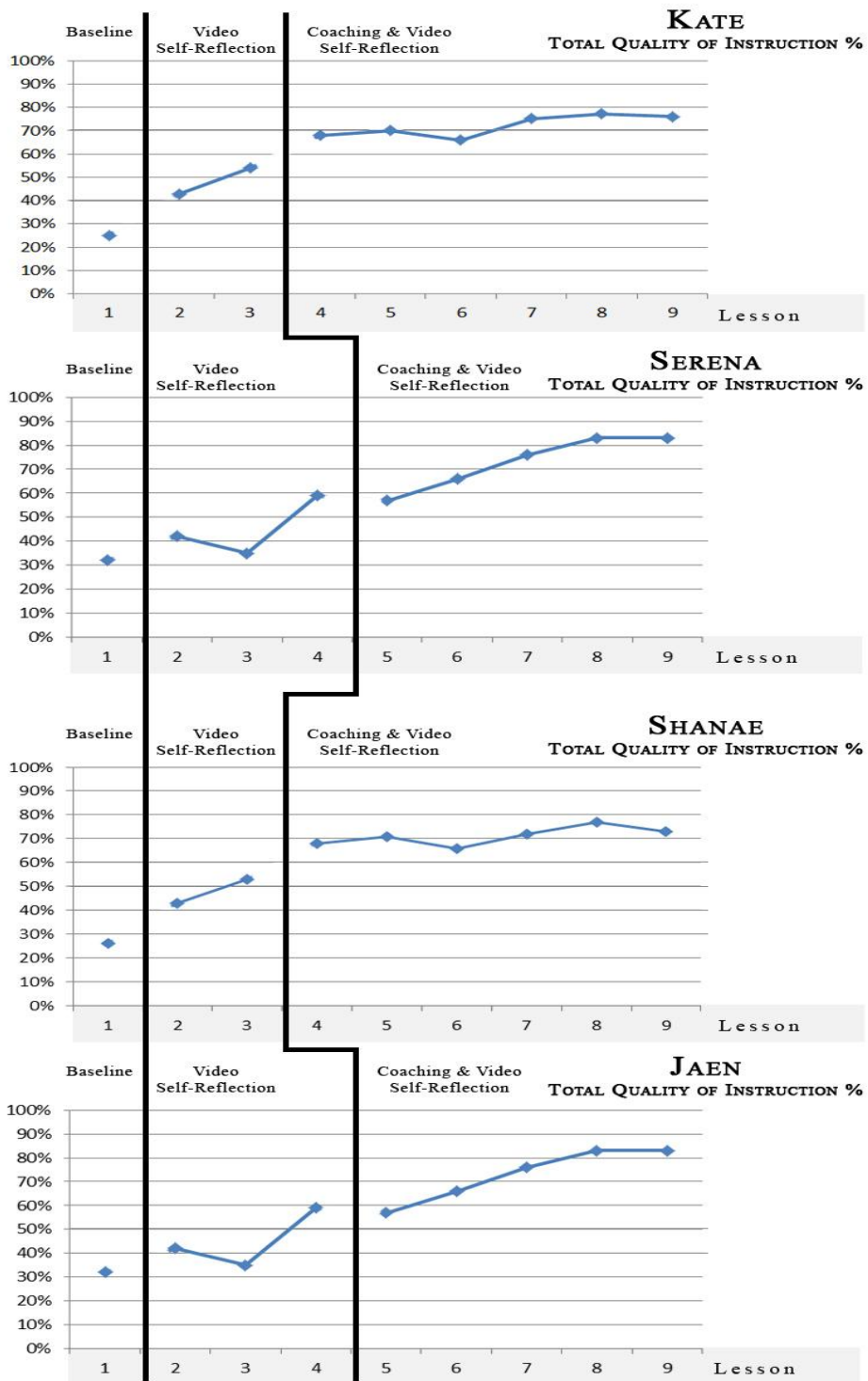
Figure 16. Replication of P1 (Beata's) condition across the participants in video self-reflection condition (part 2)

Visual inspection of the data shows that all participants demonstrated gains from baseline scores immediately after the initial intervention condition 1 (coaching or video self-reflection) began. Table 5 presents mean, median, and range for teachers' academic language instructional quality scores for each condition.

Table 5

Mean, Median, and Range for Teachers' Academic Language Instructional Quality Scores for Baseline, Initial Intervention Condition, and Combined Intervention

Baseline	Intervention condition 1: Coaching	Intervention condition 2: Video Self-reflection	Combined Intervention
Mean	48%	48%	72%
Median	50%	50%	69.5%
SD	13%	13%	10%
Range	43	43	41

During the initial intervention condition, the mean performance for coaching was 48% (median=50%; SD = 13%, range = 30% -73%, 43), and the mean performance for video self-reflection was 48% (median=50%; SD = 13%, range =30% -73%, 43). Comparison of the effects of initial intervention conditions (coaching vs. video self- reflection) shows that both coaching and video reflection conditions were comparable in their effects on quality of academic language instruction. Interestingly, for 4 participants (Julia, Elise, Tanya and Lora), 2 sessions of coaching resulted in significant gains in scores (very steep slope, from 37%, 36%, 30% and 32% at the baseline to 73%, 73%, 51% and 51%, respectively, at the end of the coaching intervention). However, the mechanisms responsible for this change in performance remain unknown. For the other 4 teachers -Mike, Alondra, Jaime, and Herman, who received 3 sessions of coaching, performance was more stable across the two conditions: from 22%, 26%, 28% and 25% at the baseline to 33%, 33%, 55%, and 55%, respectively, at the end of the coaching intervention. Scores for 2 participants, Serena and Jaen, showed a brief return to nearly-baseline level during

the 2nd lesson after the video-reflection session (Serena's BL:32% Jaen's BL:31% ; Serena's 2nd lesson score in video reflection condition: 35%, Jaen's 2nd lesson score in video reflection condition: 31%), but then they regained a higher level of performance (Serena:59%; Jaen: 61%) in the lesson that followed the 3rd session video-reflection session. The condition that was of the particular interest for this study- combined intervention condition that concurrently implemented video self-reflection and coaching (VR+C)- showed a steady improvement of academic language instructional quality scores for all participants. During the combined intervention condition, mean performance was 72% (SD =10, range: 53%-94%, 41; median=69.5%). The scores in the combined condition (VR+Coaching) were also more stable across the participants.

Trend/Slope. The scores in the initial intervention condition for all participants showed an upward trend that was observed in both groups of participants across different conditions (in groups of participants who had 2 and 3 sessions of initial intervention). The trend was consistent across both initial intervention conditions: coaching and video self-reflection. The trend was also consistent for all but one dyad of the participants (Lora and Tanya) who had a drop in scores at the second session within the coaching condition. The scores in the initial intervention condition 2 (video self-reflection) for all participants showed a milder upward trend- except for Beata and Gloria whose scores had a clearly upward trend. The slopes for intervention conditions 1, 2, and 3 for all of the participants are presented in table 6.

Table 6

Slopes for Participants Across 3 Conditions.

Participant	Condition: VR slope	Condition: Coaching Slope	Condition: VR+Coaching slope
Beata	7.5		3.5
Gloria	7		2.6
Kit	5.5		1.5
Chanee	5		1.5

Carina	8.3	4.8
Ana	8	5.2
Serena	5.6	5.2
Jaen	6.3	3.6
Julia	7	3
Elise	7	3.8
Tanya	6.5	5
Lora	6.5	6.5
Mike	0.67	.3
Alodra	1	.3
Jaime	2	1.6
Herman	2	1

A degree of slope indicates how strong the trend is. A steeper/ more pronounced slope is stronger evidence that the intervention is working. For 12 out of 16 participants, the slopes formed by scores during conditions of coaching and video reflection intervention were steep (mean slope of 6.68), with 4 participants' (Mike, Alondra, Jaime, Herman) scores during coaching condition exhibiting a milder slope (mean slope of 1.41). This indicates that for teachers who are more resistant to learning solely from instructional coaching (e.g., Mike, Alondra, Jaime and Herman) and for teachers whose performance was unstable during the training that implemented solely video self-reflection (e.g., Serena and Jaen), a training model that combines coaching and video self-reflection produces better results.

Level. The graphs in figures 11-16 demonstrate a clear change in levels between the baseline, initial intervention conditions 1 (video self-reflection and coaching implemented separately), and the combined intervention condition (video self-reflection+coaching) intervention stages. The difference in levels between baseline and intervention phases underscores the change in teachers' instructional behaviors and the significant impact of the intervention, especially the one that combined video reflection and coaching, on teachers' quality of academic language instruction.

The Impact of an Increased Quality of Academic Language Instruction on Teacher-Student Interactions and English Language Learners' Use and Structure of Oral Academic Language

The following section addresses the results for research question 2: *How does the increase in teachers' quality of academic language instruction influence English Language Learners' use and structure of academic language?* As stated earlier, the findings in this section are presented as a combination of qualitative results and their analytical, interpretive analysis. After academic language instruction quality scores for each lesson were established, 24 lessons (eight baseline lessons, four lessons with the highest quality scores in coaching condition, four lessons with the highest quality scores in video self-reflection, and eight lessons with the highest quality scores in combined intervention) were selected for a closer qualitative examination. The lessons yielded 28 hours of video footage that was transcribed verbatim. The lessons were coded for the types of instructional contexts, strategies used by teachers and students, and teacher-student interactions. The trends in codes were examined to determine the impact that the improvement in teachers' academic language instruction quality had on ELL students' use and structure of academic language.

Instructional contexts and strategies within the framework of the lessons. All the lessons in the study were developed following a rigid time framework that was required as one of features ensuring the experimental control. Every lesson had a 15-minute block dedicated to teacher-led instruction of a particular social studies topic, followed by a 10-minute small group discussion of the material learned. The next 15 minutes were devoted to writing within the social studies teacher-led presentation focusing on the compare and contrast features of an essay, followed by a 10-minute small group discussion of the material learned, followed by a 20 minute

writing prompt that tied together both focus social studies content and the writing instruction.

The lesson structure, times allocated for each lesson components, as well as examples of

instructional contexts and strategies used within them are presented in Figure 18 and 19. The

figures present two representative cases from different points within the study (baseline and

combined intervention). While the lessons data presented in the figure merely present illustrative

data and are not used to support a research question, they provide an illustration of sample lesson

structure and its individual variations. The first lesson taken from the baseline illustrates lack of

thematic alignment between its segments and an overwhelming plethora of instructional

contexts/strategies that get rapidly switched by the teachers. In contrast, , the second lesson

(with a more organized structure) serves as a clear example of the lessons developed by the

teacher participants as they gained experience within the study.

Figure 17 outlines the main components of the lesson conducted in the baseline condition

that focused on American Culture. In it, at the start of the lesson, within the mini-block dedicated

to the social studies content, the teachers took turns presenting components of American Culture.

Next, in a small group discussion, the students responded to teacher-led questions that focused

mainly on vocabulary review and activating background knowledge (e.g., "What words did you

learn?""What landmarks you like?" and "What is your favorite food?") The latter contributed to

a lot of off topic discussions and side conversations (e.g., "favorite flavor of jelly bellies"), and

the teachers had to review classroom rules. Next, the teachers presented a mini-lesson focused on

fragments, simple and complex sentences. The sentences presented in class did not focus on

culture, lacked compare and contrast focus, and started with "I really like…because" and "I

really dislike… because…" In the small discussion that followed, the students worked in pairs

Lesson Parts and Timeframe	Sample Lesson Content	Instructional Contexts	Strategies Used
Social Studies Focused Mini Block. Direct Teacher-Led Instruction: 15 minutes; teachers take turns	Mini-lecture on American Culture	**IC_WC_L1_DF_TL:** presenting the objectives (n=1) **IC_WC_L1_DF_TL:** Introducing lesson theme (n=1) **IC_WC_L1_WF_TL:** Activating students' background knowledge **IC_WC_L1_DF_TL:** Defining key concept (n=4) **IC_WC_L1_DF_TL:** Review of classroom rules (n=3) **IC_WC_L1_DF_TL:** Examining the components of the key concept: clothes, sports and food (n=1) **IC_WC_L1_WF_TL:** Introducing key vocabulary (n=3) **IC_WC_L1_WF_TL:** Reviewing key vocabulary (n=3)	**STR_WCL1_DL_T:** read aloud (the teacher reads to class) (n=6) **STR_WCL1_WL_T:** asking guiding questions (n=12) **STR_WCL1_DL_T**: checking for understanding (n=7) **STR_WCL1_WL_T**:prompting at word level (n=6) **STR_WCL1_WL_T**: compare and contrast at word level (n=6) **STR_WCL1_WL_T**: analogies at word level (n=4) **STR_WCL1_WL_T**:providing examples at word level (n=4)
Small group discussion focused on social studies material learned: 10 minutes, teachers switch small groups at 5 minutes	One by one students respond to teachers' questions about what they learned. Questions include "What words did you learn?" "What landmarks you like?" and "What is your favorite food?"	**IC_SG_L1_DF_TL:** giving directions (n=3) **IC_SG_L1_DF_TL:** review at the time of the teacher switch (n=1) **IC_SG_L1_DF_TL:** review of classroom rules (n=2)	**STR_SGL1_WL_T**:prompting at word level (n=6) **STR_SGL1_SL_T**: prompting at sentence level (sentence starters) (n=5) **STR_SGL1_WL_T**: asking guiding questions (n=12) **STR_SGL1_DL_T**: checking for understanding (n=7) **STR_SGL1_WL_T**: asking guiding questions (n=10)

Writing within Social Studies Mini Block. Direct Teacher-Led Instruction: 15 minutes; teachers take turns	Mini-lesson on writing focusing on completing simple sentences and creating complex sentences out of simple ones. Theme of the mini-lesson: "Your favorite food"	**IC_WC_L2_SF_TL:** introducing the concept of a simple sentence (n=1) **IC_WC_L2_SF_TL:** introducing the concept of a complex sentence (n=1) **IC_WC_L2_SF_TL:** introducing the concept of a dependent/independent clause (n=1) **IC_WC_L2_SF_TL:** practicing with sentences and fragments	**STR_SGL2_SL_T**: prompting at sentence level (sentence starters) (n=4) **STR_SGL2_WL_T**: prompting at word level (n=10) **STR_SGL1_DL_T**: checking for understanding (n=7) **STR_SGL1_WL_T:** asking guiding questions (n=10)
Small group discussion focused on writing within social studies: 10 minutes, teachers switch small groups at 5 minutes	Students practice extending each others' simple sentences into complex sentences and explain to each other what makes their new sentences complex	**IC_SG_L2_DF_TL:** giving directions (n=2) **IC_SG_L2_DF_TL:** teacher-guided discussion (n=2)	**STR_SGL2_WL_T**: prompting at word level (n=10) **STR_SGL2_SL_T**: prompting at sentence level (sentence starters) (n=4) **STR_SGL1_DL_T**: checking for understanding (n=7) **STR_SGL1_WL_T:** asking guiding questions (n=10)
Independent Writing 20 minutes	Prompt: Teachers administered TOWL-3 Story Construction Subtest	**IC_WCWRT_DF_S:** independent writing (n=2)	**No strategies used**

Figure 17. Sample lesson structure from the lesson developed within the baseline, with times allocated for each lesson components; instructional contexts and strategies

completing each other's sentences. The writing prompt that followed did not relate to the theme of the lesson.

The lesson presented in figure 17 was conducted in the combined intervention condition and focused on Freedom Riders. In it, at the start of the lesson, within the mini-block dedicated to the social studies content, the teachers took turns presenting the history of the movement. Next, in a small group discussion, the students discussed three focus questions, "*The Freedom Riders fought to end segregation, how do you think white or black people felt about the law that ended segregation? Who were some supporters of the Freedom Riders? How did they help them?*" Next, the teachers presented a mini-lesson on writing a compare and contrast essay demonstrating the use of a "hamburger" paragraph organizer and a Venn diagram. In the small discussion that followed, the students collaboratively filled out a Venn diagram that they subsequently used while answering the writing prompt that asked them to examine the similarities and differences of the Freedom Riders movement as compared to Little Rock Nine.

Lesson Parts and Timeframe	Sample Lesson Content	Instructional Contexts	Strategies Used
Social Studies Focused Mini Block. Direct Teacher-Led Instruction: 15 minutes; teachers take turns	Mini-lecture on Freedom Riders	**IC_WC_L1_DF_TL:** Introducing lesson theme (n=1) **IC_WC_L1_DF_TL:** Review of previously learned material (n=3) **IC_WC_L1_DF_TL:** Review of classroom rules (n=1) **IC_WC_L1_DF_TL:** Discussion of a visual (i.e., a historical photograph) (n=2)	**STR_WCL1_DL_T**/S: Choral reading (n=3) **STR_WCL1_WL_S:**Acting out the key vocabulary (i.e., chanting, protesting, etc.) (n=2) **STR_WCL1_DL_T**: checking for understanding (n=4) **STR_WCL1_WL_T**:prompting at word level (n=6)
Small group discussion focused on social studies material learned: 10 minutes, teachers switch small groups at 5 minutes	Students collaboratively respond to the questions: "*The Freedom Riders fought to end segregation, how do you think white or black people felt about the law that ended segregation? Who were some supporters of the Freedom Riders? How did they help them?*"	**IC_SG_L1_DF_TL:** giving directions (n=3) **IC_SG_L1_DF_SL:** student-led discussion (n=1) **IC_SG_L1_DF_TL:** review at the time of the teacher switch (n=1)	**STR_SGL1_DL_T**: visual supports (questions projected on the board) (n=1) **STR_SGL1_WL_T**:prompting at word level (n=6) **STR_SGL1_SL_T**: prompting at sentence level (sentence starters) (n=4)
Writing within Social Studies Mini Block. Direct Teacher-Led Instruction: 15 minutes; teachers take turns	Mini-lesson on writing a compare and contrast essay demonstrating the use of a "hamburger" paragraph organizer and a Venn diagram.	**IC_WC_L2_DF_TL:** introducing the concept of a paragraph (n=1) **IC_WC_L2_DF_TL:** introducing the hamburger graphic organizer and its parts (n=1) **IC_WC_L2_DF_TL:** introducing the Venn diagram (n=1) **IC_WC_L2_DF_TL:** filling out the Venn diagram together (n=2)	**STR_WCL2_DL_T**: "hamburger" graphic organizer for paragraph writing support (n=1) **STR_WCL2_DL_T**: Venn diagram compare and contrast organizer (n=2)
Small group	Students collaboratively fill out a Venn	**IC_SG_L2_DF_TL:** giving	**STR_SGL2_DL_T**: visual

discussion focused on writing within social studies: 10 minutes, teachers switch small groups at 5 minutes	diagram that compares and contrasts Little Rock Nine and Freedom Riders	directions (n=2) **IC_SG_L2_DF_TL:** teacher-guided discussion (n=2) **IC_SG_L2_SF_SL:** within the group presentation (n=3)	supports (questions projected on the board) (n=1) **STR_SGL2_WL_T**: prompting at word level (n=5) **STR_SGL2_SL_T**: prompting at sentence level (sentence starters) (n=4) **STR_SGL2_DL_T**: guided review of learned material (n=4) **STR_SGL2_DL_S**: Venn diagram (n=2)
Independent Writing 20 minutes	Prompt: "*Examine the similarities and differences of the Freedom Riders movement as compared to Little Rock Nine*"	**IC_WCWRT_DF_S:** independent writing (n=2)	**STR_WCWRT_WL_T**: spelling out words (n=7) **STR_WCWRT_WL_S**: using Venn diagram graphic organizers (n=2)

Figure 18. Sample lesson structure from the lesson developed within the combined intervention condition, with times allocated for each lesson components and examples of instructional contexts and strategies

Features of the baseline lessons and the impact of teachers' academic language

instructional quality on students' oral academic language. Eight baseline lessons conducted by

16 teacher participants (8 dyads of teachers) had a number of common patterns in their

instructional context and strategy use. These common patterns resulted in similarities in teacher-

student interactions across the classrooms in the baseline condition. The types of instructional

contexts were quite uniform across teachers, despite the fact that none of them received any

intervention training at that point, except for the opening lecture on academic language along

with the introduction to the experiment procedures/requirements: the lesson timeframe (15 mins-

10 mins-15 mins-10 mins-20 mins), social studies theme for each classroom, and the compare

and contrast genre focus for the writing assignments. Figure 19 lists the numbers of the types of

instructional contexts and strategies used by teacher participants in the whole class segments 1

and 2, with the focus on social studies and writing, respectively, in the baseline condition.

Appendix K provides a list of examples of contexts and strategies used in the baseline whole

class and small group.

Part of the lesson	Instructional contexts (n=number of contexts implemented across 8 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 8 lessons)
Whole lesson segments	Total Number of Types of Instructional contexts: 13; DL focused types: 8 SL focused types: 1 WL focused types: 4	Total Number of Different Strategies: 16; DL focused: 7 SL focused: 4 WL focused: 6 Teacher-implemented: 13 Teacher and Student- implemented: 3 Student- implemented: 0

Figure 19. Instructional contexts and strategies within the baseline lessons: Whole Class Lesson 1 and 2- Social Studies and Writing within Social Studies Focus

Instructional context types. During the *whole class* lesson segments 1 and 2 that focused on social studies (15 minutes) and writing (15 minutes), a total of 13 different instructional context types were implemented across 8 classrooms. Six context types were implemented by 14 out of 16 teachers (88% of the participants). These types of instructional contexts included: presentation of the lesson topic, defining the focus concept, examining components of the key concepts, giving directions, and defining vocabulary. The majority of teachers used 8 and more instructional context types. Two teachers implemented only 3 types of instructional contexts: presenting the lesson topic, defining the focus concept, and defining vocabulary.

The most frequent instructional context type within the whole class lesson segments in the baseline condition was the context of giving directions which was implemented 23 times followed by the instructional context of defining the focus concept (implemented 18 times). The least frequent contexts were setting the lesson objectives, introducing key events and the contexts of discussing the consequences of the key events (each implemented once), the context of guided vocabulary practice and the context of comparing two concepts (both types implemented twice). This category of the least frequent contexts is of a particular interest because it contains the contexts that are key to social studies and writing within the social studies instruction (i.e., identification of important events, comparison and contrast). Additional characteristic of the whole class instruction lesson segments 1 and 2 within the baseline condition was the prevalence on the discourse level focused types of contexts (i.e., presentation of the topic, giving directions) followed by a few word level focused types of instructional contexts (i.e., defining vocabulary) and only one type of instructional context that focused on academic language at sentence level.

Frequency of context implementation. In terms of frequency of instructional context implementation, it is important to note that teachers in the baseline condition frequently switched

instructional context types, going back and forth from one context to another and using one context type more than once within the same lesson segment. The *whole class lesson segments 1 and 2* in the baseline condition fell into two categories: the ones with too numerous instructional contexts per within the same lesson segment (8-10 instructional contexts within 15 minutes block; n=7); the ones with too few instructional contexts (three instructional contexts per 15 minutes block; n=1).

Most of the instructional contexts in whole class lesson segments were teacher-led and the teacher was the only speaker. A number of instructional contexts in the baseline condition followed one another without any student input (i.e., introducing the key concept was followed by defining key concept and then by defining key vocabulary, where all of the talking was done by the teachers). The mean number of instructional contexts within each whole class lesson 1 in baseline condition was 6.75 contexts within 15 minutes (each whole class segment). The median number of contexts was 8.5, and the range was 3-10.The lessons that featured too many (9-10) and too few instructional contexts (3) correlated with the lessons with the overall lower academic language instructional quality as was established by the single subject design analysis. In the case of too many instructional contexts, the focus of the whole class lesson segment was frequently indistinct: with one context following another with no time or opportunities for students to respond or with a particular context being disrupted by an unrelated context (i.e., giving directions or reviewing classroom rules). For example, one of the lessons that had 9 instructional contexts presented such a sequence: 1) presenting the topic of the lesson, 2) presenting a key concept of the lesson, 3) review of classroom rules, 4) presenting a key concept of the lesson (a different concept), 5) giving directions for the following activity, 6) defining key vocabulary, 7) giving directions again for the same activity (reading of the slides), 8) reading of

the slides, 9) review of classroom rules. Within the 15 minutes given to this lesson segment, less than 2 minutes was spent in each context, and in only three of them (#4, 6, 8), a few volunteer students had a chance to respond.

Missed instructional opportunities. The multitude of instructional contexts within a relatively short timeframe of the *whole class lesson segments 1 and 2* led to a higher frequency of missed instructional contexts in the baseline when compared to other experimental conditions (discussed further). A missed instructional context can be defined as a missed segment within the cohesive sequence of instructional contexts that logically follow each other. Missed instructional contexts often stem from lack of responsiveness on the teachers' part when the teachers miss an impromptu teaching context that follows the students' lead and to extend their learning. For example, when the student provides an erroneous answer or if the whole class is unclear about the directions, an instructional context that needs to follow is one of re-teaching or re-explaining the directions. If the teacher continues with her instruction, there is an instructional context that is missed.

The mean number of missed instructional contexts per whole class lesson 1 was 4, with teachers overlooking students' comments, erroneous responses, etc. In the following example 1, the teacher and a focus ELL student are discussing the concept of "grain":

Example 1. Missed instructional context.

1 T: Alright. Who would like to read this slide for me? New volunteers, new volunteers. Yes.
2 Please.
3 ELLST1 [reading]: "Rice is a grain belonging to the grass family. A grain needs both warmth and moisture to grow."
4 T: Very good. "Grain." What is "grain"?
5 NonELLST1: It's something that needs vitamins in nature.
6 T: Grain, okay. Do you think rice is a grain?
7 NONELLST1: Yes it is.
8 T: Yes, rice is grain. What else is a grain?

9 ELLST1: Umm, **a grain like, kind of like, dust.** A grain of dust made by fire.
10 T: Okay, grain is a type of crop, okay? Rice is grain. Barley is grain, right? Wheat. Yes. I
11 would like to show you different types of rice.

The above teacher-student exchange clearly indicates that both the focus ELL student (ELLST1) and her non-ELL classmate are unsure what the word "grain" means. In this exchange, at least two instructional contexts were missed. First, the concept of the "grain" remains undefined. The definition provided by non-ELL student in line 5 is too vague and imprecise. Here the teacher missed the opportunity (missed instructional context) to provide immediate feedback. Second instructional context is missed after line 9, when the focus ELL student 1 is possibly misinterpreting the word "grain" for the word "gray." Her response, "Umm, a grain like, kind of like, dust. A grain of dust made by fire," in line 9 is not clear. The teacher's response in which she provides an imprecise definition followed by examples ("Okay, grain is a type of crop, okay? Rice is grain. Barley is grain, right? Wheat." (line 10)) takes the place of the missed instructional context: a check for an understanding or corrective feedback. Instead, the teacher moves on. The multitude of contexts within each 15-minute lesson segment combined with frequently missed opportunities to respond to students' performance illustrate the lack of instructional clarity and coherence, which in turn caused the teachers to review the class rules twice, give directions more than once, and check for understanding in a hit-and-miss fashion, bringing in additional instructional contexts and further limiting opportunities for student responses within the whole class segments.

Additional characteristic of the baseline lessons was the lack of thematic matching between the whole class lesson 1 and 2 segments. Seven out of 8 lessons did not have all segments focused on the same theme within one lesson. For example, in one of the baseline lessons, while the first whole class segment focused on the history of careers, the second whole

class segment within the same lesson that was supposed to be focused on writing in the social studies context included examples of comparing and contrasting students favorite fast food. This lack of thematic alignment within the lesson further contributed to the lack of opportunities for students to practice academic language in the baseline lessons.

Small group lesson segments 1 and 2 in contrast with the whole class lesson segments 1 and 2 within the baseline condition presented a distinct lack of a variety of instructional contexts and noticeably lower frequency of different context implementation within each small group segment. In contrast to 13 different types of instructional contexts within the whole class instruction, 8 baseline lessons featured a total of 4 types of instructional contexts in small group settings. These 4 types included 1) restating directions (teacher-led, implemented 8 times), 2) question-answer review of the material presented in the whole class lesson segment (teacher-led, implemented 8 times), 3) guided work with a worksheet based on the material (teacher-led or student independent work, implemented 3 times), 4) question-answer review of the small group progress at the time when the teachers switched small groups (at 5 minutes within each 10 minute small group lesson segment, implemented 4 times). The instructional contexts did not differ by type within the small group segments that focused on social studies and writing. The mean number of instructional contexts used within the small group lessons 1 and 2 in the baseline condition was 2.5; two most frequent contexts were restating questions and question-answer review of the material presented in the whole group segments. The range was 1, with the minimal number of 2 and the maximum number of 3 instructional contexts within the 10 minutes segment of the small group instruction. Figure 20 presents the numbers of types of instructional contexts and strategies used within the small group settings during the baseline condition.

Appendix K provides examples of the types of instructional contexts and strategies in the small

group lesson segments for the baseline condition.

Part of the lesson	Instructional contexts (n=number of contexts implemented across 8 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 8 lessons)
Small group lesson segments	Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 2 WL focused types: 3	Total Number of Different Types of Strategies: 8; DL focused: 2 SL focused: 3 WL focused: 4 Teacher-implemented: 8 Teacher and Student- implemented: 1 Student- implemented: 0

Figure 20. Instructional contexts and strategies within the baseline lessons: Small group lesson segments 1 and 2 –Focus: Social Studies and Writing within Social Studies

Instructional strategies use. Another common feature of the baseline lessons was an

overabundance of strategies used within the instructional contexts during whole class instruction

and lack of strategies during the small group instruction. Within the *whole class lessons 1 and 2*

within the baseline condition, the teachers implemented 16 different types of strategies. The

mean number of strategies per *whole class lesson segment* was 10. The most frequent strategies

were checking for understanding, prompting at word level, and asking guiding questions. Within

the small group segments, teachers implemented 8 different strategies and the mean number of

strategies per small group segment was 9.25. The most frequent strategies were getting students'

attention and asking guiding questions (both implemented 26 times). The quality of strategy

implementation across the whole and small group segments according to the observation

protocol was very low: the mean performance was 1 (minimally present, for anchors refer to

Appendix E). Most of the strategy types in whole lesson settings were teacher-led and teacher

implemented (n=13; i.e., check for understanding, read aloud, analogy use), only three types

were implemented by both teachers and students (choral reading, categorizing with visual support, and activating background knowledge). In small group settings, all strategies were teacher-led. None of the strategies in both whole class and small group settings were implemented only by students or student-led. Strategy types were distributed more evenly than instructional contexts across the levels of academic language that they aimed to support: seven types of strategies were used to support academic language at discourse level, four types of strategies aimed to support academic language at sentence level, and six types of strategies aimed to support academic language at word level. In small group settings, two types of strategies were used to support academic language at discourse level, three types of strategies aimed to support academic language at sentence level, and four types of strategies aimed to support academic language at word level. However, the frequency of word-level type of strategies was implemented generally much more frequently than any other type of strategy.

An interesting characteristic of baseline lessons was the lack of alignment in the levels of academic language that were the focus of the instructional contexts and strategies. For example, in a discourse focused instructional context, such as "Introducing the topic of the lesson" the majority of strategies were word-level focused and included "word-prompting," "check for understanding at word level," etc.

Levels of academic language focus. In regards to the three levels of academic language (word, sentence, and discourse level), the overall focus on word level prevailed, with teachers spending most of the time introducing new vocabulary and defining words that they thought were difficult for their students. Within the word-level focus, 88% of the words presented and/or discussed by teachers in the baseline lessons were content area specific words pertaining to the social studies or writing content (i.e., Civil Rights, staple foods, conjunctions, etc.), and 12 % of

the words presented were general academic words (i.e., define, compare, present, focus, etc.). None of the words chosen for presentation/discussion by teachers within the baseline condition was a polysemous word with the content area specific meaning.

The lists of content area specific words introduced by teachers were generally not planned and excessive, ranging from 10 to 25 words per baseline lesson. They were presented orally, with occasional visual support when the teacher wrote them on the board. Students typically had a total of 2-3 time exposure to focus words (i.e., hearing them from teachers, reading them on a slide, working with them in a worksheet task). Students' use of academic language within the whole class baseline lessons was very minimal and depended largely on teachers' prompts, which targeted mostly word use and not the use of complete sentences or oral discourse construction. It is important to note that the predominant mode of response in baseline lessons was an individual, volunteer, one-at-a-time mode. Due to this, students spent lot of time waiting for their turn, and focus ELL students typically responded using 8-20% of the content area specific words (2-3 words per lesson). None of the ELL students' responses transcribed within the baseline lessons was a complete sentence. None of the turns exceeded 2 incomplete sentences/fragments.

Teacher-student interactions within the baseline lessons, both during the whole class and small group activities were carried out in a very authoritative style (Chin, 2007), where initiation-response-evaluation (IRE) sequence was a dominant form. Teacher-student interactions with focus ELL students did not go beyond the minimal three-step interaction, never going beyond evaluation that often contained an ill-fitting reassurance.

Example 2. Authoritative IRE interaction.

1 T: To cultivate rice we need moisture. What's moisture? Moisture?
2 ELLST1: Mud.

3 T: Mud, yes! when soil is mixed with water. Liquid. Very good. Moisture is damp, right?
      There is dirt with little bit of liquid in it. Yes?
4 NonELLST1: The sun?
5 T: The sun, warmth. Very good! Excellent! Excellent! Thank you. Let's move to the….any
6 questions? 'Origin of Rice.'

In the above example, in response to teacher's question what moisture is, in line 2 the

ELL student provides a one-word response, "mud." The teacher recasts her response, repeating

the word "mud," provides a positive evaluation ("yes") and a description of what "mud" is:

"when soil is mixed with water", gives another positive comment ("Very good."), and finally

adds a little detail to the focus word "Moisture is dump." As a result, in this teacher-student

interaction, the goal of the exchange (defining what moisture is) was never achieved. Both ELL

and non-ELL students provided one word responses that did not directly contribute to meaning

making and received a positive reaffirming evaluation (recast of their word and "yes").

According to the coding schema for students' responses developed on the basis of

Bloom's taxonomy (Bloom & Krathwohl, 1956), all students' responses to teachers' questions in

the baseline lessons fell under the category of "knowledge" (the initiation questions targeted

such skills as "remember," "know," and "define"). This was due to the fact that the teachers

mostly probed students' memory and background knowledge.

Features of the initial intervention conditions (coaching and video self-reflection)

lessons and the impact of teachers' academic language instructional quality on students' oral

academic language. From the 20 lessons within the initial intervention conditions of coaching

and video self-reflection conducted by 16 teacher participants (10 lessons per each condition in

separate quarters), four lessons per condition with the highest instructional quality scores were

selected and coded qualitatively for instructional contexts, strategy use, levels of academic

language focus and support, and the type of teacher-student interactions. In coaching condition,

the selected lessons included lesson 3 for Julia and Elise, Tanya and Lora, and lesson 4 for Mike and Alondra, and Jaime and Herman. In video self-reflection condition, the selected lessons included lesson 3 for Beata and Gloria, Kate and Shanae, and lesson 4 for Carina and Alina, Serena and Jaen. A number of common patterns was observed in teachers' instructional context and strategy use across the two conditions and classrooms. Appendix L illustrates the types of instructional contexts and strategies used by teacher participants in the *whole class lesson* segments 1 and 2 with the focus on social studies and writing in the initial intervention conditions of coaching and video self-reflection.

Instructional context types. During the *whole class lesson segments 1 and 2* that focused on social studies (15 minutes) and writing (15 minutes), a total of 13 different instructional context types were implemented in four classrooms in coaching condition and 16 different context types were implemented in video self-reflection condition. Figure 21 below presents the numbers of instructional contexts and strategies used in each condition during the whole class segments. Appendix L presents specific examples of contexts and strategies within the whole class segments in coaching and video self-reflection conditions. The number of different types of contexts was similar the baseline condition where a total of 13 different context types were implemented. The new instructional contexts that were observed in both coaching and video self-reflection conditions were 1) review of previous lesson material (n=16 for coaching and video self- reflection; WL, DL); 2) transition (n=10 for coaching and n=32 for video reflection, DL); 3) paragraph construction (n=14 for coaching and n=14 for video reflection, DL); 4) examining paragraph components (n=16 for coaching and n=14 for video reflection, DL). The new context types that were documented only in the video reflection condition were 1) analysis of visual information: graphs, photographs, etc. (n=14, DL), 2) examining study tools: acronyms,

	Initial Intervention Condition: *Coaching*		Initial Intervention Condition: *Video Self-Reflection*	
Part of the lesson	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)
Whole Class Segments	Total Number of Types of Instructional contexts: 13; New contexts added in the coaching condition: 3 DL focused types: 9 SL focused types: 0 WL focused types: 5	Total Number of Different Strategies: 22; New strategies added in the coaching condition: 7 DL focused: 10 SL focused: 7 WL focused: 12 Teacher-implemented: 14 Teacher and Student-implemented: 8 Student- implemented: 0	Total Number of Types of Instructional contexts: 16; New contexts added in the video self-reflection condition: 6 DL focused types: 12 SL focused types: 0 WL focused types: 5	Total Number of Different Strategies: 23; New strategies added in the video reflection condition: 9 DL focused: 11 SL focused: 8 WL focused: 13 Teacher-implemented:15 Teacher and Student-implemented: 7 Student- implemented: 1

Figure 21. Instructional contexts and strategies within the initial intervention lessons: Whole Class Lesson Segments 1 and 2-Social Studies and Writing within Social Studies Focus

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mnemonic devices, etc. (n=6, DL), 3) examining text structure (n=12, DL). Seven context types were implemented by all 16 teachers (100% of the participants). These types of instructional contexts included: setting objectives, presentation of the lesson topic, defining the focus concept, giving directions, defining vocabulary, paragraph construction, and transitions.

In comparison to the baseline condition, initial intervention conditions of coaching and video reflection led to a higher number of instructional contexts that were implemented by all participants. Also, the increase in the number of instructional contexts and uniformity of context implementation were possibly caused by the increase in the procedural contexts: objectives and transitions. These lesson components were addressed in coaching and through video reflection rubric. The majority of teachers used 7 or more instructional context types.

The most frequent instructional context type within the whole class lesson segments in coaching condition was the context of giving directions which was implemented 26 times (compared to 16 times in video reflection) followed by the instructional context of defining the focus concept (implemented 20 times). The least frequent contexts were 1) examining components of the key concepts (n=2); 2) reviewing classroom rules (n=2 in both coaching and video reflection); 3) comparing two concepts (n=2), and 4) the context of guided vocabulary practice (n=3). The number of implementation of clarifying directions context noticeably reduced in video reflection condition to n=2 from n=5 in baseline. The contexts that are key to social studies and writing within the social studies instruction (i.e., identification of important events, comparison and contrast) continued to be rarely implemented. Prevalence on the discourse level focused types of contexts continued in both coaching (n=9) and video reflection (n=11) conditions. Word level focused types of instructional contexts were the next dominant type (n=5 in coaching and n=5 in video reflection). The use of sentence level focused types of

contexts (e.g., an instructional analysis of how to turn bullet points into sentences, observed later in the combined intervention condition) was not documented in the initial intervention condition.

Frequency of context implementation. The stark difference between the lessons with too many instructional contexts and ones with too few instructional contexts that was notes in *whole class lesson segments 1 and 2* in the baseline condition was less noticeable in the 4 lessons of the initial intervention condition. The number of lessons with high numbers of instructional context implementation that featured 10-11 contexts within 15 minutes block greatly reduced (n=3); the number of lessons with six instructional contexts increased to five lessons. No lesson had fewer than six instructional contexts in initial intervention condition. The change in frequency of context implementation is important. During the initial intervention condition regardless of the intervention type, the teacher participants mastered consistent implementation of six context types which became classroom routines: setting of the objectives, presentation of the lesson topic, defining the focus concept, giving directions, defining vocabulary, paragraph construction, and guided orderly transitions.

Most of the instructional contexts in whole class lesson segments within the initial intervention condition continued to be teacher-led, but student input increased through the use of instructional strategies with greater student involvement (described below). The mean number of instructional contexts within whole class lessons in coaching and video reflection conditions was 10.75 contexts within 15 minutes for coaching condition and 11.75 for video reflection (each whole class segment). However, the increase from the mean of 6.75 in the baseline condition was not drastically different because some of the contexts were very short when well executed (i.e., setting objectives, transition). The median number of contexts was nine, and the range was 6-13 in coaching and 6-16 in video reflection condition.

Missed Instructional Opportunities. The mean number of missed instructional contexts in whole class segments in coaching and video reflection conditions was three. One of the differences between the baseline condition and the initial intervention conditions was that along with the category of missing instructional contexts, there were contexts that the teachers attempted to implement spontaneously but missed the level of academic language support. In the example 3 below the teacher and the focus ELL student are focusing on a visual prompt in the middle of a whole class lesson on the history of the Netherlands.

Example 3. Missed instructional context: reducing a potential discourse level context to word level context.

1 T: What do you see up here that we just learned about? Here is a picture showing what we just
2 talked about with Ms. Elise?
3 ELLST1: Windmills.
4 T: Windmills. We have a picture of a windmill and tulips. Tulips were brought over to the
5 Netherlands in the 16th century. That was a long time ago.

In the above conversation, the teacher's initiation- the question starting with "What do you see here that we just learned about?" has a potential to unfold a discourse level instructional context, such as "describing a visual prompt." In this context, the students are expected to provide a description- a response that should be longer than just one word. The focus ELL student responds with one word "windmills." Instead of focusing on the initial task and extending or expanding student's response, the teacher recasts her response on a word level, repeating the vocabulary word, reduces description to a minimal statement of "We have a picture of windmill and tulips," and moves on to the next focus vocabulary word "tulips." Thus, a potential discourse level instructional context is missed.

In contrast to the baseline lessons which demonstrated a lack of thematic matching between whole lesson 1 and 2 segments, the lessons with the highest scores in the initial intervention condition did not reveal such discord. The second whole class lesson segments that

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focused on writing that were now more aligned with the themes of the social studies presented in

the first whole class segment of the lesson For example, if the first whole class lesson segment

(with the social studies emphasis) focused on the history of the Huntington Gardens, the second

whole class segment (with the emphasis on writing in the area of social studies) focused on the

same topic, and the class was developing a paragraph or a compare and contrast essay dedicated

to the history of the focus landmark. Only occasionally examples that the teachers supplied in the

second segment of the whole class instruction (focused on writing) were off topic and related to

topics more familiar to the students than the focus of the lesson. For example, in the excerpt

below (Example 4) the teacher asked the students to work on connecting sentences using

examples unrelated to STEM careers:

Example 4. Off topic focus on the second whole class segment of the lesson focused on STEM
careers.

> 1 T: Combine 2 sentences, using comparative conjunctions: "Roberta likes going to
> 2 school. Roberta does not like math class."
> 3 ELLST1: Roberta likes going to school, but she does not like math class.
> 4 T: How about the next one, [ELLST2]?
> 5 ELLST2: Betty likes to eat pizza. Betty likes spaghetti better. Betty likes to eat pizza,
> 6 however, she likes spaghetti better.
> 7 T: Ok, so the white writing are the conjunctions. The comma goes before. For review,
> 8 FANBOYS is an acronym for the conjunctions we use to make compound sentences.
> 9 FANBOYS require 2 sentences, 1 compound and 1 FANBOYS. Using FANBOYS
> 10 can help us create better sentences. Remember when you're combining sentences,
> 11 you need to take out words. You can't just take 2 sentences and use FANBOYS. You
> 12 need to take out some words.

In the example above, sentences provided by the teacher in lines 1-2 and 5 are not

directly connected to the theme of the lesson "The history of careers in technology". However,

while in the baseline at times the whole lesson segment 2 was not aligned with lesson segment 1,

the initial intervention condition showed some improvement in this domain: the majority of the

second whole class lesson segments (6 out of 8) used the same content as the social studies

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presentations but included only a few examples that were off topic. For example, in the same

lesson as the excerpt above, in Example 5 below, the teacher uses the theme of the first segment

of the lesson "The history of the careers in technology" to practice creating complex sentences

with conjunctions.

Example 5. Whole lesson 1 and 2 thematic alignment.

1 T: Let's read the first sentence together on the count of 3, 1-2-3.
2 STS [chorally]: In the 1990s, the dot com boom was happening.
3 T: Ok the second one, I want to read it with you. 1-2-3.
4 T and STS [chorally]: In the 2000s, the dot com boom ended.
5 T: How can we combine these two sentences to make one? Anybody? Yes, [ELLST1]?
6 ELLST1: In the 1990s, the dot com boom was happening but in the 2000s, the dot com boom
7 ended.
8 T: Perfect!

The exchange above demonstrates thematic alignment between the lesson segments 1 and

2, which contributes to further practice of focus vocabulary "dot com boom" (introduced in the

first segment of the lesson) and more frequent opportunities for students to practice academic

language, going beyond the word-level, since the focus of the second whole class segment was

on writing which brought an opportunity for the students to practice responding in sentences, and

not just single words. Additionally, the teachers in initial intervention conditions implemented a

lot more choral reading, which in turn also contributed to academic vocabulary practice and

scaffolded its use at the sentence level.

Small group lesson 1 and 2 segments. Similar to the lessons in the baseline condition,

small group lessons 1 and 2 in the initial intervention condition continued to lack variety of

instructional contexts. In contrast to 13 and 16 different types of instructional contexts (in

coaching and video reflection, respectively) implemented in whole class segments, the small

group segments featured the same four contexts as documented in the baseline. These four types

were 1) restating directions (teacher-led, implemented 6 times, two times fewer than in baseline

condition), 2) question-answer review of the material presented in the whole class lesson segment (teacher-led, implemented 8 times, no change with the baseline condition), 3) guided work with a worksheet based on the material (teacher-led or student independent work, implemented 12 times, an increase from 3 times in the baseline), 4) question-answer review of the small group progress at the time when the teachers switched small groups (at 5 minutes within each 10 minute small group lesson segment, implemented 10 times, and increase from 5 times in the baseline).

An important qualitative change that distinguishes the lessons with the highest score in coaching and video reflection conditions from the lessons in the baseline condition is the consistency of implementation of the four context types listed above. A much higher number of small group segments featured three of the four instructional context types. The small group segments that focused on social studies featured more question-answer review contexts, while each of the small group lesson segments focused on writing had a worksheet/graphic organizer-centered context. The mean number of instructional contexts used within the small group lessons 1 and 2 in coaching and video reflection conditions was 3. Two most frequent contexts were guided work with a worksheet and question-answer review of the material presented in the whole group segments. The number of times that restating directions and questions was implemented went down, possibly due to the consistency of giving directions context in the whole class segments that preceded small group instruction. The range was 1, with the minimal number of 3 and the maximum number of 4 instructional contexts within the 10 minutes segment of the small group instruction. Figure 23 presents total numbers of the types of instructional contexts and strategies used. Appendix M presents specific examples of contexts and strategies within the small group segments in coaching and video self-reflection conditions.

Instructional strategies use. While overabundance of strategies used within the instructional contexts during whole class instruction (first noted in baseline) continued in the initial intervention condition, the number of strategies used in small groups increased in comparison to the initial lack of strategies during the small group instruction. Within the *whole class lesson segments 1 and 2* within the coaching and video self-reflection condition, the teachers implemented 22 and 23 different types of strategies, respectively. The mean number of strategies per whole class lessons was 18 for coaching and 17 for video reflection. Despite the high number of strategies implemented within 15 minute segments, many of them maximized the efficiency of instruction (i.e., non-verbal responses for the check in understanding, whole class choral responses) and supported student learning (i.e., graphic organizers, visual supports, individual word walls, etc.).

In *small group lesson segments*, there was an observable change in strategy implementation as compared to the baseline lessons. The limited number of different types of strategies and low frequency of their implementation noted in the small group lesson segments in baseline were replaced by much higher numbers of different strategy types and higher means for their implementation. In coaching there were a total of 10 different strategy types used, and the mean for implementation was 11.65 strategies per 10-min segment. In video self-reflection the total number of different strategy types was nine and the mean for implementation was 9.12 strategies per 10-min segment. Many of the strategies were implemented concurrently. For example, a teacher was asking guiding questions while the students were filling out a graphic organizer. The most frequent strategies in the whole class segments were prompting at word level (n=16, in coaching condition) and visual prompts (n=14, in video self-reflection condition). The most frequent strategies in the small group segments were guiding questions (n=20 in

	Coaching		Video Self-Reflection	
Part of the lesson	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)
Small Group Segments 1 and 2	Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 3 WL focused types: 3	Total Number of Different Types of Strategies: 10; DL focused: 4 SL focused: 4 WL focused: 4 Teacher-implemented: 8 Teacher and Student-implemented: 3 Student-implemented: 1	Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 3 WL focused types: 3	Total Number of Different Types of Strategies: 9; DL focused: 5 SL focused: 4 WL focused: 4 Teacher-implemented: 8 Teacher and Student-implemented: 3 Student-implemented: 1

Figure 22. Instructional contexts and strategies within the baseline lessons: Small Group Lessons 1 and 2 – Focus: Social Studies and Writing within Social Studies

coaching and n=13 in video self-reflection condition), followed by prompting at word level in coaching (n=15), and activation of the background knowledge in video self-reflection (n=10).

Another trend in strategy implementation in the whole class segments in the initial intervention condition was high numbers (n=8 and above) of instances of a particular strategy implementation. In coaching condition, 45% of strategies were implemented eight or more times (i.e., consistently each lesson), and in video self-reflection condition 25% of strategies were implemented 8 or more times within the lesson.

The quality of strategy implementation according to the observation protocol was higher than in the baseline (mean=1): the mean score for strategy implementation performance in whole class and small group settings for coaching was 2.5 and 3 for video reflection condition (score 2: "emerging performance," score 3: "progressing performance"; for anchor description see Appendix E) across whole class and small group settings. In both conditions, in whole class and small group settings, most of the strategy types continued to be teacher-led and teacher implemented (n=14 and n=8 for whole class and small group settings in coaching; n=15 and n=8; for whole class and small group settings in video reflection). In comparison to baseline (n=3), the initial intervention conditions' whole class lessons featured more strategies that were by both teachers and students (n=8 for coaching and n=7 for video reflection). In small group settings, the number of strategies implemented by both teachers and students continued to be low (n=3, no change from video reflection). While in the baseline there were no strategies implemented only by students or student-led, initial intervention small group lesson segments featured one student implemented strategy (i.e., independently filling out a graphic organizer).

Strategy types continued to be distributed more evenly than instructional contexts across the levels of academic language that they aimed to support. In the *whole class segments* in

coaching and video reflection, 10 and 11 types of strategies respectively were used to support academic language at discourse level, seven and eight types of strategies aimed to support academic language at sentence level, and 12 and 13 types of strategies aimed to support academic language at word level. There was a notable similarity in the numbers of different strategy types for the support of all three levels of academic language between coaching and video reflection conditions. In *small group segments* in coaching and video reflection, four and five types of strategies respectively were used to support academic language at discourse level, four types of strategies aimed to support academic language at sentence level in both conditions, and 4 types of strategies aimed to support academic language at word level in both conditions.

Levels of Academic Language Focus. In regards to the three levels of academic language (word, sentence, and discourse level), while the overall focus on word level continued to prevail in the instruction, in the initial intervention condition teachers began to focus on sentence level academic language support more than they did in the baseline lessons. They also began to discuss the text structure with the students and focus more on the features of written texts. Within the word-level focus, 80% of the words presented and/or discussed by teachers in coaching and 85% of words presented in discussed in video self-reflection lessons were content area specific words pertaining to the social studies or writing content, and 18 % of the words in coaching and 15% in video reflection presented were general academic words. Two percent of the words presented and/or discussed by teachers in lessons in coaching condition were polysemous words with the content area specific meaning. The few instances of discussing of polysemous words with content area specific meaning in lessons in coaching condition can be explained by the fact that this category of academic vocabulary was discussed in coaching sessions. In the excerpt below (Example 6), the teacher is illustrating the polysemous nature of

the word "pyramid." In it, the teacher describes the graphic in great detail and then ties to the

term "pyramid." She contrasts its meaning in social studies and math.

Example 6. Teacher's presentation of a polysemous word "pyramid"

1 T: [pointing to the graphic representation of the Mayan society]At the very top, who do you
2 think is here under Mayan social structure?
3 ELLST1: The king?
4 T: The king? Yes and above them would be the gods. Then we have our nobles and wealthy
5 people. We have priests and kings, and then the nobles who were wealthy. We have the
6 commoners and low level officers. People who were farmers, people who had a trade. They
7 were tradesmen. Maybe they sold corn. Maybe they sold goods. At then at the bottom we
8 have the slaves and the servants. This is the Mayan social pyramid.
9 Who knows the word "pyramid"?
10 ELLST2: Pyramid is like a triangle.
11 T: yes, it looks like a triangle and in math it means 3D triangle. But here in history it means
12 social structure that has very few people at the top. We're going to talk about the elite class.
13 Elite means a very small special group. This was only 10% of the population. That's a very
14 small. That's a very small percentage. This class has all the social, religious, and political
15 power. Imagine 100%, and 10% are at the top and everybody else is at the bottom.

An important characteristic of word level support in the initial intervention conditions

was the planned approach to word instruction that emerged in this phase of the experiment.

Teachers in both coaching and video reflection created word walls for their students and teachers

in the video reflection condition went further and created individual word lists for students. The

latter strategy was clearly caused by the opportunities provided in video reflection: the teachers

were able to witness that some of the students could not see the word walls or had to turn around

to refer to them. Individual word lists came as an accommodating strategy in response to student

behavior observed in lesson videos. The word walls and word lists contained a mixture of

content area specific words and general academic words, including compare and contrast words

(i.e., similarly, on the contrary). The numbers of words ranged from 5 to 9 (a significant decrease

from the baseline condition). Some teachers chose to have a new word wall every lesson, while

others created a continuous word wall that included words from all the 9 lessons in the unit.

Figure 23 presents an example of a continuous and daily word wall that the teachers implemented.

Continuous 3 Week Word Wall (Elise and Julia's class)			Weekly Word Wall (Herman and Jaime)
Week 2	Week 3	Week 4	Week 4
Tradition Symbol Mexico Flag Culture	Region Landmarks The Netherlands Holland Windmills Tulips Practice Topic sentence Supporting detail	American Revolution French Revolution Lafayette Guillotine Similarly On the other hand On the contrary	Integration Integrate Public Martin Luther King Freedom Riders Jim Craw Laws Condemn

Figure 23. Continuous and weekly word walls.

The number of times that students were exposed to the words and got to practice the words within the lesson increased in comparison to baseline. Students typically had a total of 3-5 time exposure to focus words (i.e., hearing them from teachers, reading them on a slide chorally, working with words in a worksheet task, using them in sentences during the whole class and small group writing segments, seeing them on word walls and in objectives that were explicitly presented to them). Students' use of academic language within the whole class lessons in both coaching and video reflection increased. It continued to depend on teachers' prompts, but because the number of choral responses increased, every student in class used target academic words more often than in baseline. Additionally, teachers focused more on sentence construction than they did in the baseline, so students had more opportunities to use academic language orally on the sentence level (see example below). Furthermore, students had more opportunities to read connected text chorally, so their exposure to academic language at discourse level also increased. Due to the higher frequency of choral responses, focus ELL students were now exposed to 100% of all target words within the lessons, but continued to lag in the frequency of their spontaneous

responses, providing just 8-10% of focus words on their own. ELL students' responses

transcribed within the initial intervention conditions' lessons began to feature single sentence

responses. The length of turns produced by them in this phase of the experiment did not exceed

two sentences/fragments at a time. Example 7 below illustrates a teacher in coaching condition

working with her 5th grade students on expanding their single word responses to simple

sentences and to complex sentence responses:

Example 7. Expanding single word responses to simple and complex sentence responses

1 T: The Netherlands has a lot of tulips. Ok. Since we have a lot of details, we can write one
2 sentence about tulips and one about windmills. Those are two different things right? Or would
3 you like to lump them into one sentence?
4 ELLST1: Two.
5 T: Two different things? Ok, our first one, our "tomato." [part of the graphic organizer used in
6 the lesson]. Can you tell us again what you wanted to say about them in a sentence?
7 ELLST1: The Netherlands have a lot of tulips.
8 T: It has a lot of tulips, ok. So what about the tulips? Are they red, are they black?
9 ELLST2: They're amazing.
10 T: They're amazing. Yes?
11 ELLST1: They're colorful tulips.
12 T: They're amazing colorful tulips. Yes, Zinnia?
13 NonELLST2: **They're amazing because they're all different colors.**
14 T: They're all different colors. That's a great one. Let's say, how about we put all of those
15 sentences together. We can say, "Netherlands has tulips that are amazing with lots of
16 different colors." That's a good one. Let's say it together and let's write the next one over
17 here. What did you say about the colors?

Example above also illustrates a change in teacher-student interactions from mostly

authoritative in baseline to more dialogic (Chin, 2007) in the initial intervention condition

lessons, both during the whole class and small group activities. While initiation-response-

evaluation (IRE) sequence was still a dominant form, new longer sequences, such as IRPRPE

appeared in most instances in coaching and in some cases in video reflection lessons. Teachers'

evaluation of students' responses did not come until later in the conversation, allowing for more

developed discussions that developed the same concept. It is possible that this was caused by the

realization that one word responses are not sufficient for demonstration of students'
understanding.

The example above presents a longer sequence of teacher-student interaction that can be coded as $IR_{ELL1}P_1R_{ELL1}P_2R_{ELL2}P_3R_{ELL1}P_4R_{NONELL}E/P$. In it, the teacher initiates the conversation with pointing out that tulips and windmills are two different things and asks the student to decide if they should make one sentence or two about these "details" about the Netherlands. When the focus ELL student provides a single word response ("two"), the teacher recasts his response and extends it a little ("two different things, right?) and prompts him further to provide her and the class with a sentence response ("Can you tell us again what you wanted to say about them in a sentence?), which the same ELL student does in line 7: "The Netherlands have a lot of tulips." The teacher continues her extension and prompting strategy: "What about tulips?" And the next ELL student joins in adding an adjective "amazing": "They are amazing." The teacher recasts that and prompts for more, and the first ELL student adds in the word "colorful" but restates the entire sentence: "They are amazing colorful tulips." The previous sentence provided by another student served as scaffold for this response. Next, the teacher recasts what she heard and calls on a more capable student in the class, Zinnia, who creates a complex sentence, "They're amazing because they're all different colors." The teachers evaluates it "That's a great one" and continues to prompt students.

Evolution of complexity of cognitive skills targeted by teachers' prompts and demonstrated in students' responses. According to the coding schema for students' responses developed on the basis of Bloom's taxonomy (Bloom & Krathwohl, 1956), the majority of students' responses to teachers' questions in the initial intervention condition fell under the category of "knowledge" (the initiation questions targeted such skills as "remember," "know,"

and "define"), but there were also instances where the teachers targeted the more complex skills in the area of "comprehension" (asking the students to "give examples," "describe," "paraphrase" and "predict"), and also in the area of "application" (asking the students to "dramatise/act out" and "interpret") and "analysis" (asking the students to "compare and contrast"). Figure 24 provides examples of the students' responses that fell into the different categories of the Bloom's taxonomy. The additional focus on sentence production and discourse production characteristic for both coaching and video reflection conditions contributed to teachers' requests for completion of tasks that were more complex and developed than the tasks based on memory and background knowledge that predominated in the baseline condition.

Knowledge	Comprehension	Application	Analysis
T: Have you ever heard of the word 'harvest'? Yeah? Harvest, yes. S: Umm, is it kind of like harvest of the pumpkins?	T: Who can give me an example of a staple food? We said rice is a staple food because many different people from different cultures ELLST1: Tamales?	T: How could we help the people in Haiti? ELLST2: I would help the people by planting some seeds.	T: Compare and contrast using "similarly" and "on the other hand." You can talk about the royal palace and compare it to the White House. S: In America the president lives in the White House, on the other hand, the king and queen in Netherlands live in their own royal palace.

Figure 24. Examples of the students' responses coded using Bloom's taxonomy.

Features of the combined intervention condition (coaching and video reflection) lessons and the impact of teachers' academic language instructional quality on students' oral academic language. Eight lessons with the highest teacher quality scores in the combined intervention condition were examined for patterns of instructional context and strategy use and the impact that these features had on students' oral language. The lessons had a high number of common patterns in their instructional contexts and strategy use. The same conditions of intervention (coaching and video self-reflection) for all dyads contributed to the higher number

of similar features in all the lessons. These common patterns resulted in similarities in teacher-student interactions across the classrooms in the combined condition. Figure 25 presents the numbers of instructional context types and strategies used by teacher participants in the whole class and small group lessons 1 and 2 segments with the focus on social studies and writing in the combined condition of coaching and video self-reflection. Appendix N presents specific examples of contexts and strategies within the whole class and small group segments in the combined intervention condition.

Instructional context types. During the *whole class lesson segments1 and 2* that focused on social studies (15 minutes) and writing (15 minutes), a total of 13 different instructional context types were implemented across 8 classrooms. The number of contexts remained the same in comparison to the initial intervention conditions of coaching and video self-reflection. Ten context types were implemented by 100% of the participants. These types of instructional contexts included: setting the objectives, presentation of the lesson topic, defining the focus concept, giving directions, defining vocabulary, comparing two concepts, transition, essay review and revisions, introducing key figures, places, and events and lesson closure context types. The last two types were implemented only in the combined intervention condition. The majority of teachers used 8 and more instructional context types. Contexts that were implemented 16 times were implemented consistently for each lesson (i.e., at the beginning of each whole class/small group lesson segment, etc.)

Frequency of context implementation. Several context types that were implemented most frequently (n=16) within the whole class lesson segments in the combined intervention condition included: presentation of the lesson topic (implemented consistently at the beginning of whole lessons 1 and 2), defining the focus concept, giving directions, and defining key

vocabulary. The least frequent contexts were reviewing classroom rules (n=1), the context of guided vocabulary practice (n=6), and the context of review of previous lesson's material (n=4). The fact that reviewing classroom rules was implemented only once points to the fact that by the end of the experiment classroom routines (e.g., color-coded turn taking when reading chorally (teacher's turn, girls' turn, boys' turn), roles assigned for the small group discussion that kept everyone busy and on task, finding partners according to numbered post-its placed on the desks in advance) were so well established in every classroom that there was no need to review the rules. Discourse level focused types of contexts continued to prevail in the lessons in the combined intervention condition (n=9), while word level focused types of instructional contexts were next in frequency (n=6). The distinguishing characteristic of the combined intervention condition was the increased number of the instructional context types that focused on academic language at sentence level (n=4, in comparison to n=1 in baseline and n=0, in coaching and video self-reflection when implemented separately).

Part of the lesson	Instructional contexts (n=number of contexts implemented across 8 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 8 lessons)
Whole Class Instruction Lesson Segments 1 and 2 Totals	Total Number of Types of Instructional contexts: 13 DL focused types: 9 SL focused types: 4 WL focused types: 6	Total Number of Different Strategies: 21 DL focused: 11 SL focused: 7 WL focused: 11 Teacher-implemented: 11 Teacher and Student- implemented: 7 Student- implemented: 3
Small Group Instruction Lesson Segments 1 and 2 Totals	Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 3 WL focused types: 1	Total Number of Different Types of Strategies: 11; DL focused: 6 SL focused: 4 WL focused: 4 Teacher-implemented: 7 Teacher and Student- implemented:3 ~~2~~ Student- implemented: 2

Figure 25. The numbers of instructional contexts and strategies within the combined intervention lessons: Whole Class Lesson and Small Group Lessons 1 and 2-Social Studies and Writing within Social Studies Focus

Most of the instructional contexts in whole class lesson segments were teacher-led, but in contrast to baseline and some of the initial intervention lessons with lower scores, the teacher was not the only speaker. The strategies (i.e., choral reading, non-verbal responses) implemented within the contexts (described later in this section) promoted students' participation. The mean number of instructional contexts within each whole class lessons 1 and 2 in the combined intervention condition was 7.9 contexts within 15 minutes (each whole class segment). The median number of contexts was 11, and the range was 8-14.There was no longer a divide observed in previous conditions between the lessons that featured too many or too few instructional contexts. As in baseline, the average number of minutes per context ranged from 2 minutes to 3 minutes, but since the contexts were purposefully designed, their sequence unfolded more smoothly than in earlier conditions.

Missed instructional opportunities. The multitude of instructional contexts within a relatively short timeframe of the *whole class lesson segments 1 and 2* continued to lead to some missed instructional contexts, however, a new feature developed in the combined condition: the teachers within the dyad started to fill in the missing instructional contexts as their instructional turn followed their colleague's turn. For example, noticing any confusion or an erroneous answer during Teacher 1 presentation, Teacher 2 built in a quick review into her/his instruction that addressed the students' difficulties. Overall, teachers' responsiveness to students' performance increased greatly in the combined intervention condition. The mean number of missed instructional contexts per whole class lesson 1 was 2 in the combined intervention lessons. Example 8 below illustrates a missed context in one of the teacher's lessons and its implementation by her colleague:

Example 8. Filling in the missed instructional contexts overlooked by the co-teaching partner.

1 T2: [ELLST1], I see that some of you just responded to number 2 earlier with [T1], *but I see*
2 *that not everybody had a chance over here to respond*. So how 'bout number 4: can you tell me
3 what was the interesting staple food for you?
4 ELLST1: Baguette.
5 T2: Baguette – and croissant? [ELLST1 nodding] Because…
6 ELLST1: Because you can eat it with Nutella?
7 T2: Because you can have it with Nutella. *But what about the history of these staple foods?*
8 ELLST1: Baguette is from France. It means a "stick."

In the example above, Teacher 2 noticed a missed context: while focus ELL students were not participating in the think-pair-share presentation, Teacher 1 did not get a chance to call on them. Teacher 2 stepped in and checked what food the focus ELL students considered "staple food" (focus vocabulary in that class), and what they remembered about its history.

In the combined intervention lessons, whole lesson segments 1 and 2 were thematically matched. All lessons focused on the same theme throughout one lesson. This high level of thematic alignment within the lesson contributed to multiple opportunities for students to practice academic language in this condition and be exposed to the focus features (i.e, focus vocabulary, sentence and discourse structures) numerous times. For example, the teachers and students examined the sentence and text structure while reading the slides of the whole lesson 1 presentation. Later, in whole lesson 2 focused on writing within the area of social studies, the teacher and the students practiced extending the text of the slide or changing its structure to better fit the compare and contrast genre. Additionally, some teachers infused their social studies instruction with further opportunities to focus on sentence and discourse levels. Within the lessons in the combined intervention condition the students came up with titles for the historical texts presented by the teacher, turned bullet points into sentences and connected sentences into cohesive text.

Small group lesson segments 1 and 2 in the combined intervention condition continued the trends of the lessons in initial intervention conditions. The number of instructional contexts remained the same: all 8 baseline lessons featured a total of 4 types of instructional contexts in small group settings. These 4 types included 1) restating directions (teacher-led, implemented 8 times), 2) question-answer review of the material presented in the whole class lesson segment (teacher-led, implemented 8 times), 3) guided work with a worksheet based on the material (teacher-led or student independent work, implemented 8 times), 4) question-answer review of the small group progress at the time when the teachers switched small groups (implemented 8 times). Despite the fact that the context types remained the same, there were three notable changes in their implementation. The *students* were now the main agents in the "restating directions" context. And the academic language level focus in guided work contexts and question-answer review contexts shifted from word level to sentence level. The instructional contexts did not differ by type within the small group segments that focused on social studies and writing. The mean number of instructional contexts used within the small group lessons 1 and 2 in the baseline condition was 4; all types of contexts were implemented equal amount of times once within each small group lesson segments. This demonstrated high levels of well-established routines in the small group settings at the completion of the study.

Instructional strategies use. The trends in the number of strategy types implementation in the combined intervention condition followed the lesson trends in baseline and initial intervention conditions: the numbers of different types of strategies implemented in the whole class lesson segments was high (n=21, compared n=16 in baseline and n=22 and 23, in coaching and video reflection); the number of different types of strategies implemented in the small group lesson segments was nearly twice as low (n=10, compared n=8 in baseline and n=10 and 9, in

coaching and video reflection). However, the frequency of different strategy implementation was also similar to baseline but much lower in comparison to initial intervention conditions. The mean number of strategies per whole class lessons was 9.8 (compared to 10 in the baseline, and 18 and 17 in coaching and video reflection, respectively). The most frequently implemented strategies in whole class segments were choral reading (n=16) and asking guiding questions (n=16). The most frequently implemented strategies in small group segments were guiding questions (n=24), prompting at word level (n=16), and providing definitions (n=16). The quality of strategy implementation in both whole class and small group segments according to the observation protocol higher than in baseline and similar to the initial intervention conditions: the mean performance was 3 (progressing performance, for anchors refer to Appendix E). None of the teachers consistently reached mastery in strategy implementation. Most of the strategy types in whole class lesson segments were teacher-led and teacher implemented (n=11); i.e., the number of strategy types that were implemented by both teachers and students increased (n=7); and three types of strategies were implemented only by students or student-led (i.e., paraphrasing, summary, and creating/using individual student word lists). The presence of student implemented strategies was a great change from the previous conditions. In small group lesson segments, most of the strategy types were teacher-led and teacher implemented (n=7); the number of strategy types that were implemented by both teachers and students decreased in comparison to the initial intervention conditions (n=3); and student-implemented types of strategies were observed (n=2). The combined intervention condition featured one new small group instructional strategy type: organizational routines (implemented 8 times across 8 lessons (1 time per lesson). This strategy type included such strategies as "assigning roles to group members" (i.e., "the leader," "the scribe," "the presenter," etc.) or "assigning numbers to group

members," or "the one who is holding [any type of manipulative] gets to speak" and other similar approaches. Implementation of this strategy type brought upon a critical change in students' use and structure of academic language described in the academic language analysis section below.

Strategy types were distributed less evenly in whole class segments than in small group instruction segments across the levels of academic language that they aimed to support. In whole class segments, 7 types of strategies were used to support academic language at discourse level, 2 types of strategies aimed to support academic language at sentence level, and 2 types of strategies aimed to support academic language at word level. In small group segments, 6 types of strategies were used to support academic language at discourse level, 4 types of strategies aimed to support academic language at sentence level, and 4 types of strategies aimed to support academic language at word level. Overall, in the combined intervention condition in comparison to all previous conditions, the number of strategy types in the whole class segments went down. This indicates the teachers' choice of quality over quantity. In small group segments the number of different strategy types was comparable to initial intervention conditions, indicating stability of approaches in small group instruction. Thematic alignment of whole class and small group segments continued in the combined intervention condition.

Levels of academic language focus. The lessons within the combined intervention condition were more balanced across the levels of academic language (discourse, sentence, word) and between the whole class- small group settings than the previous conditions. None of the levels remained unsupported. In the *whole class* segments, there were 9 discourse level, 4 sentence level and 6 word level contexts, and 11 discourse level, 7 sentence level and 11 word level strategies. While discourse and word levels of academic language continued to be the

leading levels in focus, the sentence level had clearly received substantially more attention in this

condition. In small group segments, sentence level contexts were the leading type, with 3

sentence level types of context compared to discourse and word level contexts represented by

one type each. The strategies within the small group segments continued the patterns of the

previous conditions: with 5 discourse level, 3 sentence level and 4 word level types of strategies.

Table 7 presents the overall context, strategy focus distribution across the intervention

conditions.

Table 7

Context and Strategy Focus Distribution Across the Intervention Conditions.

Condition	Whole Class		Small Group	
	Contexts	Strategies	Contexts	Strategies
Baseline	DL focused types: 8 SL focused types: 1 WL focused types: 4	DL focused: 7 SL focused: 4 WL focused: 6	DL focused context types: 1 SL focused context types: 2 WL focused types: 3	DL focused: 2 SL focused: 3 WL focused: 4
Coaching	DL focused types: 9 SL focused types: 0 WL focused types: 5	DL focused: 10 SL focused: 7 WL focused: 12	DL focused context types: 1 SL focused context types: 3 WL focused types: 3	DL focused: 4 SL focused: 4 WL focused: 4
Video Self-Reflection	DL focused types: 12 SL focused types: 0 WL focused types: 5	DL focused: 11 SL focused: 8 WL focused: 13	DL focused context types: 1 SL focused context types: 3 WL focused types: 3	DL focused: 5 SL focused: 4 WL focused: 4
Combined Intervention	DL focused types: 9 SL focused types: 4 WL focused types: 6	DL focused: 11 SL focused: 7 WL focused: 11	DL focused context types: 1 SL focused context types: 3 WL focused types: 1	DL focused: 6 SL focused: 4 WL focused: 4

Within the word-level focus, the patterns shown in the initial intervention conditions continued. The majority of focus vocabulary (85% and above) presented and/or discussed by teachers in the lessons were content area specific words pertaining to the social studies or writing content; 10% and above of the presented words were general academic words. A distinguishing characteristic of the lessons on the combined condition was that every lesson across all 8 dyads featured content specific and general academic words. Five percent or less of words presented and/or discussed by teachers within the combined condition was a polysemous word with the content area specific meaning. However, the number of the instances when such words were discussed was the highest in all conditions. The teachers' approach to vocabulary instruction became notably better planned and more sensitive to students' needs. Figure 26 presents a sample word list from one of the lessons within this condition.

Content specific words	General Academic Words	Words with multiple meanings
Polytheistic Mayan Civilization Medico-religious	Compare Contrast Similarities Differences	GRAPES Primary (as in primary=the most power) "under" (as in "under the rule")

Figure 26. Sample word list from a lesson in the combined intervention condition: Even distribution of academic language across three levels.

Students' use and structure of academic language within the whole class segments in the combined condition exhibited similar patterns to the ones observed in the initial intervention conditions, illustrated in the example 7. Teachers continued to solicit word and sentence long responses and to emphasize the importance of sentence and thought completion. In the whole class segments, teachers called on focus ELL students more regularly. Due to teachers' regular use of choral responses, focus ELL students used all the target words (from word walls) at least 6-7 times within the lesson: during the initial choral read of the word wall, during the connected text reading, when answering the teacher's questions and following teachers' prompts, at least

once in each of the small group segments, and once in writing. While the word and sentence

levels of students' responses were well-practiced, the discourse level practice and production

persisted as the area of continued need. None of the speech turns constructed by students in

whole class segments was longer than 2-3 sentences. The reason for this was possibly the lack of

time, since ELL students require more time in their responses. Example below illustrates a

typical conversation of focus ELL students in the classroom within the combined intervention

condition. Lines 3 and 4 show that the focus ELL student1 went beyond one word response

adding two additional sentences to his initial word "Egyptians." From the dialogue below

(Example 9), it is clear that one of the focus ELL students did not have time to give a full

answer. The teacher rapidly switched the focus of the discussion and ELLST2's point lost its

timeliness, and she never got to finish her sentence.

Example 9. A typical conversation of focus ELL students in the classroom within the combined intervention condition

1 T: Who had a more extensive trade route? Who had the bigger trade route? Tell your partner.
2 The Egyptians or the Mayans?
3 ELLST1: Egyptians. They were more better in trade because they traded copper, gold. They
4 had the most luxury than the Mayan, and the Mayan traded minerals, rocks.
5 ELLST2: I think the, the Egyptians because…
6 T: Remember the social structure? They both had modeled their society into a pyramid.

Teacher-student interactions within the combined intervention condition continued the

patterns of the teacher-student interactions observed in initial intervention conditions. The

majority of interactions were dialogic and maintained a 3-4 turn IRPRPRP(E) sequence. In such

interactions, two to three students at a time were co-creating content area sentences and

paragraphs. Jointly, these small dyads and triads of students under teachers' careful guidance

were able to construct discourse levels pieces of oral text (i.e., all their 1-2 individual sentence

responses fit together into a cohesive whole). Similarly to the initial intervention conditions, the

majority of students' responses to teachers' questions in the combined intervention condition lessons fell under the categories of "knowledge," "comprehension," "application" and "analysis." A distinguishing characteristic of the combined intervention condition was the emergence of the "evaluation" category of students' responses described below.

As it was mentioned earlier, the combined intervention condition brought about implementation of a new small group instructional strategy type: organizational routines which caused significant changes in students' use of academic language. This type of strategy was brainstormed in the training sessions in response to teachers' concerns that "students would not speak on their own." Creating routines for which student gets to lead the discussion, gets to respond, or record the group's responses promoted a new development in students' academic language use and structure. Unlike any of the earlier conditions, combined intervention condition featured IRPRP(E) sequences that were completed within the context of **student-student** interactions. And in such exchanges, the focus ELL students began to *initiate* the conversations, prompt their group members, and even evaluate their responses, taking on leadership roles. Therefore, their academic language conversational repertoire was extended to all four types of conversation participation: initiation, response, prompt, and evaluation. Example 10 illustrates a student-student interaction in which a focus ELL student takes on the leadership role. In line 3, the focus ELL student is the first person to respond after the teacher's question. She does not directly say that she will be the leader, but she makes the first step. In line 12, she volunteers to be a writer and feels comfortable to ask her peers for spelling assistance (lines 14,19) and clarification (line 16). She also feels confident enough to make a shortcut by writing "smash seeds" instead of the lengthy response of her classmate "They build windmills and get the seeds to make mustard."

Example 10. A student-student interaction in which a focus ELL takes on the leadership role.

1 T: Who is the leader in red [red group]? You need to make sure everyone in your
2 group is talking. Ready go, you have 2 minutes.
3 ELLST1: They have windmills.
4 NonELLST1: They have tulips.
5 ELLST1: They have a palace.
6 NonELLST2: I don't want to be captain. Underline Netherlands.
7 T: What did you learn about the Netherlands? We just learned a lot
8 about it. [here the teacher is referring to the whole class lecture that preceded the
   small group discussion]
9 NonELLST1: They have tulips.
10 NonELLST2: Everybody, no one wants to write.
11 T: Who is going to be the writer? We need someone to step up to the plate.
12 ELLST1: [raises her hand]
13 T: Ok, thank you.
14 ELLST1: Do you know how to spell tulips?
15 NonELLST1: They make windmill cookies. Windmill cookies.
16 ELLST1: What's that mean?
17 ELLST1: I'll write it.
18 NonELLST2: They build windmills and get the seeds to make mustard.
19 ELLST1: How do you spell it?
20 NonELLST1: m-u-s-t-e-r-d
21 ELLST1: [writes "smash seeds"]

The focus ELLST1 behavior in the excerpt above shows her being the first to respond,

take charge, and make time-efficient executive decisions by paraphrasing what her classmates

mean.

The Impact of an Increased Quality of Academic Language Instruction on English

Language Learners' Use and Structure of Written Academic Language

In order to answer research question 3*: How the increase in teachers' quality of academic*

language instruction influences English Language Learners' use and structure of academic

language, students' written academic language was examined on word, sentence and discourse

levels. All the examined written samples had to meet the following requirements: 1) be written in

response to compare and contrast prompt with a focus on a social studies topic, 2) be written

within 20 minutes, 3) represent a sample of student's independent work. For each of the 8 classrooms, the writing samples from 3 sample lessons were examined according to the 3 conditions: baseline, initial intervention condition (coaching or video self-reflection), and combined intervention condition. Figure 27 below represents the prompts that were used in all the lessons across eights classrooms.

Baseline condition. None of the writing samples collected in the baseline condition met the requirements mentioned above. In 4 out of 8 classrooms, no writing happened in the 20 minute period that the students were supposed to spend writing. The teachers either ran out of time or implemented a different activity, i.e., drawing, writing sentences instead of an essay, filling out a graphic organizer or a worksheet. When asked about the instructional choices that they made, the teachers in these 4 classrooms reported that since they already administered the writing assessment earlier in the lesson, they felt that the students had too much writing to do that day. In the remaining 4 out of 8 classrooms, the teachers used the twenty minutes dedicated to writing as time to implement the initial whole class writing assessment using a prompt from TOWL, which was not a compare and contrast essay and did not fit the topics of the lessons that were taught to students.

Students' writing in the coaching condition. Seven out of eight students' sample essays were examined for the video self-reflection condition (one focus ELL student was absent in one of the classes). Students' essays in this condition were similar to the essays in video self-reflection condition in many aspects. The mean length of an essay was 50 words, with the range of 33- 77 (slightly longer than in the video reflection condition), the median length was 53 words. Fifty two percent of the sentences in the essays were simple sentences, 18% were run on sentences, 6% were incomplete sentences, and 24% were complex sentences. The number of

complex sentences in this condition was higher than in video reflection condition. It is possible to hypothesize that since the students in this condition (unlike in video reflection and combined intervention condition) did not have graphic organizers to assist them with the essay structure and sentence by sentence support (i.e., main idea, supporting detail 1, etc.), they developed their points in a more run-on, less organized and less coherent way. All of the essays in this condition consisted of one paragraph.

Figure 28 presents two samples of 6th grade students' writing in coaching condition. The author of example 1 responded to the prompt "Compare and contrast Rosa Parks, Martin Luther King and/or people from the Brown v the Board of Education case." The author of example 2 responded to the prompt ""What are some similarities and differences between the history and present of the careers of police and firemen, and the technology and the STEM careers?"

Both examples illustrate similar trends. The students demonstrated a considerable grasp on focus academic vocabulary of the lesson (both content area specific: *STEM, segregation,* etc. and general academic: *main difference, another difference*). At the same time, their academic language skills on sentence and discourse levels were less solid. In these two examples, we see the compare and contrast genre in transition. The first student mixed in the features of a personal narrative genre (i.e., taking on a personal perspective: "I feel happy," bringing in subjunctive stand "If I were").

The second student stayed within the expository genre, used the compare and contrast discourse markers (i.e., "the main difference," "another difference"), but was still grappling with developing coherence of compare and contrast statements at both sentence and discourse level. At sentence level, some of the complex sentence components did fit together seamlessly: "Another difference is that STEM is involves a career and the other is provided a wepon." Both

Condition	Baseline (n=8)	Video Self-Reflection Lessons with the highest quality scores (n=4)	Coaching Lessons with the highest quality scores (n=4)	Combined Intervention Lessons with the highest quality scores (n=8)
4th grade	Writing samples did not meet the compare and contrast criteria	"Compare and contrast Japanese and American Cuisine and the history and origin of some popular dishes" (Video Self-Reflection)	"Compare and contrast two of the most popular Dutch landmarks in the Netherlands, their importance and history"	"Compare and contrast the lives of people in the US with the lives of the Peruvians: past and present" "Compare and contrast the history and attributes of two dishes that we talked about this quarter"
5th grade		"Compare and contrast the Mayan political and social structure. How was the life of nobles different from the peasants' life?"	"Compare and contrast how sausages and/or pretzels originated, how they were originally eaten and prepared, and how they are prepared and eaten"	"Compare and contrast the lives of ancient Mayans and Egyptians using any 2 components of GRAPES" [geography, religion, architecture, politics, economy, social structure] "Compare and contrast the history and origin of the bread-like staple foods."
6th grade		"Contrast and compare Yazmin and Aya [the two focus characters in the lesson] and the history of education in their countries"	"Compare and contrast Rosa Parks, Martin Luther King and/or people from the Brown VS. the Board of Education case"	"Compare and contrast the history of the music industry in the US" "Compare and contrast the rights of minorities in the 1950's to the present"
		"Compare and contrast the Kidspace Museum history from the times when it opened to how it is now"	"What are some similarities and differences between the history and present of the careers of police and firemen, and the technology and STEM careers?"	"Compare and contrast the history of Disneyland. How was it similar and different in 1954 and 2013?" "Compare and contrast Lost Boys and Malala' story"

Figure 27: Prompts that were used in all the lessons across eights classrooms

Example 1

If I were a African
American in the year
1963 durring the march of
Washington I would ~~feel~~ feel happy because
the black were going be free
from segation, Because ~~&~~ we
still had segration ~~xxxx~~
everybody will be sparted
from everyone. I ~~glad~~ Martin
Luther king, Rosa Parks, and the
Freedom Riders fought for
eavality and freedom. Rosa Parks,
Martin Luter king, and the freedom Riders
fought for eavality because
they ~~xxx~~ knew it was
right.

Example 2

The main difference
between STEM careers &
Public Softey and Fire is because
~~STEM~~ STEM started 40 yrs. ago and
Fire fighters or public safety started
2000 yrs. ago. Another ~~difference~~
is that stem is involves a
career and the other is provided weron.

The End

Figure 28. Students' work samples in the initial intervention (coaching) condition.

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essays are missing the developed essay structure with concluding sentences, detailed points of

difference, and well-developed compare and contrast framework.

At the word level, in coaching condition, the majority of academic vocabulary words

used by focus ELL students was content specific vocabulary. Figure 29 illustrates academic

vocabulary use at word level in the two student work samples above.

Student, grade	Content area specific words	General academic vocabulary	Polysemous words taking on content specific meaning	Total number of words; percentage of academic vocabulary
Leo, 6th grade (example 1)	African American Black March on Washington 1963 Free Segregation Separated Martin Luther King Rosa Parks Freedom Riders Equality Freedom	In the year [of]	0	77 Content area specific words: 16% General academic vocabulary: 1% Polysemous words taking on content specific meaning: 0%
Adrian, 6th grade	STEM Difference Public safety Firefighters Career	Main Another Difference Involve end	0	46 Content area specific words: 11% General academic vocabulary: 11% Polysemous words taking on content specific meaning: 0%

Figure 29. Academic Language at Word Level.[4]

The percent of content specific vocabulary in the 7 sample essays in coaching condition

ranged from 10-20% of the total words used. General academic vocabulary use was low: 1-5% of

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[4] Prompts "Compare and contrast Rosa Parks, Martin Luther King and/or people from the Brown v the Board of Education case" and "What are some similarities and differences between the history and present of the careers of police and firemen, and the technology and the STEM careers?"

the total words, and only 1-2% of the words used were polysemous words that had content-specific meaning. Given that all the essays were written as 1 paragraph, few of the students succeeded in incorporating the features of compare and contrast essays into their work. The mean scores for the word, sentence and discourse levels in this condition were 12, 27% and 9 (Refer to Table 5. Recall that sentence level scores were standardized by using the percent scores because the scale was finite in TOWL-3 subtest, in contrast word count that did not have a limit in word level, and contrast marker count did not have a limit in Compare and Contrast rubric adapted from Hammann and Stevens, 2003).

   Students' writing in the video self-reflection condition. Eight students' sample essays were examined for the video self-reflection condition. Students' essays in this condition were similar to the essays in coaching condition in many aspects. The mean length of an essay was 45 words, with the range of 26- 63, the median length was 47 words. Seventy two percent of the sentences in them were simple sentences, 8% were run on sentences, 5% were incomplete sentences, and 15% were complex sentences. Similar to coaching condition, all of the essays in video self-reflection condition consisted of one paragraph. One of the students never got to write his essay but came up with a long list of academic vocabulary words and ideas that he was going to use in his essay (see Figure 30 below).

Example 1   **Example 2**

Figure 30. Written academic language: Students' work samples[5].

Figure 30 presents 4 samples of students' work that illustrate the range of students'

essays in the video reflection condition. One of the distinguishing characteristics in the teachers'

instruction in the video reflection condition was the emphasis on the use of graphic organizers to

support students' learning. The teachers also implemented color coding for focus vocabulary.

Students' works presented in Figure 30 carry the evidence of the strategies used by their

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[5] Prompts used for the essays included "Compare and contrast the Mayan political and social structure. How was the life of nobles different from the peasants' life?"; "Compare and contrast the Kidspace history from the times when it opened to how it is now"; "Contrast and compare Yazmin and Aya and the history of education in their countries."

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teachers: sample 1 (the organized word lists prepared for the essay writing) and sample 2 (the essay in which the student labeled her main idea and supporting details) reflect the structure of the organizers that the teachers introduced in this condition. The author of the third sample chose to underline the focus words that she was taught in the lesson.

At the word level, in video self-reflection condition, similarly to the coaching condition, the majority of academic vocabulary words used by focus ELL students was content specific vocabulary.

Student, grade	Content area specific words	General academic vocabulary	Polysemous words taking on content specific meaning	Total number of words; percentage of academic vocabulary
Nico, 5th grade	Mayan Religion Afterlife Underworld Demon	topic	0	26 Content area specific words: 20% General academic vocabulary: 3% Polysemous words taking on content specific meaning: 0%
Irene, 5th grade	Mayan Religion Afterlife Underworld Demon Priests Nobles Kings Descendants Gods Demons	Topic Sentence	Supporting (as in "supporting detail") Nobles	63 Content area specific words: 17% General academic vocabulary: 3% Polysemous words taking on content specific meaning: 3%

Figure 31. Academic Language at Word Level: Prompt "Compare and contrast the Mayan political and social structure. How was the life of nobles different from the peasants' life?"

The percent of content specific vocabulary in the 8 sample essays ranged from 15-25% of the total words used. General academic vocabulary use was low: 3-7% of the total words, and only 2-3% of the words used were polysemous words that had content-specific meaning. Given that all the essays were written as 1 paragraph, few of the students succeeded in incorporating the features of compare and contrast essays into their work. The scores for the word, sentence and discourse levels in this condition were 9, 35%, and 11.5 (refer to Table 8).

Table 8

Students' Mean Scores, Range, and SDs for Word, Sentence, and Discourse Levels by Conditions

Condition	Word Level (mean, range and SD of total number of academic language words)	Sentence Level (mean, range and SD percent of the maximum possible score on TOWL subtest)	Discourse level (mean, range and SD of the raw score in discourse rubric adapted from Hammann and Stevens, 2003)
Baseline (n=16)	Mean: 0 Range: 0 SD: 0	Mean: 0 Range: 0 SD: 0	Mean: 0 Range: 0 SD: 0
Coaching (n=7[6])	Mean: 12 Range: 5-14 SD: NA	Mean: 27% Range: 20-40% SD: NA	Mean: 9 Range:9-17 SD: NA
Video Self-Reflection (n=7[7])	Mean: 9 Range: 5-12 SD:NA	Mean:35% Range: 27%-40% SD: NA	Mean:11.5 Range: 8-18 SD: NA
Combined intervention (n=14[8])	Mean: 15 Range: 10-19 SD: 2.8	Mean: 47% Range: 35%-63% SD: 3.2	Mean: 21 Range: 14-28 SD: 2.4

Students' writing in the combined (coaching + video self-reflection) intervention condition.

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[6] One of the students in the focus lesson in coaching condition was absent due to illness

[7] One of the students in the focus lesson in video self-reflection condition was absent due to illness

[8] Two students in the focus lesson in combined intervention condition were absent due to family circumstances

Six students' sample essays were examined for the combined intervention condition. Students' essays in this condition demonstrated noticeable growth in all three levels of academic language and were generally longer and better developed. The mean length of an essay was 60 words, with the range of 48- 80, the median length was 58 words. Seventy percent of the sentences in them were simple sentences, 3% were run on sentences, 2% were incomplete sentences, and 25% were complex sentences. Unlike initial intervention conditions, five out of six essays had two paragraphs (see Figure 32 below).

Example 1   **Example 2**

Example 1:

We are going to Compare and contrast hamburgers and French Fries. The Hamburger is Originated from Germany. The French Fries was originated from greece. They both alike because they have garnish on top. These dishes are popular.

The hamburger existed from The city hamburg. The French Fries existed in 1537, These dishes are very popular in the US. The French Fries is staple because they used to make it out of mashed potato.

Example 2:

Transition Words

Comparing Words	Contrasting Words
similarly	however
likewise	in contrast
in much the same way	on the other hand

Key Words

Old	New
sustenance	surplus
luxury	import
elaborate	export
	trade

Farmers!
I think that the farmers did more work then the Merchant. For examples the farmers pant grain, grapes vegetables and flax to make line. They raised cattle, sheep, pigs, and geese. Farmers had to meet grain quotas as a form of taxion. They work for the phorah. The farmers worked very hard if they did not do there work they were securely punished.

Merchant!
Merchant Lived in a brick home. They traveled to sell there products in a marketplace where other merchants gathered. Sometime sustenance items provied by the Farmer or fisherman were traded. They usually carried luxury items. For example they sold silver, iron, copper, cattle, spices, gold, wheat, paprrus, and linen.

Figure 32. Examples of students' written work in the combined intervention condition.

Figure 32 presents two samples of students' work that illustrate the work of 4th and 5th grade students in the combined condition. Example 1 is written by the youngest student participant, Kevin, who was nine years old at the time of the intervention. Example 2 is the second sample of Irene, whose earlier work was examined in the video self-reflection condition. Both samples reflect the teachers' pedagogy that was implemented. As evident from Kevin's sample, he followed his teachers' recommendation to explicitly state the topic of the essay. One of the strategies implemented by Kevin's teachers was POW (Pick Your Idea, Organize your Thoughts and Write, Graham, Harris, & Mason, 2005). Kevin's writing sample is representative of the essays created by fourth graders in his class. Following the class procedures for writing,

he opened his essay with an explicit declaration of his topic, narrowing it down from the original prompt ("Compare and contrast the history and attributes of two dishes that we talked about this quarter"): "We are going to compare and contrast hamburger and French fries." Irene responded to the prompt ""Compare and contrast the lives of ancient Mayans and Egyptians using any 2 components of GRAPES." Her sample demonstrates that the teachers who originally were in the video reflection condition continued to use graphic organizers to support students' learning. Irene's essay is written on a teacher-prepared paper that has an individual student's word list that contains transition words and key words from past and present lessons on it. Irene's sample also provides the evidence that she has internalized the habit of following a certain outline. Her essay has two paragraphs but each paragraph has a title, as if she is following a set plan.

At the word level, in the combined intervention condition, similarly to the initial intervention conditions, the majority of academic vocabulary words used by focus ELL students was content specific vocabulary. Figure 33 demonstrates the distribution of words that the students used across the three levels of academic language.

Student, grade	Content area specific words	General academic vocabulary	Polysemous words taking on content specific meaning	Total number of words; percentage of academic vocabulary
Kevin, 4th grade	Originated Germany Greece Alike Garnish Hamburg Dishes Staple Popular foods 1557	Compare Contrast Exist	0	77 Content area specific words: 13% General academic vocabulary: 4% Polysemous words taking on content specific meaning: 0%

Irene, 5th grade	Farmers Merchants Plant Grain Flax Linen Cattle Grain quota Form Taxation Pharaoh Sell Product Marketplace Luxury Sustenance Papyrus	Than For example Severely Item	Raise (cattle) Meet (the quota)	109 Content area specific words: 15% General academic vocabulary: 4% Polysemous words taking on content specific meaning: 2%

Figure 33. Academic Language at Word Level: Prompts ""Compare and contrast the history and attributes of two dishes that we talked about this quarter" and "Compare and contrast the lives of ancient Mayans and Egyptians using any 2 components of GRAPES"

Percent of content specific vocabulary in the 6 sample essays ranged from 13-25% of the total words used. General academic vocabulary use was low: 4-7% of the total words, and only 2-3% of the words used were polysemous words that had content-specific meaning. Given that all the focus ELL students' essays were written as a two paragraph pieces, students were more successful in incorporating the features of compare and contrast essays into their work. The scores for the word, sentence and discourse levels in this condition were 15, 47%, and 21 (refer to Table 5).

CHAPTER V
Discussion

The current study explored the impact of a continuous professional development model on pre-service special education teachers' academic language instruction using a single subject (experimental) design. It also examined teacher and student use and structure of academic language in the context of a nine-lesson series that had a combined focus on social studies and writing instruction. The present section examines the findings and highlights moments and particulars in each specific intervention condition, discusses the shifts in teacher participants' attention from themselves to students and the qualitative results of such shifts, as well as components of change in teacher participants' instructional practice that were essential for building their formative assessment skills.

What coaching and video self-reflection provide when implemented separately

The study results demonstrated that lessons in each intervention condition- coaching, video self-reflection, and the combined intervention- produced much higher quality ratings than lessons in the baseline. Coaching and video reflection taken separately as an intervention led to noticeable improvements in the outcome measure (quality of academic language instruction) for 12 out of 16 teacher participants. Participants' instructional quality scores exhibited steep slopes in both conditions indicating a powerful initial impact of these interventions on the quality of academic language instruction for the pre-service special education teachers. These positive results are consistent with the existing research findings on the impact of coaching and video self-reflection based interventions (Teemant et al., 2011; Kong et al., 2009; Rosaen et al., 2008).

A number of factors recognized by research on professional development have likely contributed to the rapid improvement in instructional quality in the initial intervention conditions. Consistency, ongoing nature of the intervention, contextualization of training within

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the teachers' classrooms, and the individualized approach based on inquiry-based learning were all likely to be critical contributors to an explanation of the rapid growth in academic language instructional quality of teacher participants. Existing research recognizes the benefits of these characteristics of a professional development model (Klingner, 2004; Penlington, 2008; Dall'Alba & Sandberg, 2006). In both conditions, teacher participants had access to the same self-rating quality rubric (video self-reflection rubric) which consistently addressed the same areas of instruction (refer to Appendix D), which possibly led to improvement in specific areas targeted by the study through the use of "guided noticing" (Osipova et al., 2011).

In the *coaching* condition, the teachers had an opportunity to discuss their concerns and plan the strategies with the coach trained for the project. The coaches guided the discussions uniformly in the direction of the academic language focus (i.e., "Did you use academic language on a sentence level? What evidence do you have for that?"). In the video *self-reflection* condition, the teachers' attention was directed to specific aspects of the lesson through focus on specific areas of instruction (i.e., "Teacher uses academic language on the sentence level," etc.) via a self-rating rubric. The requirement to provide evidence to support self-rated scores kept the teachers grounded in the reality of their lessons (which was also noted in the previous research on the video self-reflection [Osipova et al., 2011]). While in video self-reflection the teachers were able to watch their own teaching from the start of the study, in the coaching condition the teachers relied on their memory of the lesson. It is possible to hypothesize that the concrete self-examination of teaching performance initially had a more powerful impact on academic language instructional quality than the less contextualized coaching approach, thus resulting in higher quality scores. The brevity of each of the initial intervention conditions (2 to 3 weeks each) in the

current study does not allow for a detailed examination of how effective these conditions would have been over the longer term.

The powerful impact of combined intervention: highest quality scores. The innovative aspect of the present study was in adding a video self-reflection to coaching and combining the two approaches within intervention sessions in an attempt to improve the quality of academic language instruction for all teacher participants. During the combined intervention condition that lasted 5-6 weeks, all teacher participants maintained a steady and slightly increasing instructional quality scores. Results of the single subject visual analysis (the level and the stability of the trajectory) indicate that the combined intervention was more effective than a coaching or video self-reflection intervention implemented independent of one another. The results were particularly promising for the teacher participants who demonstrate little change in instructional quality during the initial intervention condition.

Positive changes for teachers resistant to intervention. Performance of four participants in the coaching condition is of particular interest. These participants did not demonstrate an improvement in their quality of instruction scores as significant as the performance of their colleagues. It is possible to hypothesize that these participants represent teachers who are recognized as resistant to intervention (Osipova et al., 2011). Previous studies have shown that even within ongoing, individualized, collaborative training, some teachers do not show expected levels of growth due to a number of individual and contextual factors that need to be further examined by research (McCray, Rosenberg, Brownell, Leko, & Long, 2011; Urbach & Osipova, 2014). Despite the coaches' recommendations, the four participants did not improve their instructional quality, following many of the same ineffective teaching routines that they demonstrated in the baseline: excessive teacher talk with very limited opportunities for

student engagement, rapid switch of instructional contexts and strategies without an attempt to teach to mastery, etc. While individual and contextual factors that made one dyad resistant to the positive effects of coaching remain largely unknown, a few of these factors were revealed in the participants' exit surveys, where both teachers mentioned that the initial lesson planning and collaboration were problematic in this dyad and personal weaknesses (e.g., excessive talking) did not become apparent to them until they had access to lessons' video footage.

In contrast, the other dyad, whose scores were slightly higher than those of the participants described above reported better rapport but similar difficulty with lesson planning. In this context it is possible to hypothesize that the combination of personalities in co-teaching is a powerful factor in establishing the initial quality of instruction. Further analysis of coaching sessions revealed that these four teachers' focus in the areas that they chose to discuss in coaching did not match the coaches' focus (i.e., the teachers tended to focus on self, while the coaches focused on the impact that the teachers' instruction had on students' academic language development and learning). In such cases, the cognitive dissonance between the teachers' focus and the coach's focus was too vast, more time was spent on achieving mutual agreement on *what* to focus on in the next lessons and less time was spent on *how* to make the selected instructional areas more effective. This might have contributed to less dramatic growth in the initial intervention conditions for these four participants.

The combined intervention maybe an effective method to bring about positive change in the instruction of teachers most resistant to intervention. While the mechanisms responsible for this change remain subject to further research, it is possible to hypothesize that combining coaching with video self-reflection allowed for joint examination of concrete examples of critical teaching moments, which ultimately promoted quicker and more efficient way to reaching a

consensus on what areas needed improvement and led to a more productive dialogue on how to affect change.

Moments and Particulars: Changes in Teachers' and ELL Students' Use and Structure of Oral Academic Language

The lessons in each intervention condition demonstrated a number of similar patterns across teacher and student participants. There were a number of changes in the instructional contexts' and strategies' implementation during the initial intervention conditions of coaching and video self-reflection that were implemented separately. The lessons in both conditions became thematically more homogenous than those in the baseline, and instructional contexts and strategies became less numerous. In the *coaching condition*, there was an observable shift towards maximizing students' engagement and balancing the academic language focus of the lesson (i.e., remembering to include discussion of the word, sentence, and discourse levels of academic language). This shift was consistent with the discussions that took place in coaching sessions. It is likely that participation in coaching additionally contributed to consistency of implementation because the teachers were able to discuss the instructional choices/strategy implementation with the coach and get suggestions on practices to continue, whereas in video reflection condition, the teachers followed the same rubric for their reflection, but were relying mostly on their own judgment of strategy implementation and being critical or unsure of best ways to implement a particular strategy may not have persevered in its implementation consistently. In *video self-reflection condition,* the teachers (guided by the video self-reflection) became aware that they were primarily focusing on word level, and they subsequently began to tap into sentence and discourse levels of academic language in their lessons in this condition. In fact, in contrast to the dominant word-level focus of the baseline lessons, the majority of instructional contexts in both conditions were focused on discourse. Within the instruction that

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focused on the word level within the initial intervention conditions, it is critical to note that the teachers went further and began to address different tiers within the word level of academic language. In the coaching condition specifically, a number of instances of teachers drawing students' attention to general academic and polysemous words were documented in the transcripts. A defining characteristic of teachers' instruction in the video self-reflection condition was the implementation of more visual supports than in the coaching condition (i.e., teachers became aware of inaccessibility of word walls for some students, they began to implement individual word lists, color coding of words and segments of text, etc.). It is possible to hypothesize that displaying directions on the slides/on the boards (an approach typical for the video self-reflection condition) led to the reduced number of the context of giving directions (which remained high in the coaching condition).

The shift of focus from self to students. There were also some observable differences in what aspects of the lessons the teachers chose to focus when in the two different conditions. In the video self-reflection, teachers began by focusing on themselves and not on students and did not shift "the lens" until the combined intervention. This initial focus on self was consistent with the findings of previous studies (Osipova et al., 2011). Alternatively, teachers in the coaching condition were able to shift their focus quicker than the teachers in video self-reflection condition, since the coaches were able to ask them guiding questions that expedited the shift of attention to the impact of instruction on students' learning, and academic language use and structure in particular. Through qualitative analysis this study began to uncover subtle differences between coaching and video self-reflection professional development models. Recognizing these potential differences is important when selecting an individualized model of

teacher training. Given the small size and explorative nature of this experiment these discovery of these distinctions warrants further exploration.

Within the initial intervention conditions, the number of *implemented* instructional contexts decreased, as did the number of *missed* instructional contexts. These two trends were possibly interconnected: reducing the number of planned instructional contexts allowed for certain flexibility within the lesson segments, and the teachers became more responsive to students' errors, struggles and correct responses in the moment. It is important to note that by the end of the initial intervention condition, the majority of teachers learned to incorporate unplanned impromptu instructional contexts of re-teaching, reviewing, and re-explaining upon the students' needs.

Teacher-student interactions in coaching and video self-reflection: increase in length and quality. Another common characteristic of the two initial intervention conditions was the change in the quality and length of teacher- student interactions. It is within the initial intervention conditions that the teachers' style of interaction with students became less authoritative and more dialogic (Chin, 2007). This in turn allowed for more opportunities for students to use academic language and move beyond just the word level. Within teachers' questions and prompts and students' responses, qualitative shifts occurred in the types of responses according to Bloom's taxonomy (Bloom & & Krathwohl, 1956). Teachers' questions and students' responses in the initial intervention condition involved a slightly wider range of higher order cognitive skills (i.e., recall, recognize, define, explain) than in the baseline condition. The prompts targeting higher order cognitive skills caused longer and more sophisticated responses from students. Existing research supports the feasibility of this finding: Saunders and Goldenberg (2010) reported that "instructional conversations" (i.e., interactive

teacher-student discussions) led to more sophisticated understanding of the material presented to students and higher literal comprehension. Teachers' improved ability to lead the students to more sophisticated thinking and, consequently, sophisticated responses is recognized in research as a successful skill of proximal formative assessment (Erickson, 2007). Bailey, Heritage, and Butler (2014) refer to acts of formative assessment which as demonstrated in the examples of teacher-student interactions as a micro-level assessment (Black, Wilson, & Yao, 2011), emphasizing the importance of this type of assessment ("assessment *for* learning", as it allows the teachers to make immediate, proximal decisions within the lesson, facilitate students' learning, and work within the students' ZPD.

Combined intervention lessons under a microscope: features of high quality instruction. Eight lessons with the highest teacher quality scores in the combined intervention condition were examined for patterns of instructional context and strategy use and the impact that these features had on students' oral language. Along with the improved and more stable quality scores characteristic for the combined intervention condition, the lessons became more balanced in their academic language focus, addressing all three levels: word, sentence and discourse. Given the combined guidance of coaches and video self-reflection, the teachers rapidly became aware of the missing lesson components or the missing emphasis on a particular aspect/level of academic language instruction and practice. This improvement in quality of academic language instruction is manifested in consistency of scores and higher level of scores.

The overall lesson structure became more coherent and cohesive within the combined condition. One of the lesson features that the majority of teachers began to implement successfully in this condition were the lesson closing contexts (review, check of meeting objectives, and establishing the focus of the next lessons). While the number of instructional

strategies became slightly higher, a tendency to "layer" these strategies combining strategies that targeted different modes of support (i.e., visual, auditory) became pronounced in the combined intervention condition. Thus, the teacher participants were able to support struggling students on multiple levels simultaneously. For example, two to three strategies were implemented at the same time: the students were given oral prompts (i.e., sentence starters), they were presented with a word wall to use in their responses, and the words within the word wall were color coded for comparison and contrast. Layering of the strategies provided powerful scaffolding for students and has positively affected their academic language use and structure: the focus ELL students used more academic language at word level and at sentence level than in any of the previous conditions.

Another distinguishing characteristic within the combined intervention condition was release of teacher dominance in the small group interactions. In the previous conditions, the teachers often assumed the leader's role in the contexts of the small group discussions. This ongoing teacher presence and dominance within the discussion often precluded students from talking at length. In the combined intervention condition, the teachers began to use effective tools for student engagement, such as assigning roles for the group discussions, implementing turn taking, etc. Due to this new approach promoting students' initiative and leadership within the context of the small group interactions, the instances of student-student interactions were documented. Overall, during the combined intervention condition, the teachers began to check for progress and understanding, as opposed to predominantly checking for understanding in the earlier conditions. This qualitative shift in teachers' pedagogical routines signifies their newly attained expertise in formative assessment recognized as a critical method in support of students' development (Bailey & Heritage, 2008; Heritage & Heritage, 2013).

This release of teacher dominance also led to implementation of certain strategies/academic behaviors by students, which constituted a qualitative shift in the nature of the lessons. As a result, within the combined condition, students' responses became longer, more developed and reflected a wider range of cognitive skills (i.e., analysis, application, evaluation). These categories of responses were not only more sophisticated in comparison to student responses in the earlier conditions, but they also fell closer to the typical tasks/skills necessary within the area of social studies (i.e., explanation, analysis) that aimed at determining key relationships for this academic domain (compare and contrast, cause and effect).

Gaining formative assessment skills in the context of observing students and co-teachers. The multitude of instructional contexts and strategies on the part of the teachers continued to lead to some missed instructional contexts. However, a new feature developed in the combined condition: the teachers within the dyad started to fill in the missing instructional contexts as their instructional turn followed their colleague's turn. For example, if during one teacher's lecture her co-teacher observed certain confusion among the students, the co-teacher addressed this in her instructional segment that followed. This phenomenon of identifying missed instructional opportunities within each other's teaching initially began occurring in lessons of the teachers in the video self-reflection condition. However, during the combined intervention condition, this practice became prevalent in all teachers' practice. Thus, it is possible to hypothesize that observing their own teaching generally heightened teacher participants' observation and critical evaluation of instruction skills.

The discussion of the combined intervention would not be complete without mentioning the establishment of a zone of proximal development (ZPD, Vygotsky, 1978) that the teachers achieved only within the combined intervention condition. It is possible that watching each other

teach, watching videos of lessons and being coached heightened the teachers' awareness of their own and each other's instruction and made them more responsive to students' needs regardless of whether or not they were delivering instruction. As Kate, one of teacher participants mentioned in her reflection, *"When it comes to seeing in the moment what the students got and what they missed, I still need to work on this, [Shanae] does a better job of this."* Here we also see the teacher engaging in short-cycle (i.e., within the lesson, William, 2006) formative assessment of not only *students'* learning but also *her own* learning. Such responsiveness and attention to the process of learning occurring on multiple levels is an invaluable skill for special education teachers who often serve as co-teaching partners to general educators. Similarly, engaging focus ELL students in student-student interactions which was achieved during the combined intervention condition created a ZPD for the struggling students. At times, during the small group interactions in the combined condition, the students were observed helping each other, providing their peers with responses and assistance.

ELL Students' Use and Structure of Written Academic Language Within the Context of Increased Instructional Quality

Analysis of students' writing samples further illuminates the qualitative changes in students' performance across the conditions. While the design of the study does not allow for establishment of the direct causal relationships between the teachers' instruction and students' writing, due to the particularly small non-representative sample and the exploratory nature of writing samples analysis the samples of students' writing within the lessons with the highest quality scores demonstrate a few key shifts that occurred across all eight classrooms. The baseline lessons with their absence of any implementation of writing after a detailed lesson dedicated to writing (in four out of eight classrooms) and implementation of a TOWL subtest

writing screener (in the remaining four classrooms) may actually have been representative of what happens in schools when the beginning teachers are pressed for time due to curricular or assessment results: when testing is seen as "writing practice" or where the lessons' activities are not thematically connected. The word, sentence and discourse scores for initial intervention conditions were generally similar, with slightly higher mean scores for sentence and discourse levels in video reflection condition as compared to coaching. This slight difference can be explained through the higher implementation of graphic organizers and visual supports in the video reflection condition. Since the students were provided with the detailed paragraph/essay frames, their responses were more organized. The paragraph/essay frames served as scaffolding that the teachers regularly provided to the students. The students' written samples in the combined intervention condition featured the highest mean scores for word, sentence and discourse. It remains unclear whether the high scores could have resulted from the overall student learning that occurred during the study, but the rapid progress exhibited in the students' samples contains promising results. While the small number of samples (6-8 in each condition) rule out the possibility of any definitive conclusions, the exploratory results of the study warrant further study of students' performance in different professional development models.

Perceived Benefits to Participants

Upon completion of their participation in the study, the teacher were asked to fill out the exit questionnaire that contained nine questions addressing social validity of the study (refer to Appendix J). Teachers' responses indicated that all 16 teacher participants thoroughly enjoyed their participation. The majority of participants preferred coaching to video self-reflection in the initial intervention condition and recognized the benefits of the study. All of the participants (100% of the sample) mentioned increased confidence in their teaching and reflected on

increased confidence of their students. For example, Kate responding to the question asking in what areas she recognizes most growth, answered, *"Confidence in myself as a teacher."* Similarly, Beata listed confidence as a number one benefit of the project, *"All of the experience gave me confidence so that I could be a better teacher."* Alina also noted that not only she became more confident in her instruction, but she also recognized that her focus ELL students *"showed more and more confidence in their writing as the weeks passed, so the biggest impact might have been in their confidence and comfort in writing."*

All teacher participants reported deeper understanding of academic language and its critical importance for ELL students' instruction. In her response, Kate underscored *"The importance of academic language and teaching students to see the structure of language."* Mike thought that his newly acquired *"grasp of academic language and ELL instructional strategies ...will make [him] stand out from other teachers."* He recognized that he *"was able to provide [his] students with intensive academic language instruction… and a rich set of strategies to support students' writing."* The majority of teachers continued to focus on word level when they talked about academic language. For example, one of the participants responded,

> *"I never really gave certain vocabulary that pertains to social studies much thought until I started this project. I was made more aware of the context in which words are used and how it should be presented to the students."*

Teacher participants also reported planning to continue using instructional approaches and implementing the strategies they learned within the project. Eighty percent of participants named newly gained knowledge in strategy instruction as one of the key benefits gained within the project that they will take with them in their future teaching career. Carina, reflecting on what aspects of the project she will continue to incorporate in her teaching, responded,

> *"I plan to use what I have learned in the classroom. I need to be aware of the language I use when lecturing, giving instructions or speaking with students. I*

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also plan to use mini-lessons but I need to keep working on them. I plan to share my experience in classes with my peers. I also plan to take all this knowledge and apply it when I get to work. I learned teaching to write is not easy and I need to find ways to make it easier and enjoyable for the students and me."

Among a few challenges of the professional development model, the teachers noted the time constraints, not having enough time with students, and lack of preparation to teach social studies prior to the project. However, the overwhelmingly positive attitudes toward the intervention by the participants justifies further investigation of the professional development model explored in the study.

Study Limitations

Several limitations should be considered when evaluating the results of the study. First, the type of design and the small scale of the study does not allow for generalizable conclusions. Furthermore, the upward trajectory in the majority of the participants' scores indicates the presence of the learning curve, which compromises the conclusions central to single subject design. Given the presence of learning curve, it is not possible to conclude that the participants' performance depended solely on the intervention stimulus (combined intervention condition). As with all single subject design experiments, the carry-over effect cannot be entirely dismissed: the high scores within the combined intervention condition could have resulted from the high scores achieved in the initial intervention conditions.

A number of limitations stems from the nature of the setting where the experiment took place. First, the duration of the study was constrained by the limited number of weeks given to directed teaching (n=9) within the ten-week academic quarter timeframe. The short duration of the experiment limited the possibility of having a longer baseline and implementing a maintenance phase, which affects the validity of conclusions drawn about the effectiveness of the intervention. The longer time could have allowed for implementation of a longer baseline, longer

implementation of initial intervention condition, and a maintenance check. However, a longer baseline before the introduction of intervention phases may not be entirely possible due to the constraints of program scheduling. Further and different types of investigations, especially studies with randomized control trial design, are needed to establish effects of the intervention piloted in this study. For the sake of ethical considerations, it may not be feasible to have no intervention in the control condition. Instead, it might include coaching and video self-reflection intervention in another content area, or not focusing on academic language.

Another limitation of the intervention has to do with the frequency of intervention implementation. The once-a-week classes possibly weakened the intervention effects. Additionally, while the teacher participant sample was carefully matched in dyads and fairly homogenous in their teaching experiences and background knowledge, the limited number of classrooms of the same grade level in the Learning Center did not allow for homogeneity of the student sample. The impossibility of matching the students in language levels, as well as overall skills and ability levels, allows only for an exploratory, descriptive analysis of the impact of intervention on students' academic language skills progress. Furthermore, the number of students in each classroom was significantly lower than in a typical public school upper elementary classroom. The small number of students results in less divided attention and more frequent teacher-student interactions which likely have contributed to enhanced student learning. Additionally, co-teaching model in which the teachers were learning from each other allowed them to effectively modify the overall quality of instruction in the classroom. And while co-teaching is not unheard of in inclusive settings, more research is needed to test the effects of the innovative professional development model in more traditional one-teacher-per-classroom settings.

The third category of limitations pertains to standardized measures used in the study, which may have had a cultural or linguistic bias. While the measures used were predominantly administered in English, the majority of measures (TOWL, CORE, and PPVT) considered the U.S. census information when selecting the normative samples. Additional efforts were made to check student participants' language skills in their native language(s) by administering vocabulary scales. The data obtained by the assessments in the study was used to select the students most in need of an intervention and inform the teacher participants of the needs of their students. No high stakes decisions were made based on these assessment data. Nevertheless, the results of the measures are to be interpreted with caution.

Implications for Future Research and Practice

Several implications for future research and practice emerge from the study. First, the findings from the study have demonstrated that an ongoing, contextualized and dialogic professional development model holds a lot of potential for the pre-service special education teachers. Despite the relative shortness of the intervention, the study demonstrated the effectiveness of this approach, as it promoted an increase in the quality of instruction for all of teacher participants, and especially for teachers who might be resistant to less intensive professional development approaches, such as coaching and video self-reflection. The professional development experience in which teacher participants were given an opportunity to purposefully observe their own instruction and to collaboratively discuss and plan the necessary changes proved to be a powerful tool within the present study as it successfully improved performance of teachers initially resistant to coaching and video self-reflection implemented alone. Future research is needed to determine the effectiveness of the model in a longer timeframe and with larger participant samples.

The study has shown that an intervention combining coaching and video self-reflection is a useful tool in increasing teachers' awareness about academic language and their implementation of strategies and academic contexts designed to promote students' use of oral and written academic language. The ideal number of instructional contexts within a certain timeframe remains subject for further investigation. While the study took place in a University Saturday Learning Center setting, further research is needed to examine such professional models in the context of traditional secondary schools.

The study indicated that certain instructional contexts and strategies promote more engaged students' use of academic language. Additionally, the study illustrated that specific types of questions can elicit responses that are not only longer and more complex in their syntactic structure, but also featuring higher order cognitive skills. Further research could explore professional development models that train the teachers to pursue inquiry-based instruction that targets specific features of academic language use and structure.

In terms of the study's instrumentation, a few instruments were developed for the purpose of this experiment (i.e., academic language use and structure protocol, coaching rubric). These instruments were reviewed by researchers specializing in language assessment and classroom observations as well as teacher quality evaluation protocols. The instruments were piloted and validated by several trained graduate student observers. The feedback from the expert review and the pilot sessions was incorporated into the instruments. However, further larger scale studies are needed to establish validity and reliability of the instruments.

The study focused on exploring the impact of special education teachers' academic language instruction on early adolescent ELL students' at risk for literacy failure. It is critical to examine the impact of such instruction on various populations of students with disabilities.

Furthermore,   analysis of focus students' oral and written academic language use and structure in the study was explorative in nature and was comparatively minimal, as it focused on strategically selected lessons to illustrate possible patterns in students' responses. Further analysis of the samples of a larger student body is needed to produce more conclusive results.

Finally, the study has significant implications for the field of practice. It added to the body of existing research on teacher training an innovative instructional approach combining coaching and video self-reflection. As university teacher training faculty searches for effective ways to prepare pre-service special education teachers for the challenges of teaching and working with struggling learners with and without disabilities, the novel professional development model presented in this study holds a promising solution for rapid increase in teacher quality. Presented professional development model extended the traditionally used coaching approaches by adding a video self-reflection component. Such incorporation of technology is a highly feasible and invaluable tool that scaffolds pre-service educators' learning.

Appendix A. Research Focused on Adolescent Challenges in Academic Settings

Group of Students	Challenging Issues	Authors and Sources that Discuss these Challenges
All Adolescents	Rapid Increase in Difficulty of Academic Tasks	Fletcher, Lyon, Fuchs, & Barnes, 2007
	High Academic Expectations for Oral and Written Proficiency	Levy & Murnane, 2004; National Center for History in the Schools, 1996; Spycher, 2007
	Increase in Genre Diversity and Text Structure Variation	Spycher, 2007
	Demand to Use Higher Order/Analytical Thinking Skills	Echevarria, Richards-Tutor, Chinn, & Ratleff, 2011; Francis, 2006; Zwiers, 2005
	Increased Density of Academic Discourse	Bailey, 2007
Adolescent English Language Learners and students at risk for academic failure	Continued Difficulty with Basic Literacy Skills	Gersten & Baker, 2000; Kibby, 2009; Rivera, 1994
	Increased Difficulty with Comprehension	Peverly & Wood, 2001; Swanson, 1999b
	Unfamiliar Academic Vocabulary	Bryant, Ugel, Thompson, & Hamff, 1999; Proctor, Carlo, August, & Snow, 2005; Wood, Mustian, & Cooke, 2012
	Need to Continue Developing Academic Language	Rivera, 1994
Adolescent English Language Learners	Unfamiliar Genres and Text Structures	Jimenez, Garcia, & Pearson, 1996; Scarcella, 2003; Short, 1994
	Need to Continue Developing Communicative English Skills	Hinkel & Fotos, 2002; Zwiers, 2005

Appendix B. Individual Student Participants' Demographics, Languages Spoken and Literacy Skills

Name	Gender	Age	Grade Level	Ethnicity	Bilingual status and Languages Spoken	Vocabulary Scores			Reading Comprehension	Written Expression (pre-test)
						Peabody Picture vocabulary; grade and age equivalents	Critchlow Verbal Scale-English; grade equivalents	Critchlow Verbal Scale-Spanish; grade equivalents	CORE maze task; grade equivalents	TOWL Story Construction Subtest; grade and age equivalents
Kevin	M	9:04	Early 4th	Asian	Bilingual, English and Spanish	Age:9:05 Grade:3.8	4th grade	K and below	Early 3rd grade	Age:<7:0 Grade: <2
Giovanni	M	9:09	Early 4th	Hispanic	Bilingual, English and Spanish	Age:8:03 Grade:2.7	4th grade	K and below	Early 3rd grade	Age: 8:6 Grade: 3:4
Evelyna	F	10:4	Late 4th	Hispanic	Bilingual, English and Spanish	Age:8:07 Grade:3.1	4th grade	3rd grade	Late 2nd grade	Age: 8:6 Grade: 3:4
Edelina	F	9:05	Late 4th	Hispanic	Bilingual, English and Spanish	Age: 8:8 Grade:3.1	4th grade	K and below	Late 2nd grade	Age: 8:6 Grade: 3:4
Irene	F	10:08	Early 5th	Hispanic	Bilingual, English and Spanish	Age: 8:8 Grade:3.1	4th grade	K and below	Late 3rd grade	Age: 9:0 Grade: 4:0
Miko	M	11:04	Early 5th	Hispanic	Bilingual, English and Spanish	Age:10:01 Grade:4.5	4th grade	7th grade	Early 3rd grade	Age: 9:0 Grade: 4:0
Alina	F	10:11	Late 5th	Hispanic	Bilingual, English and Spanish	Age: 9:10 Grade:4:3	5th grade	4th grade	Late 4th grade	Age: 9:0 Grade: 4:0

Oliver	M	11:03	Late 5th	Hispanic	Bilingual, English and Spanish	Age:8 Grade: 2.5	5th grade	Late 3rd grade	K and below	Age: 9:0 Grade: 4:0
Karina	F	11:03	Late 5th	Hispanic	Bilingual, English and Spanish	Age:8:4 Grade:2.8	3rd grade	4th grade	Late 3rd grade	Age: 9:0 Grade: 4:0
Daniel	M	11:09	Early 6th	Hispanic	Bilingual, English and Spanish	Age:9:10 Grade:4.3	4th grade	K and below	Early 3rd grade	Age:7:9 Grade:2:7
George	M	11:01	Early 6th	Hispanic	Bilingual, English and Spanish	Age: 8:8 Grade:3.1	5th grade	1st grade	Early 5th grade	Age:<7:0 Grade: <2
Jenny	F	11:11	Early 6th	Hispanic	Bilingual, English and Spanish	Age: 8:8 Grade:3.1	5th grade	4th grade	Early 5th grade	Age: 9:0 Grade: 4:0
Delia	F	12:03	Early 6th	Hispanic	Bilingual, English and Spanish	Age:8:4 Grade:2:8	5th grade	6th grade	Early 4th grade	Age: 9:0 Grade: 4:0
Leo	M	12:02	Late 6th	Hispanic	Bilingual, English and Spanish	Age 8:4 Grade:2.8	5th grade	4th grade	Late 2nd grade	Age:7:9 Grade:2:7
Adrian	M	12:03	Late 6th	Hispanic	Bilingual, English and Spanish	Age:6:3 Grade:K.6	3rd grade	K and below	Late 2nd grade	Age: 9:0 Grade: 4:0
Alondra	F	12:04	Late 6th	Hispanic	Bilingual, English and Spanish	Age:9:10 Grade:4.3	5th grade	5th grade	Late 3rd grade	Age:10:0 Grade:5

Appendix C. Examples of presentation activities developed for this introductory training.

Activity 2: Identifying the Impact of Vocabulary, Syntactic Structures and Discourse Structures on the Meaning of the Text.

Purpose: Activity aims to raise teachers' awareness of the impact of vocabulary, syntax and discourse markers' variations on text meaning

Working in pairs, participants follow the following steps:

1. Read the sentences provided in the table (part A) and discuss the meaning created by different vocabulary choices. Come up with your own variations of vocabulary terms.

2. Read the sentences provided in the table (part B) and discuss the meaning created by different syntax structures. Come up with your own variations of syntactic structures.

3. Read the sentences provided in the table (part C) and discuss the meaning created by different discourse markers. Come up with your own variations of discourse markers.

4. Share your impressions with another pair of participants and with the whole class.

Table 1: The Impact of Vocabulary, Syntax and Discourse Markers' Variations on Text Meaning

Part A: Vocabulary:

Example: Autocrat vs. Despot	Sample Sentence with Focus Vocabulary	Function of vocabulary/impact on meaning	Sentence with Vocabulary Variation	Function of vocabulary/impact on meaning
	Catherine the Great is known as an **autocrat** empress whose rule pushed Russia into a modern era.	Autocrat- a monarch with unlimited authority. Vocabulary choice highlights unlimited power of the empress	Catherine the Great is known as an **despot** empress whose rule pushed Russia into a modern era.	Despot- a ruler with unlimited power, a tyrant/oppressor. Vocabulary choice here highlights cruel methods which Catherine the Great used to push Russia into a modern era.
Let's Practice: Revolutionary vs. Rebel	After General Pinochet obtained rule of the country, several hundred committed Chilean **revolutionaries** joined the guerrilla forces	Revolutionary: a person who actively works for the change of the regime	Substitute "revolutionary" for a "rebel"	Discuss the new meaning and its difference from the original sentence

Variation of the activity to use with adolescent students:

Provide the class with a list of 3-5 vocabulary words and their synonyms with varying connotations. Ask the students in pairs to come up with 2 sentences that for each pair of synonyms. Discuss the difference in meaning.

Part B: Syntax:

Example:	2 Sample Simple Sentences	Function of simple sentence structure on meaning	Compound Sentence	Function of compound sentence on meaning
	Napoleon was successful in the wars often against numerous enemies. He is generally regarded as one of the greatest military commanders of all time.	Two distinct complete independent thoughts.	Due to his success in the wars, often against numerically superior enemies, Napoleon is generally regarded as one of the greatest military commanders of all time.	Subordinate structure of the clauses reached through the use of "due to" established a cause-and-effect meaning
Let's Practice:	Washington sought to preserve liberty, promote commerce, and reduce regional tensions. He is consistently ranked among the top three presidents of the United States.		Use conjunctions such as "because," "due to," "thus," and create a compound sentence	Discuss the new meaning and its difference from the original 2 simple sentences
Example:	Active vs. Passive Constructions			
	The king executed the rebels.	The agency belongs to the king.	The rebels were executed.	No authority figure assumes responsibility.
Let's Practice:	Washington avoided war with Great Britain and guaranteed a decade of peace and profitable trade by securing the Jay Treaty in 1795	The tribute for successful and peaceful decade goes to Washington	Change the sentence to passive voice and discuss the new meaning	

Variation of the activity to use with adolescent students:

A. Provide the class with sentence strips containing thematically connected simple sentences. On the board provide a list of conjunctions. Ask the students in pairs to come up with compound sentences that for each pair of sentences. Discuss the difference in meaning.

B. Provide the class with a series of sentences in active voice. Ask the students working in pairs to change the sentences to passive voice. Discuss the difference in meaning. Use a series of sentences in passive voice and ask the students to come up with alternative sentences in active voice. Discuss the difference in meaning.

Appendix D. Quality of Academic Language Instruction rubric/Video self-reflection rubric

Name_____

Date_____

Reflection_ Number:_____

Goal of The Lesson:_____

LC Teacher Video Self-Reflection

1. On the scale of 0-5 please rate your performance in the following areas.

   Please provide 1-3 points/sentences to illustrate why you are giving yourself a particular rating. Please note that the chart has 2 parts: one on whole class direct instruction and one on small group instruction

Area of Instruction: Academic Language- Whole Class Direct Instruction	Rating from 0-5: 0- not observed, 1-inadequate, 2-low average, 3-average, 4- competent,5- mastery; provide evidence to support your points
• The Lesson is Focused*	
• The Lesson has an introduction, central part, and a conclusion	
• The Teacher uses academic language on word level	
• The Teacher uses academic language on sentence level	
• The Teacher uses academic language on discourse level	
• Modeling and Review of academic language features	
• Strategy Instruction	
• Active Application of Students' Knowledge	
• Appropriateness of Practice	

• Responsiveness to Students' Performance	
• Encouraging the use of academic language	
• Error Correction and Feedback	
• Active Engagement	
Area of Instruction: Academic Language- Small Group Support	
• Clear Instructions	
• Clarity and precision of Guiding Questions	
• Check in for progress and understanding	
• Encouraging the use of academic language	
• Active Engagement	
• Feedback	

2. Choose three items from the list above and discuss what went well and what you would do different next time. Highlight or bold changes that you plan to implement before the next observation.
    1.
    2.
    3.
    Here are some guiding questions to consider when filling out self-reflection. **Please do not feel obligated to answer them all. These are suggestions if you are on sure what to choose to change in your next lesson.**

    • What do I need to review?
    • How much time do I need to review?
    • How many new skills will I cover in one lesson?
    • What strategies will I use?
    • What words/texts will I use?

- What strategies/steps will I model?
- Are my directions and descriptions clear and accurate?
- How will I group students for instruction?
- While I am teaching, what will I look for to determine if the instruction is going well?

Appendix E. Academic Language Instruction Measurement Protocol

Academic Language Instruction Measurement Protocol
Part 1: Field Notes

Date: _____ Observer: _____ Start time: _____ End time:
_____

Classroom/Grade Level: Teacher(s) : _____ Room #:
_____

Activity Setting	Social Studies Concepts
Type of activity: ❏ Teacher-directed ❏ Whole group ❏ Teacher-guided ❏ Small group (2+) ❏ Other *Materials provided/used:*	*Social Studies content standards:* ❏ ❏ ❏ ❏ *Lesson Topic:* *Specific concepts/text structures:* *(compare/contrast; chronological, etc.)*

	Content Objective:	Language Objective:
Objective Met: 0/1		
Quality of Performance (1-4) 1-minimally present performance; 2-emerging performance; 3-progressing		

performance ; 4-successful performance		
Evidence of Meeting Objective		

Academic Language Instruction Measurement Tool: Part 2 -Frequency and Types of Instructional Contexts and Strategies

Time within the Lesson	Appropriate Instructional Context	Strategy Used	Strategy Type	Quality of Performance: 1-minimally present performance; 2-emerging performance; 3-progressing performance ; 4-successful performance	What Level of AL Was Supported: Lexical Sentence Discourse (Provide Examples)	Quality of Performance: 1-minimally present performance; 2-emerging performance; 3-progressing performance ; 4-successful performance

Total # of Supports for AL Lexical Features:	Total # of Supports for AL Sentence Features:	Total # of Supports for AL Discourse Features:

Academic Language Instruction Measurement Tool: Part 3: Quality of Instruction in Instructional Contexts and Strategies

Lesson Transcript:

Part 4: Responsiveness to Coaching (1-4):

	Content Objectives	Language Objectives	Strategy Implementation	Word Level Instruction	Sentence Level Instruction	Discourse Level Instruction
Score : 1-minimally present performance; 2-emerging performance; 3-progressing performance ; 4-successful performance						

Academic Language Instruction Measurement Protocol: Item Descriptors and Scoring Guide

Part 1: Field Notes

Activity Setting Field:

Teacher –directed: an activity or a part of the lesson that is led by the teacher: the teacher does most of the talking and does most of the work within an activity, and the focus of the audience is on the teacher.
Teacher-guided: an activity or a part of the lesson that is guided by the teacher: the students do most of the talking and most of the work within an activity (or the amount of talk/work is shared among the teacher and the students) and the focus of the audience is on the students.

Content Objective: The goal for the lesson that is related to the content of the lesson. For example: To identify the causes of the demise of the Roman Empire

Language Objective: The goal for the lesson that is related to the academic of the lesson. For example: To recognize and use conjunctions that would emphasize the cause and effect relationship within the oral/written text (such as "therefore," "so," "thus," "as a result") while writing/discussing the causes of the demise of the Roman Empire.

Objective Met: 1- the objective was met during the lesson; 0- the objective was not met during the lesson;

Objectives: Quality of Performance

Type of Objective	1-minimally present performance	2-emerging performance	3-progressing performance	4-successful performance
Content Objective "Students hypothesize major causes of the collapse of Mayan	An objective is written on the board and listed in the lesson plan. The teacher might even	An objective is written on the board. Throughout the lesson the teacher reminds the students of the objective. As the students listen to	An objective is written on the board. The teacher explains why this objective is important. The teacher models and provides some guided and independent practice to meet the	An objective is written on the board and is discussed with students. The teacher explains why this objective is important and how it is connected to what the class has learned so far. The teacher models and provides plenty of guided and independent practice to meet the objective. Throughout

civilization."	read the objective to class, but there is no further revisiting of the objective throughout the lesson.	teacher's presentation, the teacher asks guiding questions to bring the students back to the lesson objectives: "What does this allow us to hypothesize about the collapse of this civilization?" The teacher provides 1-3 guiding questions. The teacher uses 1 mini-activity to allow students meet the objectives. At the end of the lesson the teacher revisits the objective: "so now you know the causes of the collapse of the Mayan Civilization."	objective. Throughout the lesson the teacher revisits the objective. As the students listen to teacher's presentation, the teacher asks guiding questions to bring the students back to the lesson objectives: "What does this allow us to hypothesize about the collapse of this civilization?" Specific academic vocabulary from the objective is used. The teacher provides some guiding questions. The teacher uses 2-3 mini-activities to allow students meet the objectives. At the end of the lesson the teacher revisits the objective and evaluates together whether it were met.	the lesson the teacher revisits the objective. It appears to be the overarching goal for the lesson. As the students listen to teacher's presentation, look at artifacts, trace historical development of civilization, the teacher asks guiding questions to bring the students back to the lesson objectives: "What does this allow us to hypothesize about the collapse of this civilization?" "What comes to mind?" The teacher provides different types of guiding questions. Specific academic vocabulary and its paraphrase from the objective are used. The teacher uses multiple mini-activities to allow students meet the objectives. At the end of the lesson the class revisits the objective and evaluates together whether it were met. The teacher guides the students in their evaluation of the objective.
Language Objective "Students will write a compare and contrast essay, comparing Mayan and Aztec civilizations."	An objective is written on the board. The teacher might even read the objective to class, but there is no further	An objective is written on the board. The teacher reads the objective to students. The teacher explains the features of this particular type of essay and its structure. She gives an example of a	An objective is written on the board and is discussed with students. The teacher explains why this objective is important. The teacher explains the features of this particular type of essay and its structure. She introduces a graphic representation of the essay structure. She models	An objective is written on the board and is discussed with students. The teacher explains why this objective is important and how it is connected to what the class has learned so far. The teacher explains the features of this particular type of essay and its structure. She introduces a graphic representation and some samples of compare and contrast essays. She models the writing process and discusses her steps

	revisiting of the objective throughout the lesson.	compare and contrast essay. Students listen to teacher's presentation. At the end of the lesson the teacher revisits the objective.	the writing process and discusses her steps. Throughout the lesson the teacher revisits the objective. Students occasionally contribute to co-construction of the essay. The teacher asks guiding questions "What should we do next?" Some specific academic vocabulary is used. The teacher provides a mini-activity to allow students practice planning of the essay. At the end of the lesson the teacher revisits the objective and evaluates together whether it were met.	in a think-aloud. She gradually releases her control over the activity and co-composes paragraphs with students on an overhead projector. Throughout the lesson the teacher revisits the objective. The goals for the lesson and the steps are very clear. Students do not passively listen to teacher's presentation but contribute to co-construction of the essay. The teacher asks guiding questions to bring the students back to the lesson objectives: "What do you notice about this essay structure?" "How is it different from the other structures with which you are familiar?" The teacher provides different types of guiding questions. Specific academic vocabulary is used. The teacher uses multiple mini-activities to allow students meet the objectives. At the end of the lesson the class revisits the objective and evaluates together whether it were met. The teacher guides the students in their evaluation of the objective.

Evidence of Meeting Objectives: List the evidence that objectives were met:

Content Objectives: In the small group discussion following the PowerPoint Presentation the students filled out graphic organizers listing the causes of the demise of the Mayan civilization.

Language Objectives: In their written responses during the lesson students correctly filled out a graphic organizer for compare and contrast essay.

Part 2: Frequency and Types of Instructional Contexts and Strategies

Appropriate Instructional Context: An instructional context created by the teacher within the lesson. The appropriateness of the context is determined by its alignment with the lesson objectives and student responsiveness. For example, in a lesson for which the objective is to teach students to identify the reasons for the demise of the Roman Empire, appropriate instructional contexts may include 1) academic vocabulary preview (for terms such as "demise"), 2) a comparison of maps of the Empire before and after its demise, etc.

Strategy Used: Describe the strategy the teacher is using. For example, the teacher is providing a graphic organizer for the paragraph structure.

Strategy Types: Examples of strategy types include but are not limited to: **explanation, definition, demonstration, providing example/non-example, elaboration, guiding questions, sentence starters, essay frames, graphic representations, etc.**

An inventory of strategies will be developed through data coding. Additional types of strategies are likely to be identified during the analysis of lesson video footage.

Strategy Used: Quality of Performance

Strategy Used	1-minimally present performance	2-emerging performance	3-progressing performance	4-successful performance
Definition	The teacher says, "Let me define what descriptive language is." A minimal dictionary definition follows. The definition contains words that are new to the students, unclear, or confusing.	The teacher says, "Let me define what descriptive language is." A dictionary definition follows. The teacher asks if the students understood what descriptive language is.	The teacher says, "Let me define what descriptive language is." She provides a definition and paraphrases it for the students. The teacher asks if the students understood what descriptive language is.	The teacher says, "Let me define what descriptive language is." She provides a definition and paraphrases it for the students. She describes in which contexts this construct is used. The teacher asks if the students understood

			The teacher provides some evaluative feedback to students' responses ("right," "not exactly").	what descriptive language is. She asks them to explain what it is in their own words. She also asks the students to provide some examples of descriptive language. The teacher provides detailed feedback to students' responses.

Supported Levels of Academic Language:

Lexical: Instruction targets the word level of academic language. Instruction may include vocabulary instruction, as well as focus on morphology and semantics, etc.

Sentence: Instruction targets the sentence level of academic language. Instruction may include sentence frames, discussion of sentence types, practice with various sentence building and expanding techniques, etc.

Discourse: Instruction targets the discourse level of academic language. Instruction may include essay frames, discussion and practice of genres, instruction in awareness of audience, purpose of essay, etc.

Level of Academic Language: Quality of Performance

Level of Academic Language	1-minimally present performance	2-emerging performance	3-progressing performance	4-successful performance
Lexical:				
Sentence:				
Discourse:				

Appendix F. Coaching Quality Rubric

Component of Coaching Session	Examples:	Scale of 0-5 (0-not observed; 5 highly evident)
Teacher choice in the content and process of learning		
Evidence of respect for difference in perspectives;		
Evidence of reflection and focus on actions;		
Evidence of genuine dialog;		
Evidence of reciprocal learning		
The coach is modeling techniques and instructional practices,		
The session is focused on specific content		
The session is structured around observing teacher practices		
The coach and the teacher engage in consulting for reflection		

Appendix G. Rubric of Students' Academic Vocabulary Use in Written Samples.

Level of Academic Language	ELLST1 (L1)	ELLST1 (L3)	ELLST1 (L9)
Content Area Specific Vocabulary			
General Academic Vocabulary			
Polysemous words that take on academic area-specific meaning			

Appendix H. Oral Academic Language Observation Protocol (used for coding transcript data).

Level of Academic Language	ELLST1 (L1)	ELLST1 (L3)	ELLST1 (L9)
Word Level: Content Area Specific Vocabulary			
Word Level: General Academic Vocabulary			
Word Level: Polysemous words that take on academic area-specific meaning			
Sentence Level: (record verbatim/rate as fragment, simple, complex sentence)			
Discourse Level: (record verbatim)			

Appendix I. Teacher Demographics and Educational and Professional Background Questionnaire.

Questions	Response(s)
Have you had any previous experience teaching writing prior to this study? If so, briefly state the context.	
Do you have any background in studying teaching writing? If so, briefly state the context.	
Do you have any previous experiences teaching social studies? If so, at what grade level?	
Do you have any background in studying social studies? If so, briefly state the context	
Do you have any language learning experience of your own? Was it in a classroom, within the culture, or through any other life experience? If so, briefly state the context	
What are your goals for teaching writing to your students?	
What is your motivation for teaching social studies?	
What is your motivation for teaching the thematic unit you chose to teach?	
Do you have any training for working with ELLs? If so, briefly state the context	
Do you have any experience working with ELLs? If so, in what context and for how many years?	
Do you have any experience working with early adolescents (4, 5, 6th grade)? If so, in	

what context and for how many years?							
Do you have any experience of working in education?							
If yes, what positions have you held working in education (grade level(s), age group(s), disability categories, class size)							
How many years have you been working in education?							
What languages do you speak?							
What degrees/credentials do you hold?							
What degrees/credentials are you pursuing?							
What is your gender? (circle one)	female	male	another gendered identity	Decline to state			
What is your age category?	20-24	25-29	30-34	35-39	40-44	45-50	other

Appendix J. Exit Questionnaire (Social Validity measure):

1. What have you learned from this project?
2. What do you see as its benefits?
3. What do you see as its challenges?
4. What have you learned about teaching writing within the context of social studies?
5. What have you learned about teaching ELLs?
6. In what area (that were listed in your self-reflection form) do you think you have grown the most?
7. In what areas would you like to continue to improve?
8. How do you plan to use what you have learned?
9. Do you plan to share what you have learned?
10. What impact do you think the project/your teaching had on your students?

Appendix K. Examples of Contexts and Strategies Used in the Baseline.

Instructional contexts and strategies within the baseline lessons: Whole Class Lesson 1 and 2-
Social Studies and Writing within Social Studies Focus

Part of the lesson	Instructional contexts (n=number of contexts implemented across 8 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 8 lessons)
Whole Class Instruction Lesson 1: focus on Social studies (15 minutes) and Whole Class Instruction Lesson 2: focus on Writing in the Context of Social Studies (15 minutes)	Setting objectives (n=1), DL Presentation of the lesson topic (n=16), DL Defining the focus concept (n=18), WL Examining components of the key concept(s) (n=8), WL Introducing key events (n=1), WL Discussion of consequences of key events (n=1), DL Giving directions (n=23), DL Vocabulary guided practice (n=2),WL Defining vocabulary, teacher-led (n=16), WL Comparing 2 concepts (n=2), DL Guided practice with conjunctions (n=4), SL Reviewing classroom rules (n=3), DL Clarifying directions (n=5), DL	Read Aloud- T (n=16); DL Check for Understanding –T (n=24), DL Getting students' attention –T (n=9), DL Prompting at word level-T (n=20), WL Activating background knowledge-T,S (n=10); WL, DL Analogy use-T (n=7), WL Visual Prompts-T (n=8); WL, DL Categorizing with visual support-T,S (n=10); DL Providing examples-T (n=14); WL Providing definitions-T (n=20); WL Paraphrasing-T (n=6); SL Providing Synonyms-T (n=6); WL Choral Reading-T,S (n=8); WL; DL Repetition of sentences, words-T(n=10); SL, WL Recasting sentences-T (n=10); SL Guiding Questions-T (n=16); SL
	Total Number of Types of Instructional contexts: 13; DL focused types: 8 SL focused types: 1 WL focused types: 4	Total Number of Different Strategies: 16; DL focused: 7 SL focused: 4 WL focused: 6 Teacher-implemented: 13 Teacher and Student- implemented: 3 Student- implemented: 0

Instructional contexts and strategies within the baseline lessons: Small Group Lessons 1 and 2 -
Social Studies focus and Writing within Social Studies Focus

Part of the lesson	Instructional contexts (n=number of contexts implemented across 8 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 8 lessons)

Small Group Instruction Lesson 1: focus on Social studies (10 minutes)

and Lesson 2: focus on Writing in the Context of Social Studies (10 minutes) | Restating directions (n=8), DL Question-answer review of the material presented in the whole class lesson segment (n=8), WL, SL Guided work with a worksheet based on the material (n=3), WL Question-answer review of the small group progress at the time when the teachers switched small groups (n=4), WL, SL | Check for Understanding –T (n=20), DL Getting students' attention –T (n=24), DL Prompting at word level-T (n=20), WL Activating background knowledge-T,S (n=10); WL, DL Providing definitions-T (n=16); WL Repetition of sentences, words-T(n=20); SL, WL Recasting sentences-T (n=10); SL Guiding Questions-T (n=26); SL |
| | Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 2 WL focused types: 3 | Total Number of Different Types of Strategies: 8; DL focused: 2 SL focused: 3 WL focused: 4 Teacher-implemented: 8 Teacher and Student- implemented: 1 Student- implemented: 0 |

Appendix L. Examples of Contexts and Strategies Used in the Initial Intervention Condition (Whole Class Lesson Segments)

*Types of instructional contexts and strategies used by teacher participants in the **whole class** lesson segments 1 and 2 with the focus on social studies and writing in the initial intervention conditions of coaching and video self-reflection.*

	Initial Intervention Condition: Coaching		Initial Intervention Condition: Video Self-Reflection	
Part of the lesson	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)
Whole Class Instruction Lesson 1: focus on Social studies (15 minutes) and Whole Class Instruction Lesson 2: focus on Writing in the Context of	Setting objectives (n=4), DL Presentation of the lesson topic (n=7), DL Defining the focus concept (n=16), WL Examining components of the key concept(s) (n=2), WL Giving directions (n=10), DL Vocabulary guided practice (n=3),WL Defining vocabulary, (n=12), WL	Read Aloud- T (n=8); DL Check for Understanding –T (n=6), DL Getting students' attention –T (n=4), DL Prompting at word level-T (n=15), WL Activating background knowledge-T,S (n=8); WL, DL Analogy use-T (n=3), WL Visual Prompts-T (n=8); WL, DL Providing examples-T (n=8); WL Providing definitions-T (n=8); WL Paraphrasing-T,S (n=8); SL	Setting objectives (n=4), DL Presentation of the lesson topic (n=8), DL Defining the focus concept (n=8), WL Examining components of the key concept(s) (n=8), WL Giving directions (n=8), DL Vocabulary guided practice (n=4),WL Defining vocabulary (n=8), WL Comparing 2 concepts (n=3), DL Reviewing classroom rules (n=2), DL	Read Aloud- T (n=4); DL Check for Understanding –T (n=8), DL Routine signals for getting students' attention –T,S (n=8), DL Prompting at word level-T (n=6), WL Activating background knowledge-T,S (n=6); WL, DL Visual Prompts-T (n=14); WL, DL Providing examples-T (n=4); WL Providing definitions-T (n=4); WL

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Social Studies (15 minutes)	Comparing 2 concepts (n=2), DL Reviewing classroom rules (n=2), DL Clarifying directions (n=5), DL Review of previous lessons (n=7),WL, DL Transition (n=10), DL Paragraph construction (n=6), DL	Providing Synonyms-T (n=6); WL Choral Reading-T,S (n=8); WL; DL Repetition of sentences, words-T,S (n=6); SL, WL Recasting sentences-T (n=8); SL Guiding Questions-T (n=4); SL Maximizing participation: choral responses, non-verbal responses –T,S (n=6), WL, SL, DL Realia-T (n=6), WL Summary-T,S (n=6), DL Graphic organizers- T,S (n=8), DL Sentence starters-T,S (n=4), SL Modeling –T, (n=4), DL, SL Word Walls-T (n=4), WL	Clarifying directions (n=2), DL Review of previous lessons (n=8),WL, DL Transition (n=8), DL Paragraph construction (n=6), DL Examining text structure (n=8), DL Analysis of visual information: graphs, photographs, etc. (n=3), DL Examining study tools: acronyms, mnemonic devices, etc. (n=6), DL	Paraphrasing-T (n=6); SL Providing Synonyms-T (n=4); WL Choral Reading-T,S (n=10); WL; DL Repetition of sentences, words-T,S (n=6); SL, WL Recasting sentences-T (n=8); SL Guiding Questions-T (n=5); SL Maximizing participation: choral responses, non-verbal responses T,S (n=8), WL, SL, DL Realia-T (n=5), WL Summary-T,S (n=4), DL Graphic organizers- T,S (n=4), DL Sentence starters-T,S (n=4), SL Modeling –T, (n=4), DL, SL Color coding –T (n=8), DL, SL, WL Word walls-T (n=4), WL Individual word lists -S(n=4), WL
	Total Number of Types of Instructional contexts: 13; New contexts added in the coaching	Total Number of Different Strategies: 22; New strategies added in the coaching condition: 7 DL focused: 10 SL focused: 7	Total Number of Types of Instructional contexts: 16; New contexts added in the video self-reflection condition: 6 DL focused types: 12	Total Number of Different Strategies: 23; New strategies added in the video reflection condition: 9 DL focused: 11 SL focused: 8

	condition: 3 DL focused types: 9 SL focused types: 0 WL focused types: 5	WL focused: 12 Teacher-implemented: 14 Teacher and Student- implemented: 8 Student- implemented: 0	SL focused types: 0 WL focused types: 5	WL focused: 13 Teacher-implemented:15 Teacher and Student- implemented: 7 Student- implemented: 1

Appendix M. *Types of Instructional Contexts and Strategies Used in Small Group Lesson Segments in the Initial Intervention Conditions.*

	Coaching		Video Self-Reflection	
Part of the lesson	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)	Instructional contexts (n=number of contexts implemented across 4 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 4 lessons)
Small Group Instruction Lesson 1: focus on Social studies (10 minutes) and Lesson 2: focus on Writing in the Context of Social Studies (10 minutes)	Restating directions (n=4), DL Question-answer review of the material presented in the whole class lesson segment (n=4), WL, SL Guided work with a worksheet based on the material (n=5), WL, SL Question-answer review of the small group progress at the time when the teachers switched small groups (n=4), WL, SL	Check for Understanding –T (n=8), DL Getting students' attention –T (n=10), DL Prompting at word level-T (n=15), WL Activating background knowledge-T,S (n=7); WL, DL Providing definitions-T,S (n=4); WL Repetition of sentences, words-T,S (n=10); SL, WL Recasting sentences-	Restating directions (n=2), DL Question-answer review of the material presented in the whole class lesson segment (n=4), WL, SL Guided work with a worksheet based on the material (n=7), WL, SL Question-answer review of the small group progress at the time when the teachers switched small groups (n=6), WL, SL	Check for Understanding –T (n=10), DL Getting students' attention –T (n=11), DL Prompting at word level-T (n=8), WL Activating background knowledge-T,S (n=10); WL, DL Providing definitions-T,S (n=6); WL Repetition of sentences, words-T,S (n=5); SL, WL

		T (n=10); SL Guiding Questions-T (n=20); SL Graphic Organizers-S, (n=6),SL, DL Mnemonic devices – T,S (n=3) SL, DL		Recasting sentences-T (n=5); SL Guiding Questions-T (n=13); SL Graphic organizers-S (n=5), SL, DL
	Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 3 WL focused types: 3	Total Number of Different Types of Strategies: 10; DL focused: 4 SL focused: 4 WL focused: 4 Teacher-implemented: 8 Teacher and Student-implemented: 3 Student-implemented: 1	Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 3 WL focused types: 3	Total Number of Different Types of Strategies: 9; DL focused: 5 SL focused: 4 WL focused: 4 Teacher-implemented: 8 Teacher and Student-implemented: 3 Student-implemented: 1

Appendix N. Examples of Contexts and Strategies Within the Whole Class and Small Group Segments in the Combined

Intervention Condition.

Instructional contexts and strategies within the combined intervention lessons: Whole Class Lesson and Small Group Lessons

1 and 2-Social Studies and Writing within Social Studies Focus

Part of the lesson	Instructional contexts (n=number of contexts implemented across 8 lessons); level of Academic Language that the context targets	Strategies used (T-teacher led, S-Student led) (n=number of times a strategy was implemented across 8 lessons)
Whole Class Instruction Lesson 1: focus on Social studies (15 minutes) and Whole Class Instruction Lesson 2: focus on Writing in the Context of Social Studies (15 minutes)	Setting objectives (n=8), DL Presentation of the lesson topic (n=16), DL Defining the focus concept (n=16), WL Introducing key figures, places, and events (n=8), WL, SL Giving directions (n=16), DL Vocabulary guided practice (n=6),WL Defining vocabulary, teacher-led (n=16), WL Comparing 2 concepts (n=8), DL, SL Reviewing classroom rules (n=1), DL Review of previous lessons (n=4),WL, DL Transition (n=12), DL Essay review and revision (n=8), DL, SL, WL Lesson closure/summary (n=8), DL, SL	Read Aloud- T (n=4); DL Check for Understanding –T (n=10), DL Routine signals for getting students' attention –T,S (n=8), DL Prompting at word level-T (n=12), WL Activating background knowledge-T,S (n=8); WL, DL Analogy use-T (n=3), WL Visual Prompts-T (n=8); WL, DL Providing examples-T (n=8); WL Providing definitions-T (n=8); WL Paraphrasing-S (n=6); SL Choral Reading-T,S (n=16); WL; DL Recasting sentences-T (n=8); SL Guiding Questions-T (n=16); SL Maximizing participation: choral responses, non-verbal responses T,S (n=8), WL, SL, DL Summary-S (n=4), DL Graphic organizers- T,S (n=4), DL Sentence starters-T,S (n=4), SL Modeling –T, (n=4), DL, SL Color coding –T, S (n=8), DL, SL, WL

		Word walls-T (n=8), WL
		Individual word lists -S(n=6), WL
Whole Class Instruction Lesson Segments 1 and 2 Totals	Total Number of Types of Instructional contexts: 13 DL focused types: 9 SL focused types: 4 WL focused types: 6	Total Number of Different Strategies: 21 DL focused: 11 SL focused: 7 WL focused: 11 Teacher-implemented: 11 Teacher and Student- implemented: 7 Student- implemented: 3
Small Group Instruction Lesson 1: focus on Social studies (10 minutes) and Small Group Instruction Lesson 2: focus on Writing in the Context of Social Studies (10 minutes)	Restating directions (n=8), DL Question-answer review of the material presented in the whole class lesson segment (n=8), WL, SL Guided work with a worksheet based on the material (n=8), SL Question-answer review of the small group progress at the time when the teachers switched small groups (n=8), SL	Check for Understanding –T (n=10), DL Check on progress- T (n=6), DL Getting students' attention –T (n=4), DL Prompting at word level-T (n=16), WL Activating background knowledge-T,S (n=8); WL, DL Providing definitions-T (n=16); WL Recasting sentences-T,S (n=10); SL Guiding Questions-T (n=24); SL Graphic organizers-S (n=5), SL, DL Individual word lists- S (n=4), WL Organizational routines-T, S (n=8), SL, DL
Small Group Instruction Lesson Segments 1 and 2 Totals	Total Number of Types of Instructional contexts: 4; DL focused context types: 1 SL focused context types: 3 WL focused types: 1	Total Number of Different Types of Strategies: 11; DL focused: 6 SL focused: 4 WL focused: 4 Teacher-implemented: 7 Teacher and Student- implemented:3 ~~2~~ Student- implemented: 2

Appendix O. Coding Schema Examples of the Student/Teacher Oral Academic Language Use and Structure.

Examples of Codes Used for Instructional Contexts	Types and Examples of Instructional Contexts	Examples of Codes Used for Strategies Used with Instructional Contexts	Examples of Strategies	Words and Sentence Types Used within the Lesson (Running Record)
IC_WC_L1_DF_TL: Whole class mini-lesson 1 Discourse Focus Teacher-Led	Introduction of the Lesson's Topic: Teacher introduces a topic of the lesson Ex.: T: "Today's topic is Freedom Riders. Let's read *the text* on the slide chorally, all together. Let's read the *opening paragraph*."	**STR_WCL1_DL_T:** Strategy Whole Class mini-lesson 1 Discourse Level Teacher Led	Choral Reading Ex.: T: "Let's read the text on the slide *chorally*, all together."	**WLCST:** Word Level Content Specific Teacher Used: *Freedom Riders, opening paragraph* **WLGAT:** Word Level General Academic Teacher Used: *chorally* *text*
IC_WC_L1_SF_TL: Whole class mini-lesson 1 Sentence Focus Teacher-Led	Lesson Objectives: Teacher reads lesson objectives and discusses objectives' sentence structure Ex.: T: "Today's objective is to recognize the words that help us see the progression of the text: first, next, then etc. *What sentence is this, by the way*?"	**STR_WCL1_SL_T:** Strategy Whole Class mini-lesson 1 Sentence Level Teacher-Led	Sentence Starters T: "Let's make *predictions* of how these two events are similar? Let's start the responses with '*I predict…*'" S: "*I predict* that this is similar to the March on Selma."	**WLCSS:** Word Level Content Specific Student Used: *March on Selma, similar* **SLCSS:** Sentence Level Complex Sentence Student: S: "*I predict* that this is similar to the March on Selma."
IC_WC_L1_WF_TL: Whole class mini-lesson 1 Word Focus Teacher-Led	Giving Directions: Teacher gives directions and explains the meaning of the task-word Ex.: T: "First, let's *summarize* what we've learned. Remember, *summarize is different from retell.*	**STR_WCL1_WL_T:** Strategy Whole Class mini-lesson 1 Word Level Teacher-Led	Using word morphology for deciphering meaning: Ex.: T: "Our next word is	**WLCST:** *endangered* **WLGAT:** *mean* **WLPCT:** Word Level Polysemous Content

	To summarize is to focus on the main idea and most important details"		*endangered*. Does anyone know what endangered means? What root word do you see in it?"	Area Specific Teacher Used: *root*
IC_SG_ L1_DF_TL: Small Group mini-lesson 1 Discourse Focus Teacher-Led	Text Analysis: Teacher models reading of a text intended for the small group analysis Ex.: Teacher: "What makes it a history text? 'What were the Freedom Riders? In 1961, many black and white women and men traveled on buses together through the segregated south.'"	**STR_SGL1_DL_T:** Strategy Small Group mini-lesson 1 Discourse Level Teacher-Led	Think aloud Ex.: T: "I am going to use think aloud strategy here. Let's see what are some features of a history text? I see a year…"	**WLCST:** *history* **WLGAT:** *think aloud strategy* *features* *text*
IC_SG_ L1_SF_TL: Small Group mini-lesson 1 Sentence Focus Teacher-Led	Sentence analysis: Teacher selects a sentence that has a clue to the discussion: Ex.: T: "Based on the first sentence, what's the difference now? What in the first sentence gives a clue about a difference?"	**STR_SGL1_SL_T:** Strategy Small Group mini-lesson 1 Sentence Level Teacher-Led	Analysis of a sentence role within a paragraph: Ex.: T: "This first sentence gives the main point of your paragraph, a Topic sentence talks about the Main Idea"	**WLCST:** *sentence* *paragraph* *topic sentence* **WLGAT:** *main point* *main idea*
IC_SG_ L1_WF_TL: Small Group mini-lesson 1 Word Focus Teacher-Led	Defining the key term: Ex.: T: "African Americans protested against these 'Jim Crow Laws.' What do you guys think, based on what we just read, what did Jim Crow law mean?"	**STR_SGL1_WL_T:** Strategy Small Group mini-lesson 1 Word Level Teacher-Led	Context Clue: Ex.: T: "Based on what we just read, what did Jim Crow law mean?"	**WLGAT:** *read* *mean*

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