

2017

# Instructional Practices of Upper Elementary General Education Teachers of English Learners

Jamie Lynn Cardwell  
*Walden University*

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# Walden University

College of Education

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Jamie Cardwell

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Walden University  
2017

Abstract

Instructional Practices of Upper Elementary General Education Teachers of English

Learners

by

Jamie Lynn Cardwell

MA, Southern Illinois University Edwardsville, 2006

BS, Illinois State University, 2000

BS, Lincoln Christian University, 2000

Doctoral Study Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Education

September 2017

## Abstract

For the past 7 years in a public Midwestern school district, 75% of the English learners (ELs) in 3rd, 4th, and 5th grades have performed below proficiency on the state examination. To address the declining academic achievement, district administration required that K-5 teachers attend professional development (PD) that featured culturally and linguistically responsive (CLR) instructional practices for ELs. Despite district wide PD, school administration did not monitor implementation of these practices and student achievement continued to decline. This qualitative bounded case study was grounded in Vygotsky's constructivism and Krashen's second language acquisition theories. The purpose of this study was to explore teachers' perceptions and use of CLR instructional practices when teaching ELs. Data were collected via 23 individual interviews with and 22 observations of teachers, who had taught ELs within the last 3 years. Data were analyzed using typological analysis and a priori codes were established based on the typologies. Teachers reported they were using academic language and native language in class, but these instructional practices were not supported in observation data. Furthermore, teachers reported that using the student's native language, incorporating language and content, lack of instructional time, and a need for further training in how to teach ELs were barriers that affected implementation of CLR instructional practices. Based on the findings, a 3-day professional development was created to increase teachers' knowledge of how to develop ELs' academic language, to use ELs' native language in the classroom, and to overcome classroom barriers. These endeavors may contribute to positive social change when administrators provide teachers with CLR instructional practices, ELs may increase their academic performance.

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## Dedication

I have been through a lot of life changes while on this journey. I have had exciting times and difficult times. Throughout all of these changes, my mom was my biggest supporter. From looking for a book in my stored belongings to scanning documents for me, she has been there to support me. Growing up, my mom was my cheerleader, no matter what I wanted to do and I wanted to be in everything. She would make costumes for a program the day before, take me shopping for days on end to find the best dress, and host a party for a bunch of ungrateful teenagers to celebrate my thirteenth birthday. We did not have much growing up, but I never knew it. My mom would scrimp and save so that we could do the things we wanted to do. Even though my mom had only a high school education, she wanted a college education for us. All of her children have master's degrees because of her perseverance. This project study is dedicated to my mom for her love, support, and dedication. I could not have done it without her help. I love you, mom.

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A project like this takes an extensive community of support to help support you through the hard times and rejoice with you in the good times. A village truly helped me finish this project study. My community of support includes people from work, my family, and friends from all over the world. I am fortunate to have such an amazing group of people who constantly surround me and encourage me to keep going until this marathon was finished.

I have always had a supportive work environment that expanded from the Midwest to Uganda to Turkey. Colleagues have been willing to talk with me and support me through every stage of this project. I took a position in Uganda during the last two semesters of classes and had to have plan A, B, and C in order to make sure that things were posted on time. There were several times when we would go from place to place to find working electricity and internet. I also went to Uganda last summer for a month when I knew I just needed some time to get away from everything and transcribe my interviews. Thank you to Daniel, Jenny, Sam, and Joseph for your unwavering support and helping me to get things done in a difficult environment. When I came back home, I was working on my proposal and one of my administrators helped me narrow down what I actually wanted to study. Thank you to Tim for helping me to take my passion and turn it into research, to Karina for listening to all of my complaints, and to Julie for providing all of the data I needed. I also appreciate my local school district for allowing me to conduct research and being open to my ideas. Lastly, I am thankful to my colleagues at Bilkent University and friends in Turkey for supporting me and always asking about my research. It is nice to be surrounded by so many people that have been through this

process who share their horror stories of completing a dissertation. Your advice and personal stories made me feel part of a sense of belonging and helped during times of isolation.

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Last but not least, my family has been a major contributor in this project. They have helped me, supported me, and listened to me as I rattled on about my literature



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## Section 1: The Problem

### **The Local Problem**

In 2001, congress passed the No Child Left Behind (NCLB) law requiring school districts to demonstrate 100% student achievement for all “major racial and ethnic groups, low-income students, students with disabilities, and LEP (limited English proficient) students” by 2014 (U. S. Department of Education, 2010, p. 3). President Obama then reauthorized NCLB in 2015 as the Every Student Succeeds Act with changes in academic expectations ensuring all students will be college and career ready by the time they graduate high school (U.S. Department of Education, n.d.). The LEP category as defined by the law refers to students who are English Learners (ELs) between the ages of three and 21 enrolled in an elementary or secondary school, and have limited English skills (NCLB, 2002). ELs may be born in the United States or another country and are identified in most districts through a home language survey. These students account for more than 9% of the U.S. K-12 student population (National Center for Education Statistics, n.d.a).

Out of 563 districts in Missouri, 180 districts contain ELs (30,136 students). Out of those 180 districts containing ELs, nearly 50% of the school districts have failed to meet the required achievement percentages for the past seven years, including the district being examined (Missouri Department of Elementary and Secondary Education [DESE], n.d.a). In response to the increasing requirements for more students to pass state examinations due to NCLB, the local district implemented a district wide reform in 2008 requiring all teachers to learn and utilize culturally and linguistically responsive (CLR)

instructional practices for ELs (district documents). All teachers were given a book, trained during multiple sessions, and were supported with in-person coaching and an online platform. New teachers hired by the district were required to participate in the training before beginning the school year.

Despite this comprehensive reform effort utilizing CLR instructional practices, the local district of interest has not met state requirements for ELs' progress for the past seven consecutive years and is currently in *Title III District Improvement Year 4*. This status places the district at risk of losing accreditation as well as facing sanctions including modifying curriculum, instruction, and programs; losing funds; and replacing staff (DESE, 2013). In addition to not meeting achievement percentages and NCLB requirements, the local district has consistently had a 25% gap in the graduation rate of ELs and non-ELs for the past four years (DESE, n.d.b). ELs in the local district drop out of high school at nearly twice the rate of English only learners (EOs). Although the district has taken steps to address this lack of achievement for ELs through required ongoing professional development on instructional practices for ELs, there is little knowledge of implementation of these practices in the classroom.

## **Rationale**

### **Evidence of the Problem at the Local Level**

The state of Missouri requires all teachers to have 10-15 hours of professional development (PD), depending on their certification level (DESE, n.d.c.). The local district imbeds these hours into the academic year by using one day per month (eight total for the year), focusing on various initiatives aligned with building, district, and state



goals. In 2008, the district leadership focused on implementing CLR instructional practices to improve EL achievement across the district. The district offered training sessions to all of the building leaders and then the building leaders trained the teachers. All teachers were trained within one year and any new staff member was required to attend a five-hour mandatory training during teacher orientation week. Teachers were supported over the next few years through books, websites, and coaching sessions.

In 2014, the district leadership again received improvement status (Year 4) after six consecutive years of not meeting NCLB requirements. Using a state-required Title III plan, the district leadership responded to DESE as to why certain criteria were not met for the district, including an explanation about why ELs were not demonstrating proficiency as required by NCLB. The Title III plan was submitted with specific academic improvement strategies outlined for ELs in 2014-2015. In this plan the district leadership acknowledged a problem with consistency and fidelity in a statement addressing concerns, “Although training and coaching has been provided to support teachers in the implementation of linguistically responsive pedagogy, the fidelity and consistency of implementation continues to present a challenge” (internal district documents, 2015, p. 5). In EL department meetings and conversations among teachers, district administrators have reiterated the need to have instructional practices investigated. A district assistant superintendent stated, “At this time, we have no way of knowing whether our teachers are using the instructional strategies for ELs, but our state achievement data would suggest they are not” (M. LaChance, personal communication, September 9, 2014).

Although the district PD department and administration had incorporated EL-specific PD, the achievement rates of ELs were still in decline. Students in Missouri participate yearly in the Missouri Assessment Program aligned with the Show-Me Standards (based on Common Core Curriculum Standards) in the spring. Students in grades three through eight complete grade level assessments in mathematics and English language arts. In addition, students in Grades 5 and 8 complete science assessments to measure achievement gained in elementary and middle school. The state of Missouri reports test results in four categories: below basic, basic, proficient, and advanced. Student must score in the proficient or advanced range to demonstrate mastery of grade level content. Over a four-year period, an achievement gap exists between EL and EO students. The following three tables show the combined percentages of proficient and advanced third, fourth, and fifth grade ELs and EOs in English language arts, mathematics, and science. From the tables, an overall trend in the achievement gap across all of the subjects between ELs and EOs is confirmed; however, all students have made some progress with the exception of mathematics in fourth grade and fifth grade and science in fifth grade. When comparing ELs to EOs percentage of students proficient and advanced, the gap ranges from 4.8% to 32.8%. In third grade, the gap between ELs and EOs in English language arts has decreased steadily over the past four years; however, there are still fewer ELs than EOs passing the state examination in third grade English language arts and mathematics (Table 1). In fourth grade, the gap had been decreasing in English language arts, but rose to 10.9% in 2016. The gap in mathematics has decreased from 20.7% in 2014 to 5.3% in 2016 (Table 2). Fifth grade has the widest gap of the three

grades with a 19.9% gap in English language arts, a 13.7% gap in mathematics, and a 14.3% gap in science (Table 3).

**Table 1**

*Third Grade Level Assessment Mastery Scores – Local District*

Content	Years	ELs (proficient + advanced)	EOs (proficient + advanced)	Total Gap % (ELs - EOs)
English language arts	2013	15.2%	40.1%	-24.9%
English language arts	2014	8.3%	28.7%	-20.4%
English language arts	2015	29.7%	45.3%	-15.7%
English language arts	2016	41.1%	48.1%	-7%
Mathematics	2013	26.1%	38.7%	-12.6%
Mathematics	2014	20%	37.2%	-7.3%
Mathematics	2015	29.9%	38.9%	-10.0%
Mathematics	2016	31.9%	36.7%	-4.8%

*Note.* Missouri Department of Elementary & Secondary Education (n.d.d). *Missouri comprehensive data system.* Retrieved from <http://mcds.dese.mo.gov/Pages/State-Assessment.aspx>

**Table 2**

*Fourth Grade Level Assessment Mastery Scores – Local District*

Content	Years	ELs (proficient + advanced)	EOs (proficient + advanced)	Total Gap % (ELs - EOs)
English language arts	2013	10.2%	41.4%	-31.2%
English language arts	2014	8.3%	33.3%	-25.0%
English language arts	2015	38.2%	45.9%	-7.7%
English language arts	2016	35.1%	46.0%	-10.9%
Mathematics	2013	23.5%	38.7%	-15.2%
Mathematics	2014	10.0%	30.7%	-20.7%
Mathematics	2015	23.7%	36.5%	-12.8%
Mathematics	2016	29.0%	34.3%	-5.3%

*Note.* Missouri Department of Elementary & Secondary Education (n.d.d). *Missouri comprehensive data system.* Retrieved from <http://mcds.dese.mo.gov/Pages/State-Assessment.aspx>

**Table 3***Fifth Grade Level Assessment Mastery Scores – Local District*

Content	Years	ELs (proficient + advanced)	EOs (proficient + advanced)	Total Gap % (ELs - EOs)
English language arts	2013	9.6%	34.5%	-24.9%
English language arts	2014	8.0%	38.6%	-30.6%
English language arts	2015	21.4%	46.6%	-25.2%
English language arts	2016	28.6%	48.5%	-19.9%
Mathematics	2013	28.8%	39.9%	-11.1%
Mathematics	2014	25.0%	40.7%	-15.7%
Mathematics	2015	11.4%	31.4%	-20.0%
Mathematics	2016	26.6%	40.3%	-13.7%
Science	2013	21.2%	31.9%	-10.7%
Science	2014	7.7%	31.3%	-23.6%
Science	2015	4.5%	37.3%	-32.8%
Science	2016	11.6%	25.9%	-14.3%

*Note.* Missouri Department of Elementary & Secondary Education (n.d.d). *Missouri comprehensive data system*. Retrieved from <http://mcds.dese.mo.gov/Pages/State-Assessment.aspx>

As shown in Table 4, the difference in achievement is evident in the Missouri grade level assessments when comparing the mastery scores of the local district with the state results in the LEP third, fourth, and fifth grade subgroups for English language arts, mathematics, and science. Overall, the achievement scores for all ELs in the state of MO are lower than EOs, but the district scored lower than state results in all three categories (DESE, n.d.d).

**Table 4**

*Third, Fourth, and Fifth Grade Level Assessment Mastery Scores – District vs. State LEP Data 2016*

GLA	Local District (proficient + advanced)	State of MO (proficient + advanced)	Difference (local district – state of MO)
English language arts 3	41.1%	47.2%	-6.1%
Mathematics 3	31.9%	40.2%	-8.3%
English language arts 4	35.1%	47.6%	-12.5%
Mathematics 4	29.0%	37.9%	-8.9%
English language arts 5	28.6%	44.6%	-16%
Mathematics 5	26.6%	32.9%	-6.3%
Science 5	11.6%	22.3%	-10.7%

*Note.* Missouri Department of Elementary & Secondary Education (n.d.d). *Missouri comprehensive data system*. Retrieved from <http://mcds.dese.mo.gov/Pages/State-Assessment.aspx>

### **Evidence of the Problem From Professional Literature**

With the increase of ELs in the United States, much research has been published about implementing research-based instructional practices to increase achievement (Cole, 2014; Delacruz, 2014). The most effective way to ensure academic success for ELs is for teachers to use high-quality instructional practices on a consistent basis (Farbman, 2015). Implementation with fidelity of these instructional practices creates positive outcomes for ELs. Effective education for ELs is also influenced by the quality of instruction and the capacity of educators to continually make the best decisions for students (Brisk, 2012; Farbman, 2015). Teachers decide how to develop students' understanding and how to link that understanding to prior knowledge on a daily basis. Brown and Broemmel (2011) equated inadequate instructional choices in a classroom to “throwing a child who is not proficient in swimming into water without a life preserver, knowing they will either sink

or swim. Even if they manage to swim, we cannot reasonably expect them to enjoy being in the water” (p. 34). A *sink or swim* mentality is not beneficial for ELs and often leads to frustration in the classroom.

Although the problem being investigated in this study is the implementation of instructional practices, the achievement gap between ELs and EOs is an indicator of effective classroom instruction. The achievement gaps between ELs and EOs are well documented nationally in English language arts, mathematics, and science (Valle, Waxman, Diaz, & Padrón, 2013). The Center for Education Statistics publishes yearly reports based on the National Assessment of Educational Progress (NAEP) assessment documenting achievement gaps in reading and mathematics both nationally and by state in grades four and eight. Fourth grade achievement will be discussed in this section since this study involved upper elementary students. The achievement gaps in fourth grade literacy skills on the NAEP between ELs and EOs have been longitudinally documented over the past 10 years (Kena et al., 2014). The gap has remained steady between 35 and 38 points. Nationally, performance of ELs has fluctuated between one and two points whereas EOs’ performance has steadily gained five points over the 10-year period. In 2015, EL students in Missouri scored 197, a gain of eight points and EOs scored 223, a gain of two points. These data shows a slight increase in EL achievement levels, but ELs are still 26 points below EOs on reading NAEP reading assessments in Missouri, which is one point below the national average of ELs.

Although mathematics achievement has increased since NAEP started recording scores in 1990, ELs’ achievement still lags behind EOs. According to the national NAEP

results in fourth grade mathematics, the gap has been consistent with a change of two points over the past 10 years (Kena et al., 2014). In 2003, the average scale score for ELs was 214 while EOs earned an average score of 237. This is relatively consistent with the 25-point gap in 2013 with scores of 219 for ELs and 244 for EOs. Longitudinally, ELs have gained five points and EOs have gained seven points over the last 10 years. In 2005, ELs scored 224 on the mathematics assessment and EOs scored 235, which is an 11-point gap. However, in 2011, ELs scored 217 compared to 241 with EOs, which is a 24-point gap and one point less than the national average.

The purpose of this study was to investigate the implementation of instructional practices by mainstream classroom teachers for third, fourth, and fifth grade ELs in English language arts, mathematics, and science. Although there has been continuous, mandatory PD about instructional practices used with ELs provided for the past seven years, ELs are still achieving below the required state standards. There has also been no attempt to identify what instructional practices teachers are using for ELs in the classroom.

### **Definition of Terms**

*Academic language:* Academic language is the language used in a classroom environment. Students need this language to meaningfully participate within an academic context (Frantz, Bailey, Starr, & Perea, 2014).

*Activating background knowledge:* Activating background knowledge is the process of connecting a student's prior knowledge about a specific subject or concept to the new knowledge being taught (Turkan, Bicknell, & Croft, 2012).

*Cooperative learning:* Cooperative learning is when two or more students work together to complete an objective without direct teacher guidance (Cole, 2014).

*English learners (ELs):* ELs refers to students who are in the process of acquiring English because they have another language as their native or primary language. ELs may be born in or outside of the United States and are identified through a testing process when they first enter a U.S. school. This process varies from state to state (Trevino, Calderon, & Zamora, 2014).

*Instructional practices:* Instructional practices are techniques teachers use to help students understand new information. These techniques should address the needs of learners and in this case, ELs (Sanford, Brown, & Turner, 2012).

*Limited English proficient (LEP):* LEP is the designation that Missouri uses to identify students who are receiving EL services (DESE, n.d.a).

*Scaffolding/Supports:* Scaffolding is the technique used to provide various supports to help students access a specific concept or word and may vary from full to minimal support. These supports may be in the form of background knowledge, native language, visuals, accessing background knowledge, etc. (Athanases & de Oliveira, 2014).

*Sheltered instruction:* Sheltered instruction is the use of instructional supports to assist in the learning of grade-level academic material and skills for ELs (Goldenberg, 2013).

*Tiered vocabulary:* Tiered vocabulary is a system of grouping vocabulary words according to their frequency of usage. Tier I words are everyday words that are not



content specific. Tier II words are mostly used in academic settings across disciplines.

Tier III words are content specific and only used in that setting (Gomez-Zwiep, Straits, & Topps, 2015).

### **Significance of the Study**

This study has the potential to benefit the teachers, ELs, and the local district. Research in instructional practices for ELs could provide valuable information to the local district about the instructional practices being used across the district to support ELs. This study has potential for social change by raising awareness and strengthening instructional practices being used by the teachers in the local district, which could lead to increased achievement for ELs. Raising achievement for ELs will help district administration maintain accreditation, which will benefit the entire community.

### **Research Questions**

In this study, I explored the implementation of instructional practices being used by general education teachers with third, fourth, and fifth grade ELs because it was unknown which instructional practices were used in the mainstream classroom after seven years of PD and declining achievement. The content areas of this study focused on English language arts, mathematics, and science because those areas were measured by the state examination for accountability purposes. I posed two questions to investigate the instructional practices used across the district.

The following research questions will guide this study:

Research Question 1: What instructional practices are implemented by general education teachers for third, fourth, and fifth grade ELs in English language arts, mathematics and science in mainstream classrooms?

Research Question 2: What factors enhance and/or constrain implementation of instructional practices by general education teachers for third, fourth, and fifth grade ELs in English language arts, mathematics and science in mainstream classroom?

### **Conceptual Framework**

The two theories used to frame this study were constructivism and second language acquisition theory. In constructivism, learners generate new understanding by building upon previous knowledge and experiences (Yoders, 2014). According to Yoders (2014), the tenets of constructivism are:

- Learning is characterized by cognitively active learners;
- Learning should happen in context and be structured around related themes or primary concepts;
- New knowledge constructions are built upon prior knowledge;
- New knowledge should be applied and feedback provided;
- Learner self-reflection on the learning process is a key learning activity (p. 12).

The work of Vygotsky and Krashan in second language acquisition theory under constructivism was used to frame this study. Vygotsky's research on sociocultural theory focused on the social process of learning, which is essential to creating a shared context for learning with diverse learners (Valdés, Kibler, & Walqui, 2014). According to Vygotsky's sociocultural theory, social experiences shape the way students think and

learn (Vygotsky, 1978). He believed that meaning was first associated socially and then psychologically. Therefore, cognition occurs in a social situation where a student uses language to negotiate meaning.

Vygotsky's early research also introduced the zone of proximal development which was defined as "the distance between the actual developmental level as determined by independent problem solving and the level of potential development as determined through problem solving under adult guidance, or in collaboration with more capable peers" (Vygotsky, 1978, p. 86). In essence, this is the area outside of what a learner can do autonomously. Therefore, learning is a dialogical process where students are actively learning through participation in cooperative learning (Valdés et al., 2014). This research set the groundwork for others to develop research-based classroom instructional practices that increase achievement such as the use of cooperative learning and differentiated instruction (Norton, 2015).

Krashen (2003) contributed to second language research through connecting first language (L1) and second language (L2). Krashen's research is based on the understanding that literacy in L1 influences literacy in L2. Therefore, students who read fluently in L1 will also read fluently in L2 (Krashen, 2003). Krashen also developed *comprehensible input hypothesis*, which explains that all people have a language acquisition device functioning in their brains (Anthanases & de Oliveira, 2014). When the language acquisition device receives meaningful messages, it must acquire language. However, the affective filter can mentally block language from reaching the language

acquisition device; therefore, lowering the affective filter helps students acquire more language and leads to achievement.

Along with the work of Vygotsky and Krashen, Brunner's work on pedagogical scaffolding influenced and shaped sociocultural theory. Brunner studied how a tutor used the scaffolding process to help children solve a problem (Wood, Bruner, & Ross, 1976). He identified several scaffolding functions including recruitment, reduction in degrees of freedom, direction maintenance, marking critical features, frustration control, and demonstration. Recruitment involves getting students involved in a task by creating interest. The teacher then scaffolds the activity or reduces the degrees of freedom according to the needs of the student, adjusting while he/she progresses through the activity. The teacher guides students through the activity (direction maintenance) and continually reminds them of the objective throughout the activity. The teacher will then mark critical features of what is correct and what the students has produced. Reducing frustration during problem solving is also important as the teacher encourages the student to keep working without exploiting errors made. Lastly, providing a demonstration or modeling throughout a lesson is critical to the scaffolding process. Using these levels of scaffolding, a teacher can guide students to successful outcomes.

Scaffolding is the technique used to provide various supports to help students access a specific concept or word and may vary from full to minimal support (Athanases & de Oliveira, 2014). These supports may be in the form of background knowledge, native language, visuals, and accessing background knowledge. Scaffolding "stimulates a critical and independent orientation to meaning-making within the context of their

disciplines, and assists students to achieve well beyond their current ‘zone of capability’” (Wilson & Devereux, 2014, p. A-91). Scaffolded learning can be divided into two types: designed-in and contingent support. Designed-in support refers to scaffolding that teachers plan throughout the lesson and anticipate prior to teaching a lesson. Contingent support is unplanned and provided in the moment as students need it.

### **Review of the Literature**

This literature review consists of a discussion of sheltered instruction, common instructional practices for ELs, and barriers to implementing effective instructional practices for ELs. The literature review for this study was conducted through the use of Walden’s online database and Google Scholar. The databases searched have been predominantly in the topic of education including Eric, Education Research Complete, and SAGE Premier. The search terms included *culturally responsive teaching, ELL, ESL, EL, language minority, instructional practices, second language acquisition, sheltered instruction, SIOP, limited English proficient, academic language, inquiry based instruction, achievement, and linguistically diverse students.*

### **Sheltered Instruction**

One of the more common systems for instructing ELs is called sheltered instruction. Sheltered instruction is a system of organization, which provides teachers with instructional supports to increase achievement for ELs. Supports and modifications include:

- Building on student experiences and familiar content
- Providing students with necessary background knowledge

- Using graph organizers or organize information and clarify concepts
- Making instruction and learning tasks extremely clear
- Using pictures, demonstrations, and real-life objects
- Providing hands-on, interactive learning activities
- Providing redundant information (gestures, visual cues)
- Giving additional practice and time for discussion of key concepts
- Designating language and content objectives for each lesson
- Using sentence frames and models to help students talk about academic content
- Providing instruction differentiated by students' English language proficiency (Goldenberg, 2013, p. 7).

There are several different instructional programs that were developed using sheltered instruction including content-based learning and Sheltered Instruction Observation Protocol. Content-based instruction is provided by specialists with a focus on language learning while supporting academic vocabulary, background knowledge, and assignments needed to be successful in content classes (Short, 2013). The Sheltered Instruction Observation Protocol is an instructional model that provides structure for lesson planning and delivery. Although there is some research published on this instructional model, the achievement is not statistically significant based on current studies and all of the research has been conducted with secondary ELs.

### **Common Instructional Practices**

There are several instructional practices used with ELs that have helped students understand and access curriculum in the mainstream classroom. Because instructional

practices can have several parts, I have identified four categories of instructional practices most commonly found through a review of the literature including: scaffolding/supports, activating prior background knowledge, cooperative learning, and developing academic language. It is important to note that these instructional practices are beneficial for all learners, but they are also the most common in second language acquisition research.

**Scaffolding/Supports.** I divided this first instructional practice, scaffolding/supports, into five parts because of the amount of research published on this topic. The five parts are using native language support, utilizing multiple modalities, incorporating organizers, conducting individual and small group instruction, and supporting mathematics and science with literacy strategies.

Scaffolding increases the level of comprehensibility of the text for ELs by making the text more accessible or easier to understand and reducing the cognitive load (Athansases & de Oliveira, 2014). There are three instructional conditions that must be considered when using scaffolding. The first, *contingency*, is responsiveness to the learner's needs such as instructional decisions, the amount of help given, and the level of difficulty of assignments. The second condition, *fading*, is gradual release of responsibility where less supports are put in place as students make steady progress. This stage is crucial because the teacher must know the level of the student and anticipate his/her instructional needs appropriately for academic success. Lastly, *transfer of responsibility*, is where students complete tasks/assessments with little to no supports. Scaffolding can be used before, during, and after reading. Scaffolding used before

reading, called *priming*, is a form of activating background knowledge where vocabulary may be pretaught or cultural knowledge may be developed. Scaffolding during reading, called *navigating*, can be used to help guide students through a series of activities, which focus on explicit vocabulary instruction or review questions in the text. Scaffolding used after reading, called *amplifying*, allows the teacher to facilitate a discussion where meaningful connections to the text are made to strengthen understanding. Deep scaffolding through explicit instruction is beneficial for all students, but especially for ELs because appropriate supports help to create meaningful input.

The first way that teachers can help ELs make meaning is to use native language support in literacy, mathematics, and science instruction (Goldenberg, 2013). Native language is commonly referred to as language one (L1) or the home language (Cole, 2014). When teachers use L1 in class, students have an opportunity to use the language in which they are the most familiar to understand the target language, referred to as language two (L2). The L2 in this discussion is English. There are two common ways to use the L1 during instruction. Teachers can deliver academic content in the L1 through bilingual instruction. The teachers would need to be fluent in both languages as instructional is provided in both languages. Teachers could also use the L1 as support, but deliver the content in the L2. Support devices such as a tablet or a dictionary can be used to support the L1.

In literacy, using the L1 as a support has been seen to improve achievement in vocabulary and comprehension (Goldenberg, 2013). Teachers can use cognates to show shared meanings between the two languages (English and Spanish). ELs can access their



L1 and compare it to the L2 to increase understanding (Barrow, 2014). This practice is especially helpful for ELs who have strong literacy skills in their L1, which then carry over to their L2. More literature about vocabulary will be covered in the last section under *building academic language*.

Using an L1 also allows students to negotiate meaning in content areas such as mathematics (Turner, Dominguez, Empson, & Maldonado, 2013). For example, students may have learned about order of operations in mathematics using their L1, but did not understand the English words for order of operations' concepts. Students need to have time to be able to discuss and negotiate what they do not understand. A practice referred to as a *shared communicative space* can be used to negotiate through a specific learning objective. The purpose of this space is to create shared meanings and understandings about mathematical concepts through discussions in L1 and L2. Turner et al. (2013) found that ELs struggle to explain their ideas to others in English, but when students were allowed to use a common native language, they discussed meanings, reconciled confusion, and explained ideas to improve mathematical understanding. The teacher linked these mathematical understandings back to the L1 to increase achievement on state examinations. Tran, Martinez-Cruz, Behseta, Ellis, and Contreras (2015) also found that providing students with bilingual support increased problem-solving performance in ELs. Student participation and engagement increased in mathematics lessons when provided with L1 support. Students were taught through everyday situations that connected to the mathematics lessons with some explanations in the L1. This real life application is

important for all learners, but especially for ELs who are sometimes disconnected because of the language/cultural barrier.

Use of L1 can also be beneficial in science instruction. Teachers can explicitly support students' native language to optimize participation (Stevenson, 2013). This explicit L1 support can occur through classroom collaboration, discussions, or assistive technology. Teachers can also provide previews and reviews of lesson content in the L1. This practice allows students to connect with the lesson before hearing it in the L2. Students can also use the L1 for clarification or to negotiate meaning of various science concepts and objectives. By seamlessly incorporating linguistic resources, such as translation applications on tablets or dictionaries in the classroom, student learning is facilitated and achievement increases because all students have access to link their L1 to the target language. In some online curriculums, websites, and textbooks, students can view instruction in both languages and then develop meaning using whichever language helps them to understand the information. When meaning is clarified, students can demonstrate understanding on assessments.

L1 support can also be used during inquiry-based lessons in multiple content areas (science, mathematics, literacy). Ulanoff, Quioco, and Riedell (2015) studied questioning techniques during inquiry-based lessons to understand how academic language and discourse develop in L1. ELs in third grade worked with ELs in kindergarten. Even though students were not specifically taught questioning techniques, students asked questions and responded appropriately while working on inquiry-based

activities. Students developed their own questioning techniques when given new information, which demonstrated academic language development.

Contrary to the research about L1 support, Cheung and Slavin (2012) conducted a study of outcomes in reading programs for Spanish-dominant ELs from 1970-2012 and found that the language of instruction was second to the quality of instruction. Students who were taught in Spanish or through bilingual education had no difference in reading outcomes than students who were taught in all English.

Another way teachers can provide scaffolding/supports for ELs is through multiple modalities including visuals, technology, videos, animations, and multi-sensory activities. Multiple modalities make content comprehensible for ELs by reducing the language demand and creating a picture of what is being taught (Sanford et al., 2012). While students are reading a story in English language arts classes, teachers can use technology such as an iPad to help students create pictures or find pictures to enhance understanding for all ages. Studies have shown that using tablets with elementary students has increased achievement (Delacruz, 2014). The use of visuals in guided digital reading programs increase reading levels for struggling readers by differentiating lessons based on a student's literacy level.

Visuals like charts and graphs can also be used to provide immediate feedback to students about their answers during a guided reading lesson (Delacruz, 2014). Visuals can help students understand their own progress and create more engagement in their own learning through providing choice and opportunities to manipulate the text. Because ELs often have learned a concept or word in another language, using a visual helps the teacher

to bridge the gap in learning the new word. Visuals are especially helpful in vocabulary development across content areas because the linguistic demands are reduced and students *see* the concept or new word (Lee & Buxton, 2013a). All of these supports would help student achievement by increasing meaning and allowing students equal access to the literacy curriculum.

Multiple modalities can also be used to improve science instruction and increase student achievement. Effective vocabulary instruction includes purposeful, frequent opportunities to practice the new language. Teachers can use interactive word walls to increase understanding through visuals and interactive-multisensory activities (Jackson & Narvaez, 2013). In science, vocabulary acquisition increases through the use of hands-on labs and real-life experiences. Alt, Arizmendi, Beal, Nippold, and Pruitt-Lord (2014) studied the connection between mathematics and language using experimental tasks with reduced language demand in second and third grade students. Students responded to a visual game on the computer using a racing dinosaur to demonstrate number competency. The dinosaur would then respond with a facial expression and a noise to indicate if the answer was correct. If the answer was correct, the race would begin and students were given feedback through animation at the end of each race. The students had four attempts to answer the prompt correctly before receiving visual feedback. Through this program, students demonstrated what they knew or did not know without the language demand interfering with the understanding.

The use of graphic organizers can also increase achievement for ELs. Graphic organizers help students to organize information and aid in clarifying relationships

(Sanford et al., 2012). Scaffolding can be used to support writing development in literacy. O'Hallaron (2014) studied differentiated instruction through the use of genre-specific scaffolds to support argumentative writing development in fifth grade. Using an argument-specific organizer helped develop argumentative writing; ELs consistently used evidence to support their arguments. The use of graphic organizers also increased academic achievement of ELs in science and mathematics.

Teachers can provide support for ELs through one-on-one and small group instruction. ELs have different academic and linguistic needs based on when they first entered a U.S. school and their prior educational background. Differentiation through one-on-one support or in a small group is an effective way to address the variety of needs in a typical class or school. Ross and Begeny (2011) used a fluency intervention with second grade ELs in both one-on-one and small group support. Although students showed fluency growth in both types of interventions, one-on-one was more effective due to individualized attention on specific skills. ELs also derived long-term benefits from individualized phonics and comprehension interventions (Vadasy & Sanders, 2012). These lessons focused on explicit individualized instruction in “code-oriented skills (alphabetic and phonics)” as well as “word recognition skills (decoding and word identification)” and “not to represent spoken words in accurate spellings” (Vadasy & Sanders, 2012, p. 837). EOs benefitted from the spelling intervention, but ELs did not have long-term retention rates with these interventions.

ELs can also be supported through using comprehension strategies in mathematics and science instruction. Problem-solving skills in mathematics are often intertwined with

language and comprehension strategies to mitigate misunderstandings in instruction (Orosco, 2014). Teachers can explicitly incorporate the type of language students may see in word problems in a lesson to increase understanding. For example, in an upcoming algebra lesson, a teacher may pre-teach vocabulary used in that specific lesson. Then, when the lesson is taught, the student does not have to learn the language and the content at the same time. This practice reduces the language demand (Cho, Yang, & Mandracchia, 2015).

In addition to mathematics instruction, ELs also benefit from reading comprehension strategies in science instruction. Specifically, the use of text-based questioning improves academic achievement (Taboada, 2012). ELs who demonstrate text-based questioning skills have higher achievement in science because they interact with the text while thinking about the topic in context. Use of questioning helps ELs to focus on the specific key concepts within the bigger context.

**Activating prior background knowledge.** Activating prior background knowledge assists students in moving from the known knowledge they possess to the new knowledge being acquired (Turkan et al., 2012). This instructional practice is especially important for ELs because they may have different background knowledge and experiences than EOs based on their culture, prior schooling, and language. Building background knowledge ensures that all students have the same information about a topic before beginning a lesson and facilitates comprehension. For example, a teacher may use a text that assumes students already know about cultural norms such as seasons, Native Americans, or gender roles in society. Using lessons to build understanding of these

various concepts will increase understanding and lead to higher achievement for ELs.

Building background knowledge fills in the gaps of knowledge regardless of what is already commonly known. Teachers can also build background knowledge by asking ELs to share experiences from their culture and/or prior classroom experience. Sharing cultural/prior experiences leads to increased motivation and classroom inclusion by incorporating prior knowledge from ELs (Tahtinen-Pacheco, & Merchant, 2014).

Using background knowledge also helps teachers pre-assess knowledge before beginning a lesson (Turkan et al., 2012). Teachers can differentiate the content of the lesson based on students' academic needs. Pre-reading activities such as predictions can also activate prior knowledge and give a purpose for reading (Bui & Fagan, 2013). Predictions lead to an increase in comprehension because students are thinking about what may happen before they read the story. Background knowledge can also be connected to academic language. Because ELs have background knowledge of an academic term in a home language, the teacher needs to bridge the gap to support language acquisition. This gap is bridged through asking the student about the academic term and what he/she knows about the term. Then, based on this pre-assessment, the teacher can adjust the content needed.

**Cooperative learning.** The use of cooperative learning increases achievement for ELs. The students may vary in age and/or language proficiency level and the group may vary in size. The teacher's role in cooperative learning is to facilitate the lesson while the student's role is to participate in the lesson. Cooperative learning has many benefits for ELs including allowing students to work together and increasing motivation and

engagement (Bui & Fagan, 2013). Most students enjoy working together and learning from each other. This instructional practice is as effective as one-on-one instruction and more effective than large group instruction (Cole, 2014).

ELs who participate in cooperative learning also have opportunities for authentic academic discourse in literacy and science contexts. Inquiry-based learning also uses cooperative learning strategies to promote authentic communication about science knowledge and practice through hands-on learning (Tahtinen-Pacheco, & Merchant, 2016). Through collaborative inquiry, students communicate with each other while practicing their listening and speaking skills to solve real-world problems using a scientific process. Then, when students were assessed, they produced the scientific process using the correct language practiced during collaborative inquiry.

Cooperative learning approaches improved literacy outcomes when compared to teacher-centered or individualistic instruction because small groups are used (Cheung & Slavin, 2012; Cole, 2014). In small groups, ELs have more opportunities to participate and contribute with less risk than in a large group environment, which is true for all learners. When ELs work with EOs, they will hear models of pronunciation and language frameworks in a rich linguistic environment. ELs can also construct meaning with peers in a safe, supportive environment through cooperative learning. Students may discuss characters, plot, setting in an environment where they negotiate meaning and arrive to a conclusion (Turkan et al., 2012).

In addition, cooperative learning provides ELs with an opportunity to see some of their home cultures reflective in classroom practices (Bui & Fagan, 2013). In some



countries, completing a task together is the expected norm. ELs with this background would naturally feel more comfortable working in a small group. In some classrooms, these cooperative groups are referred to *communities of learners* who explore and learn together (Johnson, Bolshakova, & Waldron, 2014).

Despite all of the research discussing the benefits of using the instructional practice of cooperative learning in a diverse classroom, this practice might hinder development of reading skills. Liu and Wang (2015) studied the effectiveness of using cooperative reading activities (pair and small group) versus independent reading activities in fourth grade. Overall, they found that cooperative reading activities might interfere with reading development. In this study, ELs developed their reading skills using individual practice to become independent readers. The researchers further concluded that when ELs reach upper elementary stage, they have already moved from regulation to self-regulation and they no longer benefit from reading through socially constructed interaction (Vygotsky, 1978). Instead of cooperative learning, it is recommended that ELs improve reading through sustained independent reading, which may lead to increased comprehension and fluency.

**Developing academic language.** Academic language acquisition plays the most significant role in acquiring language (Chung, 2012). It is a significant predictor of comprehension because students need to understand 98% of the vocabulary in a text before independent comprehension occurs. Vocabulary errors are the most frequent type of error in literacy and often lead to miscommunication for ELs. In addition to errors, there is a disparity in the breadth and depth and knowledge of ELs and EOs, which

widens as students get older. New ELs coming into the school system may know few to no English words whereas EOs may have already learned as many as 6,000 new words by kindergarten. The depth of word knowledge includes literal meaning, connotations, syntactical forms, morphological forms, semantic relations, and collocations. ELs have limited meaning of words and these are less diverse when compared to EOs' depth of AL knowledge. There are two types of academic language including general and discipline-specific (Nagy, Townsend, Lesaux, & Schmitt, 2012). In the general category, providing multiple opportunities for students to practice the new words; providing multiple exposures across disciplines; and using authentic contexts increases acquisition. In the discipline-specific category, using explicit vocabulary instruction, graphic organizers, student collaboration, and videos improves proficiency.

Vocabulary not only affects language development, but also oral language. The gap in patterns of growth of oral language in ELs compared EOs suggests a developmental lag and has implications for instructional practice (Mancilla-Martinez & Lasaux, 2011). ELs need to learn the all types of vocabulary (social and academic) at an accelerated pace in order to catch up to their peers. ELs need to be exposed to explicit lessons where they can learn word parts and function of words during instruction. Using meaningful, age-appropriate language instructional practices to build word knowledge is imperative to the development of academic language. Oral decoding also improves students' memory for recalling the meanings of vocabulary words (Rosenthal & Ehri, 2011). When meanings are explicitly taught with visuals, students could use the meanings of new vocabulary words when retelling the story. They also used more vocabulary

words in their discourse while discussing the story versus students who did not have the oral decoding strategy used synonyms. Therefore, through the oral decoding strategy, students were better able to understand and retain vocabulary words for later use.

Although academic language has always been developed in English language arts, the New Generation Science Standards now require students to use academic language in science to construct answers, demonstrate argument with evidence, and formulate questions about science (August, McCardle, & Shanahan, 2014). If students simply memorize academic language in science, they will most likely be unable to access higher order thinking skills required to succeed in science. One of the instructional models is the 5R Instructional Model, which teaches science vocabulary through repeating, revealing, repositioning, replacing, and reloading (Weinburgh, Silva, Smith, Groulx, & Nettles, 2014). The 5Rs are not in any order, but are used as needed. In repeating, the students utilize systematic repeating of scientific words or concepts, which increases understanding. During revealing, students encounter a new word in which they have no everyday word to explain it and must construct meaning. Repositioning and repeating were also used to increase science achievement. Teachers used repositioning to provide opportunities for students to use the science term in a new situation and repeating was used to practice science terms over again. Lastly, reloading is where students revisit the terms on a daily basis. Students learned academic language in science through the 5R Instructional Model and science achievement increased.

In addition to science, developing academic language in mathematics has been shown to increase conceptual understanding when solving word problems (Orosco,

2014). Student achievement increased with mathematics word problems using Dynamic Strategic Mathematics, which incorporates the academic language of mathematics into instruction. ELs learned basic mathematics vocabulary while practicing with simple word problems. As students learned more language, they were able to solve more complex word problems. Because students already had mastery in number operations and computation in their home language, they were able to use this instructional practice to focus on the academic language of the mathematics problem to improve problem-solving skills. ELs were also able to learn more complex word problems than the control group because of their language levels.

**Barriers to implementing instructional practices.** Even though there are many instructional practices that can help to increase ELs' achievement, there are also several barriers to implementation of these practices in the classroom. One of the barriers is the lack of instructional support concerning ELs from school administration (Elfers & Stritikus, 2014). In a study about how school districts support teachers of ELs, a fragmented system was discovered relevant to instructional practices. The first concern was about high-quality instruction in all classrooms. Since ELs were in general education classrooms, district leaders agreed that support for ELs through professional development, access to interventions for ELs, and opportunities to build teacher capacity were needed. The other theme related to instructional support by creating a common rationale. This rationale included prioritizing instruction for ELs and supporting staff through instructional opportunities. ELs are part of the regular student population and need to be taken into account during all instructional decisions.

The lack of preparation and/or competence teachers have had in effectively instructing ELs is another barrier. In a recent research study, 35 schools that received federal funds reported that 20% of PD time was related to ELs (Boyle, Golden, Le Floch, & O'Day, 2014). Administrators from three of these 11 schools reported that they considered teachers' EL expertise and experience when hiring new teachers. However, because ELs spend the majority of their day in the regular education classroom, all teachers need to have a basic understanding of second language acquisition and instructional practices that help ELs achieve in the content classroom (Bunch, Kiebler, & Pimentel, 2013).

ELs lack the opportunities to practice academic language in the classroom (Chung, 2012). There is a connection between teacher-dominated classroom discourse and low levels of academic language. Because ELs often speak another language at home, their opportunities to use academic language in English occur predominately at school. Oral language skills have strong correlation to reading comprehension and ELs are more successful in a classroom with rich discourse (Shea, Shanahan, Gomez-Zwiep, & Straits, 2012).

In mathematics instruction, a barrier can be found in the lack of reading and linguistic support for ELs in solving word problems (Moschkovich, 2013). ELs perform higher on assessments when the language demand is reduced. Mathematics curriculum materials typically show how to teach the process of solving a word problem with little attention to teaching the language used to understand and answer a word problem. This has caused skewed results in mathematics data because the assessments measured

language in addition to mathematical knowledge. Although mathematics assessments might show ELs mathematics proficiency, heavy language demand often masks students' true mathematical knowledge (Alt et al., 2014). Teachers need to be aware that these assessments may not provide an accurate picture of an ELs' mathematical competencies. Teachers need to teach the language of mathematics so that ELs understand the meaning of the words and how to write the answer in their second language to demonstrate their mathematical knowledge. Some suggestions for how to teach the language include visual examples, diagrams, and use of L1.

A consistent barrier mentioned in the literature to implementing a new instructional practice is lack of support that affects sustainability and fidelity of the PD (Teemant, 2013). Teachers need ongoing, job-embedded PD to support implementation of new instructional practices (Johnson et al., 2014). PD may be provided through meetings, coaching sessions, observations, etc. to help teachers use the new practices correctly. Support during implementation provides the opportunity for teachers to receive constructive feedback to hone the new skill (Cheung & Slavin, 2012). This feedback should not be punitive or connected to evaluation and should be supportive in nature.

Teachers' attitudes or perceptions of the importance of the new practices and/or students impede progress of a new instructional practice (Hamann & Reeves, 2013; Trevino Calderon & Zamora, 2014). Frustration with a new instructional practice can cause the teacher to put less importance on its implementation or abandon it altogether. Johnson et al. (2014) found that fidelity of implementation increases when teachers believe in the strengths of ELs instead of focusing on the deficits. In addition to fidelity,

student achievement rose from 6% to 48% growth in the number of students who scored proficient on the state science test. In fact, ELs surpassed the growth for EOs and all other control groups in the district.

### **Implications**

The district personnel are responsible for educating more than 600 ELs per year and more students are enrolled in the program each year (DESE, n.d.b). The decline in ELs' achievement affects all stakeholders. Because the district has not met the required percentage of student achievement for the past seven years, a thorough look at the implementation of instructional practices in third, fourth, and fifth grade was needed to make changes as the district moves forward to guarantee all students access to the curriculum to increase achievement. Based on the findings from the research, a potential project of a district-wide three-day PD plan was developed and presented to the local district. This plan focuses on the needs of the district and includes all the materials needed for three days of PD.

### **Summary**

All students should receive the appropriate instruction to access the required curriculum and demonstrate achievement as they progress through the public school system. The purpose of this qualitative study was to investigate the implementation of instructional practices being used in the district and the factors that enhance or constrain implementation of those practices. In section two, I will discuss the methodology including the research design and approach, participants, data collection, and data

analysis procedures. In section three, I will discuss the project. In section four, I will discuss the reflections and conclusions of the final study.



## Section 2: The Methodology

### **Research Design and Approach**

The purpose of this study was to examine the implementation of instructional practices for ELs in third, fourth, and fifth grade general education classes. The implementation of instructional practice was unknown in this district despite required PD efforts focusing on ELs for the past seven years. To investigate the implementation of these practices, two research questions were posed:

Research Question 1: What instructional practices are implemented by general education teachers for third, fourth, and fifth grade ELs in English language arts, mathematics and science in mainstream classrooms?

Research Question 2: What factors enhance and/or constrain implementation of instructional practices by general education teachers for third, fourth, and fifth grade ELs in English language arts, mathematics and science in the mainstream classroom?

These research questions logically lead to a qualitative design because participants provided responses to interview questions regarding the implementation of instructional practices they employ. Understanding more about which instructional practices are used, how they are chosen, and why they are used could not be developed through the use of quantitative methods. According to Bogdan and Biklen (2007), qualitative research is naturalistic where the researcher spends time collecting data and building understanding by being on location, in contrast to a quantitative approach where data are most often collected offsite. There were two separate criteria for participants in interviews and observations. In this particular study, all data were collected within the

district buildings. Qualitative research also requires descriptive data in words or pictures whereas quantitative research utilizes data in numbers. Data were collected through open-ended interviews where participants described their experiences, thoughts, and ideas. I also observed participants to gain a deeper understanding of how the instructional practice was taught. Using a qualitative design allows researchers to focus on process rather than product. In this case, I was interested in understanding what may possibly enhance or constrain implementation of instructional practices for ELs. Qualitative research is also an inductive process in which the understanding is built from the bottom up instead of top down in quantitative research. This process can also be referred to as a funnel approach. A funnel approach begins more generally and becomes more focused through the various data collection methods (Bogdan & Biklen, 2007). After I conducted an interview with each teacher, I then observed a lesson to understand how the identified instructional practices were taught.

In this section, I provide an overview of the research design and approach to understanding the implementation of instructional practices for third, fourth, and fifth grade ELs in a suburban, Midwestern district. Then, I discuss the participants including access to participants and protection of human subjects. Following that, I discuss data collection procedures for the interviews and observations and my role in the study. Then, I discuss how the data will be analyzed using typological analysis. Finally, I discuss the data analysis results including the project deliverable.

## **Qualitative Research Design**

Although all qualitative research is centered on discovering and understanding the perspectives of those being studied, there are six different types of qualitative design: phenomenology, ethnography, grounded theory, narrative analysis, case study, and critical research (Merriam, 2009). Phenomenologists study the human lived experience and are interested in understanding the fundamental basic structure of an experience (Merriam, 2009). Ethnography is a process and product where researchers study the beliefs, values and attitudes of a group or culture of people (Merriam, 2009). In grounded theory research, a theory emerges from the data (Lodico, Spaulding, & Voegtler, 2010). Narrative analysis is used when a researcher wants to tell a person's story in a narrative form (Merriam, 2009). Case study research is used when a researcher would like to investigate a bounded system (Merriam, 2009). Researchers use critical research to critique and challenge a context through the use of power dynamics to change society (Merriam, 2009).

A case study was the type of qualitative research design chosen for this study. According to Creswell (2012), a case study is “an in-depth exploration of a bounded system based on extensive data collection” (p. 465). The bounded system for this particular case study was third, fourth, and fifth grade general education teachers in six elementary schools in one district. Specifically, this study was a multisite case study because I investigated the implementation of instructional practices in six different schools (Merriam, 2009). Use of a multisite case study enabled me to create a comprehensive review of the instructional practices used across the district in three

different grades. Because multisite case studies can be difficult to manage, I attempted to interview and observe teachers at one school before moving on to the next school.

### **Justification of the Choice of Research Design**

A case study was the most relevant choice for this study because it allowed for the study of a phenomenon within a specific context. I was most interested in understanding the implementation of instructional practices from a group of upper elementary teachers within a district. I also considered the other six qualitative research approaches when planning my study before selecting a case study. A phenomenological study would not be appropriate for this study, because they are used to investigate the lived experiences of participants from the perspective of the individual or group. I was not trying to understand the lived experiences of teachers, but the implementation of instructional practices. An ethnographic study would not be appropriate for this study because I was not investigating a specific culture (Lodico et al., 2010). Grounded theory would not be appropriate for this study because I was not developing a theory based on my data and it requires prolonged engagement in the field. Narrative analysis would also not be a suitable approach because I was not interested in telling people's stories in narrative form. Critical research would also not be appropriate because I was not criticizing a theory or challenging beliefs. Therefore, a qualitative multisite case study was the most appropriate approach.

### **Participants**

The population for this study included third, fourth, and fifth grade general education teachers in a suburban, public school system in a Midwestern district,

containing six elementary schools. Third, fourth, and fifth grades were chosen for this particular study because research has shown that ELs at the elementary level need to be in school at least three to five years to close the gap in achievement with their peers (Farbman, 2015). The majority of ELs in the local district enroll in kindergarten, so children who had enrolled in Kindergarten would meet the requirement to close the achievement gap as mentioned by Farbman (2015), since they would have been in school for at least three years. Also, state testing begins in third grade, so assessment data are readily available for the three grades being investigated.

The participants were based at the six elementary schools in the district. All participants had experience with teaching ELs within the past three years. To qualify for an interview, participants must have taught ELs in the past three years. To qualify for an observation, participants had to have ELs in his/her classroom during the time of data collection. One participant qualified for an interview, but not an observation due to the fact that she had no ELs in her classroom during the interview time. All teachers in the six schools are highly qualified as required by the state of Missouri and four were certified to teach EL based on interview data. The teaching experience of the participants ranged from 2 to 25 years. Out of the population of 60 teachers across the district, the majority of teachers had an EL within the last three years, but the number of teachers who qualified for the interview varied greatly from school to school. In some schools, all of the ELs were clustered with one or two teachers per grade level; however, in other schools, ELs were dispersed among all teachers in the grade level. The sampling approach for this study was purposeful sampling since I intentionally selected

participants to participate in my study based on the criteria for interviews and observations (Creswell, 2012).

### **Criteria for Selecting Participants**

There were two separate criteria for selecting participants in this study. For the interview, the third, fourth, and fifth grade teachers must have had ELs in their classroom within the past three years. For the observation, the third, fourth, and fifth grade teachers must have had ELs in their classroom during the time of data collection. At the onset of the study, the exact number of participants was unknown, but at the minimum there was at least one teacher per grade, per school who would fit the criteria because there are ELs at every grade level in every school.

### **Justification for the Number of Participants**

In qualitative research, the number used in a study varies with the depth of inquiry (Creswell, 2012). If the sample is too small, too few participants provide insufficient data to address the problem, yet if the sample is too large, the depth of inquiry may not be sufficient. In this case, I wanted to include participants from grades three, four, and five from each of the six schools so that I could provide a complete in-depth description of instructional practices being implemented in the district with ELs. The inclusion of these grades will ensure sufficient data to address the problem. Prior to data collection, the minimum number of participants desired was 18, which hopefully included at least one teacher per grade, per school. There were 23 teachers interviewed and 22 teachers observed, based on the criteria. Although the goal for this study was to have equal participation across all schools and grades, I was unable to interview a teacher in fourth

grade at school A and a fifth grade teacher at school B. All other schools and grades were represented by at least one teacher. The total number of teachers interviewed was as follows: third grade – 9, fourth grade – 9, fifth grade – 5. It was difficult to interview and observe fifth grade teachers because of the timing of the data collection. Since it was the end of the year, most classes had finished early and were on field trips or participating in various ceremonies.

### **Access to Participants**

To gain access to the participants, a letter of cooperation to conduct research within the district was submitted with my Institutional Review Board (IRB) application. After IRB approval was granted (04-11-16-0341693), I emailed each administrator requesting permission to conduct research in his/her school. Even though I already had permission from the district, it was important to ask the local administrator since I will be conducting research in his/her building. I used the same letter for the site administrators that I used for the district administrator except for the personal information of each site. All six administrators gave me permission to conduct research in his/her school. After permission was granted for each building, an email was sent to each third, fourth, and fifth grade teacher in the district requesting participation. Names and email addresses across the district are public knowledge and listed on the district webpage. This email also included the same information about the study that was sent to administrators along with a consent form.

### **Establishing Researcher-Participant Working Relationship**

To establish a researcher-participant working relationship, I originally planned a meeting with third, fourth, and fifth grade teachers after their monthly faculty meeting to explain the purpose of the study, the consent form, and answer any questions. However, because of the timing of the school year, attending staff meetings before school finished was not possible. After the initial email to all teachers, I personalized each email and explained the important role that the participant plays in this study. To build trust I reminded the participant that I was a peer and in no way connected to the evaluation system of the district or state. I also explained that I was bound by confidentiality and if violated, my research would be compromised. I also explained that all identifying information would be removed from the data before presentation to stakeholders or publication. I also told participants that the research for this study would only be used for this study and no other purpose. Participants were informed that data would be secured and destroyed after five years. I explained their right to withdraw from the study at any time. In some cases, teachers called me to ask questions and arrange a date for the interview and observation. Other teachers sent an email indicating their interest in the study. Participants signed the consent form when I came to their classroom for our interview.

### **Methods for Ethical Protection of Participants**

Protection from harm applies to both physical and emotional harm (Lodico et al., 2010). Although there is no treatment applied to participants, it is important to note that the study may cause slight emotional discomfort due to a high stakes testing environment



in education. In the age of accountability, explaining inadequate achievement of any group of students may cause distress for a teacher since teacher evaluation is tied to achievement in this district. I reminded teachers that the district administration did not mandate this research and that I have no evaluative connection to the district. Teachers were also reminded that their participation is voluntary and not connected with the school district. Participants were informed that they could withdraw at any time without explanation.

Confidentiality was of utmost importance during this project study. Participants' confidentiality was strictly protected with no identifying information on the data. To further protect confidentiality harm, participants were identified using an alphanumeric system relating to the school, participant number, grade level taught, and data collection type. For example, A13I was a participant from *A* school, first participant, grade three, and interview as the data type. This system of confidentiality was explained to participants to further alleviate concerns about privacy. I was the only one with access to the data. All files were protected with a passcode only known by myself. All hard copies of data are protected in a locked cabinet in my personal home office. All data will be stored for five years in a locked cabinet and then securely destroyed.

### **Data Collection**

In qualitative data collection, the researcher uses general, broad questions in order to allow participants to share their views unrestrained and unbiased (Creswell, 2012). Collecting several forms of data from multiple perspectives allows the researcher to systematically learn more about the central phenomenon. In this case, I collected data

using interviews and observations to understand the implementation of instructional practices for ELs.

### **Interviews**

I conducted open-ended, one-on-one interviews with third, fourth, and fifth grade general education teachers to identify the instructional practices used for ELs. Open-ended questions allowed the teachers to express their experiences without any constraints on the way a response is created (Creswell, 2012). An interview was the appropriate choice for data collection at this phase because I wanted to gain an understanding of the implemented instructional practices being used in the classroom.

I used an interview protocol based on instructional practices from the literature review and the professional development provided to the district (Appendix B). The interview began with explaining the purpose of the study and the confidentiality procedures. I also asked the participant for his/her verbal permission to record the interview on a digital recorder. In an attempt to get to know the participant and gain trust, I asked a few questions about him/her and a general question about choosing instructional practices for ELs.

Each participant was interviewed one time for approximately one hour. As determined by the participant, most interviews took place in the participant's classroom after the workday. One interview took place in my classroom, which was the participant's choice. To ensure privacy of the participant and to safeguard against interruptions, a DO NOT DISTURB sign was placed on the door. The interview was recorded using a digital recorder. When the interview was complete, the file was immediately uploaded to my

personal computer and encrypted with a password. I am the only one who knows the password of the file.

### **Observations**

The observations occurred predominately before the interviews and usually on the same day, depending on schedules. The observations allowed me to gain more information about how the instructional practices are taught. The teacher chose the date, class, and time in which I observed him/her. Each participant was observed once for an average of 30-45 minutes. During the observation, I looked for information about how the instructional practices are taught using an observation protocol.

The observation protocol was created by me, but I modeled it after a walk through template used by the district (Appendix C). This template is used by district administration on a monthly basis to identify implementation of various building initiatives, such as, behavior supports, systems thinking, instructional practices, or classroom management strategies. This form has not been utilized to identify instructional practices specifically for ELs. As indicated before, all staff members have participated in district-wide, comprehensive, PD focused on research-based instructional practices for ELs used on the form. The form is divided into the four areas of instructional practices as identified by components in the literature review and developed in the district professional development sessions: scaffolding and/or supports, building prior background knowledge, cooperative learning, and academic language. Indicators are included on the form to help with identification of the instructional practice in class. For example, under academic language, I may see a teacher developing academic

language using word maps, student-friendly definitions, chunking, synonyms, antonyms, or word parts. These indicators aided in identifying instructional practices through various individualized forms. I used the form to record which practice(s) is/are being used and how they are used.

### **Procedures for Gaining Access to Participants**

As stated before, I used the public school email system to gain access to participants after IRB approval was granted. I first emailed the administrators in each building requesting permission to conduct research in his/her school. Even though I already had verbal permission from the district, it was important to ask the local administrator since I would be conducting research in his/her building. I used the same letter for the site administrators that I used for the district. After receiving permission from each building administrator, an email was sent to each third, fourth, and fifth grade teacher in the district requesting participation. This email also included the same information about the study that was sent to administrators along with a consent form.

### **Role of the Researcher**

During the time of data collection, I was employed in this district as an EL teacher and worked at both of the middle schools and high school for 11 years. Although I was viewed as a colleague, I had not worked directly with any of the participants in this study, but some may have heard my name through district communication. Because I worked in the district and was considered a subject matter expert in EL, some bias may be present. There is only one EL teacher in each building and he/she is considered the subject expert in second language acquisition, which also applied to my position. Teachers may have

felt some discomfort answering questions about their own instructional practices. During the interview, I assured participants that I highly value their opinions and that I was objectively looking for instructional practices, not judging their competency of second language acquisition.

My experiences and expertise may have presented a bias in this study. Following protocols (interview and observation) reduced bias and helped me to objectively study the participants (Bogdan & Biklen, 2007). Throughout the study, I kept a journal of emerging understandings and reflections to help limit my biases about ELs and how they learn. Using a journal helped me to evaluate my own thoughts about subjectivity and the data.

### **Data Analysis**

To analyze the instructional practices that teachers are using in the general education classroom with ELs, I used typological analysis as this best fit the research design for this study (Hatch, 2002). The purpose of this study was to identify the instructional practices and the factors that enhance or constrain implementation. I followed the steps in typological analysis as defined by Hatch (2002). The first step in the analysis procedure was to identify the typologies to be analyzed, based on the literature review and professional development provided in the district. The typologies used to code the data were: scaffolds and supports, background knowledge, cooperative learning, and academic language. I analyzed the interviews and the observations separately and then compared them to identify any patterns between the two data sources.

To answer the first research question, I transcribed the interview data from the audio file to a password protected Word document. During the initial coding, I carefully

read the transcripts and highlighted each typology in a different color (Appendix D). After the preliminary reading, I read the transcripts a second time to make sure I had highlighted the typologies correctly and included all relevant information. Then, I went through each highlighted section to identify themes through adding comments. I transferred the themes to a summary sheet and added percentages of how often the theme occurred based on the number of times the question was answered in the interview (Appendix E). I created an excel sheet with the themes to identify which themes were more prevalent in each typology. Then, I carefully transferred the highlighted sections into a Word document summary sheet and organized them by typology, participant, and themes (Appendix F). After coding and identifying themes throughout the interview, I tallied all instructional practices observed and transferred any notes from the observation protocol to a summary sheet (Appendix G). I triangulated the data to compare what was observed to what was mentioned in the interviews to identify additional evidence to support the themes.

To answer the second research question, I listed the barriers identified by the teachers and combined them into a single file. I followed the same coding procedure as with the first research question. After coding all of the data, I identified themes and again transferred the themes and supporting evidence to a Word document. Three themes emerged from the similarities in the patterns and the connections in the relationships from the data including: instructional scaffolding, language scaffolding, and content area scaffolding (Table 5). Instructional scaffolding is the scaffolding that teachers use to help guide and support instruction. For this study, that included: visuals, small groups, hands-

on activities, graphic organizers, and cooperative learning. Language scaffolding is the type of language teachers use during instruction or to support instruction. This includes academic language and native language. The last theme is content area scaffolding and this includes the background knowledge needed for teachers to be able to help support ELs in content areas such as science and mathematics. After all of these steps were completed, I selected evidence from the data to support the themes. Additionally, I kept an audit trail to illustrate my methods of data collection and analysis (Appendix H).

Table 5

*Strategies Discussed (interview), Strategies Observed (observation), Percentage of Teachers Who Indicated Barriers Needed to be Addressed in PD, and Barriers Named (in interviews)*

Strategy	Discussed usage	Observed	Indicated barrier	Barriers
<b>Instructional Scaffolding</b>				
Visuals	91%	86%	50%	None
Small groups	100%	41%	18%	Class sizes and time; supporting all students including ELs
Hands-on	96%	Not part of protocol		None
Multiple modalities	100%	86%		None
Graphic organizers	61%	18%	27%	Difficult organizers

*(Table continues)*

Strategy	Discussed usage	Observed	Indicated barrier	Barriers
Cooperative learning	96%	68%	83%	Difficulty with students working together; ELs unwilling or unable to contribute to group; accountability for all students
<b>Language scaffolding</b>				
Native language	83%	0%	100%	Language barrier
Academic language	91%	32%	88%	Teacher requested training; time; too much vocabulary to teach
<b>Content area scaffolding</b>				
Content literacy strategies	65%	36%	88%	Difficulty of learning language and content together
Background Knowledge	55%	23%	75%	Lack of student background knowledge; Lack due to language and culture

### **Theme 1: Instructional Scaffolding**

Instructional scaffolding refers to any type of support that teachers use while trying to explain a concept or idea and “typically targets the gap between current performance and levels learners may reach without assistance” (Athanases & de Oliveira, 2014, p. 265). Instructional scaffolding occurs daily throughout all lessons and can vary from full support to minimal support. Teachers gradually release support (scaffolds) as students learn language. To protect the teacher’s identity, a code was



assigned to each teacher and will be used throughout the data analysis. Teacher C-4-2 explained how she scaffolds lessons for ELs to increase success, “At first, I would read the questions together and then I would scaffold more how I frame the question. It is more like find the word or fill in the blank. Then, I moved to more constructed response. It was more strategy-based instead of me guiding the student. They have gotten better with learning how to rephrase a question, but I really had to scaffold how they learn to answer these questions.” Throughout the data, teachers explained how they supported ELs through the use of following subcategories: visuals, small groups, hands-on activities, multiple modalities, graphic organizers, and cooperative learning. All of these strategies were mentioned by more than half of the participants. The subcategories naturally overlap during a lesson. For example, a teacher may use visuals in working with a small group or some teachers might consider graphic organizers a form of a visual for students. When these overlaps occurred, I explained how the data chosen supported the theme.

**Visuals.** Although the subcategory of visuals was listed as an indicator of instructional practice within the multiple modalities category on the observation protocol, visuals were mentioned in nearly every question from a majority of teachers during the interviews. Therefore, I created a separate subcategory for visuals in order to explain it in more detail. For the purpose of organization, visuals in the data referred to anything that teachers used to provide visual support including: videos, charts, pictures, webs, and mind mapping. The majority of teachers said they used visuals and a majority of teachers were observed using visuals. In the classrooms where visuals were being used, all of the

teachers used projectors and an interactive white board to show pictures, examples, and videos. Teachers expressed that they used visuals frequently and in most subjects. Several teachers explained they used visuals as much as possible. Teacher B-4-1 stated, “I try to use pictures as much as I can if there is something that can be illustrated.” Other teachers (F-3-2, E-5-1, and F-4-2) mentioned their frequent usage of visuals: “I use a lot of visuals. I think that is very important. With everything, there is always some type of visual. I try to use as many pictures as possible so they can make those associations. We do a lot of things visually.” Through the interviews, the teachers did not express any barriers with using visuals. All of the conversations were positive about using visuals and teachers acknowledged that visuals helped support students and were easy to use.

Although teachers mentioned using visuals in all areas, vocabulary was most frequently mentioned when discussing visuals. Teacher B-3-1 mentioned her combined approach when teaching vocabulary, “When I do vocabulary, it is with English and Spanish and I have visuals. I make sure the whole class does a web with vocabulary words with examples, pictures, visuals, that whole thing.” Teacher B-4-1 explained how she starts with pictures and then moves to sentences, “Just connecting the vocabulary with a picture. They can add sentences as they get a better understanding.” When teaching science vocabulary, teacher A-3-2 stated, “In science, I try to draw through pictures as much as I can to help them make the connection. So, when we are talking about continents, we can draw it and see it. Academic language is so hard so I try to do as much drawing and modeling and using it correctly.”

Teacher B-4-2 described her visual process when teaching mathematics, “All of our mathematics books are graph paper because their models can be more effective using the graph. We make a lot of bar models, which is a visual reference for them. Lots and lots of visuals. And showing that there are lots of different visuals and they all look differently and we don’t care which one you use as long as it is effective every time.”

Teacher B-3-1 explained how he uses visualization in mathematics and science class to help support students, “In math and science, I ask my kids to close their eyes a lot. I ask them to visualize, especially with word problems.” Teacher C-4-1 explained that she uses a word wall in mathematics, “We have a math word wall. We have it up. It is a visual, it is there.” In addition to mathematics, the teacher also mentioned science has visuals, “A lot of science has pictures and is picture-based so student can see everything. It is very visual-based learning.”

Modeling was another visual scaffolding technique that teachers used to help students understand exactly how to approach an activity. Teachers explained how they used modeling in mathematics, reading, and writing. Teacher B-4-2 mentioned that she models everything, “One of my big things is we model everything. I want you to understand the concept, not just the algorithm.” Teacher E-4-1 explained how she used scaffolding as a support for students, “We do a lot together – I’ll do, we do, you do. The first time I model. Then, we do some together. Finally, they try it on their own.” Additionally, teacher C-4-1 explained her approach to support struggling ELs, “I’m going to model this for you and you are going to try to do what I am doing with this model, but at a lower level, kind of idea.” This scaffolding of support gradually releases

responsibility from the teacher to the student. Teachers extensively talked about modeling in writing lessons through the use of sentence frames, modeling paragraphs, and writing together as a class.

**Small groups.** Because small groups are a form of cooperative learning, I will focus on the data where teacher specifically mentioned using small groups as a way to support instruction for ELs. During the interviews, all teachers mentioned they used small groups in their classrooms, but less than half of the classrooms observed were using this type of instructional practice. Small groups are used for many purposes, according to the data collected during the interviews, including re-teaching, peer support, and usage of flexible grouping. In more than half of the classrooms observed, teachers could be seen supporting students by walking around the classroom and offering assistance as needed during small group instruction. Overall, it seems that the teachers interviewed teach a lesson with the whole class and then use small groups to differentiate instruction and support struggling learners. Teachers explained that reading has been taught in small groups at the elementary level for a long time in this district. Teacher D-4-2 stated, “I have throughout the year not just a homogeneous model, but also mixed ability groups in reading. Especially when you want that modeling feature or you want the strong to support the weaker to set that example or build understanding between them. It has so many purposes. Small group is important.”

Teacher A-5-1 discussed using small group to reteach a concept, “Usually re-teaching is a big one. So, when they get to me for mathematics, then we kind of reteach and go over it. I usually have a lower/high, so you can go back and reteach.” Teacher E-

3-2 discussed how she teaches a mini-lesson and then pulls her struggling ELs right after the lesson to support them, “I will do a 15 or 20 minute mini lesson and I know that might not 100% reach my ELLs, but those low ones will be in the first group that I pull right away. I will pull them in right after and go deeper into it with them.” For those students who did not understand the whole class lesson, small groups offer the opportunity for teachers to explain it further or for students to ask questions as teacher C-4-2 explained, “It is very helpful for the ones that are not catching it in the big lesson because it is too overwhelming or they didn’t catch something or if they are too intimidated to ask the question. It is easier to catch the misconceptions when they are with you.”

One conflict that came up within analyzing the data is the way to structure groups in cooperative learning. The teachers described two different opinions when matching learning partners or groups. On one hand, teachers stated that pairing ELs with other ELs provides support from the same culture and language. Teacher A-3-1 explained how she supported a newcomer using cooperative learning, “I think it is really important. She needed that support and she needed it from someone from her cultural language.” Pairing ELs together also creates a safe place where they can ask questions as teacher B-3-1 illustrated, “They had to work in small groups to decide on the format of the podcast, ideas, and questions to ask. This gave ELs a safe space to ask questions or share ideas because everyone was participating.” Teacher F-3-2 mentioned the benefit of pairing an EL with an English only speaking student (EO) to help increase understanding after a whole group lesson. She stated, “Sometimes when I have had a student who is not fluent

with English, I pair them up with another Spanish speaking student to help them. They will be able to talk through what it is.”

On the other hand, teachers stated that ELs should be paired with EOs in order to overcome any misconceptions, build classroom community, and to hear native pronunciation. Teacher A-3-2 discussed how she creates groups, but usually does not put ELs together, “So, if I do groups, I very rarely have an EL and a non-EL together because if there are any misconceptions or language misconceptions somewhere, then the non-EL will hear it from the EL. Unless it’s an EL that is near proficient and then I will pair them with another EL.” Teacher C-4-1 expressed a positive opinion about mixing ELs and EOs in the same group, “My kids that are native English speakers, they are like, home language, this is what I speak, but they get so excited when they have a Spanish speaker in their group because they are like, oh, I get to learn this work in Spanish. So, I think this really allows my ELs to kind of shine and they feel pride.” Teacher A-3-1 discussed the importance of sociability in addition to academics, “I think just building the rapport with each other and learning each other’s cultures. I think you know, so there is a social piece to it. It is not just about the academic piece. That social piece building respect for each other’s cultures.” Teacher B-3-1 also explained how using cooperative learning provides strong social models for ELs, “This is vital because ELs can learn and process with others. It also gives them a good social model for discussion and social structures that are used.”

One barrier that teachers discussed in using small groups is that they are not feasible because of class sizes and time. Teacher C-3-1 explained her struggle with trying

to meet the need of a larger class size in a short amount of time, “I have a class of 25. Even with my groups, I have five different groups with five or six students per group – that is a lot of children in that 13 minutes that I am allotted to get a lesson in.” Teacher D-4-1 simply stated, “I think just time like everything else. Just time is really the biggest barrier.”

Teacher B-4-1 discussed her struggle to support a newcomer when she has small groups too, “But I think that was a barrier for me. How do I make sure everyone is being supported because I can’t let the needs of the group fall by the wayside because I am trying to support this person who needs more intensive support than everybody else? So, it is almost like I had to reconcile that for myself as a teacher, but also find a way to make sure they still felt supported.” When trying to provide support for all students, teacher E-5-1 stated, “I would love to be able to do that more with time, it is hard and very difficult. I think with my Spanish speaking students only that has been a little difficult to give him the attention he needs while trying to support the other students.”

**Hands-on.** All but one teacher discussed using hands-on activities in their lessons to help support ELs. Although this instructional strategy was not included as an indicator on the observation protocol, I have included it as part of the first theme because it was so frequently mentioned in the interviews. During one of my observations, I noted that a teacher used physical movement in her lesson to act out vocabulary words. In the interview data, hands-on refers to students using their hands to create or manipulate something. It is also important to note that I did not specifically ask about barriers to using hands-on activities and the teachers did not mention any.

Several teachers commented about using manipulatives in mathematics to help students stay engaged and to “see” answers to problems. Teacher A-3-1 commented, “...actually working the manipulatives so being able to just handle things and work with thing with their hands makes a difference.” Teacher D-5-1 discussed her use of manipulatives while teaching more difficult fraction concepts, “I try to pull in lots of hands-on experiences, movement for them. We do some manipulatives with decimals at the beginning of the year. We use base 10 blocks when we get into fractions when the problems get so long and complicated.” Teachers commented that they used base 10 blocks and fraction strips frequently to help students understand mathematical concepts. Teachers also used body movements as a way to increase understanding and to keep students engaged in a mathematics lesson. In order to help students understand various geometry terms, teacher A-3-2 discussed using body movements, “For every definition, ray, and segment, we had a body movement to go with it to try to incorporate movement as much as I can.” Teacher A-3-2 explained her preference for using movements for mathematics and science, “It just lends itself easier to math and science when I can do movement with a bunch of different things than it does with reading.”

Drama was another hands-on technique that teachers said they used frequently. Teacher A-5-1 mentioned she uses plays as a way to build classroom community and to help students feel comfortable speaking in front of a class, “We do plays as part of our unit. When they performed, I was so amazed. It really allowed their personalities to shine. I feel like they were supporting each other and they were comfortable.” This is important because one of the problems that teachers mentioned with cooperative learning is that



students are too shy to speak in a group (to be discussed later). Using drama allows students to practice their speech and become more confident.

**Multiple modalities.** Multiple modalities means using several different ways to teach the same content or lesson (Sanford et al., 2012). During the interviews, I purposefully tried not to lead teachers into specific modalities, although some teachers in this district associated multiple modalities with the four modalities of language acquisition, which include reading, writing, listening, and speaking. Several of the already mentioned categories could also be incorporated together in multiple modalities. Visuals were included under the multiple modalities category on the observation protocol and as mentioned before, visuals were observed in a majority of classrooms. In addition, teachers used videos, technology, physical movement, and music during lessons. During the interviews, no barriers were mentioned in reference to multiple modalities.

In the interview data, teachers explicitly talked about using several different scaffolding techniques to teach the same concept in order to keep students engaged or to help all students to understand the lesson. As teacher C-3-1 explained, not all students learn in the same way, “I may be teaching drawing conclusions, but I may teach it is a different way for this particular student. So, it depends on the group. But definitely, consistently saying it in a different way. If this doesn’t work, you have to try something else.” Teacher B-4-1 simply stated her approach to meeting the needs of her students, “For me, I really just do whatever they (students) need me to do. I do the same lesson in one day four different ways because each class is going to need it a little bit differently.” Teacher D-4-2 also explained that using multiple modalities is best practice for students,

“It is just best practice for all kids whether you are EL or not. So, trying to deliver things through all four modalities (reading, writing, listening, and speaking) gives us the best change of getting it to stick.”

Using multiple modalities helps teachers to support all of the learners in their classes. Teacher C-4-2 explained her use of different techniques and strategies, “I think it is useful if they can see it in a different way or use a different strategy. Some of them are more visual, some like more hands-on stuff...whatever kind of learning they are.”

Teacher F-5-1 discussed the importance of using multiple modalities in her classroom, “I think that is obviously really important. Like today, first I had already touched on the lesson a bit, but we watched a video so they could see it first, then, I talked about it and then we wrote it. Then, we went outside and actually found it and did it with our own hands. I just think it will last more. We will remember it better if you can use your body, words, pictures, and sounds to explore all of those avenues.”

**Graphic organizers.** In the data, graphic organizers are often mentioned along with visuals. To help reduce repetition, I used this subcategory to explain how teachers are using graphic organizers to support instruction. More than half of the teachers discussed the usage of graphic organizers, but only 18% of the teachers were observed using them. During observations, the graphic organizers used in class were for organizing information during a lesson. Teachers discussed using graphic organizers in reading, writing, mathematics, and science. Overall, teachers had a positive opinion about organizers and felt they helped students organize their thinking and create meaning. Teacher A-3-2 stated, “I use them all the time. I use graphic organizers all the time for

anything I can possibly think of. Daily I use them.” Throughout the interviews, teachers mentioned different types of organizers including t-charts, Venn diagrams, tables, charts, webs, Frayer’s model, outlines, and story maps.

In reading, graphic organizers helped students to understand the parts of a story and create a summary. When teaching reading, teacher F-3-1 described how she uses this scaffolding technique, “It also help them to know when you are going to summarize the story, you are going to use the parts that happen at the beginning, the middle, and the end. For them to see that, it is easier than just saying here is a loose-leaf paper. Write a summary.” Teachers also used this type of scaffolding to help student create character development. Teacher F-4-2 stated, “We did a three column chart yesterday where they use it as an organizer and come up with which character was the hero and which was the villain and why.” Several teachers also discussed using story maps to help students include all of the required elements in a story.

Teachers also use graphic organize in writing to help students organize their thoughts and generate ideas. Teacher C-4-2 stated, “I love graphic organizers. It keeps you more organized with your thoughts. They like using them for writing, brainstorming, that kind of stuff.” This teacher also addressed the need to help students focus on the purpose of an organizer, not just an act of completing an assignment, “I try to tell them it is really more about organizing your thinking, it is not about filling in every one. I want them to focus on the thinking of it, not the logistics of it.” Teacher A-5-1 explained how to get a student with limited language skills started on a writing assignment using a graphic organizer, “We were just free writing, but I gave him a web and I said okay, here

is your trip, what happened. I do feel like it gave him more guidance and helped him organize his thoughts.” Several teachers also mentioned that graphic organizers help students create a plan when they are writing. Teacher E-4-1 stated, “I feel like graphic organizers help students to know where they are going. I feel like it gives them a plan.” Teacher C-5-1 explained her use of organizers to initiate writing, “It gets their thoughts down and then they start writing. So, if you have a good plan, you know it is just like going on a trip.” Teachers also stated they used organizers to help with elaboration of details. Teacher F-3-2 stated, “Details in writing is so much so when you want to actually visualize and see the details and your write it down in a web and it is a lot easier to see. I think the visual aspect of it is really great.”

In fifth grade, teacher F-5-1 mentioned using a specific type of organizer that is modeled after a hamburger that reminds students what goes in a paragraph and how to develop an essay. This teacher explained that without graphic organizers, her students would not be able to complete the assignments. She stated, “This is why we always first have a graphic organizer, the three main ideas. I get my hamburger organizer, so let’s organize our sentences. So, it is very scaffolded until the point we are going to write the rough drafts. Now, we just need to provide some explanation. So, it is steps at a time and makes them feel more comfortable. If I just told my students to sit down and write an essay, it would be very difficult for them.” Another fifth grade teacher (D-5-1) discussed her usage of outlines to support students, “We provide a lot of outlines that break down and help them organize their ideas when they are writing.”

In science, teachers explained they used graphic organizers to help organize information and also to make comparisons. Teacher F-4-2 discussed her usage of a triple Venn diagram in science, “We actually used one in science today because we were comparing features, hair, and scales.” In mathematics, teacher A-3-2 explained how she used graphic organizers, “I kind of gauge if students are having difficulty, then I will pull them back and do some things with them. I provide a lot of graphic organizers to make things connect.” Teacher E-5-1 explained her usage of flow charts in mathematics to increase understanding in errors, “We use flow charts a lot in math. This is step 1 and so on. That way in math, when they say, ‘I don’t know what I am doing,’ I can say, ‘okay, go back to step 2. This is where you made the mistake.’ It makes it very clear for them to find their mistakes.”

Teacher B-3-1 addressed the need for students to have ownership and autonomy when using graphic organizers instead of just copying down something from the board with no meaning. “I like to start the year with using a few different organizers for different things, but then I kind of notice which one they get comfortable with and then I will stick with those for my instruction for the rest of the year.” Teacher C-5-1 mentioned giving student choice in writing, “I think we almost need to introduce them to a bunch of them and then have them pick the one they want to use.”

A barrier mentioned with graphic organizers is the unknown complexity or unfamiliarity of the organizer when using them with students. One third grade teacher (A-3-2) explained the difficulty she has had when choosing an appropriate organizer, “Sometimes I pick an organizer that is too difficult. It says grade three, but it is really too

difficult for them to understand because it will have too many pieces to it.” Teacher C-4-2 also explained the difficulty her students have with graphic organizers, “I think with the graphic organizers some of them get tripped up and don’t know which ones to use or don’t know what to put in the bubbles. If they don’t know how to fill it out and sometimes it can be overwhelming and they don’t know what to put in the circles.” That same teacher also explained that in addition to the complexity, she feels that her curriculum incorporates too many graphic organizers, “The problem with our writing curriculum is that there is just an overload of graphic organizers and the kids are just overwhelmed by them.”

One way to solve this barrier as suggested by the teachers is to create your own organizer or give students a choice in which organizer they would like to use. Teacher D-4-2 stated, “If there is not one that has been created, then I create one to work with them.” When discussing difficult organizers for some students, one teacher (F-4-1) offered this solution, “But I knew that the sheet would be really difficult for some of my EL students so I provided them with a different graphic organizer which they got to choose. If you are reading these and it is beyond you, why don’t you go ahead and grab this one and I had two of the four kids who did. They were completing the task that everyone else was but there was an extra step provided for them.”

**Cooperative learning.** Cooperative learning is used in the elementary schools in every subject. All but one teacher discussed cooperative learning in the interviews and it was observed in nearly 70% of the classrooms. Students were observed working together while trying to negotiate meaning. Within those teachers that discussed cooperative

learning, all believe it was important and stated that they use cooperative learning daily. Teachers explained that cooperative learning helps students to practice speaking skills, think through their ideas, and learn from each other. Teachers also mentioned a lot of different strategies to use during cooperative learning including: think-pair-share, Kagan's strategies (Kagan & Kagan, 2009), Dr. Hollie's CLR strategies (Hollie, 2011), team-pair-solo, and think-write-share.

Students can practice speaking skills and explain their thinking in small groups. Teacher A-3-2 in third grade explained why cooperative learning was important for students, "Especially at this age though, it is even more important because they have to talk through their ideas. That's why when we are doing the cause/effect paper, I had them use Bottoms Up/Heads Together so they can talk. I use it as much as I can so that can hear each other's thinking." Teacher E-4-1 in fourth grade explained how she feels that students can now lead groups and she can facilitate, "I think it is great. I feel like at this point they are old enough once I initiate the conversation, they can keep it amongst themselves and I can facilitate. I think you can't really have a productive, successful classroom without some cooperative learning. They have to learn it from each other."

Teachers use small groups to help peers support each other while the teacher facilitates a lesson. Mathematics teacher F-5-1 described her technique to support students who were struggling with whole class instruction, "I restructured my groups so that way they were working with a high, middle, and low student. So, then I would give them a problem and have the high student do it first and then teach the other two in that group. Then the middle student would do the problem and teach the low student. So, by

the end, the low student has seen me teach it and seen the other two do it and then they have to do it. They can ask questions right then to their friends or me.” Another mathematics teacher F-3-2 explained how she uses tiered groups, “We have tiered math groups. I just think it is really beneficial. It helps to get to know what they students need, whether it is enrichment or needing that strategy to help them learn.”

Teachers also expressed that students seem to learn more from each other than when they are working with the teacher because they feel more comfortable. Teacher B-3-1 described how she used group instruction with ELs, “I think small group instruction is really, really good. I think it is really important in reading because it is not as intense and they don’t feel so overwhelmed. Small group pulls out some of the traits that they really wouldn’t have in a whole group.” Teacher A-5-1 expressed how she feels students can communicate with each other more effectively, “They can communicate with each other on a level that I can’t communicate with them. Especially with ELs if it is the language thing too. So, sometimes having their peer or if the pressure is off, like their friend versus me, I think it is really a positive thing.” Teacher B-4-2 described her opinion of cooperative learning, “We use it all the time. Kids learn best from each other. The model in here is team-pair-solo.” Teacher F-5-1 described her experience with trying to teach something, but students did not understand the lesson, “I just think kids can really learn from each other. There are times when I will be explaining something and all of a student one of my kids is like ‘hold on’ and they will come up here and I swear in my head it sound just like that I said and the kids are like ‘oh’ and I swear I just said that



five times. But there is something about peers saying it the way they think. I think they can learn just so much from each other.”

Nearly 85% of teachers expressed some type of barrier when using cooperative learning. The barriers expressed were concerns about students working together, ELs unable or unwilling to contribute during group work, and accountability for all students. Teacher A-3-1 expressed barriers with students who do not work well with others, especially students from different language backgrounds, “I think you are always going to have those kids who aren’t open to working with others. Just being able to get that student aware of how they are treating others and getting them to understand that pairing you up with someone who may not have a good language connection could benefit both of you.” Teacher B-4-1 also mentioned that EOs may not be patient with ELs, especially during reading groups. “If there are students who are not being very flexible with EL students, this can create a barrier. Sometimes they are just like read it, just read the word. They don’t understand how to work with someone whose first language is not English.”

Several teachers expressed concerns about accountability for all students and EOs limiting ELs ability to contribute to group tasks. Teacher C-4-1 stated “Sometimes with the native speakers if they have an EL that is very limited with English, they won’t allow them to do anything cause they figure, oh, they can’t do this. They are incapable of doing it. So, it takes a lot of okay, well, let her try. Give him a chance to do this. Let’s talk it out because we are helping each other learn right now and you are not allowing them to do that right now.” Teacher D-4-1 mentioned her struggle with accountability, “One of the things especially with ELs is getting specific kids to be accountable and doing part of the

work and not listening to other people and pretending to do the work or copying the other person's work." Another teacher (D-3-1) explained how to balance the accountability by assigning leadership roles so ELs have to speak, "Sometimes when they are working in their groups, I make my quiet ones the leader of the group so that have to speak. They have a task and they are focused to speak and to lead."

Overall, more than 90% of the teachers discussed using instructional scaffolding practices (except graphic organizers) and all of the mentioned practices were observed in differing frequencies. Teachers understand visuals and use of multiple modalities in instruction. All teachers were observed using these instructional practices except three (86%) and there were no barriers indicated. Although nearly every teacher discussed hands-on activities, it was not originally on the observation protocol and there were no barriers indicated. Teachers also understand cooperative learning and it was observed frequently, but teachers indicated several barriers with cooperative learning specifically with student management and accountability. Teachers mentioned this influenced their implementation. Lastly, 61% of the teachers mentioned using organizers, but few were observed using them in class. Teachers stated that difficult organizers created a barrier for implementation and a majority stated the barrier needed to be addressed.

### **Theme 2: Language Scaffolding**

Scaffolding is the technique used to provide various supports to help students access a specific discourse and may vary from full to minimal support. These supports may be in the form of background knowledge, native language, visuals, accessing background knowledge, etc. (Athanasas & de Oliveira, 2014). Language scaffolding

refers to how to support the language ELs are using, including native language and academic language. Even though both are a part of language support, the unique needs of the teachers when discussing these instructional practices necessitated two different categories. It is important to note a difference in terminology used in this section. The teachers interviewed using the terms *vocabulary* and *academic language* interchangeably, however, in my literature review and throughout this research, I have used *academic language* to represent the language used in school.

**Native language.** In the first subcategory, native language, all of the teachers except four interviewed said they use native language through technology (Google translate), peer support, curriculum materials, and/or one teacher is bilingual. Teachers specifically brought up ELs who are new to the country because this district has been receiving many newcomers from Central America and Africa. Participant A-5-1 explained how she tried to support a newcomer, “I would use Google translate on my phone to help communicate with her because she didn’t speak English. I would try to provide materials in French for her.” Teachers also use Google translate to help with vocabulary lessons, “Well, actually it (native language) in our weekly vocabulary when we introduce our topic, we always do the Spanish cognate for the new word. We have the Google translator on so we can hear it in Spanish as well.” Teachers often mentioned how they had prepared study guides, anchor charts, and parent notes in the home language. In order to share the burden of this task, teachers would work as a grade level to have various documents translated.

Teachers also discussed how they used bilingual peers to help with students who have little to no English. Teacher F-4-2 explained how she felt when she received a newcomer, “Last year I had a student who came with zero English, literally no English. It was the first time. Thankfully, I did have three students who were Spanish speakers at home, English speakers at school and where pretty fluent in both. So, they were a lifesaver.” Teacher A-2-3 explained how she supports home language using peers, “If I can’t explain it in English, then I ask one of their peers that speaks that language if they can translate it for me so they can understand what to do.” Another teacher (A-3-2) also discussed how she supported a newcomer by labeling everything in the room and peer assistance, “Last year, I had a student new to the country, so I had everything labeled with the English word and the Spanish word. They had a lot of flashcards and then I had English speaking students do it with them and non-English doing it with them.”

Teachers also used other resources to incorporate native language including curriculum materials and native speakers. Teacher E-3-1 stated, “Our curriculum has a lot of our content words in Spanish or I’ll just ask them. A lot of them don’t have the content knowledge, but I will say how to say this in Spanish or Tagalog and they will talk about it and it celebrates their languages a bit.” Teacher B-4-2 also explained how she supported a newcomer by using both English and French while giving choice to the student as to which language she wants to use, “Our student from the Congo gets her weekly quizzes in both languages and she at first started just working on the French one. But now she really works on both, so I don’t know which one is stronger. She goes back and forth. This has really helped her English language acquisition.” Another teacher (F-4-1)

allowed students to write in their native language but struggled with how to bring more native language into the classroom and understand assignments written in a language other than English, “This year is the only time I have had students ask to write in their native language. I wasn’t hesitant about it but I don’t know what they are writing. I would like to bring it more into my classroom, I just don’t know how.”

Teachers also mentioned that using native language helps students to feel more comfortable. Teacher E-3-2 explained how she uses her own mistakes in Spanish to model comfort and acceptance, “For me, they see me make so many mistakes in Spanish and it makes them more willing to make those mistakes in English. We will kind of joke about it. I will say something and they correct me. It is a whole class thing. I think it has built a community with all students, not just ELs. ” Another teacher (A-3-1) talked about a balance of native language and English, “I think it is a comfort level for them. In order to raise their comfort level, there has to be this marriage between the two, especially when they are younger. It definitely makes them feel valuable. I think is it very supportive for ELs. I am all for it. I really like it.”

Although the majority of teachers supported the use of native language in the classroom, four teachers challenged the use of native language in the classroom. One teacher (C-4-1) discussed her concern with using native language, “I feel like the struggle of the language barrier can kind of help because you are forced to figure out a way to communicate versus if I can just tell you in Spanish, you are not necessarily going to learn the expectation cause the goal we are teaching you is English.” Another teacher (D-4-1) explained that learning is not a comfortable process, “I am torn between how I really

feel about it because I think it makes them feel comfortable but learning is usually not a very comfortable process. We have to make mistakes, take risks, in order to make progress.” Teacher C-4-2 also mentioned that even though the students speak in their home language with family and friends, they often do not know how to write it or how to translate academic language used in content classes, “So, I mean, besides numbers in Spanish, using Spanish for some doesn’t help that much.” Therefore, that teacher felt that native language did not make a difference in academic achievement.

It is important to note that native language was not observed in any of the classrooms even though more than 80% of teachers said they used it. Throughout the interviews, several teachers (E-4-1, D-4-2) mentioned their desire to learn Spanish, “I wish I was bilingual because then I could flip back and forth between teaching in English and Spanish. I wish I had that ability” and “I wish I had that experience to better understand what it is like to not only be learning what they are expected to be learning, but also to have to make it make sense in a language way beyond just a concept way.” All teachers interviewed indicated that this barrier needs to be addressed.

Teachers repeatedly mentioned the problem with using native language was the language barrier itself. Teachers discussed the language barrier was a problem, especially with families. Teacher B-3-1 stated, “I want to support the families, but we just don’t understand each other’s language.” Teacher C-5-1 explained that language was a problem during parent-teacher conferences, “Conferences are a problem when parents don’t understand with the language barrier.” Some teachers also mentioned that not all ELs are fluent in their native language due to lack of consistent schooling so using native

language may not be beneficial for all students. Teacher C-4-2 stated, “The issue or barrier I have with that (native language) is that a lot of them don’t speak Spanish that well or they don’t write Spanish at all. I feel like my one that gets frustrated easily, using both languages confuses her and then she is like I don’t understand anything now because there is too much.” Third grade teacher A-3-2 expressed her frustration with forgetting to translate things, which breaks down the communication between home and school, “It is just hard sometimes for homework purposes because you know and sometimes I try to remember as much as I can that so and so needs this in Spanish or you need this in this language, but sometimes I forget. This is the only barrier for that communication with home.”

**Academic language.** Academic language is the language used in a classroom environment (Frantz et al., 2014). Almost all teachers discussed using some type of instructional support with academic language on a daily basis. Academic language support was observed in 32% of the classrooms. During the observations, three teachers displayed student-friendly definitions, two teachers used synonyms, and one teacher taught academic language through explicit instruction. Teacher A-3-1 explained the importance of academic language, “I think it is one of the most important pieces to ELs’ growth. Giving them academic language that they can use daily and building on that. It is constantly being built upon.” Teacher C-3-1 explained that teaching and learning academic language was so important that it turned into a goal for her entire school, “Oh, that is important. That has turned into one of our building smart goals because vocabulary is very, very important. I tell the children all the time, you have to use your context clues.

You have to use the words around them. Content specific vocabulary – we teach it every time we introduce a new topic. They are able to decode and use those skills when they get a job or go to school because they are able to read at higher levels and be able to interpret that passage or whatever may be presented to them at that time.”

Teachers E-3-2 and D-4-2 also discussed various strategies in which they use academic language including using visuals, various organizers, body movements, and other methods. “We use many different strategies like four square, putting pictures with it, acting it out, and putting hand motions with things.” Another teacher explained the importance of teaching academic language at this age, “It is important here too and we tend to give a lot of attention to K-4 on tier II language acquisition because they tend to stick to very simple language that is safe and they are easily confused by just a little higher caliber way to word things. We do a lot of teaching of synonyms and antonyms, linguistic and nonlinguistic representations. Seeing it in context. Learning how to use context clues because is it very, very important to understand other words that are around the tier III words.” A fourth grade teacher explained how she supports ELs using a multitude of strategies, “We teach with a graphic organizer, like Frayer’s model, only a combination of a Frayer’s model plus personal thesaurus plus personal dictionary mash up of goodness. We write the word, variations of the word, we define the word, we use it in an ELA context, a math context, and a general way of how it would come up in a conversation context. We give it a synonym and an antonym.”

Several teachers (E-3-4, F-5-1) also stated that it was important to make academic language applicable to real life situations and explicit teaching, “But explicitly teaching it



is important. The kids won't remember a term that I taught in August when it was just on its own, but if they got to do something silly with it, then they will remember it. Putting it in context. This is not some random word that we are making you learn because we are teaching and that is what we do. It is relevant to your life. Just make it applicable to their lives, not just the classroom." Another teacher supported using language in everyday life to teach vocabulary, "I like them seeing it in the real world and real life examples and trying to find language in every day life."

Teachers also talked about the importance of teaching academic language while using context either with connections to other subjects or context clues. Teacher C-4-2 explained, "It is so useful because it all connects across the content and they use words in a different context. With the more vocabulary they acquire, it makes the reading much easier to manage." Teacher E-3-1 explained that providing context helps students academically, "It is interesting how if you give them enough context, they will get it. You want to give a lot of context when you are teaching academic vocabulary."

Teacher A-3-1 also mentioned understanding the knowledge level of students helps to best effectively teach academic language, "We need to take time to get to know where your students are as far as their level of knowledge. So, looking at their level of knowledge, where they are as far as understanding the concepts you are studying. Making sure everything is given in layers. You are layering on to their prior knowledge."

When asked about a barrier to teaching academic language, teachers repeatedly admitted they have a lack of training of how to teach ELs. All but two teachers requested training for how to best teach academic language to ELs. Teacher A-3-1 admitted she

does not have formal training to understand a student's level, "Just my own barriers where my knowledge, again, being able to figure where that student is and how to help him/her. Not having formal training makes that pretty difficult." Teacher A-5-1 stated, "Unfortunately, I have never done a whole lot of training on working with ELs. I have had a whole lot of them, but I just haven't had the training." This is significant because teachers are willing to participate in training and obviously already have ELs in their classrooms.

Other barriers mentioned included logistics with using common dictionaries, insufficient time, and native language differences. The majority of the teachers in this district use personal dictionaries that students carry from class to class and grade to grade. Several teachers explained that these dictionaries are cumbersome and confusing for students. Teacher C-4-2 stated, "The problem with the dictionaries is that they have a hard time staying together and it is so much information. The squares in it are so much and can be overwhelming. The kids don't use them the way they are supposed to be used. The students confuse words especially within the same unit. They use wrong words for stuff." Another teacher (D-4-1) explained that there is just not enough time to teach and re-teach academic language, "A barrier for that is I wish we had a way to go through the words again and practice like we do other things. But we just don't have time for it. Do we want to learn new words or keep rehashing out these old words?" One of the barriers that teachers discussed in using visuals was the lack of time. Teacher C-4-2 explained how teaching vocabulary in science is difficult in the time allotted, "They love science, but the vocabulary part sometimes we just don't have that time to integrate it in the way it

should be integrated so that it is actually meaningful. There is just not enough time. They want them to fill in vocabulary squares and keep a personal dictionary. It is useful, but very time consuming.”

Finally, another teacher (B-4-1) mentioned the difficulty with translating academic terms into native language, “I think it can be a real challenge if there aren’t words in their home language that are similar enough to what we are talking about here. Sometimes the concepts just don’t match.”

Although the majority of teachers discussed the usage of native language and academic language with ELs in their classrooms, it was not observed in any of the classrooms and academic language was observed in seven of the 22 classrooms observed. Nearly all teachers indicated that these two areas within language scaffolding needed to be addressed. Teachers stated that language barriers, time, and too much vocabulary to teach were major barriers affecting implementation. Additionally, this was the only theme in which teachers stated they needed training or did not feel they had sufficient training to support ELs while utilizing language scaffolding practices.

### **Theme 3: Content Area Scaffolding**

Content area scaffolding is the instructional supports that teachers use to help support ELs when teaching content such as mathematics and science. Based on the work of Wood et al. (1976), teachers vary the degrees of scaffolding according to the student’s language level. In this theme, teachers were observed using content area scaffolding in English language arts, mathematics, and science.

**Content literacy strategies.** Strategies used for content literacy were mentioned

in the interviews by 65% of the teachers, but were only observed 36% of the time.

Teachers used these strategies before, during, and after reading a text. A quarter or 25% of the teachers who mentioned strategies also used text-based questioning techniques. Content literacy strategies were used frequently and in every subject based on the data from the teachers, but the research question focused specifically on mathematics and science instruction. Teacher A-5-1 expressed her view about using content literacy strategies, “I think it is important. There is no way around it. Literacy is a part of every topic and you absolutely have to use literacy strategies with the reading and comprehension. They have to be able to understand what it is asking. I think it is imperative with the way our education system is going.”

Mathematics teacher B-4-1 explained how she utilized English language arts strategies from other classes, “I think it is just wonderful. I think it is the way to go especially if they have already learned some of those literacy strategies in their ELA classes, then it just dovetails right in with what I am doing.” Teacher E-5-1 explained her usage of literacy strategies and connection to Common Core, “I think with Common Core being a part of everything, they have to cite evidence and knowledge in everything. I think those literacy strategies of explaining and providing evidence is definitely within science and mathematics. I think they do a lot of summarizing with their thinking, predicting in science. We do a lot of close reading in science with articles and research.”

In science, teachers explained they used a variety of literacy strategies to help increase understanding of the content. Teacher A-3-1 stated, “In science, we use a lot of books. We use a lot of articles. We use websites. Different things like that.” Several of

the teachers (F-4-1, F-4-2, and D-5-1) discussed integrating reading and science classes in order to maximize instruction time. One fourth grade teacher stated, “I try to use literacy in science frequently but I usually will embed that in my reading block because we don’t have a whole lot of time for science and I like to use that more for experiments, vocabulary has a lot to do with it. We embed a lot of our science and social studies into our writing block when we are doing MAP practice. I try to weave it in everywhere.” Another fourth grade teacher discussed combining district writing assessments and science together, “This year we actually tied our writing and science together. It is fun and it certainly makes sense when you can do it together. A fifth grade teacher also explained how she integrated reading and science, “I know one of the most beneficial things that we do is pull science texts to use during our reading time that matches what we are during our science time. It is good for them to see those words in print and how the ideas are connected. That is really beneficial.”

Teachers also discussed using literacy strategies to understand the vocabulary of science and mathematics. Teacher C-3-1 stated, “We are always trying to look at those key words especially in word problems. When we are able to hone in on specific vocabulary, it can really boost their academic level.” Teacher D-3-1 explained her usage of vocabulary strategies, “I really focus on vocabulary. It is an important piece for math. If they don’t understand those vocabulary words, they are not going to understand the problem. We are teaching them how to break the problem apart, study the problem, read it, re-read it looking closely for key words. They are circling, underlining the question, boxing words, deciding which operation they need to use or which strategy they will use

to solve the problem. We are definitely using literacy strategies. Our leadership made this a school-wide model.” Teacher F-5-1 explained her strategy to support students while learning vocabulary in science, “I have actually been making flip books where there is a picture and a definition and a match vocabulary picture and word to put up on my word wall that matched the flip books. The pictures are just more ways that they can see visuals but also what does the word have meaning to me.”

This district has incorporated science, technology, engineering, and mathematics into the curriculum from K-12 (STEM). Teacher B-3-1 explained how she incorporated literacy strategies in her STEM lessons, “Especially I have been trying to include ELA in the STEM projects. Building of things and testing them out to see what happens and then relating it back to a text.” All of the barriers mentioned with utilizing literacy strategies focused on teaching academic language and were covered in the language scaffolding section.

One of the barriers repeated in the data was the difficulty of learning academic language within content. Teacher A-3-2 stated, “Academic language is just very, very hard and because they are learning a second language, it is that much more difficult.” A fifth grade teacher (E-5-1) explained her struggle with creating more relevant connection with academic language in science, “...like some of the things I was just thinking about how I can make the word relevant to them especially with science. So, just the words themselves or the academic language themselves can be difficult.” Another teacher explained how it is difficult to teach language and content with a newcomer,

“Whenever they are lower with their language, I think it can hinder their learning because it doesn’t do a lot for them.”

**Background knowledge.** Activating prior background knowledge is accessing information that students already have before coming into the classroom (Turkan et al., 2012). This knowledge is built from various life experiences. Background knowledge was mentioned in 55% of the interviews, but was only observed in 23% of the classrooms. In four of the classrooms, background knowledge was used to remind students of a previous lesson. One teacher set a purpose for reading and another teacher shared an experience to help students connect to the new knowledge. Background knowledge was used in this district to connect prior knowledge to new knowledge, to frontload/build up information, and to assess prior background knowledge.

Teachers activated background knowledge to connect prior knowledge to new knowledge. Teacher C-3-1 described this process as building a bridge, “You always want to make that connection with the student. You kind of like build up what they are going to be learning. Building that bridge is kind of like building that foundation to get them to connect to whatever new skills you are trying to teach.” Teacher F-4-1 explained how she uses this strategy at the beginning of her lessons, “That’s always intros to lessons. I mean I know it’s really important for ELs to be thinking about that background knowledge to start pulling because they have different background knowledge than we do. So, they’re able to make more direct connections than we are. Then, as a class we are making connections to their connections.” Teacher F-4-2 stated how she makes connections to prior background knowledge, “A lot of vocabulary, you know pulling from prior

background experiences, making connections that they already have, things they already know. They got the right idea, but it was just a very different background experience that they had with that word and what it meant to them and how it had formed versus what my experience had been and where I came from.”

Teachers also used background knowledge to frontload or build up information to help students making connections to the new material. Teacher A-3-2 discussed her frequency with frontloading, “You have to frontload a lot. So, I will frontload them and give them some information before we go because they won’t get cup and pint without seeing it first. I try to frontload as much as I can.” Teacher D-5-1 felt frontloading was important because students lack experiences, “I definitely find that it is really important. Especially with our science because a lot of our kids lack experiences with the concepts we are learning.” Teacher E-3-1 also mentioned the importance of front-loading vocabulary, “As far as background, I think of read alouds and vocabulary. Like, frontloading vocabulary. We do a lot of that. Sometimes I will make picture cards if there is an unfamiliar animal and have a conversation first. But even if you didn’t frontload that vocabulary, you need to stop and give them that background. If not, it is really not going to be good for them.”

Teachers used various strategies to assess prior background knowledge. Teacher A-3-1 explained that she needed to know the knowledge base of her students first, “What knowledge base do they have coming in, whether it is they are new to the country or they have been out of the district for a while? Looking at what they know.” Teacher B-4-1 assesses background knowledge through pre-assessments in order to look as



misconceptions, “I think it is important to do for all students. I do give pre-assessments to all students before a unit. It is important to pay attention to their misconceptions because they are a little different than everyone else’s misconceptions.” Teacher B-4-2 explained she assesses background knowledge in order to learn what students know instead of depending on assumptions, “I feel like it is not assuming you know that they know. You need to find out what they know, but you can’t assume they know what you think they are supposed to know.” Teacher D-4-2 also addressed assumptions, “Not always assuming that they lack it. So, being careful not to always assume that they have limited background knowledge because of their socioeconomic background, but keep in mind that they have background knowledge and experiences that the vast majority don’t have and needs to be shared.”

One of the barriers discussed by teachers is the students’ lack of background knowledge. Although some teachers felt that students bring background knowledge to the classroom, other teachers felt that the lack of background knowledge students have really creates a barrier to achievement. Teacher B-3-1 stated, “Background knowledge is difficult because even the background knowledge you have might not match up, so then what do you do? Also, not having the exposure that some of the kids have not had. A lot of our ELs are in the lower income range so sometimes they don’t have as much exposure.” Teacher E-5-1 simply stated, “Some of them haven’t experienced a lot of things.” Teacher D-4-2 explained how to combat a lack of background knowledge, “A lot of our kids have limited experiences so trying to tap their background knowledge or showing them videos to tap their background knowledge is important.

Another barrier discussed in the interview is that language or cultural barriers affect background knowledge for both teacher and student. Teacher A-3-1 took responsibility for this cultural difference, “I think it is my lack of knowledge of their language and cultures. I may not know what I need to seek out of them because our schemas, our background knowledge is different.” Additionally, teacher C-4-2 mentioned the cultural gap, “The problem is the cultural gap. Some examples that I try to use to build background for the whole class, some of them don’t understand.” Teacher C-4-1 admitted that culture can create a barrier, “Sometimes there is that cultural piece. I don’t have a lot of background with that culture, so what I’ve learned, I’ve learned from my students, you know, and over time, you figure out these things aren’t present in this culture or in that culture.” Teacher B-4-1 explained that language often interferes with assessing background knowledge, “Sometimes it is difficult with students who are not native because we don’t always know what their background knowledge is and is it the same perspective as I would have with whatever they are bringing to the table and can they communicate their background knowledge to me.”

In content area scaffolding, a little more than half of the teachers discussed their implementation of content literacy strategies and background knowledge. Content literacy strategies were observed in eight of the 22 classrooms and a majority indicated teaching language and content together created difficulty in implementation. Background knowledge was observed in only five classrooms and a three-fourths of teachers indicated a barrier was due to a lack of student’s language and culture.

Overall, there are three areas that need to be addressed in the project based on the percentage of teachers that indicated these areas constrain implementation of instruction practices for ELs. First, in native language, 83% of teachers indicated that they use native language on a regular basis in their lessons, yet no native language support was observed during data collection. In addition, 100% of the teachers indicated that utilizing the native language created a barrier and needed to be addressed. Academic language was an instructional strategy that 88% of the teachers requested training in order to better support ELs. A majority (91%) of the teachers discussed that they used academic language on a regular basis and a majority (88%) of teachers were observed using academic language in lessons. Lastly, 88% of teachers stated that content literacy strategies was an area that needed to be addressed due to barriers of language and culture. Although 65% of teachers discussed using content literacy strategies on a regular basis, only 36% were using these strategies in the classrooms. Based on this analysis, a three-day PD plan was created to address the knowledge needed to support academic language and native language development for ELs in third, fourth, and fifth grade.

### **Project Deliverable**

The project deliverable based on the research conducted and to address the local problem of raising student achievement through implementation of instructional strategies will be a three-day professional development opportunity for all teachers in the district who teach in third, fourth, and fifth grade. The overall goal of the PD is to increase the knowledge of general education teachers to support academic language and native language development and to ultimately raise achievement for ELs in third, fourth,

and fifth grade. The PD plan contains three sessions. One must be delivered first as it is the foundation for academic language knowledge. Sessions two and three can be delivered separately, but are intended for science and mathematics teachers, respectively. The project will focus on the needs of ELs in academic language and native language through the use of content literacy strategies. Teachers will learn strategies for how best to support ELs with academic language in content (mathematics and science). Ultimately, implementation of these strategies will lead to an increase in achievement for ELs.

### **Conclusion**

This qualitative case study was conducted to systematically understand the implementation of instructional practices for third, fourth, and fifth grade ELs within a district. Results indicated a discrepancy in usage of academic language and native language. In other words, teachers often reported they were using academic language and native language in class, but these instructional practices were rarely seen during observations. Additionally, teachers discussed several barriers that interfered with balancing language instruction with content instruction. Therefore, a PD plan was developed in order to provide teachers with the knowledge to maximize time by using content plus language in their instructional practices. The next section will provide specific information on the project including goals, objectives, suggested timeline, and responsibilities of all stakeholders.

## Section 3: The Project

### **Introduction**

The problem of poor achievement among ELs, particularly amongst mathematics and science, persists in the local district and other districts across the country (National Center for Education Statistics, n.d.b). Despite district-wide CLR training, implementation of those instructional practices was unknown. The purpose of this study was to examine the implementation of instructional practices for ELs in third, fourth, and fifth grade general education classes. I conducted a qualitative study using interviews and observation methods to collect data in all schools at the local site. Results indicated a large discrepancy between the frequency teachers said they used strategies to support academic language and the student's native language in class and the number of times it was observed. Additionally, teachers indicated they wanted more training on how to best support ELs in academic language and native language development. Therefore, the purpose of this project is to provide mainstream teachers with practical strategies to support academic language and native language development to ultimately increase academic achievement for ELs in third, fourth, and fifth grade. This section includes a description of the project, goals, rationale, and literature review to support the project. Additionally, a proposed timeline, evaluation plan, and possible implications for change locally and nationally are included.

### **Description and Goals**

The overall goal of the PD is to create and offer professional development in which third, fourth, and fifth grade teachers learn the instructional practices that enable

them to simultaneously facilitate academic language development and content area learning in EL students using native language supports. The PD contains three sessions and session one must be delivered first as it is the foundation for academic language knowledge. Sessions two and three can be delivered separately, but are intended for science and mathematics teachers, respectively. The structure of the PD was designed through the literature review, district resources, and state requirements. Because this is a public school system, PD is often guided by specific mandates and requirements including time restrictions, state standards, and mandated instructional minutes. Additionally, support systems that were already in place, such as PLCs, online learning platforms, and electronic systems across the district will also be utilized.

The theoretical framework for the project is comprised of sociocultural theory and critically and CLR (Hollie, 2011; Vygotsky, 1978). Throughout this project, teachers will learn instructional strategies that develop academic language for ELs through the use of cooperative learning. Since the majority of teachers were comfortable using cooperative learning (all but one), it will be used to facilitate the new strategies. Sociocultural theory is a theory of the mind loosely connected to Vygotsky's work of how students learn through interaction. This theory supports the idea that social relationships play a crucial role in learning and will be used to guide the PD activities (Iddings & Rose, 2012; Van Compernelle & Williams, 2013). Teachers will interact with each other to learn, plan, observe, and implement the intended strategies.

All teachers have been trained in CLR methods; therefore, discussion protocols derived from CLR methods will be used to guide the collaborative activities. At the

beginning of each session, teachers will be reminded of the discussion protocols that include: moment of silence, silent appointment, my turn/your turn, think-pair-share, partners, whip around, give one/get one, let me hear you, and shout out. These discussion protocols are used across the district to encourage participation and to make sure all understand the rules for how to contribute to discussion appropriate (Hollie, 2011). A detailed description of each protocol (for the trainer) is listed in Appendix A with the appropriate slide. The type of protocol used will be indicated by an image on the slide and stated orally by the trainer. Additionally, teachers will use the standard 5E (engagement, exploration, explanation, extension, evaluation) lesson plan already being utilized by the district in science and mathematics. The trainer will share a varied version of the lesson plan that includes language objectives and a focus on language throughout the lesson.

Teachers will participate in three sessions of training. During the first session of training, all third, fourth, and fifth grade teachers will gain knowledge about how to support the development of academic language as guided by the College and Career Readiness Anchor Standards in language (Common Core State Standards Initiative, 2017). The teachers will learn practical strategies and work with other teachers within their same content to plan strategy use in their own classrooms. For example, science teachers will work with other science teachers across the grade levels. This will provide the basis of knowledge for the other two days. The objectives for the first session are: (a) Understand the current state of ELs in the local district, (b) Understand how ELs learn and process academic language, (c) Learn instructional practices for how to support

academic language, and (d) Create a plan to incorporate one instructional practice into their own classroom. In objective one, teachers will share their experiences with teaching ELs in the district and learn more about the assessment data and project study. This will help to create a rationale and urgency for the PD. Although teachers are aware of the assessment data (since it is tied to evaluation), the majority of teachers will not know about the project study. The second objective will build on the knowledge of the teachers. Teachers have had some training in CLR, so it is important to understand what they know about academic language before moving on in the training. This capitalizes on the collective experience that teachers bring to the training and values teachers' strengths instead of making assumptions (Hall, 2016). In addition, the trainer can understand where teachers are in their understanding of academic language and tailor the PD for their needs (Sun, Penuel, Frank, Gallagher, & Youngs, 2013). Using the language standards as a guide, the trainer will introduce different practices to address each standard. Teachers will have time to collaborate and discuss practical implementation at the end of each section of standards (conventions of standard English, knowledge and application of language, and vocabulary acquisition and use). After all of the instructional practices have been introduced, teachers will have additional time to specifically plan with content partners about which instructional practice they will implement and why. Teachers will have time to share their plans with others towards the end of session one. Lastly, teachers will participate in a short, formative evaluation online through Google forms. This evaluation is intended to give the trainer feedback about the knowledge teachers gained and any additional supports needed.



Based on the areas assessed by the state testing and increased implementation of STEM education in this district, the project focuses specifically on how ELs learn and process the academic language of science and mathematics. The same teachers will not be in session two and three. Session two is specifically for all science teachers in third, fourth, and fifth grade. In Session 2, teachers will: (a) understand how native language could be supported in the classroom, (b) identify the language requirements using the Next Generation Science Standards, (c) learn how to support the academic language of science through the 12 language functions, (d) learn how to write language objectives from content objectives, and (e) create a plan to incorporate one language function into his/her class.

In session three, mathematics teachers from third, fourth, and fifth grade will go through the same training as the science teachers with an emphasis of the language of mathematics. In Session 3, teachers will: (a) understand how native language could be supported in the classroom, (b) identify the language requirements using the Common Core State Standards, (c) learn how to support the academic language of mathematics through the 12 language functions; (d) learn how to write language objectives from content objectives; and (e) create a plan to incorporate one language function into his/her class.

At the beginning of the session, teachers will participate in partner talk to discuss their understanding and usage of native language. Again, this is to gain trust from the teacher and help the trainer to assess what teachers already know. One of the barriers discussed by the teachers interviewed in this study was lack of proficiency in the native

language (predominately Spanish). In order to address this barrier, teachers will discuss how they can support a student even if they do not speak the native language. This will help teachers to talk through their understanding and the trainer can also guide the discussion during the share time. In objective one, teachers will learn how they can support native language even when they do not have much knowledge of the language. Next, teachers will discuss the language needs in science using the Next Generation Science Standards (Council of Chief State School Officers, 2012) and mathematics using the Common Core State Standards (Common Core State Standards Initiative, 2017). This is particularly important at this stage because it will help teachers to understand the urgency and purpose of explicitly incorporating academic language strategies into their science/mathematics lesson plans. Then, teachers will learn the 12 functions of language (connected with the standards) and some practical organizers for how to support them. Although teachers will be familiar with these functions, a specific emphasis will be placed on the language that is used to support these functions.

As in session one, teachers will have the opportunity to collaborate with colleagues and discuss practical application for these functions periodically throughout the session. After learning about the language functions connected to the standards, teachers will have an opportunity to write language objectives from existing content objectives. Teachers will be using the existing 5E lesson plan model and will add content objectives to it. It is important to use a model teachers are already familiar with so that they only have to add one small part. This reduces the task demand on teachers and will likely increase implementation (Dicerbo, Anstrom, Baker, & Rivera, 2014). After lunch,

teachers will have an opportunity to observe the EL teacher in their building teaching a demonstration lesson using one of the academic functions. The EL teachers will be pre-arranged for this specific demonstration lesson using real students. See more about this in the *existing supports* section. Teachers will take notes to identify the academic function, procedures, as well as reflections about the observation. After the observation, teachers will come back to the session and discuss their observations. The discussion will be in groups of three with the same grade, but different school. Teachers will be able to hear about different experiences through this discussion protocol. After discussions about observations, teachers will spend time with their grade level, specifically planning a lesson to develop academic language using an upcoming lesson and the 5E lesson plan. After the planning time, teachers will have an opportunity to share their plan of implementation with a partner. Teachers will also learn about the upcoming coaching cycle and provide feedback for the session.

### **Rationale**

PD was chosen as the genre to help teachers learn the instructional practices that enable them to simultaneously facilitate academic language development and content area learning in EL students using native language supports because it is the most effective way to increase knowledge of all of the teachers (Brown & DiRanna, 2012; Kennedy, 2016). PD provides an opportunity for teachers to learn new knowledge in a cooperative and interactive environment. This local site has seven PD days already built into the schedule, so it is an efficient way to address the local problem without adding to the teachers' busy schedules. In addition, the PD addresses the original problem of

student achievement by building on the knowledge of staff, implements guided practice (instructional coaching), and evaluates for further support.

Overall, there are three areas that need to be addressed in the project based on the percentage of teachers that indicated these areas constrain implementation of instructional practices for ELs. First, according to this study, 83% of teachers indicated that they use native language on a regular basis in their lessons, yet no native language support was observed. In addition, 100% of the teachers indicated that they had experienced barriers to utilizing the native language that could to be addressed with training. Teachers indicated that academic language was a known instructional practice, but discussed multiple barriers with implementation including time management and the amount of vocabulary that needs to be taught overall. Although a majority of teacher discussed using academic language frequently, it was only observed in seven of the 22 classrooms. Lastly, 88% of teachers indicated that content literacy strategies was an area that needed to be addressed due to barriers of language and culture. Although 65% of teachers discussed using content literacy strategies on a regular basis, only 36% were using these strategies in the classrooms.

Due to these findings, session one will lay the foundation for teaching and supporting the use of academic language. Sessions two and three will focus specifically on instructional strategies that use native language support and teaching the academic language of science and mathematics. Teaching language and content together allows teachers to maximize time and increased competency in academic language is tied to achievement (Carrejo & Reinhartz, 2014; Short, Fidelman, & Louguit, 2012).

Lastly, to follow-up on implementation and to further support teachers, there will be three coaching cycles after the PD sessions (one per quarter). These coaching cycles will start immediately after the PD and will finish by the end of the school year. Coaching provides ongoing support while teachers are implementing a new practice (Rodríguez, Abrego, & Rubin, 2014). In this case, the coaching cycles will involve the EL teacher and the mathematics and science teachers. The coaches will use the *Academic Language Development Observation Form* (Appendix G) to provide feedback for teachers and as a way to collect data for the formative evaluation. Meetings will be during professional learning community (PLC) times that are already included in the schedule so there should be no extra time required by teachers.

### **Review of the Literature**

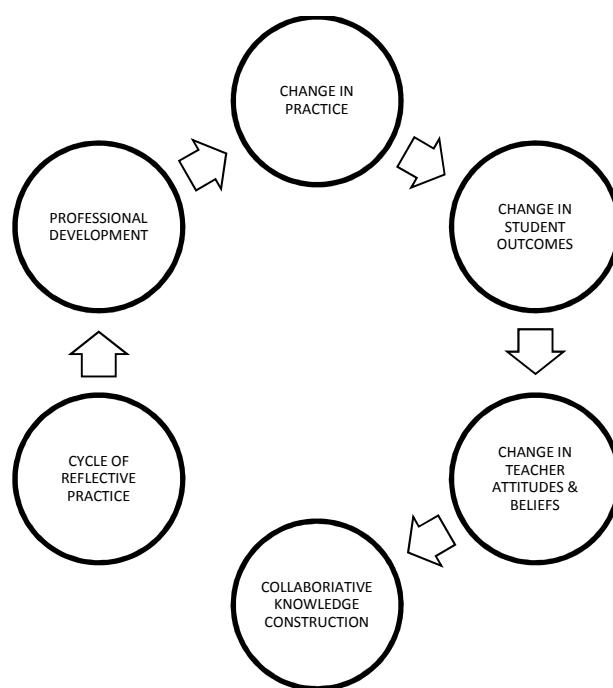
The literature in this review provides evidence to inform, support, and guide the PD plan for academic language and native language development in ELs. The specific genre of the project was chosen based on the data collected during the study, this research review, existing structures at the local site, and the need to address the problem of low achievement of ELs in grades three through five in the local school district. As the data were coded and themes emerged, it was evident that instructional practices to support academic language and native language were not being implemented in the classroom. Through interviews, teachers indicated barriers with teaching academic language including lack of training, difficulty, logistics, time, and native language barrier. This PD plan was created with these barriers in mind in order to develop the knowledge of how to incorporate academic language and native language into existing lesson plans.

This literature review consists of a discussion of professional development, barriers associated with professional development, academic language (mathematics and science), native language and evaluation in professional development in order to address the local problem. The literature review for this study was conducted through the use of Walden's online database and Google Scholar. The databases searched have been predominantly in the topic of education including Eric, Education Research Complete, and SAGE Premier. The search terms included *professional development*, *barriers in professional development*, *academic language*, *native language*, *evaluation of professional development*, *instructional coaching*, and *instructional practices for ELs in science and mathematics*.

### **Professional Development**

PD has changed over the years from being a one-shot, one-size-fits-all workshop to a systemic, sustainable, ongoing learning opportunity where teachers feel supported as they put into practice what they have learned (McLester, 2012; Raphael, Vasquez, Fortune, Gavelek, & Au, 2014). PD is also referred to as *professional learning*, *teacher training*, and *teacher learning* in the literature. The literature reviewed has shown that mainstream teachers feel inadequately prepared to effectively teach ELs (Molle, 2013). The pressure has only continued to intensify with increased linguistic demands in content areas and high stakes accountability (Lee, Quinn, & Valdés, 2013). Effective PD, in this area, involves a cycle that begins with professional development while incorporating reflective practice and collaboration with colleagues and ends with a change in practice (Choi & Morrison, 2014). Figure 1 illustrates the cycle of professional development that

teachers should go through when trying to make a change in practice. As teachers progress through the stages, a change in attitudes and beliefs emerges. This feeds the cycle of reflective practice. Throughout the literature review, four themes emerged from studies involving professional development that led to student achievement including: sustainability, support during implementation, active learning, and needs based PD.



*Figure 1.* Cycle of PD. Adapted from Choi, D. S., & Morrison, P. (2014). Learning to Get It Right: Understanding Change Processes in Professional Development for Teachers of English Learners. *Professional Development In Education*, 40(3), p. 430.

**Sustainability.** Professional development should be ongoing, throughout the school year so that teachers have time to understand and implement a new strategy. The PD plan for this study will be sustained over time by using the existing structures in place. Teachers not only need time to learn the new strategy, but they need time to think about how they may implement the strategy into their routines while anticipating any

potential problems (Gulamhussein, 2013). For PD to be effective, it needs to occur in a culture of ongoing and continuous learning (McLester, 2012). Additionally, PD is sustainable when teachers have time to collaboratively plan before, during, and after implementation of the new knowledge (Carter, Crowley, Townsend, & Barone, 2016; DiCerbo et al., 2014). Building the time for PD into the daily/weekly schedule will help to ensure fidelity. In this PD plan, teachers will use existing PLCs in order to regularly meet and discuss implementation of academic language and native language strategies.

Sustainability can be especially important where there is a gap between the old and new knowledge. Teachers need continued support to fortify the new behaviors and increase the chance the teachers will make significant changes to their existing practice (O'Hara & Pritchard, 2016; Sun et al., 2013). Also, PD, which is sustainable, creates school change and empowers teachers as agents of this change. Raphael et al. (2014), identified five principles to support sustainable school change including: "teacher agency, meaningful problems of practice, dialogical practice, a systemic view, and sustained across time" (p. 147). Teachers are more invested and PD will be sustained when they have a shared ownership and understanding of the purpose and products of the PD (Hall, 2016). PD will also be sustained when teachers are looking at current problems that are related to the curriculum and connected to standards. Teachers need meaningful dialogue as they create new understandings and practices. The structure for the proposed PD sessions will establish the purpose at the beginning of each session and share the relevant data from the local site. Additionally, the sessions are connected to the relevant



curriculum and standards from the local site so they can be practical and useful.

Consequently, PD should be systemically planned and sustained over time.

**Support during implementation.** Professional development should include built-in support for teachers during the implementation stage and should address any specific problems in changing classroom practice. Teachers need the opportunity to practice the strategy and receive feedback from an expert. This could be through feedback from a colleague or someone outside the work place either informally or using a coaching model. Rodríguez, et al. (2014), investigated the coaching styles of *Reading First* literacy coaches supporting teachers working with Hispanic ELs and identified three themes. They found the coaches understood second language acquisition, implemented bilingual theories of teaching, and worked to support teachers through sharing their experiences and knowledge. The coaches in this study specifically focused on literacy instruction with an emphasis on vocabulary development. The coached shared explicit instruction strategies and scaffolding techniques while supporting teachers in the classroom.

Instructional coaching is a common thread in both the PD models in research and in supporting classroom teachers of ELs. The instructional coaches could be outside experts or teacher leaders within the building. Often EL teachers are used as teacher leaders to help support PD initiatives since they are the experts in second language acquisition in the building (Russell, 2017). These teacher leaders are more effective than outsiders because they are trusted peers and viewed as non-threatening since they have no influence over evaluative procedures. Instructional coaching allows for intentional collaboration in order to build the content teacher's knowledge, provide encouragement

throughout implementation of the new knowledge, and support reflection after implementation (Dove & Honigsfeld, 2014; Russell, 2015).

In addition to instructional coaching, self-reflection prior to meeting with a mentor is important during the implementation stage. Ebadi and Gheisari (2016) conducted a study using sociocultural theory and critical reflection in order to raise awareness about classroom discourse and improve teacher practice. The teacher videotaped lessons before and after attending workshop sessions in order to observe changes in her practice. She used the videotaped lessons as a reference as she participated in critical reflective writing. This writing was then used to guide the discussion with her mentor. The results of this study suggested engaging teachers in reflective practice could raise awareness of current classroom practice. Self-reflection also can lead to a change in teacher attitudes, beliefs, and student outcomes (Choi & Morrison, 2014). Positive changes in student outcomes will reinforce this feedback and ultimately lead to a change in practice. Teachers from the local district will have the opportunity to reflect on their lesson plans during the coaching sessions that will take place after sessions two and three.

Another support method specifically to help mainstream teachers learn EL strategies is to have EL specialists push-in to mainstream classrooms and offer on-site support and guidance. Teachers who regularly collaborate learn from each other and reflect on their own practice (Percy, Martin-Beltrán, Silverman, & Nunn, 2015). This partnership creates a symbiotic relationship where the mainstream teacher can provide content support and the EL teacher can provide second language acquisition support. Mainstream teachers often feel ill-prepared to teach ELs and the specialist can help

explain linguistic features and suggest strategies to help increase student achievement (Molle, 2013). Ongoing teacher collaboration can provide support as teachers integrate the new practice. Martin-Beltran and Percy (2014) observed how teams of mainstream and EL teachers collaborated together and “used tools to articulate and re-conceptualize teaching goals, co-construct knowledge, and ultimately transform teaching practices to meet the needs of culturally and linguistically diverse students” (p. 721). Teachers benefitted from collaborative dialogue as they worked side-by-side to anticipate student problems and needs in each lesson. In this PD plan, teachers will participate in a coaching cycle on-site with the EL teachers in their building after sessions two and three, respectively. EL teachers are valuable assets to teachers because they are experts in second language acquisition, on-site, and have an established relationship with the teacher.

**Active learning.** The third principle of PD includes the teacher in an active role through varied approaches in order to understand the new practice. Collaborative conversations can cause what Sun et al. (2013), refer to as a *spillover effect*. The spillover effect happens whenever teachers who have participated in PD collaborate with teachers who have not directly participated in PD and a change in practice takes place. They found that teachers who had participated in PD were more likely to help others who had not participated and therefore, the PD affected even more teachers than those initially trained.

Engaging the teacher as a learner also takes on an important role in active PD. O’Hara, Pritchard, Huang, and Pella (2013) conducted a study to analyze the impact of a PD initiative focusing on the usage of technology in the classroom to effectively increase

academic achievement for ELs. Throughout the initiative, teachers actively participated in sessions where they took on the role as the learner in order to better understand the strategy. In one activity, teachers developed their own digital immigration story. Through this activity, they learned how to scaffold instruction in order to maximize academic achievement for ELs. Using this model, teachers were able to more effectively implement the strategies and were invested in their own learning. When teachers are invested in their own learning, the quality of their effort improved (Carter et al., 2016). In this PD plan, teachers will have the opportunity to be actively involved in planning with other teachers in their content area and grade level. Teachers will be able to immediately apply these strategies to their lesson plans.

Explicit modeling helps teachers effectively understand the new practice. Modeling should involve an experienced teacher demonstrating the new practice so that the teacher can effectively “see” the new practice in action with real students (Gulamhussein, 2013). This could be done through observations, videotaped lessons, or participating in a simulated lesson. Teachers involved in the PD plan will have the opportunity to observe a demonstration lesson during sessions two and three. They will also have the opportunity to come back to the PD session and discuss their observations with other teachers across schools. Another way to keep teachers active is to provide an opportunity for feedback after each session or training. This allows for the organizer to respond effectively to the needs of the teachers and in turn, teachers feel valued because their needs are being met (Shanahan & Shae, 2012). Teacher feedback can also be used to guide further sessions of professional development in this PD plan.

**Needs based.** Finally, professional development should be based on the needs of all stakeholders. PD should be created around the requirements of the district, including: standards, curriculum guides, assessments, and other relevant information (Sun et al., 2013). PD should be tailored to the discipline and grade level of the teachers, not a generic type of PD where teachers need to imagine how they might apply it in a different context (Gulamhussein, 2013). Teachers must see how the strategy applies with their specific discipline. For example, when supporting mathematics teachers with implementation of academic language strategies for ELs, teachers should provide specific examples using mathematics language. Teachers who participate in the PD plan will be grouped by level and content. Session one provides time for teachers to plan within their content area. Sessions two and three are specifically content-related with built-in time for planning with grade level partners across schools. In addition to specific content and level, the teachers' current knowledge level of second language acquisition strategies should also be addressed. This could be done through a needs based analysis or asking teachers to self-identify where they need help. This will be done in the current PD plan through asking teachers to share their knowledge about *academic language*, *native language*, and *content specific language*. Planning PD to address these needs creates more investment and ownership (Carter et al., 2016).

PD should also be focused on understanding the needs of the students instead of just focusing specifically on the instructional strategies. Molle (2013) studied conversations between general education and EL teachers in order to extract themes about the cognitive shift that occurs when teachers are discussing a particular

instructional challenge. The identified stages of the conversation include: “constructing ELs as low-performing, instructional problem-solving, celebrating ELs, and understanding the needs of ELs” (p. 116). At the beginning of the conversation, the general education teacher is focused on the deficiencies of the ELs in his class. Although the EL teachers try to move him through the conversation in order to understand the needs of ELs, he is trapped in the mindset that ELs are low-performing and there is nothing he can do instructionally to help them succeed. This mindset not only impedes implementation of effective instructional strategies, but also limits the potential achievement of ELs. Ultimately, mainstream teachers should try to understand the cultural, linguistic, and academic needs of ELs instead of viewing them as deficient. This brings a more positive, supportive role and helps teachers to focus on what ELs can do instead of what they are unable to do. In order to bring attention to the needs of EL, the trainer will discuss the characteristics of an EL student in the local district. Also, all of the instructional practices proposed in the training are specifically designed with ELs in mind.

### **Barriers with PD**

The barriers described in this section are from the literature review and not from the study. However, these barriers were kept in mind as potential problems when planning the PD plan and are also addressed in the section titled, *Potential Barriers and Solutions* towards the end of this chapter. Several barriers (or challenges) in developing academic language include the amount of time dedicated to instruction; the type of instruction; and inadequate preparation to effectively deliver instruction. One of the

barriers identified was the insufficient amount of time teachers spend on cognitively developing academic language (Carlisle, Kelcey, & Berebitsky, 2013; Hanson-Thomas, Grosso Richins, Kakkar, & Okeyo, 2016). Teachers described a challenge in balancing the amount of time spent on academic language with balancing different lessons, varying language levels, and curriculum demands. Since the amount of support positively correlates to gains in reading comprehension, teachers need to spend a significant amount of instruction developing academic language. A possible solution to this challenge could be to teach language and content together as described in the previous section.

Another barrier is the type of instruction teachers use to develop academic language. Classrooms typically contain ELs with varying levels of English language with diverse background knowledge. Although teachers traditionally develop vocabulary through definitions and context clues, this is not enough for ELs who are typically disadvantaged in English word knowledge. ELs need numerous, cognitively demanding experiences in order to effectively use academic language in different contexts (Carlisle et al., 2013).

Teachers are inadequately prepared to effectively develop academic language and often have little experience with ELs. Hanson-Thomas et al. (2016), found that teachers who have taken two or more college courses about ELs perceive themselves as being more prepared to effectively deliver instructional practices for ELs and able to facilitate academic language development and content area learning than teachers who have taken no courses. Additionally, participating in sustained, supportive PD helps increase

teachers' capacity to work effectively with ELs and increases fidelity of implementation (August et al., 2014b; de Oliveira, 2016).

Another problem teachers face when trying to implement a new instructional practice is what Gulamhussein (2013) refers to as the "implementation dip." Even when teachers have had supportive PD and observed model lessons, they will still struggle with effective implementation because it takes several tries with critical reflection to implement a new practice effectively. To further complicate implementation, teachers sometimes abandon the new practice if achievement is not seen in students immediately. In this era of high stakes testing, teachers do not have time to wait for a practice to yield results, but on average, it takes 20 separate occurrences of practice in order to master the skill. Therefore, teachers need to be given the time and support to implement the instructional practice effectively.

Lastly, students can become a barrier when teachers are trying to implement a new practice. Kennedy (2016) points out that students are often required to attend class, but attendance does not guarantee learning. Teachers need to figure out a way to engage students so that they will participate in the activities and learning can occur. This goes along with classroom management and asking for the support of an instructional coach and/or administration.

### **Academic Language**

Academic language refers to vocabulary, content language, or academic English. As show in Table 6, academic language has three dimensions including vocabulary, syntax, and discourse (Pritchard & O'Hara, 2016). Vocabulary is the term and



collocations are used within content including information about figurative language and word parts. Learning vocabulary helps students to develop meanings or unknown words and supports comprehension. The second feature, syntax, focuses on sentence structure and how words are put together, parts of speech, and verb tensing. This helps students to create clear sentences and use a variety of sentences. Lastly, discourse is a focus on the organization and text structure of the language including voice and register. Students need to be able to combine all of these features together to negotiate meaning and communicate clearly. Students need all features of the language to meaningfully participate within an academic context. For the purposes of this study, academic language is the language used in a classroom environment (Frantz et al., 2014).

Table 6

*Features of Academic Language*

Dimensions	Academic language features	Academic language skills
Vocabulary	<ul style="list-style-type: none"> <li>• Content terms and collocations</li> <li>• Figurative expressions and multiple meaning terms</li> <li>• Affixes, roots, and transformations</li> <li>• General academic terms</li> </ul>	<ul style="list-style-type: none"> <li>• Figure out the meaning of new words and terms in a particular message – connect to underlying concepts and for comprehension of text</li> <li>• Use new words to build ideas or create products</li> <li>• Choose and use the best words and phrases to get the message across</li> </ul>
Syntax	<ul style="list-style-type: none"> <li>• Sentence structure &amp; length</li> <li>• Transitions/Connectives</li> <li>• Complex verb tenses and passive voice</li> <li>• Pronouns and references</li> </ul>	<ul style="list-style-type: none"> <li>• Craft sentences to be clear and correct</li> <li>• Use of a variety of sentence types to clarify a message, condense information, and combine ideas, phrases, and clauses</li> </ul>
Discourse	<ul style="list-style-type: none"> <li>• Organization and text structure</li> <li>• Voice and register</li> <li>• Density</li> <li>• Clarity and coherence</li> </ul>	<ul style="list-style-type: none"> <li>• Combine features to communicate, clarify &amp; negotiate meaning</li> <li>• Create a logical flow and connection between ideas</li> <li>• Match language with purpose of message</li> </ul>

*Note.* Adapted from Pritchard, R., & O'Hara, S. (2016). Framing the teaching of academic language to English learners: A Delphi study of expert consensus. *TESOL Quarterly*, p. 4.

Tiered vocabulary is a system of grouping vocabulary words according to their frequency of usage. Tier I words are everyday words that are not content specific. Tier II words are mostly used in academic settings across disciplines. Tier III words are content specific and only used in that setting (Gomez-Zwiep et al., 2015). In tiered vocabulary, most academic language is referred to as Tier II language, the language that is used

across content areas (DiCerbo et al., 2014). Students need activities to develop ways to use academic language in all content areas and situations. ELs specifically need activities to develop academic language because their home register may be different and they often have limited experiences in using academic language in English (Schlepppegrell, 2012). During the PD sessions, teachers will discuss and develop their understanding of the features of language including receptive and productive language (Council of Chief State School Officers, 2012).

Instructional practices that support ELs as they participate in activities that help develop academic language have been studied for years, but Pritchard and O'Hara (2016) conducted a study focusing on which instructional practices have the greatest impact in fostering academic language development. Using a panel of experts, they identified seven instructional practices that are foundational for the development of academic language and classified them into high-impact, cross-cutting, and foundational practices. A summary of these practices is given in Table 7 and will be shared with teachers during the PD implementation in session one and lay the foundation for the academic language instructional practices.

Table 7

*Essential Practices*


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High-impact practices	Fostering academic interactions
	Fortifying academic output
	Using complex texts
Cross-cutting practices	Clarifying academic language
	Modeling complex language
	Monitoring and guiding language learning
Foundational practice	Designing language and literacy activities

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*Note.* Pritchard, R., & O'Hara, S. (2016). Framing the teaching of academic language to English learners: A Delphi study of expert consensus. *TESOL Quarterly*, p. 7

These high-impact practices include scaffolded opportunities for students to interact with each other while negotiating meaning and building understanding. Teachers also need to provide opportunities for students to produce work using academic language in oral and written form. Finally, to maximize academic language development, teachers need to use a wide variety of complex texts developed through various activities for different purposes. Cross-cutting practices are instructional practices that support the high-impact practices and are used to enhance academic language development. Creating opportunities to make language comprehensible in both written and spoken forms is important to support academic language development. Teachers should also model ways for students to use language through reading, writing, listening, and speaking. Teachers can monitor and guide language development by scaffolding as needed based on the

student's language level. Finally, the foundational practice for developing academic language is to create language and literacy activities that are organically embedded across disciplines.

Research on teaching academic language has shifted from teaching language in isolation to teaching language embedded with content. This shift is primarily due to the literacy demands of the Common Core Standards in mathematics and science (August Artzi, & Barr, 2016; Bunch, 2013; Dicerbo et al., 2014). Content teachers are now responsible for developing the language needs of all students, including ELs. In respect to focusing just on language with ELs, Ardashevea et al. (2015), state:

Such disjointed instruction of content in content area classrooms (without any attention to the domain-specific language demands) and of language forms in ESL classrooms (with limited and no connections to academic subject matter) effectively undermined students' abilities to meaningfully access the content area texts and tasks results in education inequalities for ELLs (p. 204).

Bravo and Cervetti (2014) studied instructional models addressing literacy needs of ELs in science and found that lack of instructional attention to language with content areas is a matter of equity for all students. When ELs do not receive adequate English language instruction with content, they are not college and/or career ready, thus limiting their future potential. However, a focus just on the content also does not specifically lead to conceptual understanding either. Lee and Buxton (2013b) argued that hands-on activities in science are one part of the lesson, but these activities alone do not necessarily promote academic achievement. Using content with language provides opportunities for ELs to

learn language and content together and leads to academic achievement (Bradbury, 2014). Instructional practices shared in sessions two and three will be specifically focus on integrating content and academic language (science and mathematics).

Teaching language within content presents some challenges and opportunities for teachers, therefore, some shifts in perspective are necessary to facilitate this change (Hakuta, Santos, & Fang, 2013). These shifts include viewing language learning from an individual process to a socially engaged process; from a linear building of structures and vocabulary aimed at correctness and fluency to a nonlinear and complex developmental process aimed at comprehension and communication; and from teaching language per se to supporting participation in activities that simultaneously develop conceptual understanding and language use (p. 453).

These shifts in perspective will help to integrate content and language to improve academic achievement in science and mathematics for ELs. This instructional shift is intentionally addressed in session one of the PD plan to help teachers to understand why ELs are a collective responsibility for all content teachers.

A language-based approach to content instruction focuses on learning the target language in the content classroom. Teachers use language as the basis of content in order to increase accessibility of the curriculum for ELs. “There are six principles associated with LACI including connection, culture, code-breaking, challenge, classroom interactions, community and collaboration” (de Oliveira, 2016, p. 219). *Connection* reminds teachers to utilize students’ background knowledge in order to explicitly teach content. *Culture* focuses on the considerations teachers should give to the cultural and

linguistic background that ELs bring to a classroom. *Code-breaking* reminds teachers to explicitly teach school and academic language within the content. *Challenge* refers to the principle that all students should be challenged to use higher-order thinking skills and reasoning in the classroom. *Classroom interactions* remind teachers that scaffolding should be used to effectively build classroom interactions between all learners with different levels of language. Finally, *community and collaboration* places a focus on building a community of learners that mutually construct meaning together. Utilizing these principles with fidelity increases achievement for ELs.

**Academic language in content areas.** There are many instructional strategies to support academic language in the content areas, but this section will specifically focus on strategies that can be incorporated during science and mathematics instruction. When teachers spend time developing academic language in science, academic achievement increases (August, et al., 2014a; Llosa et al., 2016). The research on teaching academic language in science focuses on integrating hands-on inquiry and language development (Gomez Zwiép & Straits, 2013). Content area instruction through science provides a meaningful context for developing proficiency in English while mastering academic content and processes (Lee & Buxton, 2013a). These strategies were incorporated into the PD plan in sessions two and three.

Academic language in all content areas can be developed through the use of Four Corners Vocabulary Charts (Smith, Sanchez, Betty, & Davis, 2016). This strategy is more accessible to ELs than a traditional dictionary because they are student-created and written in student-friendly language with visuals. These learning tools can contain an

illustration, synonyms, sentences, and a definition. Depending on the student's language level, native language and/or cognates may be incorporated to increase understanding and meaning. Since students need multiple opportunities to use the new vocabulary to increase depth of understanding, various games can be played such as a modified version of Bingo or Connect Four. Teachers could also challenge students by concealing one of the squares and asking students to complete it from memory. All of these activities are an effort to reinforce academic language usage and ultimately lead to improved academic achievement.

For developing academic language in science, the most commonly described practice is the 5Es (Engage, Explore, Explain, Extend, and Evaluate) inquiry approach. This instructional approach was developed by the Biological Sciences Curriculum Study and is endorsed by many organizations, universities, and schools districts. The main premise of this approach is to help students build on their own understanding of scientific concepts. To modify this instructional model for ELs, Gomez-Zwiep et al. (2015), proposed adding three columns to the lesson template for planning purposes to address language needs of students. One of the columns addresses the concept/language that will be addressed in sequence. The second column is used for teacher language and directions that will be used throughout the lesson. Finally, in the student column, the teacher writes anticipated appropriate student responses with additional information addressing language levels as needed by the students. Additionally, language goals and evaluation is embedded throughout the lesson.



In using this modified 5E model with ELs, four steps are recommended to support ELs with language development (Gomez-Zwiep et al., 2015). First, the teacher should determine the language function related to the science concept being studied and create activities to support these functions. For example, if students need to compare and contrast two things, the teacher would anticipate the type of language functions expected throughout the stages of the instruction. The teachers should develop sentence frames to help students communicate appropriately in a classroom setting using scientific language. These frames will change according to the language levels of the students. Thirdly, teachers should carefully consider the tiered vocabulary needs of ELs and provide activities to further develop understanding. Lastly, teachers should incorporate graphic organizers and other visuals to support further development of academic language. Using these supports, science content becomes more comprehensible to ELs.

Another modified form of the 5Es instructional model involves adding writing in science as a way to increase academic language and conceptual understanding at the same time (Huerta & Spies, 2016). An additional column on the original 5Es template is added to create writing activities. Teachers can use an organization system like a notebook for students to keep all of their writing together. Students can “record their thinking, processes, observations and reflections” related to the lesson (Huerta & Spies, 2016, p. 26). As with the other modified version, teachers should consider students’ language levels when creating writing activities and support as needed. Utilizing writing during this inquiry process helps increase conceptual knowledge and academic language development in science.

Additionally, to explicitly teach the academic language of science, Jung and Brown (2016) introduced the Academic Language Planning Organizer. This is another addition to the 5E template where teachers work through the “content objective, tasks, discourse, syntax, vocabulary, language objective and language supports” (Brown, 2016, p. 852). As teachers work through this organizer, it helps them to deconstruct the language and focus on the needs of ELs. This organizer will be used to support science teachers as they address the language needs of ELs in the PD sessions.

In mathematics, teachers must use instructional and language scaffolding strategies in order to build confidence and maintain engagement, especially when solving problems. As stated before, ELs historically have lower achievement in mathematics assessments, so using mathematical discussion strategies to increase confidence leads to academic achievement (Cho et al., 2015). Some of these strategies include questioning techniques where teachers ask students to explain and justify their answers. Teachers can use referential questions (open-ended) where students explain their problem solving strategy to help the teacher understand their thinking. Teachers can also use display questions (close-ended) where the answer is anticipated and expected. Teachers can provide support as needed based on student answers. Another strategy is to use revoicing where the teacher “repeats, expands, or reformulates student responses as a means of including student contributions in the class-wide co-construction of content knowledge” (Banse, Palacios, Merritt & Rimm-Kaufman, 2017, p. 200). Teachers may use revoicing to affirm what a student is contributing to the discussion and expand on what is missing. This provides a model for students while lowering their affective model through indirect

correction. Students feel valued for their contribution while benefiting from the teacher-modeled discourse.

In addition to questioning and revoicing, teachers can also use think-alouds and self-task as an effective way to model problem-solving approaches for ELs (Banse et al., 2017). Think-aloud is a strategy where a teacher solves a problem orally by talking through the problem-solving method. Students benefit by hearing the thinking and discourse associated with solving the problem. Self-talk, where a teacher uses repetition and extension in the language has similar benefits. This strategy gives students an opportunity to hear the discourse again or in a different way in which they can understand the language. Using these mathematical discussion strategies makes content comprehensible for ELs and allows equal access to instruction.

In contrast to the previous mentioned approaches to academic language in mathematics, Moschkovich (2015) suggests that literacy in mathematics can only be achieved when using three incorporated components through a sociocultural lens: mathematical proficiency, mathematical practices, and mathematical discourse. A shift from in the language from “academic literacy in mathematics” to “academic language in mathematics” is essential to emphasize demonstrating proficiency in mathematics involves a broader perspective on literacy, not just language (Moschkovich, 2015, p. 45). Students should have a conceptual understanding of mathematics to be able to explain answers through reasoning and justification in order to participate in mathematical discourse with others. Effective instruction in mathematics includes providing cognitively

demanding opportunities to demonstrate understanding through discourse in a collaborative environment.

### **Native Language Support**

Providing native language for ELs in the classroom has shifted from a support mechanism to a dual language approach where both languages (target and native) are taught simultaneously. ELs and EOs learn content through both languages at the same time. There are various benefits to using a dual language structure including “academic, linguistic, cognitive, and sociocultural benefits for historically underserved and low-income populations, such as ELLs” (De La Garza, Mackinney, & Lavigne, 2015, p. 366). Students enrolled in dual language programs score higher on assessments than students who are not enrolled in the program (Maxwell, 2014; Valentino & Reardon, 2014). In addition to academic gains, cognitive benefits such as critical thinking and problems solving skills have been found in students who have participated in dual language immersion (Tran et al., 2015). Although using dual language has shown an increase in academic achievement, there is a shortage of teachers to staff these programs particularly in the Midwest and at the local site.

Conversely, prohibition of native language (language 1 – L1) in the classroom has been found to be detrimental to ELs (Silvani, 2014). Students may feel a sense of insecurity or devalued if their language is not acknowledged or supported. Additionally, they may not feel like they can express themselves freely or that their own experiences are not valued. Some teachers also may feel that using the student’s native language may reduce their exposure to English, but actually it provides an additional learning support

for them. Based on classroom observations, teachers use L1 for: “(a) giving instructions, (b) explaining complex concepts or grammar points, (c) defining new vocabulary items, (d) checking student comprehension, and (e) keeping classroom atmosphere” (Silvani, 2014, p. 4). Yet, students use their native language, “(a) during group discussion to build meaning, (b) clarifying instruction, (c) clarifying pronunciation, and (d) expressing frustration” (p. 4). Teachers often use the L1 for giving instructions and connecting new knowledge to learned knowledge, such as grammar points, or vocabulary. Students are most comfortable in their native language, so teachers often use the L1 to understand student’s feelings and clarify understanding. Students use their native language with peers and often to clarify something that has already been taught. Furthermore, students use native language to express feelings and concerns, since it is most comfortable.

When supporting L1 in the classroom, it is important for teachers to be aware of language transfer. Language transfer is whenever a learner connects what they are learning to something in their L1 (Salmona Madriñan, 2014). This is a common occurrence, especially for students who are developing a new language. Teachers should understand that students will make connections to their L1 and capitalize on these opportunities to maximize language learning. This will be discussed in the PD so that teachers are aware of how language transfer may affect a student’s language development.

In addition, a comparison study conducted about teacher characteristics and effectiveness found that teachers who share the same home language as students and have bilingual certification are more effective than their counterparts who lack these

characteristics (Loeb, Soland, & Fox, 2014). This may be due to the fact that teachers can support students by explaining the content in home language as needed. Teachers who have bilingual certification also understand teaching methods for ELs and have had more preparation than teachers without this certification. At the local site, there is only one teacher with bilingual certification; therefore, this will not be a likely solution to address native language.

Although home language instruction (dual language) is the most beneficial academically for ELs, teachers can still use home language support as an effective instructional method (Lee et al., 2013). Because this study is situated in the Midwest with very few bilingual teachers in the district being studied, some practical strategies for how to support native language have been reviewed. One of these strategies is using a bilingual dictionary instead of a monolingual dictionary to specifically address the needs of ELs. Lew and Adamska-Salaciak (2014) suggested that dictionaries should start with native language instead of English because that is the language ELs first think of and are most comfortable using. Each entry should include information about: “noun countability, verb complementation, and typical collocational patterns” (p. 52). There should also be examples and cultural information included in the word entry. In addition, the dictionary should be tailored to the native language and the needs of the student.

### **Implementation**

The purpose of this project was to design practical PD sessions to increase teachers’ knowledge of how to support the academic language and native language development of ELs in third, fourth, and fifth grade. This PD is designed to be delivered

over three days of training beginning with session one. Sessions two and three can be given around the same time as each session involves different teachers. See below for more information about the specific timeline.

### **Potential Resources**

The resources needed for to deliver the professional development sessions are: a projector, a large room to accommodate the teachers, three days of time, and to the attendance of all third, fourth, and fifth grade teachers within the district. Additionally, the trainer would need access to the online learning system used by the district in order to distribute/add the session information. Teachers will need access to the state standards, district curriculum guides, and curriculum resources.

### **Existing Supports**

The local school district is a “paper free” district and utilizes electronic resources and platforms, when available. They use a Moodle platform for sharing information with well-established forums which teachers access regularly. Therefore, the PD sessions will be available via Moodle Google platform and teachers will complete all of the evaluation forms online. All teachers in the district have a laptop and will bring the laptop with them during the sessions. Additionally, seven days for PD, weekly PLC time, and release time for teachers to go to workshops, meeting, etc. is already built into the yearly schedule.

A strong instructional support system is also in place at the local site. There are four instructional facilitators that regularly meet with administrative teams that include EL teachers. This would provide a perfect opportunity for EL teachers to share the progress of implementation with administrators. There is at least one EL teachers at each

school site and in some cases, there are two or three. The EL teachers provide support, share strategies, and often lead PD at the school site. These well-established relationships will aid in the coaching portion of the PD plan. Teachers are used to people observing them including administrators, instructional facilitators, and other teachers.

### **Potential Barriers and Solutions**

There are some potential barriers to implementing this PD plan based on the literature review and data collected during this study. The greatest barrier to implementing something new is time in a variety of ways. In this study, teachers discussed struggling with time to balance academic language instruction and content instruction. A possible solution to this barrier would be to incorporate both content and language. Some teachers believe that students who have limited English cannot learn content language until they learn the basics of the language. However, teachers can maximize time by using the content language to teach English language.

Teachers' schedules are very busy and they may not have time to attend PD sessions or to participate in a coaching cycle. However, for this district, PD time is built into the schedule and required of all teachers.

Another barrier that may interfere with implementing the new practice is teachers' attitudes. Because historically ELs have been taught in isolation under the sole responsibility of the EL teacher, some may still hold the belief that ELs are not their responsibility. However, ELs are the responsibility of all teachers. One possible solution to this type of attitude is to help the teacher understand that he/she is the content expert and therefore, the best person to educate the student. Additionally, change is hard. During



these PD sessions, teachers will need to look at their current practices and evaluate if they are working or not. It is clear from the district data that things are not working as a whole, but sometimes it can be difficult to admit you need a change in practice.

### **Proposal for Implementation and Timetable**

Although I wrote the PD sessions, they are designed to be implemented by a quality trainer who understands second language acquisition and has a rapport with the staff. Presumably any of the EL teachers in the district could implement the PD plan. The ideal timeline for the plan would be to conduct session one during the second month (September) of the school year. That way, the teachers are less busy with beginning of the year procedures and have time to implement the new practice before state assessments in the spring. It would be best to have the next two sessions a month after the first session (October) so that teachers could participate in coaching sessions before the first semester is over. Each session is scheduled to run from 8:00 a.m. to 4 p.m. with two breaks and a lunch hour. This is the typical PD session for the local district. Most PD sessions are conducted throughout the school year to reinforce effectiveness of the PD and provide a platform for teachers to talk about current practice (Diamon, Maerten-Rivera, Rohrer, & Lee, 2014). Evaluation will take place at the end of each session with results shared with the administrative team and the EL teachers at each school.

The coaching sessions will be during PLC times as determined by the teacher and the coach. It would be ideal to have the first coaching session immediately after the third session so that teachers can implement the plan they made in the PD session. Subsequent coaching session can be arranged by the teacher. Coaches will use the Academic

Language Development Observation Form (Appendix G) to provide feedback to teachers. After the first semester, teachers could set up a regular observation schedule so that they can monitor implementation of the language functions.

### **Roles and Responsibilities of Students and Others**

The implementation of a district-wide plan requires that all stakeholders be involved in the implementation and evaluation process. First, the trainer will be responsible for implementing all of the sessions and coordinating with school staff. This includes distributing all the materials, providing the training sessions, maintaining communication with administration/teachers, and following up with support as needed. The administration would be responsible for arranging the site and arranging the timing for the sessions. The general education teachers' responsibilities include: (a) attending the relevant sessions and participating in all of the activities during the sessions, (b) completing the evaluation after the relevant session(s), (c) participating in the coaching session and working with the coach to facilitate growth, (d) implementing the new practice with fidelity, and (e) asking for help and support as needed. The responsibilities of the EL teachers include: (a) providing a demonstration lesson during sessions two and three, (b) observing teachers and participating in the coaching cycle, and (c) providing support to general education teachers as needed. The students would be responsible for participating in the activities that are implemented by the teachers. Additionally, the results of the study and project will be shared by the researcher with all of the administration and school board at the local site.

## **Project Evaluation Plan**

Evaluating professional learning includes several stages to address different needs. For this project, there will be two types of evaluation, formative and summative. The formative evaluation will be in the form of an open-ended questionnaire at the end of each PD session and through the observation form used by coaches. The summative evaluation will include state assessments, district assessments, and student artifacts to demonstrate achievement.

### **Formative Evaluation**

Formative evaluation occurs while the PD is taking place and informs the trainer if things are progressing as expected. Guskey (2014) suggested three questions to consider when creating a formative evaluation plan: (a) *What conditions are necessary for success?* (b) *Have those conditions for success been met?* (c) *Can they be improved?* (p. 1220). Formative evaluation is devised to be a reoccurring practice that takes place several times over the duration of the PD program. For the PD plan, the formative evaluation will be ongoing as the last part of each session and will help the trainer to know what type of support is still needed for teachers. The questions for the evaluation will be: (a) What is your definition of academic language? (b) In what ways do you think this definition has changed as a result of this PD session? (c) What did you learn in this session that will most effectively help you support ELs in the development of academic language? (d) Comments/questions? The questions provide information on what the teachers learned about academic language (outcome), how their definition has changed over time, and what effectively helped them. The trainer will use this information to

inform sessions two and three and also share with the instructional coaches that will be helping to support the teachers. It is important to note that all responses will be confidential. Teachers will complete the evaluations on a Google form that will not be connected to them in any way. There is a real fear about honesty and retribution from administration in public schools, so the responses will be kept anonymous since they will be shared with administrators and those on the leadership team. The responses will need to be shared so that the administrators can support teachers for upcoming PD sessions since the trainer may not be involved in subsequent training.

In addition to the formative evaluation being used at the end of each PD session, the coaches will use the *Academic Language Development Observation Form* to provide feedback to teachers. Coaches will be looking to identify the content and language objectives, language function, procedure, supports used, and include any other relevant information. Coaches will then use this information to give feedback to teachers, but also to see which practices are being used across the school and how teachers are implementing the language functions. Direct observations provide the most accurate information about implementation (Guskey, 2014). It would be ideal to have these observations each month, but it depends on the schedules of the teachers. Coaches would also share this information with administrative teams as a way of accountability and to demonstrate implementation patterns.

### **Summative Evaluation**

Summative evaluation occurs at the end of the PD and helps “program developers and decision makers with judgments about the program or activity’s overall merit or

worth (Guskey, 2014, p. 1221). In this case, the ultimate result of this training would be an increase in student achievement for ELs. In order to summatively test the efficacy of the professional development on student learning outcomes, state assessment in English Language Arts, mathematics and science will be compared before and after the PD is implemented using statistical techniques. Additionally, teacher participants will gather formative assessment data to explore the effects of their change in practices using quarterly assessments and/or artifacts that demonstrate mastery of academic language.

### **Project Implications for Social Change**

The local school district has struggled to meet the instructional need of ELs for nearly a decade (DESE, n.d.a). All teachers have been trained in CLR teaching methods with subsequent sessions and supports, yet no formal evaluation of the implementation of those methods had been conducted. Based on this study, it was determined that teachers had knowledge about instructional scaffolding, but would benefit from learning more about how to best utilize language and content area scaffolding through professional development. Specifically, teachers needed strategies for how to effectively and efficiently support ELs in content specific academic language through the use of content literacy and native language strategies. Additionally, the research supports that academic language is “a major contributor to the gap in achievement between ELs and native speakers of English” (Pritchard & O’Hara, 2016, p. 1).

### **Local Community**

This training has the potential to impact all stakeholders in this community. First, the teachers will be impacted. In these sessions, teachers will learn specific instructional

practices that will maximize time by integrating language and content in every lesson. This will improve teacher confidence because they will successfully be able to support ELs in their classroom. The majority of the teachers in this district are not EL certified and this would give them the much-needed support to create appropriate lesson plans concerning academic language and native language. Teachers will also grow professionally by learning new instructional strategies, which could lead to a change in practice. If teachers could continue using these practices year after year, they would impact many students.

Second, this training impacts students. ELs spend the majority of their time in general education at the local site, so they would benefit from teachers implementing instructional practices to increase their academic language. This is particularly important in science and mathematics since this district has become involved in STEM and hosts regional events at the high school. Student development of academic language is linked to academic achievement and therefore more students could be involved in these higher-level activities (Schleppegrell, 2012). Ultimately, with an increase in achievement, ELs would have more options for college and career choices.

Third, this training would impact the district as a whole. The district has teetered between accreditation and non-accreditation for several years now with provisional status. They have had to offer school choice and parents have limited choices of successful schools. They have consistently been below the state standard for nearly ten years. However, if teachers learn and implement instructional practices to support ELs,

this could possibly raise the achievement for the lowest group in the district. This could positively affect accreditation status, graduation rate, and the reputation of the district.

### **Larger Context**

Should the evaluation show the professional development effective in raising student achievement, it could then be implemented in districts across the country as a way to support academic language and native language of ELs. The population of ELs is increasing across the country and many areas are reporting shortages of qualified teachers. If all teachers were trained in effective instructional practices for ELs, there would be no shortages of teachers. This has the potential to raise achievement for nearly five million students in public schools in the U.S.

### **Conclusion**

The results of this study indicated a need for teacher knowledge development of instructional strategies to promote understanding of academic language and native language for ELs. Therefore, professional development was developed in order to provide teachers with the knowledge to maximize time by using content plus language in their instructional practices. In addition to attend the sessions, teachers will participate in a coaching cycle that will support implementation of the instructional practices. Finally, a formative and summative evaluation is included to test the efficacy of the professional development and assess whether it was beneficial for the district. The next section I will provide reflections on and conclusions of the study including the strength and limitations, recommendations for alternative approaches, and a personal reflection.

## Section 4: Reflections and Conclusions

### **Introduction**

I chose a qualitative project study to investigate why academic achievement for ELs was not increasing over time despite teachers receiving PD specifically for culturally and linguistically diverse students. I chose this method because I wanted to understand specifically what enhanced or constrained implementation from the teachers' perspective (Creswell, 2012). Interviewing teachers gave me the opportunity to elicit more information through open-ended interviews. Observations also afforded me the opportunity to see which practices were being implemented. After analyzing and triangulating the data, it became evident that I would need to develop a PD to address the implementation barriers teachers described in language scaffolding and content area scaffolding. Although teachers stated they used these instructional practices, they were rarely observed during data collection. Additionally, nearly every teacher mentioned they needed more training in how to support ELs, particularly in mathematics and science language, so that solidified the project for me.

### **Project Strengths and Limitations**

The interactive structure of the PD is a strength of the project. I used the CRL strategies that teachers are familiar with as a backbone for guiding discussion protocols throughout the PD sessions. Teachers are accustomed to discussing their own ideas and what they have learned with other teachers. I tried to make sure teachers were moving and talking every few slides so that they can process the new information. Collaboration is integrated during nearly every part of the plan.



The content of the PD is also a strength because it is structured by using the Common Core State Standards and New Generation Science Standards as a skeleton for discussing the instructional practices. The teachers are familiar with these standards as they have to use them in every lesson plan. I also used the 5E format for lesson planning since teachers already use this in the district. Since teachers are familiar with the standards and type of lesson plan, they could focus specifically on implementing the instructional practice for academic language and native language directly into something they already do. Also, the content was relevant to the teacher. For example, sessions two and three were specific to science and mathematics teachers. Teachers will become invested because it is specifically planned for their disciplines. When teachers are invested in their own learning, participation increases (Carter et al., 2016; O'Hara et al., 2013).

Another strength of the PD was that it utilized existing planning structures to accommodate busy teachers' schedules. During the PD, there was built-in planning time where teachers can collaborate with their grade level colleagues and content partners. Additionally, during the coaching cycle, teachers can work directly with the EL teacher at the home school and collaborate during PLC time. Again, this is a time already created in the schedule where teachers can discuss their observations and get feedback from the coach.

Additionally, I was able to build this project based on nearly equal representation from all three grades. Initially, I wanted to get equal representation from all schools and all grades. However, because of end-the-year scheduling conflicts, I was unable to get

representation for fourth and fifth grade at two schools. However, other teachers stepped up and I interviewed 23 teachers when my original sample size was only 18. Essentially, I interviewed “enough” to satisfy my criteria. Seidman (2013) describes “enough” with two criteria in mind. One is sufficiency and the other is saturation of information. In my interviews, I was able to sufficiently cover all of the grades and I reached saturation through repetition of answers.

Lastly, this PD is immediately applicable for teachers. In the PD sessions, teachers will be working to identify practices that they can use in the upcoming week to bolster the academic language and native language development in their classes. They will be sharing these plans with colleagues and on an online platform during the evaluation. Because of the time factor mentioned in the data and literature review, I wanted to maximize the time teachers spend in the PD sessions so that they would walk away with a practical lesson to implement the next day.

Although there are several strengths in this project, there are also a few limitations. One of the limitations of this study is that it only focuses on academic language and native language support. Teachers also mentioned several barriers to cooperative learning, but cooperative learning was observed in nearly every lesson. Small groups was also another area that could have been focused on, but again it was observed in a majority of the lessons. These areas are so intertwined and I wish I could have created a PD that focuses on all of the needs that contributed to academic achievement with ELs. Unfortunately, I had to choose something that was a clear need in the data and supported by research.

Another limitation of this project is that it was created based on data collected from only 23 of the 72 teachers in the district across three grades. Although I was able to get “enough” for the sample size needed, I still wish I could have included the input of more teachers in more grades in the construction of the project. The evaluation of the PD sessions will allow the trainer to get insight from all of the participants and the coaching sessions will also support all teachers. Then, hopefully, the PD can be expanded into lower elementary and secondary.

Additionally, the strategies mentioned by teachers in the interviews were not always evident during the observations. Although this could be seen as a limitation, it is important to note that observations were just a snapshot into what was being taught during one lesson. The teacher could have possibly used one of the mentioned instructional practices earlier in the day or a previous day. In order to address this possible limitation, more lessons for the same teacher would need to be observed across content areas throughout the day. This would give a more comprehensive understanding of which instructional practices are being implemented consistently.

Lastly, the PD is limited in the scope of the content. For sessions 2 and 3, I only focused on science and mathematics while excluding English language arts and social studies. Although I used some examples from English language arts in session 1, I could have included more in social studies. I left them out because social studies is not a tested subject and there are few teachers in that area. Science and mathematics are areas of assessment and are used to rate the district for accreditation. Additionally, with the

district becoming more involved in STEM education, this became an equity issue for ELs having access to those advanced classes.

### **Recommendations for Alternative Approaches**

The problem of student achievement is a complex issue to investigate and it took me a long time to identify one possible contributing factor at the local site. Although instructional practices have the most impact on student achievement, other factors include: student attendance, teacher preparation, limited resources, amount of instructional minutes, classroom management, home life, influence of first language (Hansen-Thomas et al., 2014). I could have investigated one of these factors instead of instructional practices through qualitative or quantitative methods.

Another way to investigate this problem of student achievement would have been through a mixed methods study in order to review the entire EL program. This would have involved surveying administrators, teachers, and parents to find out factors which may affect student achievement. I could have also looked at the different types of EL models that students participate in across the schools such as push-in, pull-out, and full inclusion. I could have reviewed documents including state assessments, 30-60-90 day administrative plans, quarterly assessments, and curriculum guides. This would have given me a full view of the type of education that ELs receive.

A third way of investigating the problem would be to change my sample. For this sample, I focused on general education teachers in grades through five. I chose this sample because at the time I was teaching at the high school and had already taught in the middle school. This presented a conflict of interest for me. However, I could have

focused on the early childhood, lower grades, or the teachers at the other middle school. Instead of mainstream teachers, I also could have focused on the EL teachers in the district in early childhood through eighth grade. This would have allowed me to see the whole spectrum of second language acquisition, but I would have been quite limited since students usually spend an average of one class period per day with these teachers. Instead, I chose to focus on the teachers with whom they spend a majority of their time. Additionally, I could have interviewed the administrative team from each school to investigate the EL instruction in each of their buildings. The curriculum facilitators also could have been included since they are in charge of curriculum implementation. But I felt it was more important to hear directly from teachers because I really want to know their perception of which instructional practices were being implemented.

### **Scholarship, Project Development and Evaluation, and Leadership and Change**

Completing this project study is one of the hardest things I have had to do in my life. Maintaining interest in a program for six years was challenging for me especially with the ups and downs of life. I dedicated many weekends to write and sacrificed time with my family and friends in order to complete this study. Along the way, I learned a few things about myself.

First, I have never really considered myself a scholar and have always achieved average grades in school. For the first time in my life, I got a 4.0 in a degree program. I was consumed by the research and the deeper I dove into the literature, data, and analysis, the more involved I became in the work. I learned how to organize an extensive literature review. When I submitted my literature review for the proposal, one of the comments I

received was “this literature review does not meet the standard for doctoral work.” My literature review was eight, maybe nine pages and insufficient to say the least. It was literally a bibliography with very little synthesis. Once I figured out how to use a chart and organize all of my ideas, I was able to start working on the sections and create a synthesized literature review.

I struggled to write a proposal and during the first semester of the proposal, I received an unsatisfactory score. I had just moved to Uganda to take a new job and I was very overwhelmed with classes, work, and culture shock. It was also very difficult to research there because of the internet and electricity outages. I learned to have plan A, B, and C to make sure things were submitted on time and I communicated with my classmates. Once I came back home, I was able to narrow down what I wanted to study after months of talking with my chair, administrator, and colleagues.

I really enjoyed the data collection and talking with teachers. I had observed student teachers before, but this was the first time I had collected data. I was very nervous during the first few sessions because I was afraid that I would miss something or not collect enough data. Then, I started to enjoy myself and just let the teachers talk about their experiences. I had to stop myself from talking about my own experiences, but sometimes I did to establish trust and create a comfortable environment. The worst part of data collection was the transcribing. It took me months upon months to transcribe. At first, my strategy was to transcribe after every interview, but my schedule caught up with me and I got behind. Then, I had around twenty hours of interviews to transcribe. I absolutely despised it, but I knew that I wanted to do my own transcribing because I

wanted to review the data and honestly, I did not trust anyone else. I wanted to make sure it was accurately transcribed and it also helped me to create codes. Next time, I want to conduct interviews, I will have them transcribed for me.

Data collection was problematic because I worked for the district in which I was collecting data and my human resources director said I could only collect data after my workday. Thankfully, since I was at the high school, our day finished before the elementary schools, so I was able to complete an observation and interview on most days. The teachers were gracious enough to stay after school so I could conduct interviews. As a thank you gift, I sent teachers who participated some of my favorite used books. Since I was moving to Turkey, I needed to get rid of books and it also gave me an opportunity to show my appreciation for their contribution to my study.

Data analysis was another difficult step because there was so much data and I did not know how to make sense of it all. I had already highlighted my themes, but even when I put interviews side-by-side, there was so much highlighting that I couldn't really see how I was going to put it all together. My chair suggested that I pull out the color-coded chunks and organize them by questions and category. So, I did and I was able to find specific quotations to support my findings. Although this step took a long time, it was essential in my data analysis progress and it saved time when I was writing it all up.

The final literature review took months because there were so many relevant articles to support my project. Professional development with ELs is a largely published topic right now, especially in mathematics and science, so I reviewed nearly 100 articles. Again, I used to same matrix to create the citations and take notes on each article. This

saved me time when I was writing up the literature review because I knew exactly where to find the information. I finally feel like I can write a synthesized literature review worthy of the doctoral level.

Although I had planned PD before, this PD was more comprehensive and longer to plan. I was responsible for providing a PD session to my school once a month, but they would last about 45 minutes, but this plan is three days of training. I wanted the PD to be relevant, interactive and reflect the literature review. The hardest part for me was designing original products and making them relevant to the objectives. It was also difficult to create activities for grades I have not taught. I relied heavily on the research and other resources to help me design appropriate activities. Since I had worked with the district for 13 years, I knew the PD systems and timetables. I also knew the environment and what might work for the teachers in the district. I designed my PD plan with all of these things in mind.

Overall, I am proud of the work I have done and even more proud of the possible implications. Throughout data collection, I sat through some observations that were painful to watch. I knew that students were not receiving the most appropriate education and often they would shut down during lessons. I also listened to teachers explain how they struggled to support the ELs in their classrooms. They pleaded for training and I knew that this plan would provide the support they need. That, it itself, is satisfaction in the work.



### **Reflection on Importance of the Work**

During the time I was writing my proposal, I had the pleasure of planning and opening an International Welcome Center (IWC) in our district last year in order to best address the influx of newcomers into our district. When we first opened the IWC, our focus was students who were in ninth through twelfth grades with proficiency levels of one through three on the W-APT/ACCESS assessments (state assessments which measure of proficiency of English in reading, writing, listening, and speaking). Some of the students had already been at the high school and some were coming directly from another country. Within the first few months of teaching at the IWC, I began to realize the importance of appropriate instruction. Our students excelled, participated, volunteered. They loved school. For some of the students who came from the high school, it was the first time they had felt comfortable and took risks in the classroom since entering the U.S. This solidified my research interests in instructional practices.

Teaching is an overwhelming responsibility. I am in charge of the education of a student for one school year (sometimes more). The instructional practices I choose make an impact on my students. They make the difference between access to content granted and access to content denied (Short et al., 2012). They make a difference between graduation and dropout. They make a difference between poverty and middle class. From a social justice perspective, it is an absolute right that all students receive the best education possible with trained teachers (Bravo & Cervetti, 2014). They deserve equitable opportunities to access the curriculum in order to reach attainable goals. I (as the teacher) am the ultimate variable in this equation.

The focus on ELs has reached national proportions that the U.S. government is awarding large grants to help support training for teachers. I recently reviewed applicants in a grant competition for the U.S. department of education that is focused on “funding to support professional development activities intended to improve instruction for English learners and assist education personnel working with such children to meet high professional standards” (National Professional Development Program, n.d., p. 4). It is exciting to see the number of teachers that could be trained in the future and most importantly how many students that training could impact.

### **Implications, Applications, and Directions for Future Research**

This project study has the possibly to affect over 6,000 students in a suburban, low socioeconomic district because these instructional practices are beneficial for all students. Academic achievement will increase and in turn the district will maintain accreditation. Additionally, the district will produce leaders and productive citizens.

One implication for this study is to provide teachers with continuous support. After the sessions, I included information about a coaching cycle. Learning the knowledge is only one part of implementing a new practice. Teachers need to be supported during implementation or they will abandon the practice. A regular, non-evaluative coaching cycle needs to be created in all schools so that implementation is monitored and supported. Additionally, teachers could observe each other to get an idea of different instructional practices in action. Utilizing in-house experts is efficient, beneficial, and low-cost.

Another implication of this study is how it will affect parents. After teachers have been appropriately trained, it would be beneficial to start working on parent/teacher communication. Teachers could share the practices they are using with parents and even help to create tips for the way that parents could help support students. Parental involvement for ELs is often low because of the language barrier, extra jobs, childcare, and numerous other factors. If these factors could be addressed, parents would be able to learn more about how they could support their children.

Since this project study only focused on grades three through five, it would be best to conduct a full-district study to get an idea of which instructional practices are being used at which grades. It would also be beneficial to examine how many minutes teachers are dedicating to academic language development per day, per grade linked with achievement scores or quarterly assessments. There is a correlation in the research that between the number of minutes spent developing academic language and achievement (August et al., 2016; Pritchard & O'Hara, 2016).

At the organization level, this project study emphasizes the importance of a requirement for all teachers to be trained in how to best support ELs. This could be done at the preparation level (universities) or the local level (district). Additionally, support measures need to be put in place such as follow-up PD sessions, book studies, observations, coaching cycles, and/or additional courses.

### **Conclusion**

The achievement of ELs not only has an impact on the local district, but on the entire nation. At nearly 10% of the public school U.S. population (and increasing),

teachers can no longer turn a blind eye to the ELs sitting in their classrooms. Districts, schools, and teachers have an urgent obligation to provide the most appropriate instructional practices for ELs so they can become productive members of society. This PD will provide the teachers with the knowledge and strategies to effectively develop academic language in order to increase achievement with ELs in the upper elementary grades.

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## Appendix A: The Project



Developing Academic Language and  
Native Language For ELs  
Session 1

**Note to Trainer:** Welcome everyone to the session.

## Ice Breaker – Who are you? Stand up if this describes you...

- I have never been out of the country before.
- I speak another language.
- I have traveled to Mexico.
- I have children.
- I live close to my job.
- I teach math.
- I teach science.
- I am a teacher.

**Note to Trainer:** 8:00-8:05

Ask teachers to stand if the statement describes them. The teachers sit after each statement.

Purpose – to make everyone feel comfortable and to establish who is in the room.



# XX School District

## Mission

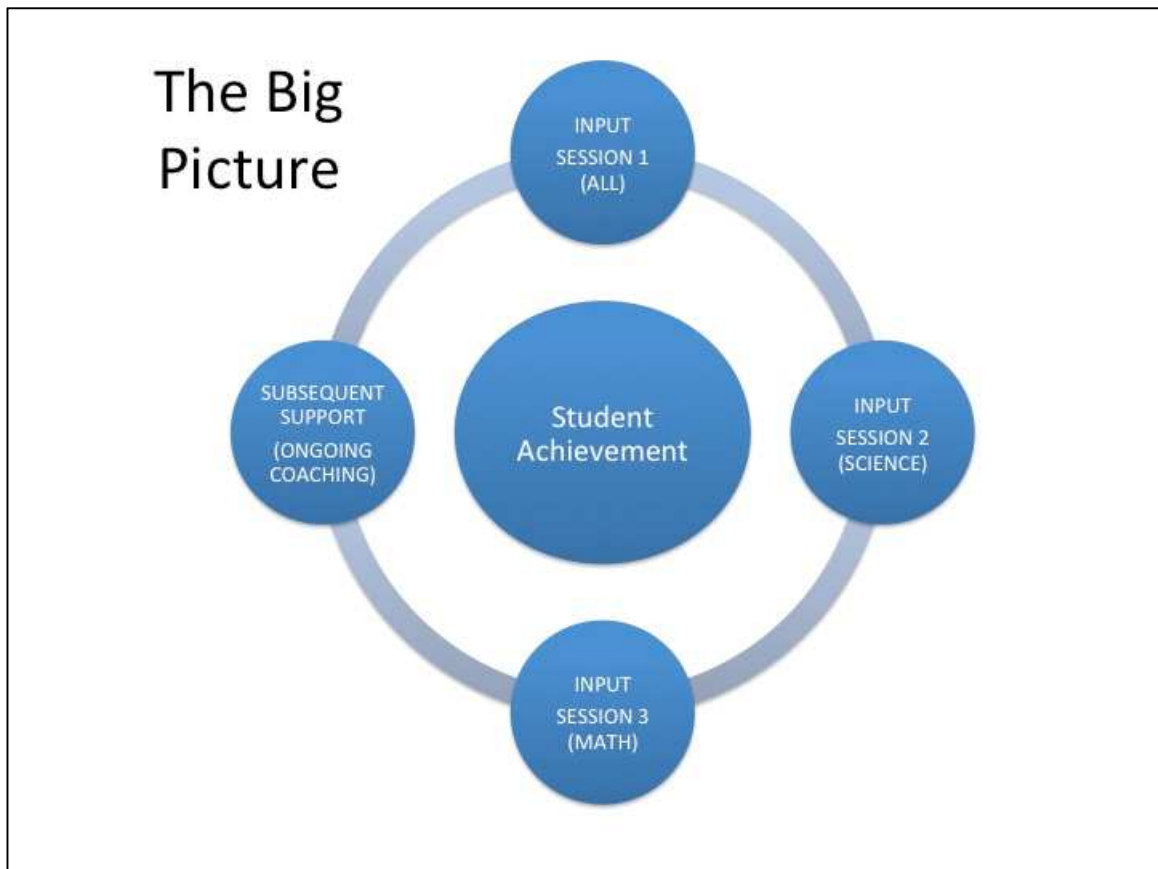
The mission of XX School District is to ensure learning occurs in a supportive environment that enables every student to think critically, solve problems and develop the knowledge and skills necessary for success in our diverse, global society.

## Vision

XX School District, in partnership with parents and community, will develop leaders recognized for academic excellence and produce graduates who will become productive citizens and lead lives of personal integrity and fulfillment.

**Note to Trainer:** 8:05-8:15  
Review the overall view of the PD plan

Purpose - to help teachers to understand the overall big picture of the PD.



**Note to Trainer:** 8:05-8:15  
Review the overall view of the PD plan

Purpose - to help teachers understand the overall big picture of the PD.

## Day 1 - Schedule

Time	Activity
8:00-9:00	Understanding the RSD English learner, data, current study
9:00-10:00	Academic Language
10:00-10:15	Break
10:15-12:00	Instructional Practices (CCRAS for Language #1-3)
12:00-1:00	Lunch
1:00-2:45	Instructional Practices (CCRAS for Language #4-6)
2:45-3:00	Break (transition to small groups)
3:00-4:00	Content Specific Planning/Share/Evaluation

**Note to Trainer:** 8:05-8:15

Go over schedule and establish breaks and lunch procedures. Tell the teachers that they will be guided through the PD using College and Career Readiness Anchor Standards (CCRAS) for language.

Purpose - to help teachers know what is coming next and how to anticipate needs/breaks.


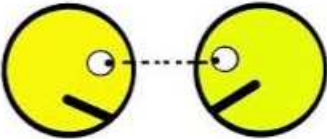







## Objectives

- Understand the current state of ELs in RSD
- Understand how ELs learn and process academic language
- Learn instructional practices for how to support academic language
- Create a plan to incorporate one instructional practice into your class

**Note to Trainer:** 8:05-8:15

Go over objectives.

Purpose - to share what will be learned throughout the course of the day.

Workshop Basics – Participation Protocols (Dr. Hollie)		
<p>Moment of Silence</p> 	<p>Silent Appointment</p> 	<p>My Turn, Your Turn</p> 
<p>Think-Pair-Share</p> 	<p>Partners</p> 	<p>Whip Around</p> 
<p>Give One, Get One</p> 	<p>Let Me Hear You</p> 	<p>Shout Out</p> 

**Note to Trainer:** 8:15-8:20

Review the Dr. Hollie symbols. All teachers will be familiar with these concepts just maybe not the symbols. Remind teachers that every time they see the symbol, they will follow the protocol.

Moment of Silence – Teachers pause for a moment of silence while they are working on a task. There is no talking during this time.

Silent Appointment – Teachers make an “appointment” with someone in the room by locked eyes and agreeing to meet. No talking, just body language.

My Turn, Your Turn – This is a turn-taking protocol where one person talks and the other listens. They do not interrupt each other. Then, they switch roles.

Think-Pair-Share – This is a three-step process where the person first thinks silently about a question. Then, individuals pair up and share their thoughts. Then, the pairs share their ideas with another pair or the whole group.

Partners – Teachers turn and share with someone close to them.

Whip Around – This is a sharing protocol where the facilitator goes around the group and everyone shares a short answer.

Give One, Get One – This is a sharing protocol where teachers share one answer and get another answer back.

Let Me Hear You – Teachers respond to a call back signal to get everyone back on track.

Shout Out – This is a sharing protocol where everyone shouts out his or her answer at the same time.

Purpose – to establish participation protocols throughout the workshop.

## Partner Talk

- What is the profile of our English learner?
  - Education?
  - Language level?
  - Experiences?
  - Economic class?
  - Parents/family?



**Note to Trainer:** 8:20-8:30

Ask teachers to work with a few partners to discuss the education, language level, experiences, economic class, and parents/family of ELs in the local district (partners, share out to whole group).

Purpose – to give teachers time to think and process who the ELs are in their school and try to communicate their perceptions with others.

## ELs in XX District

- Education?
  - Interrupted, transient
- Language level?
  - Little/no English (unless started in K)
- Experiences?
  - Immigration, travel, cultural
- Economic class?
  - In poverty, free/reduced lunch
- Parents/family?
  - Family orientated, working many hours, little/no English, often unable to finish high school, highly value education

**Note to Trainer:** 8:30-8:35

Describe the profile of an EL in the district based on education, language, experiences, economic class, and parents/family.

Purpose – to establish a common base among teachers about the real profile of an EL and dispel any myths and/or misconceptions.

## Four Years of Data (ELA, Math, and Science)

Content	Years	ELs (prof+ adv)	EOs (prof + adv)	Total Gap % (ELs - EOs)
ELA	2013	9.6%	34.5%	-24.9%
	2014	8.0%	38.6%	-30.6%
	2015	21.4%	46.6%	-25.2%
	2016	28.6%	48.5%	-19.9%

Content	Years	ELs (prof + adv)	EOs (prof + adv)	Total Gap % (ELs - EOs)
Math	2013	28.8%	39.9%	-11.1%
	2014	25.0%	40.7%	-15.7%
	2015	11.4%	31.4%	-20.0%
	2016	26.6%	40.3%	-13.7%

Content	Years	ELs (prof + adv)	EOs (prof + adv)	Total Gap % (ELs - EOs)
Science	2013	21.2%	31.9%	-10.7%
	2014	7.7%	31.3%	-23.6%
	2015	4.5%	37.3%	-32.8%
	2016	11.6%	25.9%	-14.3%



TALK WITH A PARTNER

- What are your observations about the data?
- What has contributed to the data?

**Note to Trainer:** 8:35-8:50

Discuss current data and brainstorm some possible contributions (partners, share out to whole group).

Purpose – to make sure all know the data and have time to think about some of the possible contributing factors.



## Local District Versus MO

GLA	Local District (proficient + advanced)	State of MO (proficient + advanced)	Difference (local district – state of MO)
ELA 3	41.1%	47.2%	-6.1%
Math 3	31.9%	40.2%	-8.3%
ELA 4	35.1%	47.6%	-12.5%
Math 4	29.0%	37.9%	-8.9%
ELA 5	28.6%	44.6%	-16%
Math 5	26.6%	32.9%	-6.3%
Science 5	11.6%	22.3%	-10.7%



### TALK WITH A PARTNER

- What are your observations about the data?
- What has contributed to the data?

### Note to Trainer: 8:35-8:50

Discuss how the local data and the state of MO data are different and what has contributed to those differences (partners, share out to whole group).

Purpose – to make sure all know the data and think about contributing factors.

## Project Study

- Research questions:
  - What instructional practices by general education teachers for third, fourth, and fifth grade ELs in English language arts, math, and science in mainstream classrooms?
  - What factors enhance and/or constrain implementation of instructional practices by general education teachers for third, fourth, and fifth grade ELs in English language arts, math, and science in mainstream classrooms?
- Participants – 3<sup>rd</sup>, 4<sup>th</sup>, and 5<sup>th</sup> grade teachers with ELs currently (observation) and within the past three years (interview)
- All schools represented
  - 23 interviewed (9 – 3<sup>rd</sup>, 9 – 4<sup>th</sup>, 5 – 5<sup>th</sup>)
  - 22 observed (8 – 3<sup>rd</sup>, 9 – 4<sup>th</sup>, 5 – 5<sup>th</sup>)

**Note to Trainer:** 8:50-9:00

Discuss the participants and the research questions from the study (based on data).

Purpose – to help teachers understand the study and the rationale for the PD.

## Project Study Results

Strategy	Discussed usage	Observed	Indicated Barrier to be Addressed	Barriers
<b>Instructional Scaffolding</b>				None
Visuals	91%	86%	50%	
Small Groups	100%	41%	18%	Class sizes and time; supporting all students including ELs
Hands-On	96%	Not part of protocol		None
Multiple Modalities	100%	86%		None
Graphic Organizers	61%	18%	27%	Difficult organizers
Cooperative Learning	96%	68%	83%	Difficulty with students working together; ELs unwilling or unable to contribute to group; accountability for all students
<b>Language Scaffolding</b>				
Native Language	83%	0%	100%	Language barrier
Academic Language	91%	32%	88%	Teacher requested training; time; too much vocabulary to teach
<b>Content Area Scaffolding</b>				
Content Literacy Strategies	65%	36%	88%	Difficulty of learning language and content together
Background Knowledge	55%	23%	75%	Lack of student background knowledge; Lack due to language and culture

### Note to Trainer: 8:50-9:00

Explain the results to staff and also the highlighted areas. Make sure to identify that these were chosen for the following reasons:

- (1) They were indicated as a barrier to be addressed by the highest number of teachers.
- (2) They had the greatest difference between what was observed and discussed.
- (3) Teachers indicated that there was a need for training in how to support/teach academic language.

Purpose – to help teachers understand the reason for the PD.

## Partner Talk



- What are the different “languages” we teach?
- How do you teach language on a daily basis?
- What is “academic language”?



We will share with a whip around so think of one or two words to define *academic language*.

**Note to Trainer:** 9:00-9:15

Give the teachers time to discuss these questions with a partner and then share out with the group.

Purpose – to learn what teachers know about academic language.

## Academic Language (teachers)

**Note to Trainer:**

Use this template with the previous slide to record what teachers say during the share time (academic language).

Purpose – to record what teachers understand about academic language.

## Definition (WIDA)

Academic language is...

*the language required to succeed in school that includes deep understandings of content and communication of the language in the classroom environment. These understandings revolve around specific criteria related to discourse, sentence, and word/phrase levels of language (WIDA, 2011, p. 1)*

**Note to Trainer:** 9:15-9:20

Read and share the definition of academic language from WIDA. Teachers are all familiar with this definition since they have been working with the EL teacher using WIDA requirements.

Purpose – to establish common understanding of academic language.

## Why are the different types of language we speak?

- “home” language
  - Language taught at home; may include other languages or combination of both
- “formal” language
  - Also called *academic* or *school* language (CLR)
  - Learned in school, from reading, media
- “professional” language
  - Language specific to a job

**Note to Trainer:** 9:15-9:20

Share the types of languages we speak and explain various situations where these forms of language might be appropriate.

Purpose – to establish common understanding of the type of languages used in the local district.

## Shift In Instruction

- Language has shifted from teaching in isolation to the teaching of language
- Responsibility has also shifted from EL teacher only to all teachers
- Teachers are using content to teach language
- Shift in standards as well with an increased focus on reading, writing, listening, and speaking

**Note to Trainer:** 9:20-9:25

Explain the shift in instruction from language taught by EL teachers in isolation to mainstream teachers using content to teach language to ELs.

Purpose: to help teachers to understand this shift in instruction.



## Foundational Instructional Practices

High-impact practices	Fostering academic interactions
	Fortifying academic output
	Using complex texts
Cross-cutting practices	Clarifying academic language
	Modeling complex language
	Monitoring and guiding language learning
Foundational practice	Designing language and literacy activities

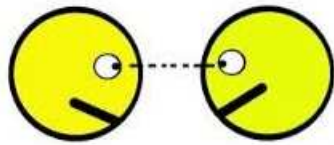
**Note to Trainer: 9:20-9:25**

Explain to teachers that these are the foundational instructional practices based on research.

Purpose – share research and give teachers an opportunity to discuss the implications.

## How does this affect us?

- In light of these shifts, what do you anticipate might be the needs of ELs?
- What do you anticipate might be the needs of the mainstream teachers?



Silent Appointment

**Note to Trainer:** 9:25-9:40

Give teachers time to make a silent appointment, meet with their partners, and then discuss the questions. After 8-10 minutes, bring the teachers back and share out with group.

Purpose – to give teachers time to process and share their ideas about this shift in instruction.

## Instructional Practices Using the College and Career Readiness Anchor Standards for Language

### **Conventions of Standard English**

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

### **Knowledge and Application of Language**

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading and listening.

### **Vocabulary Acquisition and Use**

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials as appropriate.
5. Demonstrate understanding of word relationships and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

**Note to Trainer:** 9:40-10:00

Ask teachers to read the standards. They are already familiar with these standards.

Purpose – to make sure all teachers know and are informed of the language standards.

# Think-Pair-Share

- Look at the language standards.
- How do you demonstrate these language standards in your classroom?



Note to trainer: 9:40-10:00

Give teachers time to think about how they use the standards, talk with a partner, and then choose several volunteers to share out to the group.

Purpose – to help teachers to brainstorm how they use the language standards and share their practices with colleagues.

Break 10:00-10:15



## Instructional Practices Using the College and Career Readiness Anchor Standards for Language

### **Conventions of Standard English**

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

### **Knowledge and Application of Language**

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading and listening.

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5. Demonstrate understanding of word relationships and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

# College and Career Readiness Anchor Standards for Language

## Conventions of Standard English

1. Apply the Conventions of Grammar and Usage in Writing and Speaking
  - ❖ Explicit teaching is needed so that students directly and efficiently learn features of the second language such as syntax, vocabulary, pronunciation, and norms of social usage
  - ❖ Provide many opportunities to use the second language in meaningful and real ways (organic opportunities)

**Note to Trainer:** 10:15-10:30 – Standard 1 (strategies A-D)

Go over and explain each strategy and example. Explain to teachers the importance of conventions when teaching academic language.

Purpose – to help teachers to understand standard 1 and how it applies to teaching academic language.

## A. Grammar Lesson Planning Checklist

When planning a lesson, use this handy list to make sure you are meeting the grammatical needs of all students.

Will my lesson provide:	✓
1. A simple explanation of the grammar point at issue?	<input type="checkbox"/>
2. Students' immersion in correct models of grammar?	<input type="checkbox"/>
3. A demonstration of the particular pattern in a piece of writing (model texts)?	<input type="checkbox"/>
4. Multiple meaningful activities for better understanding of the grammar point?	<input type="checkbox"/>
5. Examples posted in the classroom?	<input type="checkbox"/>
6. Ample student practice to apply new grammar knowledge?	<input type="checkbox"/>
7. Time for students to edit their own writing?	<input type="checkbox"/>

(Honigsfeld & Dove, 2013, p. 17)

### Note to Trainer:

Explain to teachers that these items should be considered when planning a lesson for ELs. Remind teachers that grammar should be embedded and used within a lesson.

Purpose – to give teachers a checklist to help guide lesson planning.



## B. Sentence Dissection

- Use with curriculum materials to enhance understanding.

Sentence: "Each night, Mother Bat would carry Stellaluna clutched to her breast as she flew out to search for food." (Stellaluna, 1993, p.2).

Sentence Chunk	Possible Discussion Points	Linguistic Features
<i>Each night</i>	<ul style="list-style-type: none"> <li>• How does the author say <i>every night</i>?</li> <li>• Which is more expressive: <i>each</i> or <i>every</i>?</li> </ul>	Time marker at sentence opening position
<i>Mother Bat would carry Stellaluna</i>	<ul style="list-style-type: none"> <li>• How the author express that Mother Bat did something regularly?</li> </ul>	Habitual past expressed with the auxiliary <i>would</i>
<i>clutched to her breast</i>	<ul style="list-style-type: none"> <li>• Why does the author choose <i>clutch</i> and not <i>hold onto</i>?</li> <li>• Who clutched to whom?</li> </ul>	The rich meaning of <i>clutch</i> ; Past participle form of the verb
<i>as she flew out</i>	<ul style="list-style-type: none"> <li>• Who flew out? Who does the author mean by <i>she</i>?</li> <li>• Why does the author say <i>flew out</i>? Out of what? Why didn't the author say <i>flew away</i>?</li> </ul>	Temporal clause; Reference use of the personal pronoun <i>she</i> to refer to Mother bat The adverb <i>out</i> indicating direction
<i>to search for food.</i>	<ul style="list-style-type: none"> <li>• Why did Mother Bat fly out?</li> <li>• What are some synonyms for <i>search for</i>?</li> </ul>	The infinitive used to express purpose Phrasal verb: <i>search for</i>

(Honigsfeld & Dove, 2013, p. 25)

### Note to Trainer:

Explain looking at the parts of a sentence could be useful for students. Point out the possible discussion points and linguistic features of the parts of the sentence. ELs often do not understand the linguistic features of the English language and time needs to be taken to discuss them and explicitly teach these features.

Purpose – to help teachers to understand how to teach linguistic features within the curriculum materials.

## B. Sentence Dissection

Sentence: "Rather than sucking blood, vampire bats make a small cut with their teeth and lap up the flowing blood with their tongues" (*National Geographic Kids*).

Sentence Chunk	Possible Discussion Points	Linguistic Features
<b><i>Rather than sucking blood,</i></b>	<ul style="list-style-type: none"> <li>What does <i>rather than</i> mean in the sentence?</li> <li>Who is this part of the sentence talking about?</li> </ul>	Comparative adverbial clause with a present participle
<b><i>vampire bats make a small cut</i></b>	<ul style="list-style-type: none"> <li>What kind of bats?</li> <li>What kind of cut?</li> </ul>	Noun phrases
<b><i>with their teeth</i></b>	<ul style="list-style-type: none"> <li>How do bats make a small cut?</li> <li>What instrument do they use? In other words, with what do they make a cut?</li> </ul>	Prepositional phrase
<b><i>and then lap up the flowing blood</i></b>	<ul style="list-style-type: none"> <li>What do vampire bats do first to get to the blood?</li> <li>What do they do next?</li> <li>What does <i>lap up</i> look like, sound like?</li> </ul>	Compound sentence; Present participle used as an adjective
<b><i>with their tongues.</i></b>	<ul style="list-style-type: none"> <li>How do bats drink the blood?</li> <li>What instrument do they use In other words, with what do they lap up the flowing blood?</li> </ul>	Prepositional phrase

(Honigsfeld & Dove, 2013, p. 19)

### Note to Trainer:

Explain looking at the parts of a sentence could be useful for students. Point out the possible discussion points and linguistic features of the parts of the sentence. ELs often do not understand the linguistic features of the English language and time needs to be taken to discuss them and explicitly teach these features.

Purpose – to help teachers to understand how to teach linguistic features within the curriculum materials.

## C. Patterned Writing, Patterned Speech

Students need to see patterns of fiction and nonfiction. They need time to borrow the language and manipulate it in a successful sentence frame.

### Original

*A wet world waited when I looked out of my window this morning.*

A \_\_\_\_\_ waited when I \_\_\_\_\_.

### Examples

A beautiful blue bird waited while I filled the bird feeder today.

An anxious baby waited while his mother prepared his bottle.

Wet World by Norma Simon (1997)

### **Note to Trainer:**

Explain to teachers that students need to study and understand the textual patterns of fiction and nonfiction in order to process them. This helps ELs understand the way words are put together to create meaning, types of verb tensing, different parts of speech in use, and various forms of sentences (simple to complex).

Purpose – to help teachers to understand how to support ELs in learning parts of English language.

## D. Real Grammar, Real Life (simple)

Students need the opportunity to see and practice authentic examples of grammar use in real life.

### CRAZY SCARF ACTIVITY

Purpose – to get students to use relative clauses with real-life examples

*I spy someone who is wearing a (adjective) scarf.*

*I spy someone who is wearing a (adjective) scarf that has/is (more information about the scarf).*

*I spy someone who is wearing a purple scarf with black elephants on it.*

### **Note to Trainer:**

Explain to the teachers that students need real-life examples of how to use grammar. The teacher can use various activities at school to explicitly teach uses of grammar. This is especially important for ELs so that they hear models of authentic language and practice using this language. Teachers could utilize language used in the library, in the cafeteria, and/or during special events to teach language.

Purpose – to give teachers a practice strategy for how to teach authentic uses of language in their daily context.

## D. Real Grammar, Real Life (advanced)

Students need the opportunity to see and practice authentic examples of grammar use in real life.

More examples from content:

Purpose – to help students recall various vocabulary words, important people, or events

*I am thinking of a word we use in science that can be a solid, a liquid, or gas.  
(matter)*

*I am thinking of a person we studied in social studies who discovered America.  
(Christopher Columbus)*

### **Note to Trainer:**

Explain to the teachers that students need real-life examples of how to use grammar. The teacher can use various activities at school to explicitly teach uses of grammar. This is especially important for ELs so that they hear models of authentic language and practice using this language. Teachers could create more rigorous examples by using the vocabulary and/or lessons from a specific content area.

Purpose – to give teachers a practice strategy for how to teach authentic uses of language in their daily context.

## Partner Talk

- How could you use these activities in your classroom to teach language standard 1?



**Note to Trainer:** 10:30-10:50

Give teachers time to talk through the strategies and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

# Implementation #1

Strategy	Usage
A: Grammar Lesson Planning Checklist	
B: Sentence Dissection	
C: Patterned Writing, Patterned Speech	
D: Resourcing	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use activities to implement standard 1.

# College and Career Readiness Anchor Standards for Language

## **Conventions of Standard English**

2. Apply the Conventions of Capitalization, Punctuation, and Spelling When Writing

**Note to Trainer:** 10:50-11:05 Standard 2 (strategies A-D)  
Go over and explain each strategy and example.

Purpose – to help teachers to understand standard 2 and how it applies to teaching academic language.



## A. Resourcing

Provide students with **explicit** instructions for how to use available resources:

- Dictionaries (bilingual/monolingual):
  - Examining the letter distribution in a dictionary
  - Locating guide words
  - Practicing scanning a dictionary page through game-like activities
  - Exploring long entries and multiple meanings
- Indexes
- Globes and maps
- Appropriate magazines, newspapers, etc.


Use games such as scavenger hunts, dictionary activities, etc. to make these more fun.

### **Note to Trainer:**

Explain to teachers that ELs need explicit instructions for how to use resources. They don't naturally know how to use them and probably will not have much practice with them at home.

Purpose – to help teachers understand that students need explicit instruction for how to use common, classroom resources.

## B. Personal Dictionaries/Word Study Books

<p>Word</p> <p>sad</p>	<p>Linguistic Representation</p> 
<p>Definition</p> <p>An emotion is not happy or feels like crying</p>	<p>Opposite</p> <p>Happy</p>

**Note to Trainer:**

Explain that personal dictionaries should be created by students and there are several variations that can be used. The most common usually have the word, definition, linguistic representation/picture, synonym/antonym, and/or sentence.

Purpose – to help teachers understand the practical ways student dictionaries could be used in the classroom.

## C. Authentic Literature & Mentor Texts

Categories	Books
Nouns	<i>Merry-Go-Round: A Book About Nouns</i> by Ruth Heller <i>A Mink, A Find, A Skating Rink: What is a Noun?</i> By Brian Cleary <i>A Lime, A Mime, A Pool of Slime: More About Nouns</i> by Brian Cleary <i>A Cache of Jewels and Other Collective Nouns</i> by Ruth Heller
Verbs	<i>It's Hard to be a Verb</i> by Julie Cook <i>Kites Sail High: A Book About Verbs</i> by Ruth Heller <i>To Root, To Toot, To Parachute: What is a Verb?</i> by Brian Cleary <i>Slide and Slurp, Scratch and Burp: More About Verbs</i> by Brian Cleary
Adjectives	<i>Many, Luscious Lollipops: A Book About Adjectives</i> by Ruth Heller <i>Hairy, Scary and Ordinary: What is an Adjective?</i> by Brian Cleary <i>Quirky, Jerky, Extra Perky: More About Adjectives</i> by Brian Cleary
Adverbs	<i>Up, Up and Away: A Book About Adverbs</i> by Ruth Heller <i>Dearly, Nearly, Insincerely: What is an Adverb?</i> By Brian Cleary <i>Lazily, Crazily, Just a Bit Nasally: More About Adverbs</i> by Brian Cleary
Pronouns	<i>Mine, All Mine: A Book About Pronouns</i> by Ruth Heller <i>I and You and Don't Forget Who: What is a Pronoun?</i> by Brian Cleary

<https://ourjourneywestward.com/picture-books-to-teach-grammar/>

### Note to Trainer:

Explain to teachers that they can use mentor texts and literature to help students understand grammar and writing mechanics. This is an engaging way to teach grammar.

Purpose – to expose teachers to various resources in order to teach grammar and writing mechanics in a more engaging way.

## C. Authentic Literature & Mentor Texts

Categories	Books
Prepositions	<i>Behind the Mask: A Book About Prepositions</i> by Ruth Heller <i>Under, Over, By the Clover: What is a Preposition?</i> by Brian Cleary
Contractions	<i>I'm and Won't, They're and Don't: What's a Contraction?</i> by Brian Cleary
Synonyms and Antonyms	<i>Fortunately, Unfortunately</i> by Remy Charlip <i>Pitch and Throw, Grasp and Know: What is a Synonym?</i> by Brian Cleary <i>Stroll and Walk, Babble and Talk: More about Synonyms</i> by Brian Cleary <i>Stop and Go, Yes and No: What is an Antonym?</i> by Brian Cleary <i>Straight and Curvy, Meek and Nervy: More About Antonyms</i> by Brian Cleary
Homonyms and Homophones	<i>Dear Deer: A Book About Homophones</i> by Gene Barretta <i>Truman's Aunt Farm</i> by Jama Kim Rattigan <i>How Much Can a Bare Bear Bear? What are Homonyms and Homophones</i> by Brian Cleary <i>A Bat Cannot Bat, A Stair Cannot Stare: More About Homonyms and Homophones</i> by Brian Cleary

<https://ourjourneywestward.com/picture-books-to-teach-grammar/>

### Note to Trainer:

Explain to teachers that they can use mentor texts and literature to help students understand grammar and writing mechanics. This is an engaging way to teach grammar.

Purpose – to expose teachers to various resources in order to teach grammar and writing mechanics in a more engaging way.

## C. Authentic Literature & Mentor Texts

Categories	Books
Plural and Singular	<i>Feet and Puppies, Thieves and Guppies: What are Irregular Plurals?</i> by Brian Cleary
Compound Words	<i>Thumbtacks, Earwax, Lipstick, Dipstick: What is a Compound Word?</i> by Brian Cleary
Prefixes and Suffixes	<i>Pre- and Re-, Mis- and Dis-: What is a Prefix?</i> by Brian Cleary <i>-ful, and -less, -er and -ness: What is a Suffix?</i> by Brian Cleary
Punctuation	<i>Punctuation Takes a Vacation</i> by Robin Pulver <i>The Punctuation Station</i> by Brian Cleary <i>The Punctuation Celebration</i> by Elsa Knight Bruno <i>Eats, Shoots and Leaves: Why, Commas Really Do Make a Difference!</i> by Lynn Truss <i>Twenty-Odd Duck: Why, Every Punctuation Mark Counts!</i> by Lynn Truss <i>The Girl's Like Spaghetti: Why, You Can't Manage Without Apostrophes!</i> By Lynn Truss <i>Greedy Apostrophe: A Cautionary Tale</i> by Jan Carr

<https://ourjourneywestward.com/picture-books-to-teach-grammar/>

### Note to Trainer:

Explain to teachers that they can use mentor texts and literature to help students understand grammar and writing mechanics. This is an engaging way to teach grammar.

Purpose – to expose teachers to various resources in order to teach grammar and writing mechanics in a more engaging way.

## D. Interactive Word Walls

- Use with high frequency words, sight words, and/or frequently misspelled words
- Teacher or student created

1	Add an Ending	The students take out their notebooks and add endings (s, ed, ing) to each of the words where appropriate.
2	Alphabetical Order	Depending on the number of word wall words, students can alphabetize all of them or they can alphabetize the first 20 or last 20 words.
3	Around the World	All the students sit in a circle (or in their desks) One student stands behind another student who is sitting. The teacher flashes them a word. Whichever child says or defines the word first will move on to the next student. The student who makes it back to his or her own desk or starting point is the winner.
4	Ball Toss	Put students in small groups. The leader of the group shares one thing learned about a particular word on the word wall, then toss the ball to someone in the group. That student shares something different, and so on
5	Bang!	All the sight words learned are put in a box. The students sit in a circle and each take a word from the box. If they can read or define the word, they get to keep it. If they cannot, the word is returned to the box. If they pull a card with the word "Bang!" from the box, all the cards they have collected so far must be returned to the box. The child with the greatest number of cards when the game ends is the winner.
6	Baseball	Materials: Words at 4 different levels (from simple to more difficult). Make them on different colored cards and have the type of hit that each color represents posted somewhere that everyone can see it clearly. Designate different places in the room as 1st base, 2nd base, 3rd base, and homeplate. Divide the students into 2 teams. Designate one team as the home team, and the other as the visitors. Mix up the cards. The children take turns going to the homeplate. Draw out a card and let the child attempt to read or define the word. If the student can read the card correctly, he or she may move according to the type of hit. (A single: move 1 base, a double: move 2 bases, a triple: move 3 bases, and a homerun: go all the way to home plate.) Make sure that you have included some strike out cards and walk cards among the word cards. If the student is unable to read or define the word, it is considered an out. After 3 outs, the next team gets to "Bat". Keep the score so that everyone can see.

### Note to Trainer:

Explain interactive word walls to teachers. They can organize these word walls visually by the alphabet. They should choose high frequency and/or sight words and well as frequently misspelled words. They need to create daily activities where students can use multiple modalities to practice the words.

Purpose – to help teachers use a practical way to help students with spelling words.

## D. Interactive Word Walls

7	Basketball	Set up in the classroom as a mini basketball court. Use masking tape to create on the floor a foul line that shots will be taken from. Prepare in advance a vocabulary activity employing words that are included on the students' word wall. Prepare at least one question for each student in the class. Arrange the class into 2 to 4 teams. Ask one of the questions you prepared of the first student on the first team. If a student identifies the correct word-wall word, that student earns a point. He or she also gets a chance to double his or her score (earn two points for the team) by trying to shoot a basket. A successful shot earns that second point; there is no penalty for a missed shot. If the student does not identify the correct word-wall word, pass the question to the first player on the next team. At the end of the game, the team with the most points is declared the winning team.
8	Cartoon Captions	Give students a collection of comics from the Sunday paper and have them each choose a strip. Tell them to cut the strip apart and glue three of the individual panels in sequence on a piece of paper. Then have the students write new captions under each of the panels or in the speech bubbles, using words from the word wall to create a story. Have students share their cartoon captions with the class.
9	Categories	Name a category, such as parts of speech, opposites, location, etc., and ask students to call out words from the word wall that are in the given category. Ask students to choose category topics according to the words that are on the word wall and allow them to move the words until they are in their correct categories.
10	Change a Letter	Students try to make new words by changing just one letter. This can also be played in teams.
11	Charades	Students act words from the word wall and guess which word is being acted out. Put students in teams and record scores to determine the winner.
12	Erasing Relay	Write two columns of words on the board that are approximately equal in difficulty. Include as many words on the board as there are children in the relay. Children are divided into 2 teams, and will stand in two lines at right angles to the chalkboard. At the signal, the first child in each line points at the first word in his respective column of words and reads or defines that word. If he or she reads or defines the word correctly, he or she is allowed to erase that word. The game is won by the side that erases all the words first.

### Note to Trainer:

Explain interactive word walls to teachers. They can organize these word walls visually by the alphabet. They should choose high frequency and/or sight words and well as frequently misspelled words. They need to create daily activities where students can use multiple modalities to practice the words.

Purpose – to help teachers use a practical way to help students with spelling words.

## D. Interactive Word Walls

13	Flashlight Word	Start off the game by turning off the lights and pointing the flashlight at a particular word on the Word Wall. The teacher calls on a student to read or define the word. When the child has read or defines the word, it is their turn to shine the flashlight on a word and call on another student to read or define. The children really enjoy this because they get a chance to "be the teacher."
14	Guess My Word Wall Word	Teacher gives clues about each word. This activity can be done in a couple of ways. The teacher gets the students to number off from 1 to 10 in their notebooks and gives clues about the word. The student then writes down what they believe the word is. The other method is to do the activity orally and let a student point to the word on the word wall.
15	Hot Seat	In this activity, one student is selected to come to the front of the class and take the "hot seat." The hot seat is located a few feet in front of a chalkboard, whiteboard, or chart. The student sits in a chair facing his or her classmates and with his or her back to the board or chart. The student also should have a clear view of the class word wall. The teacher or a classmate selects a word from the word wall (or from students' spelling or vocabulary lists) and writes that word on the board or chart. The student in the hot seat is unable to see the word, but it is his/her job to guess the word by asking questions that help to narrow down the possibilities. As the student narrows down the word, the questions might get more specific. Keep a tally of the number of questions/clues it takes for the student to guess the word. Which student(s) guess the word in the fewest number of clues?
16	Missing Word	Remove a word from the wall and maybe rearrange the remaining words. Have students figure out which word is missing. May need to give clues to help them figure out what is missing.
17	Mind Reader	In this activity, students are given clues to identify a mystery word that appears on the classroom word wall. The teacher selects a mystery word and then gives the students five clues for identifying the word. Each successive clue should help students narrow down their choice. As you give each clue, students should select one word from the word wall that matches the clue. After you have given the five clues, have students show their responses. Which student(s) guessed the mystery word with the fewest possible clues? Each student who guesses the correct word at the earliest possible clue earns a point. Tally points at the end of the game to determine which students are the winners.
18	On the Back	Students work with partners and draw the word with their finger on their partner's back. When the student guesses the word, they trade places.

### **Note to Trainer:**

Explain interactive word walls to teachers. They can organize these word walls visually by the alphabet. They should choose high frequency and/or sight words and well as frequently misspelled words. They need to create daily activities where students can use multiple modalities to practice the words.

Purpose – to help teachers use a practical way to help students with spelling words.



## D. Interactive Word Walls

19	Peer Test	Students take turns testing each other on the spelling or meaning of each of the words
20	Pictionary	Each team chooses one person to begin drawing; this position rotates with each word. The drawer chooses a word from the word wall and tries to draw pictures which suggest the word. The pictures cannot contain any numbers or letters. The teammates try to guess the word the drawing is intended to represent without the drawer talking to teammates. Use a timer to limit their time on guessing. The team that guesses the word first gets to advance and take the next turn. If none of the teams guess the word, the turn passes to whichever team should have been next.
21	Poem Definition	Use a word from the word wall to create a poem: Line 1: Name it. Line 2: Describe it, rename it. Line 3: Tell where it would be found. Line 4: Tell more about it. Line 5: Use emotion words to tell how you feel about this. Line 6: Explain why you used the emotion words in Line 5
22	Rhymes	Give students a word and ask them to identify a rhyming word from the word wall. Have students create a list of rhyming words for words on the word wall. Have them write a poem or rap using these rhyming words.
23	Scavenger Hunt	Use old magazines or newspapers. Students try to locate as many of the word wall words as they can, they can cut them out and paste them into their notebooks.
24	Sentence Frames	Use sentence frames and have students use words from the Word Wall to fill in by writing and/or discussion.
25	Sign Language	Have sign language pictures are available. Students use sign language to spell the word the teacher says.
26	Sounds Like...	The teacher says a word that sounds like the word wall word, for instance in the case of 'are' the teacher would say "sounds like far" and the students write down or says what they think the word wall is.
27	Stand Up Sit Down	Teacher reads a passage with words from word wall in it. When students hear a word in the passage that is on the word wall, then students stand up. When they hear another word from the word wall, students sit down and so on.

### **Note to Trainer:**

Explain interactive word walls to teachers. They can organize these word walls visually by the alphabet. They should choose high frequency and/or sight words and well as frequently misspelled words. They need to create daily activities where students can use multiple modalities to practice the words.

Purpose – to help teachers use a practical way to help students with spelling words.

## D. Interactive Word Walls

28	Tic-Tac-Toe	Divide the class into two teams of X's and O's. Write words in the tic-tac-toe spaces. Team members take turns coming up and selecting a space. If the child reads or defines the word correctly, he or she may put up an X or O for his or her team. If the answer is incorrect, the other team gets to send a player to the board to try to read or define the same word. An easy alternative to save time and keep the game moving is to have several tic-tac-toe boards made up with words ahead of time on overhead transparencies. Another alternative is to give each child a blank copy of the tic tac toe board, and put the list of words on the board. The children can place the words wherever they want to on their board. As the teacher calls the words out, she will have to tell the children if the word is an X word or an O word. The first child to get tic-tac-toe is the winner.
29	Who Wants to Read Like a Millionaire?	Divide the class into two teams. Using index cards prepared with the sight words, give each student a chance to read or define a word (going back and forth from team to team). The student may use a lifeline and call a friend in the classroom to help them read the word.
30	Word Pyramid	Students write the word wall word first, the second line write two antonyms, and the third line write three synonyms. On line four, students add four describing words. On line five they use the word in a sentence.
31	Word Sorts	Write 10-15 words on large index cards and place in a pocket chart. Have students write these words on separate smaller cards or papers at their desks. Have students sort the words into different piles depending on some features certain words share. Students may sort all words that begin with a certain sound, have a certain vowel sound, contain a certain blend or digraph, etc.
32	Word Wall Snap	The class forms 2 lines. The teacher is in front of the 2 lines. The teacher points to a word wall (or uses the word wall cards), the first student to say the definition of the word remains in front of the line. The other student goes to the back of the line and the 2 students in front continue on.
33	Word Wall Stories	Students use as many of the word wall words as they can to write a story.
34	WORDO	In this activity, the students write down a stated number of word wall words in boxes. The teacher then randomly states the names of some of the word wall words. As she says the words, the students underline the word or put a chip over the word. The first one to have their words read out by the teacher first is the winner. Just like BINGO

### Note to Trainer:

Explain interactive word walls to teachers. They can organize these word walls visually by the alphabet. They should choose high frequency and/or sight words and well as frequently misspelled words. They need to create daily activities where students can use multiple modalities to practice the words.

Purpose – to help teachers use a practical way to help students with spelling words.

## Partner Talk

- How could you use these activities in your classroom to teach language standard 2?



**Note to Trainer:** 11:05-11:25

Give teachers time to talk through the strategies and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Implementation #2

Strategy	Usage
A: Resourcing	
B: Personal Dictionaries/Word Study Books	
C: Authentic Literature and Mentor Texts	
D: Interactive Word Walls	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use activities to implement standard 2.

# College and Career Readiness Anchor Standards for Language

## **Knowledge and Application of Language**

### 3. Understand How Language is Used in Different Contexts

**Note to Trainer:** 11:25-11:40 Standard 3 (strategies A-D)  
Go over and explain each strategy and example.

Purpose – to help teachers understand standard 3 and how it applies to teaching academic language.

## A. Skits and Role-plays

- Allows students to experiment with home versus school language
- Use short skits with different roles
- Useful websites:
  - <https://www.dramanotebook.com/plays-for-kids/>
  - [http://a2zhomeschooling.com/explore/fine\\_arts\\_kids/theatrics/drama\\_scripts\\_skits\\_kids\\_teens/](http://a2zhomeschooling.com/explore/fine_arts_kids/theatrics/drama_scripts_skits_kids_teens/)
  - <http://pbskids.org/zoom/activities/playhouse/>
  - <http://www.skits-o-mania.com/>

**Note to Trainer:**

Explain that roles in skits help students to understand different types of language and the different contexts in which they are used.

Purpose – to help teachers understand how to support students in learning different types of language and contexts.

## B. Read It, Speak It, Write It

Written in a Book	Spoken in Everyday Situations
1. <i>One of the most magnificent structures on earth arose in the East Asian nation of China many centuries ago. (p. 2)</i>	1. They built a very famous and beautiful wall in China a long time ago.
2. <i>Like earlier walls that we built in China, the purpose of the Great Wall was to keep invaders who wandered the arid grasslands north of China's borders. (p. 2)</i>	2. They build the Great Wall to keep out strangers who lived in the north. They build other walls before the Great Wall of China.

Source: "Great Wall of China" in *Kids Discover*

### Note to Trainer:

Explain to teachers that the unique features of language in a book versus spoken in everyday situations need to be explicitly taught. Using something that students are familiar with will allow students to focus on the features of the language.

Purpose – to help teachers distinguish the differences between written and spoken language.

## C. Theme Reading, Theme Listening Across Genres

Use different resources so that students can how writing styles change (theme: geography).

Genre	Title	Author
Poetry	<i>My America: A Poetry Atlas of the United States</i>	Hopkins
Nonfiction	<i>P is for Passport: A World Alphabet</i> <i>Geography from A to Z: A Picture Glossary</i>	Scillian Knowlton
Fiction	<i>Apples to Oregon</i> <i>The Librarian Who Measured the Earth</i>	Hopkinson & Carpenter Lasky
Rhymes	<i>My Granny Went to Market: A Round-the-World Counting Rhyme</i>	Blackstone & Corr
Songs	<i>7 Continents</i>	Harmann
Plays	<i>U.S. Geography</i>	Bad Wold Press
Folktales	<i>Through the Twisted Woods</i>	Ginther

### Note to Trainer:

Explain to teachers that they can help teach how language is used in different contexts through the use of different genres while teaching a theme.

Purpose – to help teachers diversify the way they teach a theme and to put emphasis on language in different contexts.



## D. Jeopardy Game for Style Shifting

- Use this game to help students to be able to code switch from home language to school language.
- Use authentic pieces of language.

Examples:

Question: How do you say, “what’s up?” in school language?

Answer: *How are you?*

Jeopardy				
Topic 1	Topic 2	Topic 3	Topic 4	Topic 5
\$100	\$100	\$100	\$100	\$100
\$200	\$200	\$200	\$200	\$200
\$300	\$300	\$300	\$300	\$300
\$400	\$400	\$400	\$400	\$400
\$500	\$500	\$500	\$500	\$500

- <https://www.superteachertools.us/jeopardy/>
- <https://www.techteachers.com/jeopardytemplates.htm>
- <https://www.thebalance.com/free-jeopardy-powerpoint-templates-1358186>

### Note to Trainer:

Explain to teachers that they can use student language help create a game where students have to think through the language and code switch as needed. Students could do this activity in two groups or partners.

Purpose – to help students practice code-switching skills between home and school language.

## Partner Talk

- How could you use these activities in your classroom to teach language standard 3?



**Note to Trainer:** 11:40-12:00

Give teachers time to talk through the strategies and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Implementation #3

Strategy	Usage
A: Skits and Role-plays	
B: Read It, Speak It, Write It	
C: Theme Reading, Theme Listening Across Genres	
D: Jeopardy	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use activities to implement standard 3.

Lunch 12:00-1:00



## We have covered...

### **Conventions of Standard English**

1. Demonstrate command of the conventions of standard English grammar and usage when writing or speaking.
2. Demonstrate command of the conventions of standard English capitalization, punctuation, and spelling when writing.

### **Knowledge and Application of Language**

3. Apply knowledge of language to understand how language functions in different contexts, to make effective choices for meaning or style, and to comprehend more fully when reading and listening.

**Note to Trainer:** 1:00-1:05

Explain to teachers what has been covered and then what will be covered (next slide).

Purpose – to help teachers review the content that has already been covered and what will be covered during the rest of the session.

## We will cover...

### **Vocabulary Acquisition and Use**

4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases by using context clues, analyzing meaningful word parts, and consulting general and specialized reference materials as appropriate.
5. Demonstrate understanding of word relationships and nuances in word meanings.
6. Acquire and use accurately a range of general academic and domain-specific words and phrases sufficient for reading, writing, speaking, and listening at the college and career readiness level; demonstrate independence in gathering vocabulary knowledge when encountering an unknown term important to comprehension or expression.

# College and Career Readiness Anchor Standards for Language

## Vocabulary Acquisition and Use

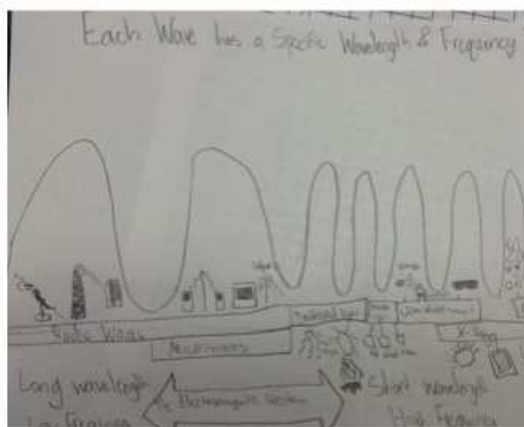
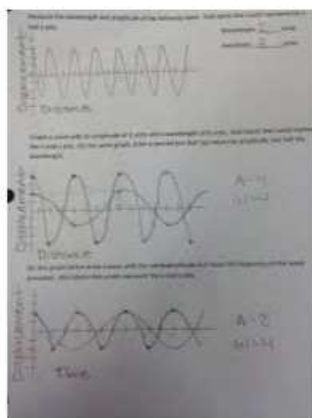
4. Determine or clarify the meaning of unknown and multiple-meaning words and phrases
  - Visual and contextual support
  - Vocabulary knowledge is a predictor of achievement (research)
  - Scaffolding and supports

**Note to Trainer:** 1:05-1:20 Standard 4 (strategies A-C)  
Go over and explain each strategy and example.

Purpose – to help teachers understand standard 4 and how it applies to teaching academic language.

## A. Picture It

Students can create a picture, symbol, or graphic representation of a term.



### Note to Trainer:

Explain that when students create a picture, symbol or graphic representation of a term, they visualize that word. These pictures can then be turned into talking pieces about that term.

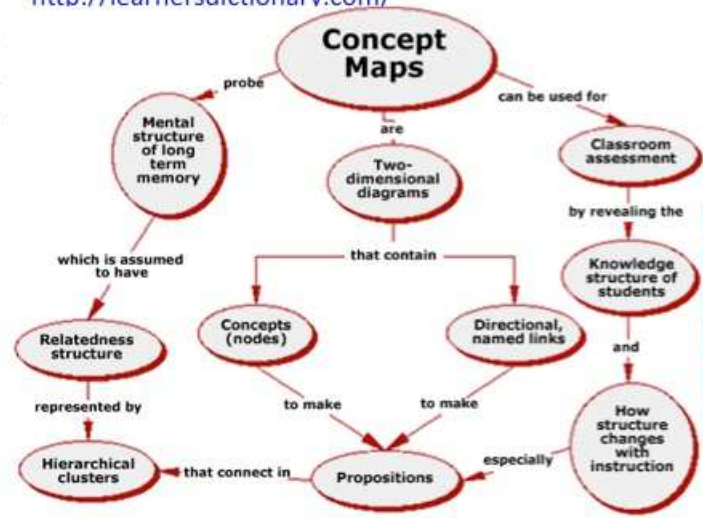
Purpose – to help teachers understand how students visualize language and create something with that visualization.



## B. Student-Friendly Definitions and Concept Maps

Online dictionaries

- <http://learnersdictionary.com/>
- 
- 
- 

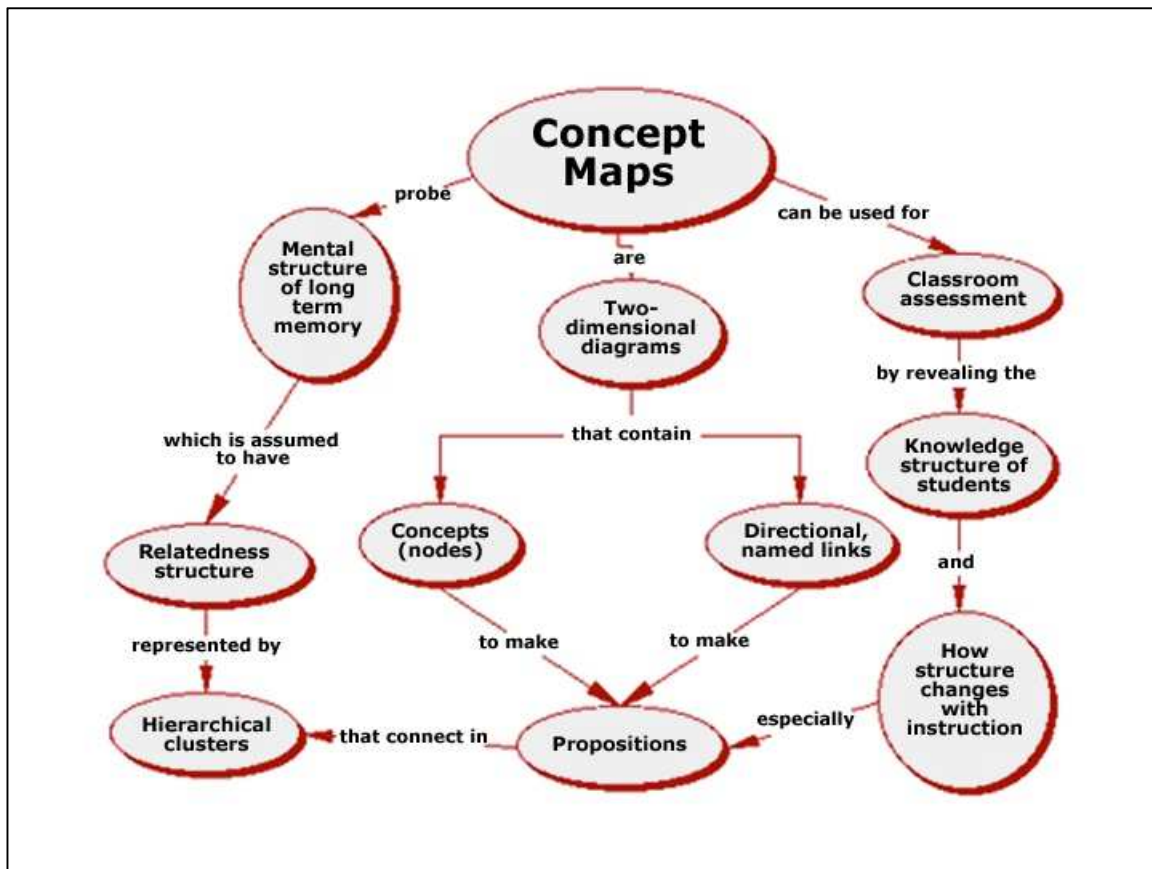


amongst dinner family comes is so much often fill up home.

**Note to Trainer:**

Explain that student friendly definitions help students to understand and internalize the meaning of a word. Concept maps can show relationships and connections with words.

Purpose – to help teachers understand how students understand the meanings of words and the relationships between them.

**Note to Trainer:**

Explain that student friendly definitions help students to understand and internalize the meaning of a word. Concept maps can show relationships and connections with words.

Purpose – to help teachers understand how students understand the meanings of words and the relationships between them.

## C. Look Inside and Outside of the Word

- Inside – root words, prefixes, suffixes, word parts, etc.
- Outside – try to understand the meaning from the sentence or paragraph

**Note to Trainer:**

Explain to teachers that one way to get students to completely understand a word is to look inside and outside of a word. The inside is the various word parts and outside is looking at it within context.

Purpose – to show teachers how to help students view all aspects of a word in order to deepen understanding.

## Partner Talk

- How could you use these activities in your classroom to teach language standard 4?



**Note to Trainer:** 1:20-1:40

Give teachers time to talk through the strategies and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Implementation #4

Strategy	Usage
A: Picture It	
B: Student-Friendly Definitions and Concept Maps	
C: Look Inside and Outside of a Word	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about possible implementation strategies for standard 4.

# College and Career Readiness Anchor Standards for Language

## **Vocabulary Acquisition and Use**

### 5. Recognize Word Relationships, Figurative Language and Nuances in Word Meanings

**Note to Trainer:** 1:40-1:55 Standard 5 (strategies A-D)  
Go over and explain each strategy and example.

Purpose – to help teachers to understand standard 5 and how it applies to teaching academic language.

## A. Word Sorts

- Open – students create categories
- Closed – teacher creates categories
  
- Variations
  - Parts of speech
  - Prefixes/suffixes, base, root
  - Spelling (vowels, consonants)
  - Certain category, etc.

Note to Trainer:

Explain to teachers that word sorts can be used to help students understand the meanings of words and how they can be grouped together.

Purpose – to help teachers understand how students comprehend the nuances of words and how they may or may not relate to each other.

## B. Act It Out

### Shades of Meaning for *walk, cry, eat, run, and listen*

walk	strut, stroll, wander, march, roam, swagger, tiptoe, glide, trek, sashay
cry	weep, wail, sob, whimper
eat	devour, wolf down, nibble, chew, gobble up, munch, pig out, dine
run	gallop, race, trot, scurry, zoom, streak, sprint, rush, speed
listen	hear, pay attention, concentrate, take heed, mind

Students can act out what these words mean and have others guess which one they are trying to demonstrate.

#### **Note to Trainer:**

Explain that ELs often have a hard time understanding the slight differences between synonyms. Students can act out what these words mean and have others guess which one they are trying to demonstrate.

Purpose – to help teachers understand how students understand the nuances of language.



## C. Idioms From Around the World

**English: Two heads are better than one.**

Chinese: 三個臭皮匠頂個諸葛亮  
One person's plans are short, but those made by two people are long.

Hungarian: Több szem többet lát.  
More eyes see more.

Japanese: 2つのヘッドが1つより優れている  
Three people together have the wisdom of Buddha.

Spanish: Cuatro ojos ven más que dos  
Four eyes see more than two eyes.

Use the languages in the classroom to help support variations of idioms that relate to the curriculum so that students can understand idioms from different perspectives.

### **Note to Trainer:**

Explain that teachers can use idioms from around the world to help support other languages and develop cross-cultural understanding as the class discusses each variation. Try to use student languages from the class, if possible.

Purpose – to recognize different cultures/languages and to look at idioms from different perspectives of language.

## D. Story Connections to Teach Figurative Language

Title	Author
<b>Similes &amp; Metaphors</b>	
<i>My Best Friend is as Sharp as a Pencil &amp; My Dog is as Smelly as Dirty Socks</i>	Hanoch Piven
<i>Crazy like a Fox: A Simile Story</i>	Loreen Leedy
<i>Skin Like Milk, Hair of Silk: What are Similes and Metaphors?</i>	
<b>Figurative Language</b>	
<i>Locomotive</i>	Brian Floca
<i>Where the Sidewalk Ends</i>	Shel Silverstein
<i>White Show, Bright Snow</i>	Alvin Tresselt
<b>Idioms</b>	
<i>There's a Frog in my Throat</i>	Loreen Leedy
<i>More Parts &amp; Even More Parts</i>	Tedd Arnold
<i>In a Pickle</i>	Marbin Terban

### Note to Trainer:

Explain that children's literature is an excellent way to expose students to different types of figurative language through more texts.

Purpose – use children's literature to help students identify figurative language.

## Partner Talk

- How could you use these activities in your classroom to teach language standard 5?



**Note to Trainer:** 1:55-2:15

Give teachers time to talk through the strategies and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Implementation #5

Strategy	Usage
A: Word Sorts	
B: Act It Out	
C: Idioms From Around the World	
D: Story Connections to Teach Figurative Language	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about possible implementation activities for standard 5.

# College and Career Readiness Anchor Standards for Language

## **Vocabulary Acquisition and Use**

### 6. Acquire and Use Accurately a Range of General Academic and Domain-Specific Words and Phrases

**Note to Trainer:** 2:15-2:30 Standard 6 (strategies A-E)  
Go over and explain each strategy and example.

Purpose – to help teachers understand standard 6 and how it applies to teaching academic language.

## A. Vocabulary Self-Assessment

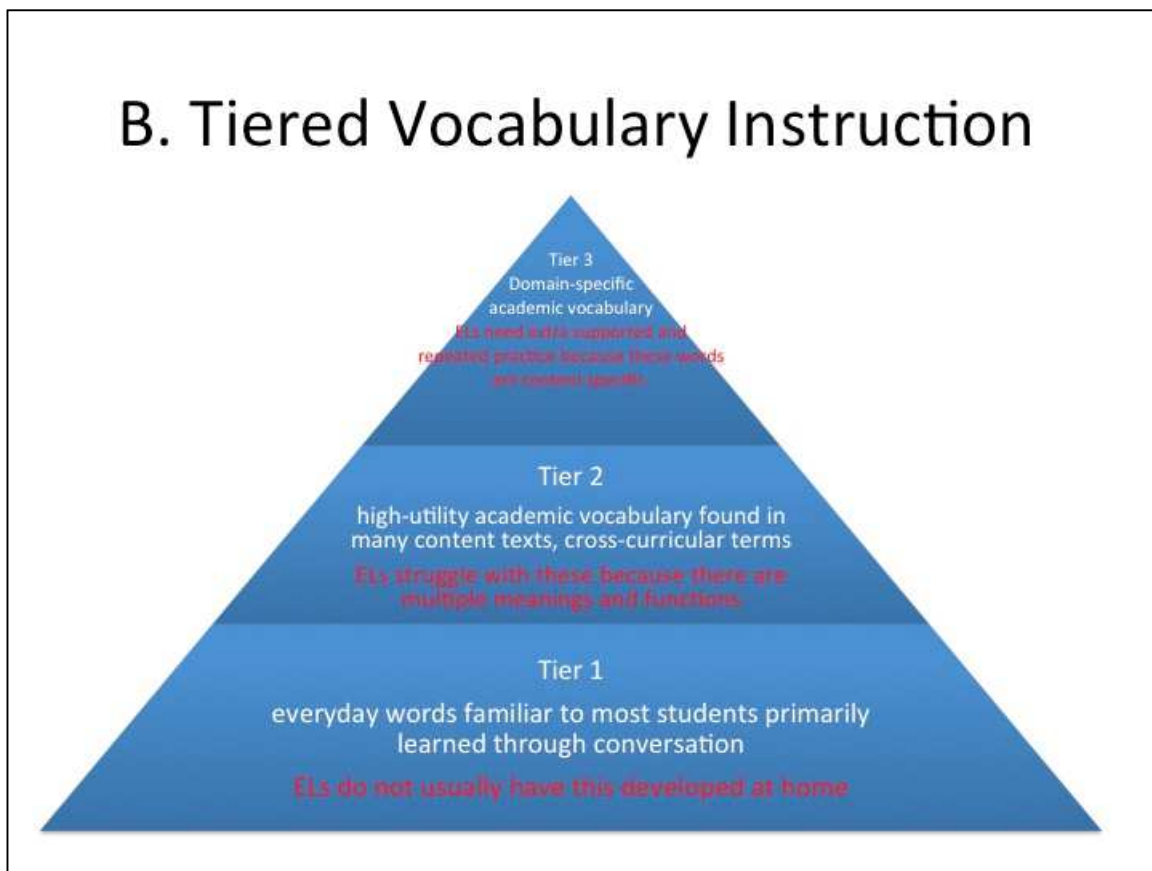
	My Knowledge of Key Words			
Vocabulary	I have never heard of it	I have heard of it, I think I know what it means	I know it very well	I can tell or write a sentence with it

**Note to Trainer:**

Explain that students can use this tool to rate their own knowledge about a word or phrase. This raises awareness of word knowledge and helps the teacher understand how the students view themselves.

Purpose – to help teachers understand how to facilitate student evaluation of knowledge about relevant vocabulary.

## B. Tiered Vocabulary Instruction



**Note to Trainer:**

Explain the tiers of vocabulary and how they affect ELs.

Purpose – to inform teachers of the differences in vocabulary types.

## C. Simon Says, Science Says

Simon says...	Content (science, math, etc.) says...
The water dries up.	The water evaporated.
It is getting warm.	The temperature is increasing.
I see drops on the outside of the glass.	I see condensation.
The writer says...	The author says...

**Note to Trainer:**

Explain that teachers can use this game to help students understand the differences between everyday language and academic language. This helps increase vocabulary knowledge of students. This can be used in partners, small groups, or whole class.

Purpose – to help teachers understand how to teach the subtle differences between everyday language and academic language used in content.



## D. Chunk It!

Help students to practice chunks of information by pointing out common collocations of words

Word	text	Use
<i>according to</i>	<i>According to</i> the author, sharks live to be 50 years old.	<i>according to</i> is a reference and it refers to who/what something belongs.
	<i>According to</i> the title, this book will be about sharks.	
	<i>According to</i> my records, you have not paid your bill.	
	According to the article, sharks do not live in salt water.	
	According to the news, the weather will be sunny today.	

### Note to Trainer:

Explain to teachers ELs often do not understand chunks of words (and phrasal verbs) that appear in text. Teachers could keep track of these phrases and display them in a chart visible for all students to see in the classroom.

Purpose – help teachers understand how students understand the meaning of phrases of information in a text.

## E. Songs, Chants, and Other Mnemonic Devices

- Fiction text structure (S.T.O.R.Y.)
  - S – Setting
  - T – Talking characters
  - O – Oops! A Problem!
  - R – Attempts resolve the problem
  - Y – Yes, the problem is solved

What are some that you use in your classroom?

**Note to Trainer:**

Explain that students can remember facts, concepts, and procedures when they are set to music, rhythm, and/or mnemonic device.

Purpose – to help students remember certain facts, concepts, and procedures.

## Partner Talk

- How could you use these activities in your classroom to teach language standard 6?



**Note to Trainer:** 2:30-2:50

Give teachers time to talk through the strategies and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Implementation #6

Strategy	Usage
A: Vocabulary Self-Assessment	
B: Tiered Vocabulary Instruction	
C: Simon Says, Science Says	
D: Chunk It!	
E. Songs, Chants and Other Mnemonic Devices	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use activities to implement standard 6.

Break 2:50-3:00



## Content Specific Planning (3:10-3:40)

- Choose one instructional practice to be implemented over the next two weeks.
- Be prepared to share
  - Instructional practice
  - Rationale/Objective
  - Practical implementation

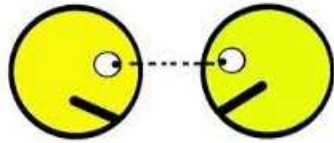
**Note to Trainer:** 3:00-3:40

Give an explanation of content specific planning and reporting back. Teachers will have from 3:10-3:40 to plan with other content partners.

Purpose – to give teachers time to plan with partners in order to provide feedback about instructional practices.

## Share Time

- ✓ Instructional practice
- ✓ Rationale/Objective
- ✓ Practical implementation



Silent Appointment

**Note to Trainer:** 3:40-3:50

Give teachers time to make a silent appointment, meet with their partners, and then discuss their strategy. After 8-10 minutes, bring the teachers back and share out with group.

Purpose – to give teachers time to process and share their ideas about how they will implement a new instructional strategy.

## Formative Evaluation

Access the Google forum and complete the following questions:

- What is your definition of academic language?
- In what ways do you think this definition changed as a result of the PD session?
- What did you learn in this session that will most effectively help you in the development of academic language?
- Comments/Questions

**\*\*All answers will be anonymous.**

**Note to Trainer:** 3:50-4:00

Explain to teachers that they will complete the evaluation on the Google forum. Remind teachers that they should not put their names anywhere on the form as it is meant to be anonymous.

Purpose – to understand what teachers have learned today and what they still need help on for the next session.





## Developing Academic Language and Native Language For ELs Session 2 - Science

**Note to Trainer:**

Welcome the teachers to the session.

## Session 2 – Schedule (Science)

Time	Activity
8:00-9:00	Native Language Support
9:00-10:00	Language Functions
10:00-10:15	Break
10:15-11:15	Language Functions
11:25-12:00	Writing Language Content Objectives
12:00-1:00	Lunch
1:00-2:00	Observations
2:00-2:30	Debrief (cross schools)
2:30-3:20	Grade Level Specific Planning
3:10-4:00	Coaching Cycle, Evaluation

**Note to Trainer:** 8:00-8:10

Go over schedule and establish breaks and lunch procedures.

Purpose – to help teachers know what is coming next and how to anticipate needs/breaks.


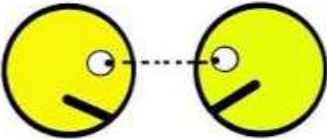







## Objectives

- Understand how native language could be supported in the classroom
- Identify the language requirements using the Next Generation Science Standards
- Learn how to support the academic language of science through the 12 language functions
- Learn how to write language objectives from content objectives
- Create a plan to incorporate one language function into your class

**Note to Trainer:** 8:00-8:10

Go over objectives.

Purpose – to share what will be learned throughout the course of the day.

Workshop Basics – Participation Protocols (Dr. Hollie)		
<p>Moment of Silence</p> 	<p>Silent Appointment</p> 	<p>My Turn, Your Turn</p> 
<p>Think-Pair-Share</p> 	<p>Partners</p> 	<p>Whip Around</p> 
<p>Give One, Get One</p> 	<p>Let Me Hear You</p> 	<p>Shout Out</p> 

**Note to Trainer:** 8:10-8:15

Review the Dr. Hollie symbols. All teachers will be familiar with these concepts just maybe not the symbols. Remind teachers that every time they see the symbol, they will follow the protocol.

Moment of Silence – Teachers pause for a moment of silence while they are working on a task. There is no talking during this time.

Silent Appointment – Teachers make an “appointment” with someone in the room by locked eyes and agreeing to meet. No talking, just body language.

My Turn, Your Turn – This is a turn-taking protocol where one person talks and the other listens. They do not interrupt each other. Then, they switch roles.

Think-Pair-Share – This is a three-step process where the person first thinks silently about a question. Then, individuals pair up and share their thoughts. Then, the pairs share their ideas with another pair or the whole group.

Partners – Teachers turn and share with someone close to them.

Whip Around – This is a sharing protocol where the facilitator goes around the group and everyone shares a short answer.

Give One, Get One – This is a sharing protocol where teachers share one answer and get another answer back.

Let Me Hear You – Teachers respond to a call back signal to get everyone back on track.

Shout Out – This is a sharing protocol where everyone shouts out his or her answer at the same time.

Purpose – to establish participation protocols throughout the workshop.

Project Study Results				
Strategy	Discussed usage	Observed	Indicated Barrier to be Addressed	Barriers
<b>Instructional Scaffolding</b>				
Visuals	91%	86%	50%	None
Small Groups	100%	41%	18%	Class sizes and time; supporting all students including ELs
Hands-On	96%	Not part of protocol		None
Multiple Modalities	100%	86%		None
Graphic Organizers	61%	18%	27%	Difficult organizers
Cooperative Learning	96%	68%	83%	Difficulty with students working together; ELs unwilling or unable to contribute to group; accountability for all students
<b>Language Scaffolding</b>				
Native Language	83%	0%	100%	Language barrier
Academic Language	91%	32%	88%	Teacher requested training; time; too much vocabulary to teach
<b>Content Area Scaffolding</b>				
Content Literacy Strategies	65%	36%	88%	Difficulty of learning language and content together
Background Knowledge	55%	23%	75%	Lack of student background knowledge; Lack due to language and culture

**Note to Trainer:** 8:15-8:20

Review the results to staff and also the highlighted areas. Make sure to identify that these were chosen for the following reasons:

- (1) They were indicated as a barrier to be addressed by the highest number of teachers.
- (2) They had the greatest difference between what was observed and discussed.
- (3) Teachers indicated that there was a need for training on how to teach academic language.

Purpose – to help teachers understand the reason for the PD.

## Partner Talk



- What are your views about using native language in class?
- How often do you use it?
- How can you support if you don't speak the native language?

**Note to Trainer:** 8:20-8:35

Give the teachers time to discuss these questions with a partner and then share out with the group.

Purpose – to learn what teachers know about academic language.

## Native Language (teachers)

**Note to Trainer:**

Use this template with the previous slide to record what teachers say during the share time (native language).

Purpose – to record what teachers understand about native language.

## Native Language (L1)

- Dual language programs
  - Kindergarten examples
  - Certificate of biliteracy
- Language transfer
  - Connections to L1
  - First language must be developed
  - Cognates
- Reliance on L1 (support, not ban)

**Note to Trainer:** 8:35-9:00

Explain to teachers that dual language programs seem to be the most effectively way to help support students learning a second language. The teachers will be familiar with this style because there has been some pilot kindergarten dual language classrooms in the district. Teachers could also discuss how this type of support might be successful.

Additionally, there have been several school districts in the states that have offered certificates of biliteracy to recognize students who are proficient in two or more languages. Discuss the issues with language transfer. Some students (especially in the lower levels of language) may transfer what they know from their L1. Sometimes this interferes or transfers into the new language, which can help increase understanding of the new language. For this to be beneficial, the first language must be developed. If the student is not literate in their first language, there will be little to bring over to the new language. Students can also utilize cognates depending on the two languages. In this case, the district has mostly Spanish speakers, so it will transfer over. Additionally, students rely on their L1, so teachers should never “ban” L1 in the classroom.

Purpose – to increase the teacher’s knowledge of issues in native language.



## Usage of L1

Teachers	Students
<ul style="list-style-type: none"> <li>• Giving instruction</li> <li>• Explaining complex concepts or grammar points</li> <li>• Defining new vocabulary items</li> <li>• Checking student comprehension</li> <li>• Keeping classroom atmosphere comfortable</li> </ul>	<ul style="list-style-type: none"> <li>• During group discussion to build meaning</li> <li>• Clarifying instruction</li> <li>• Clarifying pronunciation</li> <li>• Expressing frustration</li> </ul>

**Note to Trainer:** 8:35-9:00

Explain to teachers that there are different purposes for L1 usage in the classroom. Teachers primarily use L1 for giving instruction, explaining complex grammar, defining new vocabulary items, checking comprehension, and keeping the classroom atmosphere comfortable. Students use L1 primarily for communication with others, clarifying understanding, and expressing their feelings.

Purpose – to help teachers to understand the different ways L1 is used by teachers and students in the classroom.

## Ways to Support Native Language

- Understand the basics about student's native language
- Utilize bilingual support (peer, parents, teachers, community members, etc.)
- Bilingual dictionaries  
Technology
  - Google translate
- Hire TAs from the community or recent graduates
- Take a language class
- Grandparent volunteers
- Use textbooks in L1
- Others?

**Note to Trainer:** 8:35-9:00

Explain to teachers there are several ways in which they can support native language. It is especially important to utilize structures already in place at the local site.

Purpose – to learn the various ways that L1 can be supported.

## A few definitions before we go on...

- Receptive – relate to reading and listening
- Productive – speaking and writing
- Modality – the “channels” through which language is used (i.e. small groups)
- Register – language needed for situation

**Note to Trainer:** 9:00-9:05

Review the definitions on the slide.

Purpose – to help teachers have a common understanding of key terms in language.

## Partner Talk

- Take a look at the standards slides with all of language needed in science (slides 12-17).
- How do you currently address the language needs in science?



**Note to Trainer:** 9:05-9:20

Ask teachers to look at the standards on slides 12-17. Each standard has information about receptive and productive language functions. They will be giving general observations.

Purpose – to give teachers time to think and process the language needs for meeting the standards in science.

## Language Needs in Science (teachers)

**Note to Trainer:**

Use this template with the previous slide to record what teachers say during the share time (language of science).

Purpose – to record what teachers understand about teaching the academic language of science.

## CCSS for Science

Scientific and Engineering Practices	Disciplinary Core Ideas
<ol style="list-style-type: none"> <li>1. Asking questions (for science) and defining problems (for engineering)</li> <li>2. Developing and using models</li> <li>3. Planning and carrying out investigations</li> <li>4. Analyzing and interpreting data</li> <li>5. Using mathematics and computational thinking</li> <li>6. Constructing explanation (for science) and designing solutions (for engineering)</li> <li>7. Engaging in argument from evidence</li> <li>8. Obtaining, evaluating, and communicating information</li> </ol>	<p><b>Physical Sciences</b></p> <p>PS 1: Matter and its interactions            PS 2: Motion and stability: Forces and interactions            PS 3: Energy            PS 4: Waves and their applications in technologies for information transfer</p> <p><b>Life Sciences</b></p> <p>LS 1: From molecules to organisms: Structures and processes            LS 2: Ecosystems: Interactions, energy, and dynamics            LS 3: Heredity: Inheritance and the variation of traits            LS 4: Biological Evolution: Unity and diversity</p> <p><b>Earth and Space Science</b></p> <p>ESS 1: Earth's place in the universe            ESS 2: Earth's systems            ESS 3: Earth and human activity</p> <p><b>Engineering, Technology, and the Application of Science</b></p> <p>ETS 1: Engineering design            ETS 2: Links among engineering, technology, science and society</p>
Crosscutting Concepts	
<ol style="list-style-type: none"> <li>1. Patterns, similarity, and diversity</li> <li>2. Cause and effect: Mechanism and explanation</li> <li>3. Scale, proportion, and quantity</li> <li>4. Systems and system models</li> <li>5. Energy and matter: Flows, cycles and conservation</li> <li>6. Structure and function</li> <li>7. Stability and change</li> </ol>	

**#1a – Ask questions (science)**

Analytical Tasks	<ul style="list-style-type: none"> <li>• Frame questions conceptually to</li> <li>• Achieve improved understanding of current topic</li> <li>• Elicit clarification of a statement just made by another</li> <li>• Elicit further details of models or explanations of others</li> </ul> <p>Conceptually frame and refine questions that can be investigated by further observations or measurements</p>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend and develop own understanding of a topic or another's ideas, expressed orally or in writing</li> <li>• Comprehend questions and responses of others</li> </ul>
Productive Language Functions	<p>Ask questions to</p> <ul style="list-style-type: none"> <li>• Achieve improved understanding of current topic</li> <li>• Elicit clarification of a statement just made by another or further details of models or explanations of others</li> <li>• Propose investigations to be carried out through further observations or measurements</li> </ul>

**#1b – Define the problem (engineering)**

Analytical Tasks	<ul style="list-style-type: none"> <li>• Analyze the needs and constraints of the situation</li> <li>• Analyze what design criteria are needed</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend oral or written explanations of needs and constraints</li> <li>• Comprehend suggestions of others</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to formulation and expression of design criteria:</p> <ul style="list-style-type: none"> <li>• Ask questions to elicit needs and constraints</li> <li>• Specify criteria using words and graphic representations</li> <li>• Describe design criteria and own analytic process orally or in writing</li> </ul>

## #2 – Develop models

Analytical Tasks	<ul style="list-style-type: none"><li>• Develop and represent an explicit model of a phenomenon or system</li><li>• Use a model to support an explanation of a phenomenon or system</li><li>• Make revisions to a model based on either suggestions of others or conflicts between a model and observation</li></ul>
Receptive Language Functions	<ul style="list-style-type: none"><li>• Comprehend others' oral and written descriptions, discussions, and justifications of models of phenomena or systems</li><li>• Interpret the meaning of models presented in texts and diagrams</li></ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to a phenomenon or system using a model developed for this purpose:</p> <ul style="list-style-type: none"><li>• Label diagrams of a model and make lists of parts</li><li>• Describe a model using oral and/or written language as well as illustrations</li><li>• Describe how a model relates to a phenomenon or system</li><li>• Discuss limitations of a model</li><li>• Ask questions about others' models</li></ul>



### #3 – Plan and carry out investigations

Analytical Tasks	<ul style="list-style-type: none"> <li>• Refine questions to be investigated</li> <li>• Analyze variables in situation and decide whether and how variables are to be controlled</li> <li>• Analyze resources needed</li> <li>• Plan observations or measurements and how to record them</li> <li>• Predict expected results based on proposed model and explanation (i.e., based on a hypothesis about the system)</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend descriptions of variables and resources</li> <li>• Comprehend suggestions of others for the plan</li> <li>• Comprehend alternate hypotheses and predictions suggested by others</li> <li>• Read and follow investigation plan</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to investigation tasks:</p> <ul style="list-style-type: none"> <li>• Explain ideas for the task to others</li> <li>• Respond to others' suggestions or questions about the plan</li> <li>• Produce a written plan for an investigation</li> <li>• Make predictions</li> <li>• Describe observations</li> <li>• Describe conditions and record measurements</li> </ul>

### #4 – Analyze and interpret data

Analytical Tasks	<ul style="list-style-type: none"> <li>• Decide on ways to organize and display data (e.g., graphs, charts, and timelines)</li> <li>• Recognize relationships between variables found in data, and where possible suggest mathematical expressions of them</li> <li>• Compare results obtained to predictions</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend suggestions of others and discussion of data</li> <li>• Interpret questions from others about the data</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to analysis:</p> <ul style="list-style-type: none"> <li>• Create and label coherent representation of the data</li> <li>• Describe analysis and interpretations to others (orally or in writing)</li> <li>• Question others about their analysis</li> </ul>

**#5 – Use mathematics and computational thinking (linked to grade-level math standards)**

Analytical Tasks	<ul style="list-style-type: none"> <li>• Interpret and produce graphs of data</li> <li>• Relate mathematical symbols to physical quantities</li> <li>• Recognize where units of measure are needed</li> <li>• Recognize and apply mathematical relationships in interpreting phenomena</li> <li>• Recognize and apply algorithms for repeated computation (e.g., in data spreadsheet)</li> <li>• Employ computational tools appropriately</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend mathematical statements and arguments of others</li> <li>• Comprehend proposed algorithms for calculations</li> <li>• Comprehend discussions of use and purpose of computational tools</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to mathematical ideas and computational algorithms:</p> <ul style="list-style-type: none"> <li>• Create and label coherent representation of data</li> <li>• Describe mathematical ideas in words as well as symbols</li> <li>• Describe and explain proposed algorithms for calculations</li> </ul>

**#6 – Construct explanations (science) and design solutions (engineering)**

Analytical Tasks	<ul style="list-style-type: none"> <li>• Develop explanation or design</li> <li>• Analyze the match between explanation or model and a phenomenon or system</li> <li>• Revise explanation or design based on input of others or further observations</li> <li>• Analyze how well a solution meets design criteria</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend questions and critiques</li> <li>• Comprehend explanations offered by others</li> <li>• Comprehend explanations offered by texts</li> <li>• Coordinate texts and representations</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to a phenomenon or system (natural or designed):</p> <ul style="list-style-type: none"> <li>• Provide information needed by listeners or readers</li> <li>• Respond to questions by amplifying explanation</li> <li>• Respond to critiques by countering with further explanation or by accepting as needing further thought</li> <li>• Critique or support explanations or designs offered by others</li> </ul>

**#7 – Engage in argument from evidence**

Analytical Tasks	<ul style="list-style-type: none"> <li>• Distinguish between a claim and supporting evidence or explanation</li> <li>• Analyze whether evidence supports or contradicts a claim</li> <li>• Analyze how well a model and evidence are aligned</li> <li>• Construct an argument</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend arguments made by others orally</li> <li>• Comprehend arguments made by others in writing</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to the formation, defense, and critique of arguments:</p> <ul style="list-style-type: none"> <li>• Structure and order written or verbal arguments for a position</li> <li>• Select and present key evidence to support or refute claims</li> <li>• Question or critique arguments of others</li> </ul>

**#8 – Obtain, evaluate, and communicate scientific information**

Analytical Tasks	<ul style="list-style-type: none"> <li>• Coordinate written, verbal, and diagrammatic inputs</li> <li>• Evaluate quality of an information source</li> <li>• Evaluate agreement/disagreement of multiple sources</li> <li>• Evaluate need for further information</li> <li>• Summarize main points of a text or oral discussion</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Read or listen to obtain scientific information from diverse sources including lab or equipment manuals, oral and written presentations of other students, Internet materials, textbooks, science-oriented trade books, and science press articles</li> <li>• Listen to and understand questions or ideas of others</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) ideas, concepts, and information related to scientific information:</p> <ul style="list-style-type: none"> <li>• Present information, explanations, or arguments to others</li> <li>• Formulate clarification questions about scientific information</li> <li>• Provide summaries of information obtained appropriate a specific purpose or audience</li> <li>• Discuss the quality of scientific information obtained from text sources based on investigating the scientific reputation of the source, and comparing information from multiple sources</li> </ul>

# Language Functions

1. Inquiry/Seeking Information
2. Summarizing & Informing
3. Comparing & Contrasting
4. Sequencing/Ordering
5. Classifying
6. Analyzing
7. Inferring, Predicting, Hypothesizing
8. Justifying & Persuading
9. Problem Solving
10. Synthesizing
11. Evaluation
12. Cause & Effect



**Note to Trainer:** 9:20-9:35

Introduce the language functions and explain the first four functions. Be sure to illustrate how they would be specifically applicable in science.

Purpose – to help teachers understand the type of language that students will need to speak in their classrooms and to learn activities that utilize this language for students to practice in class.

# #1 – Inquiry/Seeking Information (NGSS 1)

**Language Frames:**

- *5 Ws and how (who, what, when, where, why, how)*
- *I wonder why...*
- *How does...work?*
- *Am I correct in assuming that...?*
- *Could you expand a little bit on what you said about...?*
- *Could you be more specific about...?*
- *Something else I'd like to know is...*

**Scientific Method Notes**

1 Ask a Question	
2 Make a Hypothesis	
3 Do an Experiment	
4 Come to a Conclusion	

**Inquiry Planner**

1. What is your question?

2. What do you think will happen?

3. How will you test your hypothesis?

4. What materials will you need?

5. How will you record your observations?

6. How will you analyze your data?

7. How will you share your findings?

KWL		
What I Know	What I Want to Know	What I Learned

**My Habitat Research**

By: \_\_\_\_\_

I chose to research this habitat because \_\_\_\_\_

Here are some animals found in my habitat: \_\_\_\_\_

Here are some words that describe my habitat: \_\_\_\_\_

3 Interesting Facts \_\_\_\_\_

**Note to Trainer:** 9:20-9:35

Explain that students use this language to observe and explore the environment, acquire information and inquire about something. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of inquiry/seeking information.

## #2 – Summarizing & Informing (NGSS 8)

### Language Frames:

- *One the whole...*
- *Basically he/she is saying that...*
- *The advantages of \_\_\_\_\_ outweigh the disadvantages of...*
- *The statistics are misleading because they do not show...*
- *These [facts/reasons/data] strongly suggest that...*
- *Some strongly argue that...*
- *\_\_\_\_\_ indicated/emphasized/concluded that...*
- *\_\_\_\_\_ is \_\_\_\_\_, and the result is \_\_\_\_\_.*
- *\_\_\_\_\_ wanted \_\_\_\_\_ but \_\_\_\_\_ so \_\_\_\_\_.*

### Note to Trainer: 9:20-9:35

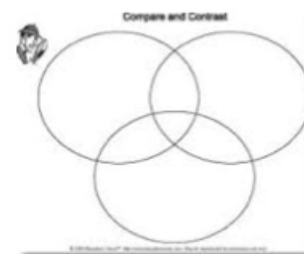
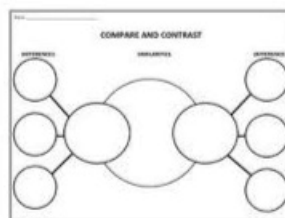
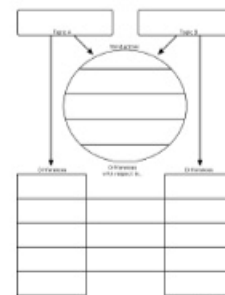
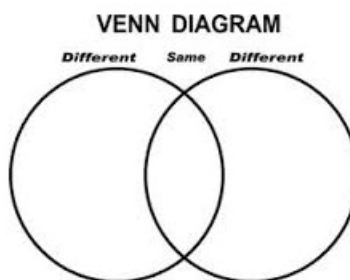
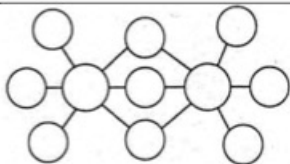
Explain that students use this language to identify, report, or describe information. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of summarizing information and informing about understanding.

## #3 – Comparing & Contrasting (NGSS 4)

### Language Frames:

- *One similarity/difference between (1) and (2) is...*
- *(1) and (2) are similar because...*
- *(1) and (2) are different because...*
- *(1) is... In contrast, (2) is...*
- *My idea/answer/explanation is similar to/related to/like...*
- *I agree with (who) because...*
- *I don't agree with you because...*
- *Both \_\_\_\_ and \_\_\_\_ are...*



### Note to Trainer: 9:20-9:35

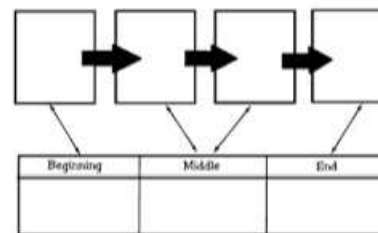
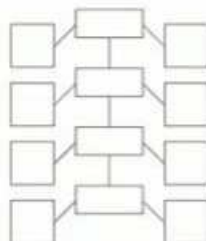
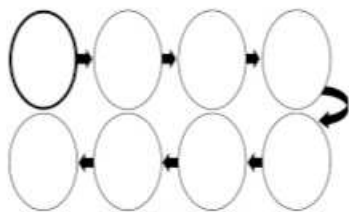
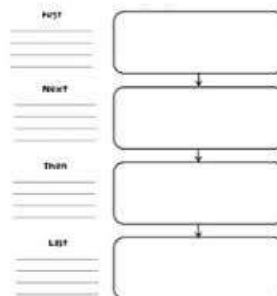
Explain that students use this language to describe similarities and differences in objects or ideas. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of comparing and contrasting information.

## #4 – Sequencing & Ordering (NGSS 2)

### Language Frames:

- *First, second, third, finally, etc.*
- *Meanwhile, the \_\_\_ appeared to be...*
- *After... the next step is/was to...*
- *In the first stage of the experiment...*
- *The transition between stages \_\_\_ and \_\_\_ can be described as...*
- *After...*



### Note to Trainer: 9:20-9:35

Explain that students use this language to sequence objects, ideas, or events. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of sequencing and ordering information.



## Partner Talk

- How could you support language functions 1-4 in your science classroom?



**Note to Trainer:** 9:35-9:55

Give teachers time to talk through language functions 1-4 and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Language Functions #1-4

Function	Usage
1: Inquiry/Seeking Information	
2: Summarizing & Informing	
3: Comparing & Contrasting	
4: Sequencing & Ordering	
Other	

**Note to Trainer:** Use this slide to record the teachers' ideas about how to use support language functions 1-4.

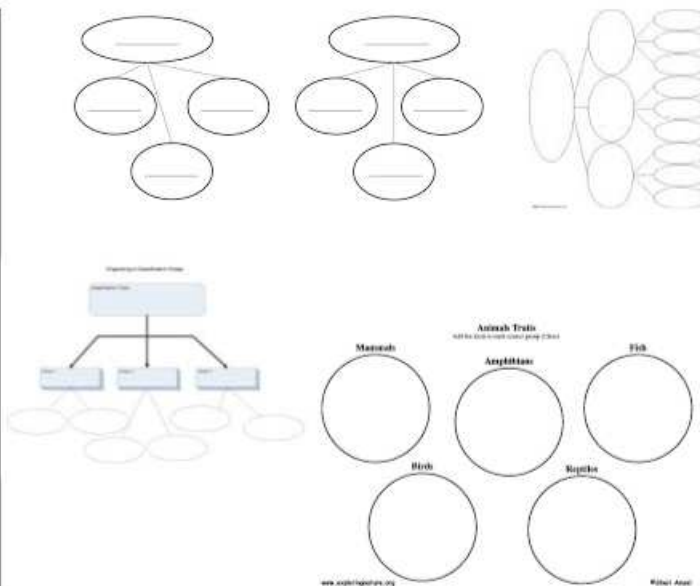
Break 10:00-10:15



## #5 – Classifying (NGSS 2)

### Language Frames:

- \_\_\_\_\_ consists of [quantity] categories.
- The [quantity] categories of \_\_\_\_\_ are \_\_\_\_\_.
- The most salient characteristic(s) of this group is/are...
- An appropriate name for this group is \_\_\_\_\_ because of the fact they are all...
- These are arranged according to...
- Both \_\_\_\_\_ and \_\_\_\_\_ could be classified as \_\_\_\_\_.



### Note to Trainer: 10:15-10:30

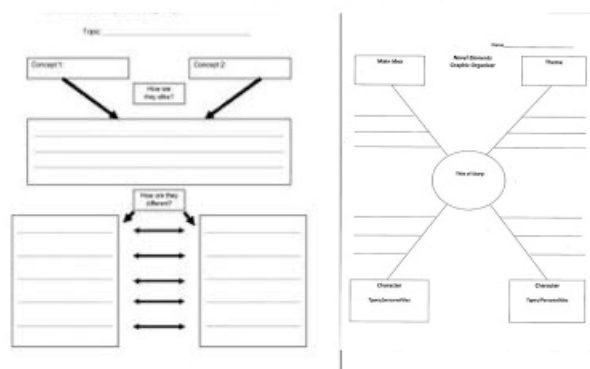
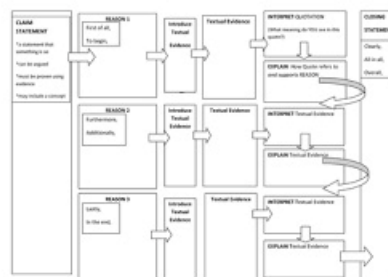
Explain that students use this language to group objects or ideas according to their characteristics. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of classifying information.

## #6 – Analyzing (NCSS 4)

### Language Frames:

- *We can interpret \_\_\_\_\_ as...*
- *Given the evidence, we can deduce that...*
- *\_\_\_\_\_ can be differentiated from \_\_\_\_\_ based on...*
- *\_\_\_\_\_ is related to \_\_\_\_\_ because*
- *\_\_\_\_\_ and \_\_\_\_\_ are connected by...*
- *This is important because...*
- *After investigating \_\_\_\_\_, it has been determined that...*
- *After careful examination, I conclude that...*



### Note to Trainer: 10:15-10:30

Explain that students use this language to separate the whole into parts and identify patterns and relationships. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of analyzing information.

## #7 – Inferring, Predicting, & Hypothesizing (NGSS 3)

### Language Frames:

- *I predict/think/hypothesize that...*
- *Based on the past results, I predict...*
- *I conclude that...*
- *I estimate \_\_\_\_\_ will happen because...*
- *Based on \_\_\_\_\_, I infer that...*
- *I infer that \_\_\_\_\_ based on \_\_\_\_\_*
- *I anticipate that...*
- *\_\_\_\_\_ are/are not \_\_\_\_\_.*
- *At first I thought \_\_\_\_\_, but now I believe \_\_\_\_\_.*
- *Since \_\_\_\_\_, I can assume that \_\_\_\_\_ will \_\_\_\_\_.*

Directions: Fill in the appropriate response in the box about the given text.

What does the text...      What already know...      What I think...


Directions: Write your prediction, and explain your prediction in detail (at least 3 sentences).

What do I think will happen?

Why do I think that will happen?

Directions: Write your observation, and explain your observation in detail (at least 3 sentences).

What do I observe?

What do I think is happening?

What do I think will happen?

Mixing Colors of Light

	Predict	Observe	Explain
Red + Blue			
Red + Green			
Red + Yellow			
Red + Cyan			

### Note to Trainer: 10:15-10:30

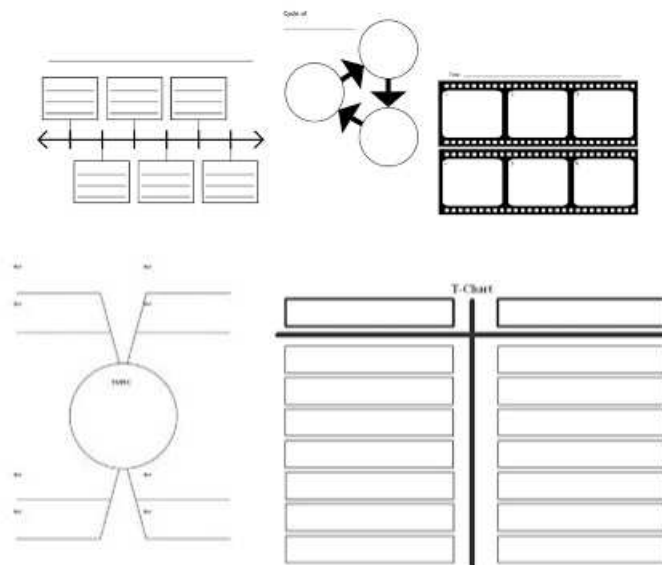
Explain that students use this language to make inferences, predict implications, or hypothesize based on evidence. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of inferring, predicting, and hypothesizing.

## #8 – Justifying & Persuading (NGSS 7)

### Language Frames:

- *I believe this because...*
- *The reason I think this is because...*
- *The most convincing reason for this is...*
- *Based on the evidence presented so far, I believe that...*
- *Although some people claim that \_\_\_\_, opponents are that....*
- *The advantages outweigh the disadvantages because...*
- *These [facts/reasons/data] strongly suggest that...*



### Note to Trainer: 10:15-10:30

Explain that students use this language to give reasons for an action, decision, point-of-view or to convince others. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of justifying and persuading.

## Partner Talk

- How could you support language functions 5-8 in your science classroom?



**Note to Trainer:** 10:30-10:50

Give teachers time to talk through language functions 5-8 and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.



## Language Functions #5-8

Function	Usage
5: Classifying	
6: Analyzing	
7: Inferring, Predicting, and Hypothesizing	
8: Justifying & Persuading	
Other	

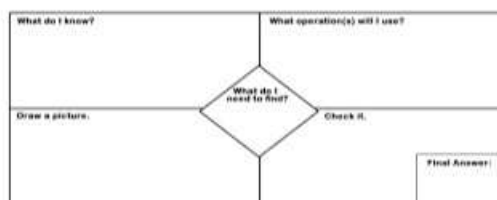
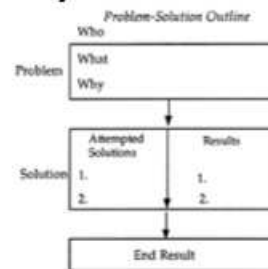
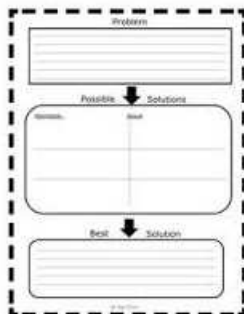
**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use activities to support language functions 5-8.

## #9 Problem Solving (NGSS 5)

### Language Frames:

- *A way of thinking about solving this problem is...*
- *I will solve this problem by...*
- *The problem is similar to...*
- *The steps of solving this program is...*
- *The solution to this problem is...*
- *I know I have solved the problem because...*
- *The solution to this problem will require...*



### Note to Trainer: 10:50-11:05

Explain that students use this language to define and represent a problem and/or determine a solution. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of solving a problem.

## #10 – Synthesizing (NGSS 6)

### Language Frames:

- *My idea is similar to/related to \_\_\_\_\_'s idea.*
- *I agree/disagree with \_\_\_\_\_ because...*
- *As [person] already mentioned...*
- *The main point(s) is/are...*
- *From my perspective, \_\_\_\_\_ means...*
- *The concept of \_\_\_\_\_ can be expressed as...*
- *I feel that [person] and [person] viewpoints are related in that...*
- *My visual represents a synthesis of \_\_\_\_\_ and \_\_\_\_\_ because...*
- *After combing all of the ideas, it can be said that...*

name \_\_\_\_\_

Synthesize Create a blueprint of our fourth being's design

what the thinking is about	what you thinking has changed

After thinking about the synthesizing I see that...



My visual represents a synthesis of \_\_\_\_\_ and \_\_\_\_\_ because...




### Note to Trainer: 10:50-11:05

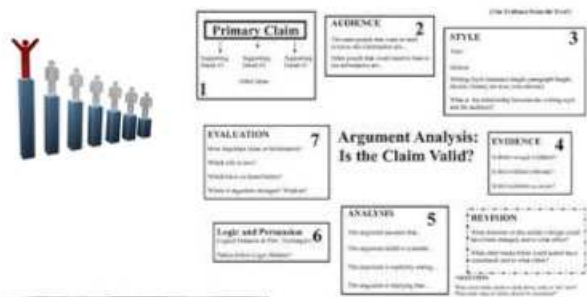
Explain that students use this language to combine or integrate ideas to form a whole group. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of synthesizing.

# #11 – Evaluation (NGSS 8)



- Language Frames:
- *Based on...I determined that...*
  - *I assess that...*
  - *After using the criteria, I think...*
  - *Based on the criteria, I think...*
  - *My interpretation of \_\_\_ is...*
  - *I evaluated the design of the project based on...*
  - *Using the rubric, I think...*
  - *I have ranked the activities based on...*
  - *After careful examination, I think the experiment...*
  - *I believe this claim is valid because...*



**Note to Trainer:** 10:50-11:05

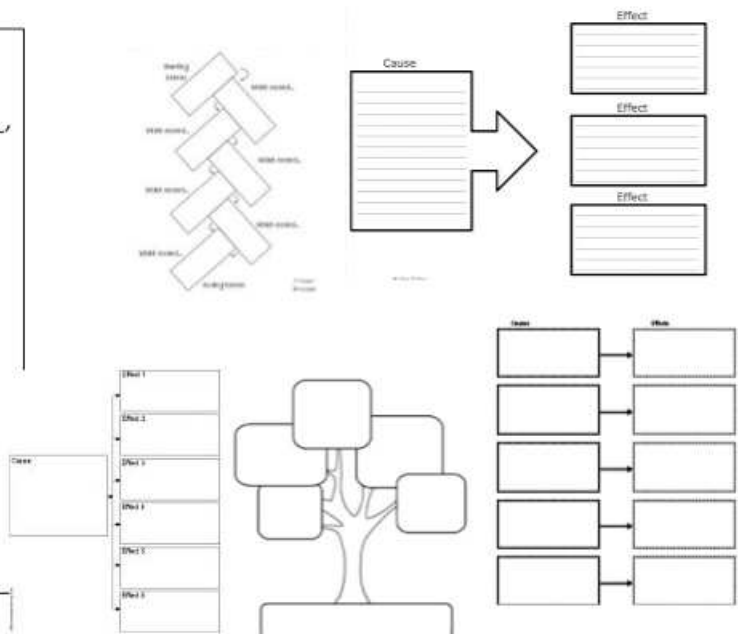
Explain that students use this language to assess and verify an object, idea, or decision. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of evaluation.

## #12 – Cause & Effect (NGSS 7)

### Language Frames:

- *Even though many people thought the cause was \_\_\_\_\_, I believe it was...*
- *The most likely reason for \_\_\_\_\_ was...*
- *\_\_\_\_\_ was not cause by \_\_\_\_\_ because...*
- *Several factors contributed to the outcomes including...*
- *The change results in...*
- *As a result of \_\_\_\_\_, the...*
- *If, then..*
- *Since/Because \_\_\_\_\_ is \_\_\_\_\_, than...*
- *Due to the fact that...*



### Note to Trainer: 10:50-11:05

Explain that students use this language to describe why or how relationships and patterns exist between events, ideas, processes, problems and identify consequences that led to the outcome. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of cause and effect.

## Partner Talk

- How could you support language functions 9-12 in your science classroom?



**Note to Trainer:** 1:05-11:25

Give teachers time to talk through language functions 9-12 and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Language Functions #9-12

Function	Usage
8: Problem Solving	
10: Synthesizing	
11: Evaluation	
12: Cause & Effect	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use activities to support language functions 5-8.

NGSS Lesson Planning Template		
Grade/ Grade Band:	Topic:	Lesson # ____ in a series of ____ lessons
Brief Lesson Description:		
Performance Expectation(s):		
Specific Learning Outcomes:		
Narrative / Background Information		
Prior Student Knowledge:		
Science & Engineering Practices:	Disciplinary Core Ideas:	Crosscutting Concepts:
Possible Preconceptions/Misconceptions:		
<b>LESSON PLAN – 3-E Model</b>		
ENGAGE: Opening Activity – Access Prior Learning / Stimulate Interest / Generate Questions:		
EXPLORE: Lesson Description – Materials Needed / Probing or Clarifying Questions:		
EXPLAIN: Concepts Explained and Vocabulary Defined:		
Vocabulary:		
ELABORATE: Applications and Extensions:		
EVALUATE:		
Formative Monitoring (Questioning / Discussion):		
Summative Assessment (Quiz / Project / Report):		
Elaborate Further / Reflect: Enrichment:		

## Traditional 5E Model

**Note to Trainer:** 11:25-12:45

Remind teachers of the parts of the traditional 5E (they are already familiar with it and use it).

Purpose – to make sure all teachers understand the foundation for moving to a modified version of the 5E model.

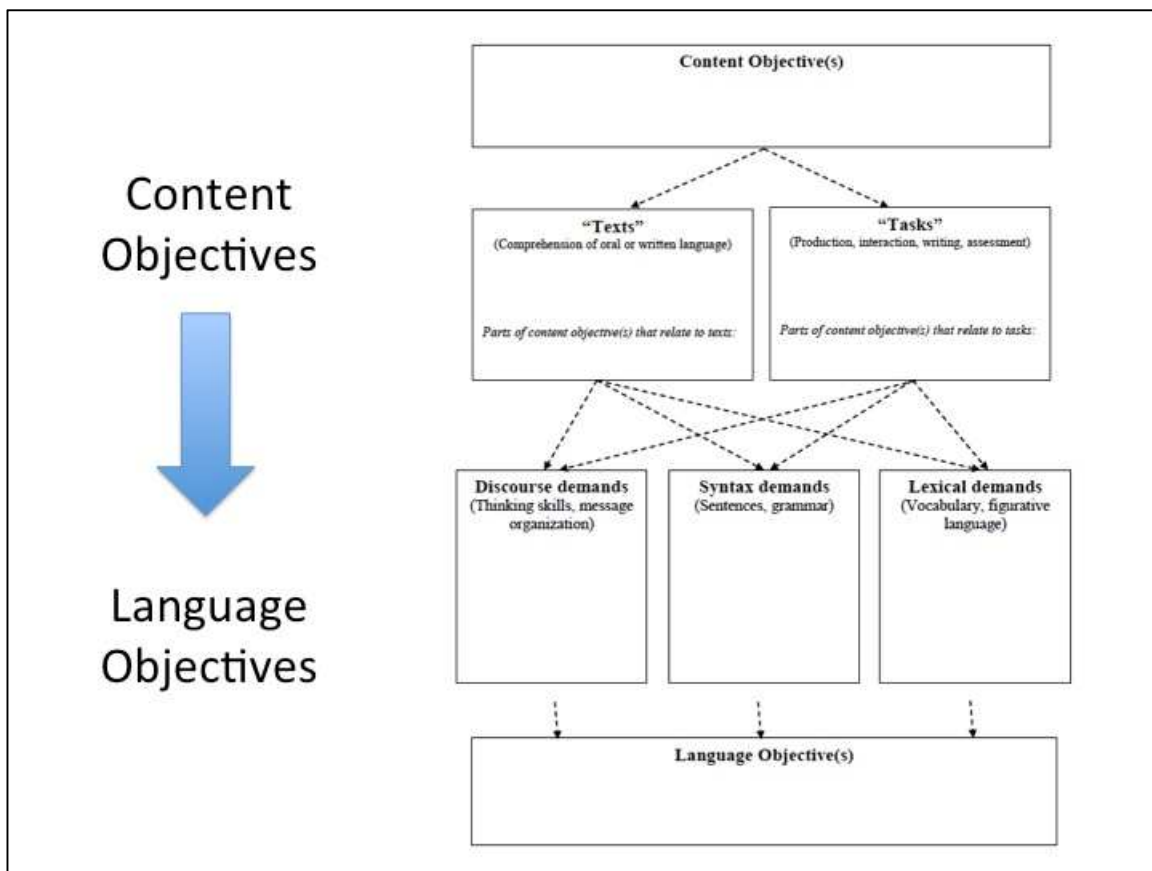


	<b>Concept</b>	<b>Teacher</b>	<b>Student</b>
<h2 style="margin: 0;">Modified 5E Model</h2> <ol style="list-style-type: none"> <li>1. Determine the natural language functions at each step.</li> <li>2. Consider sentence functions at each step.</li> <li>3. Determine the necessary vocabulary.</li> <li>4. Identify where graphic organizers are needed.</li> </ol>	<p style="margin: 0;"><i>Next Generation Science Standards, PS1.A: The Structure of Matter (p. 16).</i></p>		
	<p style="margin: 0;"><b><u>Engage</u></b> Matter is the stuff around us and takes up space.</p>		Evaluate
	<p style="margin: 0;"><b><u>Explore</u></b> Matter can be found as a solid, a liquid or a gas.</p>		Evaluate
	<p style="margin: 0;"><b><u>Explain</u></b> Each state of matter can be <i>described</i> by unique characteristics.</p>		Evaluate
	<p style="margin: 0;"><b><u>Elaborate</u></b> The state of matter can be <i>identified</i> by its unique characteristics.</p>		Evaluate

**Note to Trainer:** 11:25-11:35

Explain the steps of the modified 5E model and the emphasis on language. Consider language frames for each stage and what you explain for students to produce.

Purpose – teachers should understand that in addition to the 5E model, they should consider the language for each stage.



**Note to Trainer:** 11:25-11:45


Explain that teachers will take content objectives and create language objectives based on the language needed to satisfy that particular objective.

Purpose – to help teachers create language objectives from content objectives.

Standard (3 <sup>rd</sup> , 4 <sup>th</sup> , & 5 <sup>th</sup> )	Content Objective	Language Objective
<i>Predict and investigate that water can change from a liquid to a solid (freeze), and back again (melt), or from a liquid to a gas (evaporation), and back again (condensation) as the result of temperature changes. 3.PS1.A</i>	Students will be able to distinguish between liquids, solids, and gases and provide an example of each.	Students will be able to <b>orally describe</b> characteristics of liquids, solids, and gases to a partner.
<i>Make observations and/or measurements of an object's motion to provide evidence that a pattern can be used to predict future motion. 4.PS2.A.1</i>	Students will be able to make accurate observations about a car's speed based on various incline planes.	Students will be able to <b>explain</b> their observations to a partner using <b>prediction language</b> .
<i>Develop a model to describe that objects can be seen only when light is reflected off them or when they produce their own light. 5.PS4.A</i>	Students will be able to observe and explain how a mirror reflects light.	Students will be able to <b>orally explain</b> how a mirror reflects light.

# Examples

Receptive		Productive	
Listening	Reading	Writing	Speaking
Tell Role-play Identify Listen Recognize Point Show Follow directions	Preview Read aloud Identify Skim explore Find specific information	List Summarize Ask and answer questions Justify opinions Compare Contrast Record	Name Discuss Rephrase Ask Answer Predict Say steps in process Summarize Respond Say Explain Justify opinions Contrast



**Note to Trainer:** 11:25-11:45

Review the examples listed on the slide. Also review the receptive and productive language functions based on listening, reading, writing, and speaking.

Purpose – to provide examples for teachers of how to write content language objectives.

## With a shoulder partner...

- Choose a standard.
- Create a content objective.
- Write a language objective with that same content objective.



**Note to Trainer:** 11:45-11:55

Explain that teachers will use their standards and partners to write a language objective. Inform teachers that they will have more practice with this later when they are planning one of the language functions to implement into their class.

Purpose – to give teachers time to process language objectives with a partner.

## Observation Procedures

- 1:00-1:15 and 1:45-2:00 travel time
- 1:15-1:45 actual observation time (home school)
- Take notes:
  - What was the language function used?
  - How did the teacher develop language?
  - Other observations
- We will discuss observations at 2:00

**Note to Trainer:** 11:55-12:00

Explain to teachers the procedures of observations. Teachers will report to their home schools to observe the EL teacher complete a demonstration lesson and take notes according to the type of language function used, how the teacher developed language, and other observations. They will report back and discuss the observations at 2:00.

Purpose – to help teachers understand the procedures for observations.

Lunch 12:00-1:00



## Debrief - Observations

- Groups of 3 (same grade, different school)



**Note to Trainer:** 2:00-2:25

Teachers will be grouped in 3s by grade level. No group should contain teachers from the same school. These can be prearranged or teachers can choose themselves. Teachers will discuss what they observed during their observations.

Purpose – to give teachers time to process what they saw during the observation in the same grade level.

## Content Specific Planning (2:25-3:10)

- By grade level, cross all schools
- Choose one language function to be implemented over the next two weeks.
- Be prepared to share
  - Language function
  - Rationale/Objective
  - Practical implementation

**Note to Trainer:** 2:25-3:10

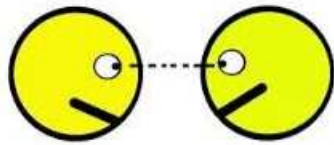
Give an explanation of content specific planning and reporting back. Teachers will have from 2:25-3:10 to plan with other content partners.

Purpose – to give teachers time to plan with partners in order to feedback about instructional practices.



## Share Time

- ✓ Language function
- ✓ Rationale/Objective
- ✓ Practical implementation



Silent Appointment

**Note to Trainer:** 3:10-3:20

Give teachers time to make a silent appointment, meet with their partners, and then discuss their strategy. After 8-10 minutes, bring the teachers back and share out with group.

Purpose – to give teachers time to process and share their ideas about how they will implement a new instructional strategy.

## Next Steps - Coaching Cycle

- Share 5E lesson plan with instructional coach (ELL teacher) in PLC meeting next week
  - Make sure you add language objectives and the language function (see pp)
- Coach will observe short lesson looking specific for academic language supports
- Discuss/reflect in PLC the following week
- Questions/Concerns?

**Note to Trainer:** 3:20-3:50

Share the coaching procedure with teachers. Teachers will work with their building ELL teacher to engage in instructional coaching. Teachers will share their 5E lesson plan (something they already do) with the ELL teacher during PLC (already planned time) and receive feedback. Then, the teacher will implement the lesson with the coach observing. Coaches will use the feedback tool already in place at the school.

Purpose – to share the next steps with teachers and explain how they will be supported during implementation.

## Formative Evaluation

Access the Google forum and complete the following questions:

- What is your definition of language functions?
- In what ways do you think this definition changed as a result of the PD session?
- What did you learn in this session that will most effectively help you support ELs in academic language of science?
- Comments/Questions

**Note to Trainer:** 3:50-4:00

Explain to teachers that they will complete the evaluation on the Google forum.

Purpose – to understand what teachers have learned today and how to support for subsequent sessions.



## Developing Academic Language and Native Language For ELs Session 3 - Mathematics

**Note to Trainer:**

Welcome all participants to the session.

## Session 2 – Schedule (Mathematics)

Time	Activity
8:00-9:00	Native Language Support
9:00-10:00	Language Functions
10:00-10:15	Break
10:15-11:15	Language Functions
11:25-12:00	Writing Language Content Objectives
12:00-1:00	Lunch
1:00-2:00	Observations
2:00-2:30	Debrief (cross schools)
2:30-3:20	Grade Level Specific Planning
3:10-4:00	Coaching Cycle, Evaluation

**Note to Trainer:** 8:00-8:10

Review schedule and establish breaks and lunch procedures.

Purpose – to help teachers know what is coming next and how to anticipate needs/breaks.


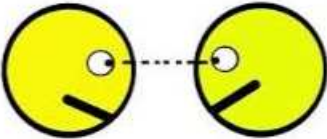







## Objectives

- Understand how native language could be supported in the classroom
- Identify the language requirements using the Common Core State Standards
- Learn how to support the academic language of math through the 12 language functions
- Learn how to write language objectives from content objectives
- Create a plan to incorporate one language function into your class

**Note to Trainer:** 8:00-8:10

Review objectives.

Purpose – to share what will be learned throughout the course of the day.

Workshop Basics – Participation Protocols (Dr. Hollie)		
<p>Moment of Silence</p> 	<p>Silent Appointment</p> 	<p>My Turn, Your Turn</p> 
<p>Think-Pair-Share</p> 	<p>Partners</p> 	<p>Whip Around</p> 
<p>Give One, Get One</p> 	<p>Let Me Hear You</p> 	<p>Shout Out</p> 

**Note to Trainer:** 8:10-8:15

Review the Dr. Hollie symbols. All teachers will be familiar with these concepts just maybe not the symbols. Remind teachers that every time they see the symbol, they will follow the protocol.

Moment of Silence – Teachers pause for a moment of silence while they are working on a task. There is no talking during this time.

Silent Appointment – Teachers make an “appointment” with someone in the room by locked eyes and agreeing to meet. No talking, just body language.

My Turn, Your Turn – This is a turn-taking protocol where one person talks and the other listens. They do not interrupt each other. Then, they switch roles.

Think-Pair-Share – This is a three-step process where the person first thinks silently about a question. Then, individuals pair up and share their thoughts. Then, the pairs share their ideas with another pair or the whole group.

Partners – Teachers turn and share with someone close to them.

Whip Around – This is a sharing protocol where the facilitator goes around the group and everyone shares a short answer.

Give One, Get One – This is a sharing protocol where teachers share one answer and get another answer back.

Let Me Hear You – Teachers respond to a call back signal to get everyone back on track.

Shout Out – This is a sharing protocol where everyone shouts out his or her answer at the same time.

Purpose – to establish participation protocols throughout the workshop.

Project Study Results				
Strategy	Discussed usage	Observed	Indicated Barrier to be Addressed	Barriers
<b>Instructional Scaffolding</b>				
Visuals	91%	86%	50%	None
Small Groups	100%	41%	18%	Class sizes and time; supporting all students including ELs
Hands-On	96%	Not part of protocol		None
Multiple Modalities	100%	86%		None
Graphic Organizers	61%	18%	27%	Difficult organizers
Cooperative Learning	96%	68%	83%	Difficulty with students working together; ELs unwilling or unable to contribute to group; accountability for all students
<b>Language Scaffolding</b>				
Native Language	83%	0%	100%	Language barrier
Academic Language	91%	32%	88%	Teacher requested training; time; too much vocabulary to teach
<b>Content Area Scaffolding</b>				
Content Literacy Strategies	65%	36%	88%	Difficulty of learning language and content together
Background Knowledge	55%	23%	75%	Lack of student background knowledge; Lack due to language and culture

**Note to Trainer:** 8:15-8:20

Review the results for staff and also the highlighted areas. Make sure to identify that these were chosen for the following reasons:

- (1) They were indicated as a barrier to be addressed by the highest number of teachers.
- (2) They had the greatest difference between what was observed and discussed.
- (3) Teachers indicated that there was a need for training on how to teach academic language.

Purpose – to help teachers understand the reason for the PD.



## Partner Talk



- What are your views about using native language in class?
- How often do you use it?
- How can you support if you don't speak the native language?

**Note to Trainer:** 8:20-8:35

Give the teachers time to discuss these questions with a partner and then share out with the group.

Purpose – to learn what teachers know about academic language.

## Native Language (teachers)

**Note to Trainer:**

Use this template with the previous slide to record what teachers say during the share time (native language).

Purpose – to record what teachers understand about native language.

## Native Language (L1)

- Dual language programs
  - Kindergarten examples
  - Certificate of biliteracy
- Language transfer
  - Connections to L1
  - First language must be developed
  - Cognates
- Reliance on L1 (support, not ban)

**Note to Trainer:** 8:35-9:00

Explain to teachers that dual language programs seem to be the most effectively way to help support students learning a second language. The teachers will be familiar with this style because there has been some pilot kindergarten dual language classrooms in the district. Teachers could also discuss how this type of support might be successful.

Additionally, there have been several school districts in the states that have offered certificates of biliteracy to recognize students who are proficient in two or more languages. Discuss the issues with language transfer. Some students (especially in the lower levels of language) may transfer what they know from their L1. Sometimes this interferes or transfers into the new language, which can help increase understanding of the new language. For this to be beneficial, the first language must be developed. If the student is not literate in their first language, there will be little to bring over to the new language. Students can also utilize cognates depending on the two languages. In this case, the district has mostly Spanish speakers, so it will transfer over. Additionally, students rely on their L1, so teachers should never “ban” L1 in the classroom.

Purpose – to increase the teachers’ knowledge of potential issues in native language.

## Usage of L1

Teachers	Students
<ul style="list-style-type: none"> <li>• Giving instruction</li> <li>• Explaining complex concepts or grammar points</li> <li>• Defining new vocabulary items</li> <li>• Checking student comprehension</li> <li>• Keeping classroom atmosphere comfortable</li> </ul>	<ul style="list-style-type: none"> <li>• During group discussion to build meaning</li> <li>• Clarifying instruction</li> <li>• Clarifying pronunciation</li> <li>• Expressing frustration</li> </ul>

**Note to Trainer:** 8:35-9:00

Explain to teachers that there are different purposes for L1 usage in the classroom. Teachers primarily use L1 for giving instruction, explaining complex grammar, defining new vocabulary items, checking comprehension, and keeping the classroom atmosphere comfortable. Students use L1 primarily for communication with others, clarifying understanding, and expressing their feelings.

Purpose – to help teachers to understand the different ways L1 is used by teachers and students in the classroom.

## Ways to Support Native Language

- Understand the basics about student's native language
- Utilize bilingual support (peer, parents, teachers, community members, etc.)
- Bilingual dictionaries  
Technology
  - Google translate
- Hire TAs from the community or recent graduates
- Take a language class
- Grandparent volunteers
- Use textbooks in L1
- Others?

**Note to Trainer:** 8:35-9:00

Explain to teachers there are several ways in which they can support native language. It is especially important to utilize structures already in place at the local site.

Purpose – to learn the various ways that L1 can be supported.

## A few definitions before we go on...

- Receptive – relate to reading and listening
- Productive – speaking and writing
- Modality – the “channels” through which language is used (i.e. small groups)
- Register – language needed for situation

**Note to Trainer:** 9:00-9:05

Review the definitions on the slide.

Purpose – to help teachers have a common understanding of key terms in language.

## Partner Talk

- Take a look at the standards slides with all of language needed in math (slides 12-20).
- How do you currently address the language needs in mathematics?



**Note to Trainer:** 9:05-9:20

Ask teachers to look at the standards on slides 12-17. Each standard has information about receptive and productive language functions. They will be giving general observations.

Purpose – to give teachers time to think and process the language needs for meeting the standards in mathematics.

## Language Needs in Mathematics (teachers)

**Note to Trainer:**

Use this template with the previous slide to record what teachers say during the share time (language of mathematics).

Purpose – to record what teachers understand about teaching the academic language of mathematics.



# CCSS for Mathematics

Standards for Mathematical Practice	Disciplinary Core Ideas (Domains)
1. Make sense of problems and persevere in solving them	Counting and Cardinality (K)
2. Reason abstractly and quantitatively	Operations and Algebraic Thinking
3. Construct viable arguments and critique the reasoning of others	Numbers and Operations in Base Ten
4. Model with mathematics	Numbers and Operations – Fractions (3-5)
5. Use appropriate tools strategically	Measurement and Data
6. Attend to precision	Geometry
7. Look for and make use of structure	
8. Look for and express regularity in repeated reasoning	

## #1 – Make sense of problems and persevere in solving them

Analytical Tasks	<ul style="list-style-type: none"> <li>• Explain to self a problems' meaning, look for entry points to a solution, and plan solution pathway</li> <li>• Analyze givens, constraints, relationships, and goals</li> <li>• Make conjectures about form and meaning of solution</li> <li>• Consider analogous problems</li> <li>• Monitor effectiveness of current selected solution strategy and decide when to pursue a different solution strategy</li> <li>• Check answers using different methods</li> <li>• Understand others' approaches to solving complex problems and identify correspondences between them</li> <li>• Create coherent representation of problems, considering units</li> <li>• Monitor use of resources such as time and effectiveness of current selected solution strategy</li> <li>• Monitor and evaluate reasonableness of intermediate and final results</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend the meaning of a problem as presented in multiple representations, such as spoken language, written texts, diagrams, drawings, tables, graphs, and mathematical expressions or equations</li> <li>• Comprehend other's talk about math problems, solutions, approaches, and reasoning</li> <li>• Coordinate texts and multiple representations</li> </ul>
Productive Language Functions	<p>Communicate (orally, in writing and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to problems solving:</p> <ul style="list-style-type: none"> <li>• Create, label, describe, and use in presenting solutions to a math problem multiple written representations of a problem</li> <li>• Explain in words orally or in writing relationships between quantities and multiple representations of problem solutions</li> <li>• Present information, description of solutions, explanations, and arguments to others</li> <li>• Respond to questions or critiques from others</li> <li>• Ask questions about others' solutions, strategies, and procedures for solving problems</li> </ul>

## #2 – Reason abstractly and quantitatively

Analytical Tasks	<ul style="list-style-type: none"> <li>• Know when it is best to abstract a given problem situation, represent it symbolically, and manipulate symbols without necessarily attending to referents (decontextualize)</li> <li>• Know when it is best to pause as needed during symbol manipulation to use the meaning of the symbols involved (contextualize)</li> <li>• Monitor and decide when to contextualize and decontextualize</li> <li>• Attend to meaning of quantities in the problem situation</li> <li>• Do and undo computations; abstract from computation best</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend the meaning of a problem situation and its relevant quantities as presented through multiple representations</li> <li>• Comprehend others' talk about the relevant and irrelevant quantities in the problem situation</li> <li>• Coordinate written texts and multiple representations</li> </ul>
Productive Language Functions	<p>Communicate (orally, in writing, and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to abstract and quantitative reasoning:</p> <ul style="list-style-type: none"> <li>• Explain reasoning as it relates to problem situation, especially the quantities in the problem that are mathematically relevant</li> <li>• Create, label, describe, and defend coherent representations of the problem situation at hand</li> <li>• Ask questions to contextualize the problem situation or the quantities in the problem</li> </ul>

### #3 – Construct viable arguments and critique the reasoning of others

Analytical Tasks	<ul style="list-style-type: none"> <li>• Understand and use stated assumptions, definitions, and previously established results</li> <li>• Make conjectures and build logical progression of statements to explore truth of conjectures</li> <li>• Justify conclusions, communicate them to others, and respond to counterarguments</li> <li>• Analyze situations by breaking them into cases</li> <li>• Recognize and use counterexamples</li> <li>• Make plausible arguments taking into account context from which data arose</li> <li>• Compare effectiveness of two plausible arguments</li> <li>• Identify correct vs. flawed logic/reasoning</li> <li>• Monitor one's own and others' reasoning</li> </ul>
Receptive Language Functions	<p>Comprehend oral and written concepts, procedures, or strategies used in arguments and reasoning, including</p> <ul style="list-style-type: none"> <li>• Questions and critiques using words or other representations</li> <li>• Explanations offered using words or other representations by others (peers or teachers)</li> <li>• Explanations offered by written texts using words or other representations</li> </ul>
Productive Language Functions	<p>Communicate using words (orally and in writing) about concepts, procedures, strategies, claims, arguments, and other information related to constructing arguments and critique reasoning:</p> <ul style="list-style-type: none"> <li>• Provide written or verbal explanation of an argument using words through logical progression of statements, and also using multiple non-verbal representations, concrete referents (such as objects), or more formal means (i.e., mathematical symbols and mathematical proofs)</li> <li>• Justify conclusions and respond to counterarguments</li> <li>• Recognize and use counterexamples</li> <li>• Respond to questions by amplifying explanation</li> <li>• Respond to critiques by countering with further explanation or by accepting as needing further thought</li> <li>• Critique or support explanations or designs offered by others</li> </ul>

## #4 – Model with mathematics

Analytical Tasks	<ul style="list-style-type: none"> <li>• Apply math to everyday situations (e.g., outside of school and on the job)</li> <li>• Pose a problem for a situation that can be solved with the available data and by using mathematical models</li> <li>• Make assumptions and approximations to temporarily simplify a complicated problem situation</li> <li>• Identify and map relationships among important quantities; decide which quantities are relevant</li> <li>• Analyze relationships among quantities mathematically to draw conclusions</li> <li>• Interpret results in context of the situation</li> <li>• Monitor one's own and others' reasoning in support of a model</li> <li>• Reflect on reasonableness of results and improve model as needed</li> <li>• Use technology to visualize results, explore consequences, and compare predictions with data</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend others' oral or written descriptions, defenses, and discussions of their models</li> <li>• Comprehend the meaning of models presented in multiple representations</li> </ul>
Productive Language Functions	<p>Communicate (orally and in writing) about concepts, procedures, strategies, claims, arguments, and other information related to mathematical models:</p> <ul style="list-style-type: none"> <li>• Label (or create and label) diagrams of a model</li> <li>• Describe and defend a model using words and other representations</li> <li>• Ask questions and hypothesize about whether or how others' models work</li> </ul>

## #5 – Use appropriate tools strategically

Analytical Tasks	<ul style="list-style-type: none"><li>• Make sound decisions about helpfulness of different tools for problem solving</li><li>• Use estimation and other strategies to detect possible errors in computation</li><li>• Use technology to explore and deepen conceptual understanding, visualize results, explore consequences, and compare predictions with data</li><li>• Identify and use relevant mathematical resources such as digital content on websites</li></ul>
Receptive Language Functions	<ul style="list-style-type: none"><li>• Comprehend others' oral and written language that describes purposes and functions of tools and other resources</li><li>• Comprehend the purposes and functions of tools and other resources as presented in texts, diagrams, and visual media</li></ul>
Productive Language Functions	<p>Communicate (orally and in writing) about concepts, procedures, strategies, claims, arguments, and other information related to strategic use of tools:</p> <ul style="list-style-type: none"><li>• Ask questions regarding purpose and functions of tools and others' use of them</li><li>• Explain own use of tools and outcomes of tool use</li></ul>

## #6 – Attend to precision

Analytical Tasks	<ul style="list-style-type: none"> <li>• When appropriate, communicate precisely with others about mathematical reasoning and objects (e.g., use clear definitions of terms, state meaning of symbols used, specify units of measure, label visual representations, and make claims that apply to a precise set of situations)</li> <li>• Refine communication about mathematical reasoning and objects so that it increasingly becomes more mathematically precise (e.g., uses clearer definitions of terms, explicitly states the meaning of symbols used, specifies units of measure)</li> <li>• Calculate, compute, and use arithmetic procedures appropriately, accurately, and efficiently</li> <li>• Express numerical answers with degrees of precision appropriate for the problem situation • Monitor one’s own and others’ use of precision</li> <li>• Decide when precision is more necessary (e.g., during a presentation) and when it is not a high priority (e.g., during exploration and exploratory talk in groups)</li> <li>• Decide the level of precision necessary (e.g., one can make a precise claim that only applies to a defined set of instances even when using colloquial or imprecise individual words).</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend others’ spoken language regarding definitions, meaning of symbols, arithmetic procedures, strategies, solutions, claims, evidence, etc.</li> <li>• Comprehend the meaning and features of precision of definitions, symbols meanings, units of measure, and visual representations as presented in multiple representations (e.g., texts, diagrams, and visual media)</li> </ul>
Productive Language Functions	<p>Communicate with precision (orally, in writing, and through other representations) about claims and arguments related to precision:</p> <ul style="list-style-type: none"> <li>• Define key terms and concepts</li> <li>• Explain meaning of symbols</li> <li>• Specify units of measure</li> <li>• Label (or create and label) visual representations</li> <li>• Ask questions to clarify meaning of others’ statements or representations</li> <li>• Make specific claims and evaluate constraints</li> </ul>

## #7 – Look for and make use of structure

Analytical Tasks	<ul style="list-style-type: none"> <li>• Look closely to discern pattern or structure (e.g., look for patterns in quantities, relationships among quantities, arithmetic procedures, data in tables, and graphs)</li> <li>• Shift perspective on a problem situation or a mathematical representation (e.g., equation, table, or graph) if necessary</li> <li>• See complicated mathematical representations, such as algebraic expressions, equations, or lines, as a process, single objects, or as composed of several objects</li> <li>• Flexibly use different perspectives of mathematical representations</li> <li>• Monitor and decide which perspective is most useful for the problem situation at hand</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend the meaning of patterns or structures found in a situation, problem, or mathematical expression as presented in spoken language, texts, and diagrams</li> <li>• Comprehend others' talk about patterns and structures</li> </ul>
Productive Language Functions	<p>Communicate (orally, in writing, and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to structure:</p> <ul style="list-style-type: none"> <li>• Create and label representations of patterns or structures</li> <li>• Describe patterns or structures</li> <li>• Ask questions about others' use of patterns or structures</li> </ul>



## #8 – Look for and express regularity in repeated reasoning

Analytical Tasks	<ul style="list-style-type: none"> <li>• Notice if calculations are repeated</li> <li>• Look both for general methods or solution strategies (generalize) and for shortcuts</li> <li>• Monitor reasoning process while attending to detail</li> <li>• Monitor and evaluate reasonableness of intermediate and final results</li> <li>• Search for regularity or trends in multiple representations</li> <li>• Graph data and search for regularity or trends</li> <li>• Abstract from computation, build rules to represent functions</li> </ul>
Receptive Language Functions	<ul style="list-style-type: none"> <li>• Comprehend others' oral and written language and other representations regarding regularity</li> <li>• Comprehend descriptions, discussions, and arguments about regularity</li> </ul>
Productive Language Functions	<p>Communicate (orally, in writing, and through other representations) about concepts, procedures, strategies, claims, arguments, and other information related to regularity in repeated reasoning:</p> <ul style="list-style-type: none"> <li>• Ask questions about others' use of repetition, methods or solution strategies, and evaluation of intermediate and final results</li> <li>• Explain patterns, discuss methods or solution strategies, and evaluations of results</li> </ul>

## Language Functions

1. Inquiry/Seeking Information
2. Summarizing & Informing
3. Comparing & Contrasting
4. Sequencing/Ordering
5. Classifying
6. Analyzing
7. Inferring, Predicting, Hypothesizing
8. Justifying & Persuading
9. Problem Solving
10. Synthesizing
11. Evaluation
12. Cause & Effect



**Note to Trainer:** 9:20-9:35

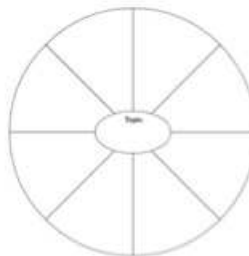
Introduce the language functions and explain the first four functions. Be sure to illustrate how they would be specifically applicable in mathematics.

Purpose – to help teachers understand the type of language that students will need to speak in their classrooms.

# #1 – Inquiry/Seeking Information

## Language Frames:

- *5 Ws and how (who, what, when, where, why, how)*
- *I wonder why...*
- *How does...work?*
- *Am I correct in assuming that...?*
- *Could you expand a little bit on what you said about...?*
- *Could you be more specific about...?*
- *Something else I'd like to know is...*



KWL		
What I Know	What I Want to Know	What I Learned

## Note to Trainer: 9:20-9:35

Explain that students use this language to observe and explore the environment, acquire information and inquire about something. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of inquiry/seeking information.

## #2 – Summarizing & Informing

### Language Frames:

- *One the whole...*
- *Basically he/she is saying that...*
- *The advantages of \_\_\_\_\_ outweigh the disadvantages of...*
- *The statistics are misleading because they do not show...*
- *These [facts/reasons/data] strongly suggest that...*
- *Some strongly argue that...*
- *\_\_\_\_\_ indicated/emphasized/concluded that...*
- *\_\_\_\_\_ is \_\_\_\_\_, and the result is \_\_\_\_\_.*
- *\_\_\_\_\_ wanted \_\_\_\_\_ but \_\_\_\_\_ so \_\_\_\_\_.*

### Note to Trainer: 9:20-9:35

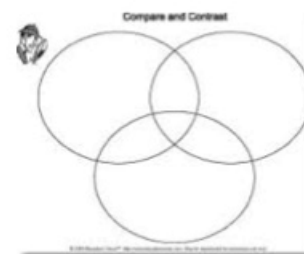
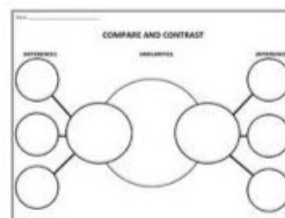
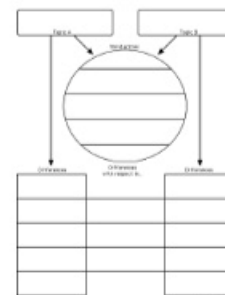
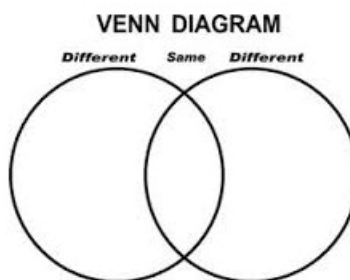
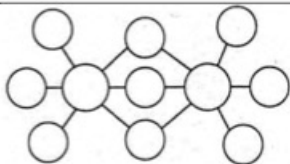
Explain that students use this language to identify, report, or describe information. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers understand how to support the language function of summarizing information and informing about understanding.

## #3 – Comparing & Contrasting

### Language Frames:

- *One similarity/difference between (1) and (2) is...*
- *(1) and (2) are similar because...*
- *(1) and (2) are different because...*
- *(1) is... In contrast, (2) is...*
- *My idea/answer/explanation is similar to/related to/like...*
- *I agree with (who) because...*
- *I don't agree with you because...*
- *Both \_\_\_\_ and \_\_\_\_ are...*



### Note to Trainer: 9:20-9:35

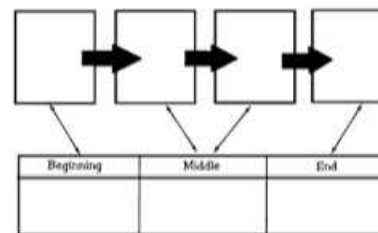
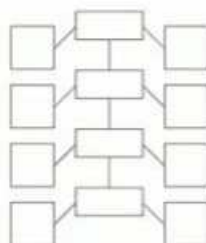
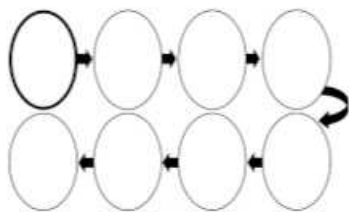
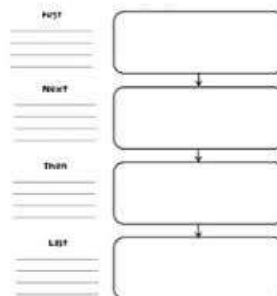
Explain that students use this language to describe similarities and differences in objects or ideas. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of comparing and contrasting information.

## #4 – Sequencing & Ordering

### Language Frames:

- *First, second, third, finally, etc.*
- *Meanwhile, the \_\_\_ appeared to be...*
- *After... the next step is/was to...*
- *In the first step of the problem...*
- *After...*
- *I solved the problem by first...*



### Note to Trainer: 9:20-9:35

Explain that students use this language to sequence objects, ideas, or events. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of sequencing and ordering information.

## Partner Talk

- How could you support language functions 1-4 in your mathematics classroom?



**Note to Trainer:** 9:35-9:55

Give teachers time to talk through language functions 1-4 and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Language Functions #1-4

Function	Usage
1: Inquiry/Seeking Information	
2: Summarizing & Informing	
3: Comparing & Contrasting	
4: Sequencing & Ordering	
Other	

**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use support language functions 1-4.



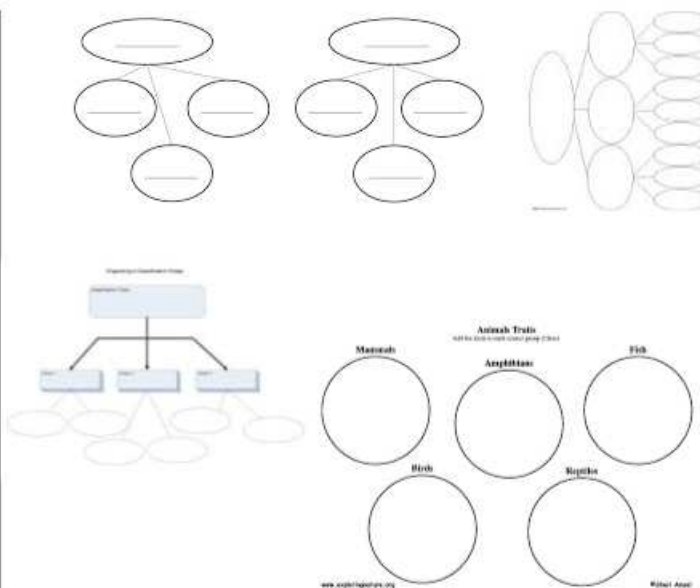
Break 10:00-10:15



## #5 – Classifying

### Language Frames:

- \_\_\_\_\_ consists of [quantity] categories.
- The [quantity] categories of \_\_\_\_\_ are \_\_\_\_\_.
- The most salient characteristic(s) of this group is/are...
- An appropriate name for this group is \_\_\_\_\_ because of the fact they are all...
- These are arranged according to...
- Both \_\_\_\_\_ and \_\_\_\_\_ could be classified as \_\_\_\_\_.



### Note to Trainer: 10:15-10:30

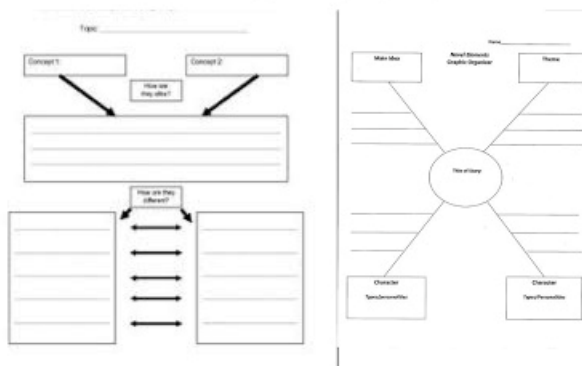
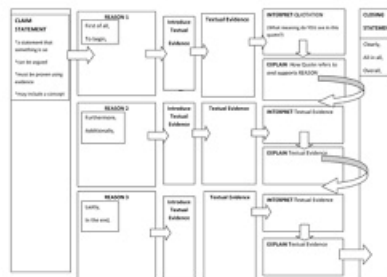
Explain that students use this language to group objects or ideas according to their characteristics. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of classifying information.

# #6 – Analyzing

**Language Frames:**

- *We can interpret \_\_\_\_\_ as...*
- *Given the evidence, we can deduce that...*
- *\_\_\_\_\_ can be differentiated from \_\_\_\_\_ based on...*
- *\_\_\_\_\_ is related to \_\_\_\_\_ because*
- *\_\_\_\_\_ and \_\_\_\_\_ are connected by...*
- *This is important because...*
- *After investigating \_\_\_\_\_, it has been determined that...*
- *After careful examination, I conclude that...*



**Note to Trainer:** 10:15-10:30

Explain that students use this language to separate whole into parts and identify patterns and relationships. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of analyzing information.

## #7 – Inferring, Predicting, & Hypothesizing

### Language Frames:

- *I predict/think/hypothesize that...*
- *Based on the past results, I predict...*
- *I conclude that...*
- *I estimate \_\_\_\_\_ will happen because...*
- *Based on \_\_\_\_\_, I infer that...*
- *I infer that \_\_\_\_\_ based on \_\_\_\_\_*
- *I anticipate that...*
- *\_\_\_\_\_ are/are not \_\_\_\_\_.*
- *At first I thought \_\_\_\_\_, but now I believe \_\_\_\_\_.*
- *Since \_\_\_\_\_, I can assume that \_\_\_\_\_ will \_\_\_\_\_.*

Directions: Fill in the appropriate response in the box about the given text.

What was the text?      What? Already know?      What? I don't know...


Directions: Write your prediction, and explain your prediction.

What? I don't know...

What? I don't know...

What? I don't know...

Directions: Write your prediction, and explain your prediction.

What? I don't know...

What? I don't know...

What? I don't know...

Mixing Colors of Light

	Predict	Observe	Explain
Start Color			
End Color			
Start Color			
End Color			
Start Color			
End Color			

### Note to Trainer: 10:15-10:30

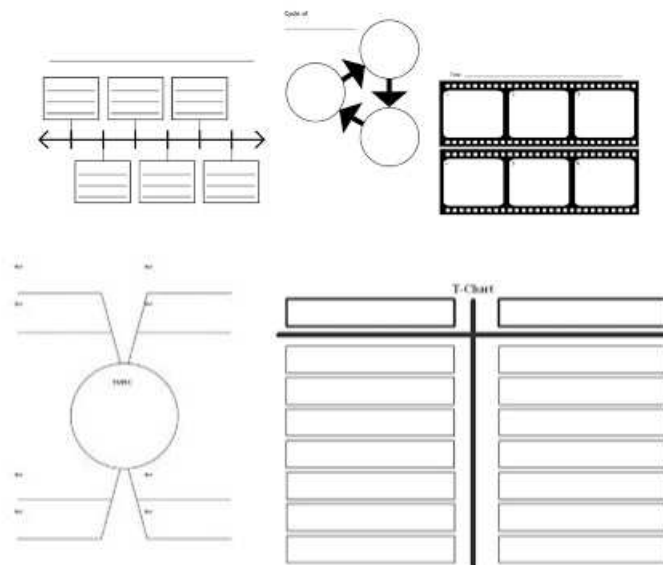
Explain that students use this language to make inferences, predict implications, or hypothesize based on evidence. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of inferring, predicting, and hypothesizing.

## #8 – Justifying & Persuading

### Language Frames:

- *I believe this because...*
- *The reason I think this is because...*
- *The most convincing reason for this is...*
- *Based on the evidence presented so far, I believe that...*
- *Although some people claim that \_\_\_\_, opponents are that....*
- *The advantages outweigh the disadvantages because...*
- *These [facts/reasons/data] strongly suggest that...*



Note to Trainer: 10:15-10:30

Explain that students use this language to give reasons for an action, decision, point of view or to convince others. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of justifying and persuading.

## Partner Talk

- How could you support language functions 5-8 in your mathematics classroom?



**Note to Trainer:** 10:30-10:50

Give teachers time to talk through language functions 5-8 and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Language Functions #5-8

Function	Usage
5: Classifying	
6: Analyzing	
7: Inferring, Predicting, and Hypothesizing	
8: Justifying & Persuading	
Other	

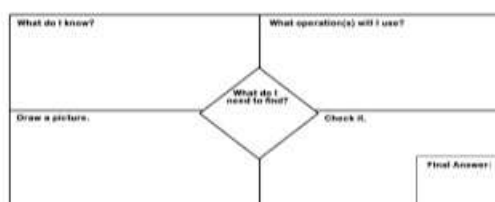
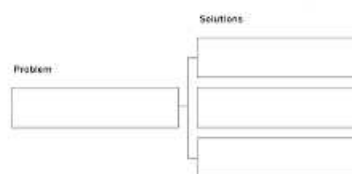
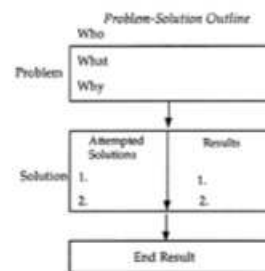
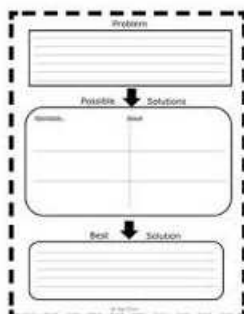
**Note to Trainer:**

Use this slide to record the teachers' ideas about how to use activities to support language functions 5-8.

## #9 Problem Solving

### Language Frames:

- *A way of thinking about solving this problem is...*
- *I will solve this problem by...*
- *The problem is similar to...*
- *The steps of solving this program is...*
- *The solution to this problem is...*
- *I know I have solved the problem because...*
- *The solution to this problem will require...*



### Note to Trainer: 10:50-11:05

Explain that students use this language to define and represent a problem and/or determine a solution. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of solving a problem.



## #10 – Synthesizing

### Language Frames:

- *My idea is similar to/related to \_\_\_\_\_'s idea.*
- *I agree/disagree with \_\_\_\_\_ because...*
- *As [person] already mentioned...*
- *The main point(s) is/are...*
- *From my perspective, \_\_\_\_\_ means...*
- *The concept of \_\_\_\_\_ can be expressed as...*
- *I feel that [person] and [person] viewpoints are related in that...*
- *My visual represents a synthesis of \_\_\_\_\_ and \_\_\_\_\_ because...*
- *After combing all of the ideas, it can be said that...*

name \_\_\_\_\_

Synthesize Create a blueprint of our fourth being's design

what Do I think of this?	What are other things I can design?

After thinking about the synthesizing I can see...



My idea is only some to you




### Note to Trainer: 10:50-11:05

Explain that students use this language to combine or integrate ideas to form a whole group. Teachers can use organizers to support the language function and then have students practice with the language frames.

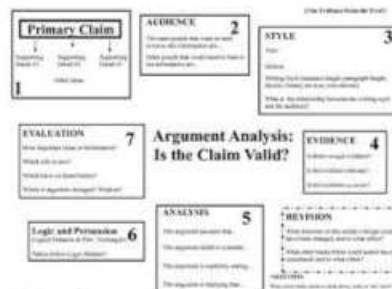
Purpose – to help teachers to understand how to support the language function of synthesizing.

# #11 – Evaluation



Language Frames:

- *Based on...I determined that...*
- *I assess that...*
- *After using the criteria, I think...*
- *Based on the criteria, I think...*
- *My interpretation of \_\_\_ is...*
- *I evaluated the design of the project based on...*
- *Using the rubric, I think...*
- *I have ranked the activities based on...*
- *After careful examination, I think I solved this problem correctly because...*
- *I believe this claim is valid because...*



+	△

PRO	CON



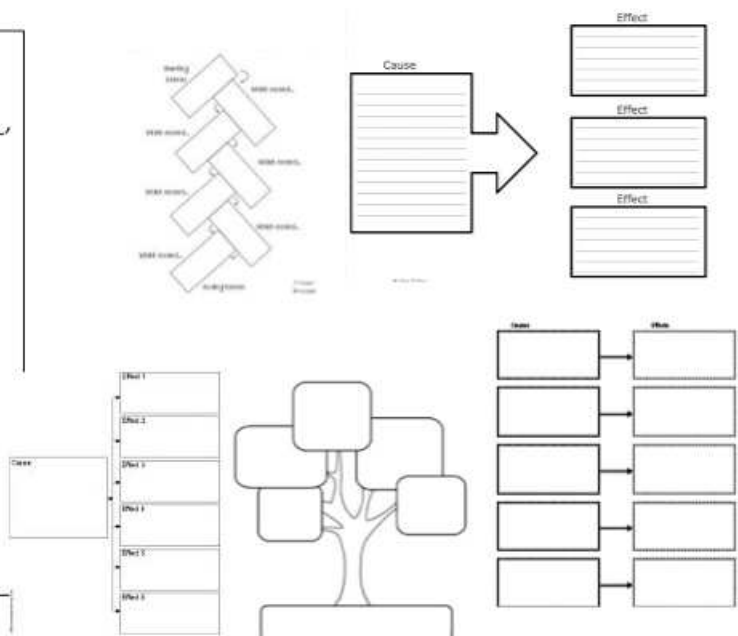
**Note to Trainer:** 10:50-11:05  
 Explain that students use this language to assess and verify an object, idea, or decision. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of evaluation.

## #12 – Cause & Effect

### Language Frames:

- *Even though many people thought the cause was \_\_\_\_\_, I believe it was...*
- *The most likely reason for \_\_\_\_\_ was...*
- *\_\_\_\_\_ was not cause by \_\_\_\_\_ because...*
- *Several factors contributed to the outcomes including...*
- *The change results in...*
- *As a result of \_\_\_\_\_, the...*
- *If, then..*
- *Since/Because \_\_\_\_\_ is \_\_\_\_\_, than...*
- *Due to the fact that...*



### Note to Trainer: 10:50-11:05

Explain that students use this language to describe why or how relationships and patterns exist between events, ideas, processes, problems and identify consequences that led to the outcome. Teachers can use organizers to support the language function and then have students practice with the language frames.

Purpose – to help teachers to understand how to support the language function of cause and effect.

## Partner Talk

- How could you support language functions 9-12 in your mathematics classroom?



**Note to Trainer:** 11:05-11:25

Give teachers time to talk through language functions 9-12 and then have a share out to record ideas on the next slide.

Purpose – to give teachers time to process what they have learned through sharing with others.

## Language Functions #9-12

Function	Usage
8: Problem Solving	
10: Synthesizing	
11: Evaluation	
12: Cause & Effect	
Other	

**Note to Trainer:** Use this slide to record the teachers' ideas about how to use activities to support language functions 5-8.

# Traditional 5E Model

Grade/ Grade Band:	Topic:	Lesson # ____ In a series of ____ lessons
Brief Lesson Description:		
Performance Expectation(s):		
Specific Learning Outcomes:		
Narrative / Background Information		
Prior Student Knowledge:		
Possible Preconceptions/Misconceptions:		
LESSON PLAN – 5-E Model		
ENGAGE: Opening Activity – Access Prior Learning / Stimulate Interest / Generate Questions:		
EXPLORE: Lesson Description – Materials Needed / Probing or Clarifying Questions:		
EXPLAIN: Concepts Explained and Vocabulary Defined:		
Vocabulary:		
ELABORATE: Applications and Extensions:		
EVALUATE:		
Formative Monitoring (Questioning / Discussion):		
Summative Assessment (Quiz / Project / Report):		
Elaborate Further / Reflect: Enrichment:		

**Note to Trainer:** 11:25-12:45

Remind teachers of the traditional 5E (they are already familiar with it and use it).

Purpose – to make sure all teachers understand the foundation for moving to a modified version of the 5E model.

## Modified 5E Model

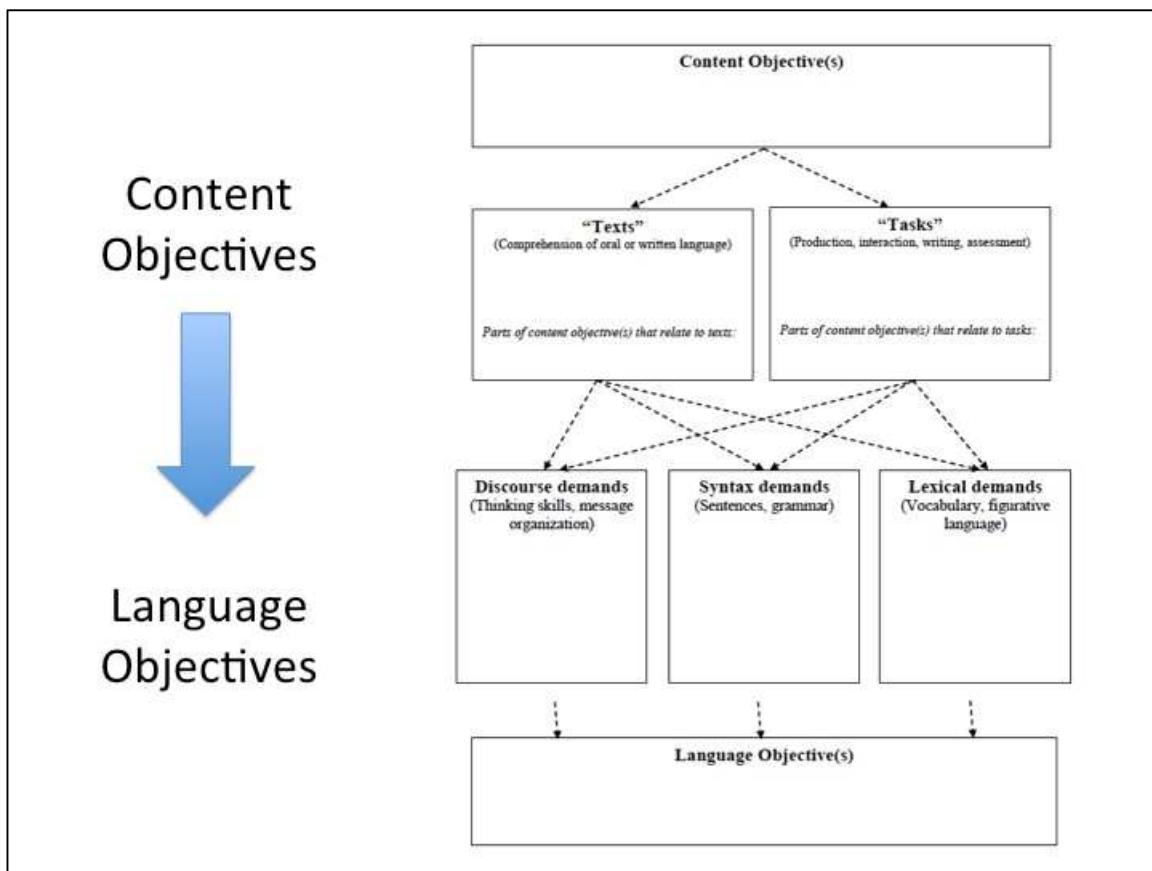
1. Determine the natural language functions at each step.
2. Consider sentence functions at each step.
3. Determine the necessary vocabulary.
4. Identify where graphic organizers are needed.

Concept Round multi-digit whole numbers to any place.	Teacher	Student
<b>Engage</b> Identify whole numbers.		<b>Evaluate</b>
<b>Explore</b> Rounded numbers have specific rules.		<b>Evaluate</b>
<b>Explain</b> Rounded numbers can be described by unique characteristics.		<b>Evaluate</b>
<b>Elaborate</b> The way numbers are rounded can be identified by its unique characteristics.		<b>Evaluate</b>

### **Note to Trainer:** 11:25-11:35

Explain the steps of the modified 5E model and the emphasis on language. Consider language frames for each stage and what you explain for students to produce.

Purpose – teachers should understand that in addition to the 5E model, they should consider the language for each stage.



**Note to Trainer:** 11:25-11:45

Explain that teachers will take content objectives and create language objectives based on the language needed to satisfy that particular objective.

Purpose – to help teachers create language objectives from content objectives.



Standard (3 <sup>rd</sup> , 4 <sup>th</sup> , & 5 <sup>th</sup> )	Content Objective	Language Objective
<i>Understand a unit fraction as the quantity formed by one part when a whole is partitioned into equal parts.</i> 3.NF.A	Students will be able to demonstrate parts fit into a whole.	Students will be able to <b>orally describe</b> how parts of a fraction are able to fit into a whole.
<i>Explain and/or illustrate why two fractions are equivalent.</i> 4.NF.A	Students will be able to demonstrate why two fractions are equivalent.	Students will be able to <b>explain</b> why two fractions are equivalent using appropriate language.
<i>Understand that parts of a whole can be expressed as fractions and/or decimals.</i> 5.NF.A	Students will be able to write parts of a whole in fraction and decimal form.	Students will be able to <b>orally explain</b> how a fractions and decimals are different forms to express part of a whole.

## Examples

Receptive		Productive	
Listening	Reading	Writing	Speaking
Tell Role-play Identify Listen Recognize Point Show Follow directions	Preview Read aloud Identify Skim explore Find specific information	List Summarize Ask and answer questions Justify opinions Compare Contrast Record	Name Discuss Rephrase Ask Answer Predict Say steps in process Summarize Respond Say Explain Justify opinions Contrast

**Note to Trainer:** 11:25-11:45

Review the examples listed on the slide. Also review the receptive and productive language functions based on listening, reading, writing, and speaking.

Purpose – to provide examples for teachers of how to write content language objectives.

## With a shoulder partner...

- Choose a standard.
- Create a content objective.
- Write a language objective with that same content objective.



**Note to Trainer:** 11:45-11:55

Explain that teachers will use their standards and partners to write a language objective. Inform teachers that they will have more practice with this later when they are planning one of the language functions to implement into their class.

Purpose – to give teachers time to process language objectives with a partner.

## Observation Procedures

- 1:00-1:15 and 1:45-2:00 travel time
- 1:15-1:45 actual observation time (home school)
- Take notes:
  - What was the language function used?
  - How did the teacher develop language?
  - Other observations
- We will discuss observations at 2:00

**Note to Trainer:** 11:55-12:00

Explain to teachers the procedures of observations. Teachers will report to their home schools to observe the EL teacher complete a demonstration lesson and take notes according to the type of language function used, how the teacher developed language, and other observations. They will report back and discuss the observations at 2:00.

Purpose – to help teachers to understand the procedures for observations.

Lunch 12:00-1:00



## Debrief - Observations

- Groups of 3 (same grade, different school)



**Note to Trainer:** 2:00-2:25

Teachers will be grouped in 3s by grade level. No group should contain teachers from the same school. These can be prearranged or teachers can choose themselves. Teachers will discuss what they observed during their observations.

Purpose – to give teachers time to process what they saw during the observation in the same grade level.

## Content Specific Planning (2:25-3:10)

- By grade level, cross all schools
- Choose one language function to be implemented over the next two weeks.
- Be prepared to share
  - Language function
  - Rationale/Objective
  - Practical implementation

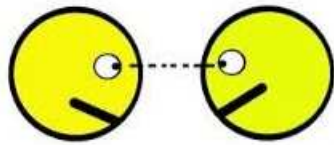
**Note to Trainer:** 2:25-3:10

Give an explanation of content specific planning and reporting back. Teachers will have from 2:25-3:10 to plan with other content partners.

Purpose – to give teachers time to plan with partners in order to feedback about instructional practices.

## Share Time

- ✓ Language function
- ✓ Rationale/Objective
- ✓ Practical implementation



Silent Appointment

**Note to Trainer:** 3:10-3:20

Give teachers time to make a silent appointment, meet with their partners, and then discuss their strategy. After 8-10 minutes, bring the teachers back and share out with group.

Purpose – to give teachers time to process and share their ideas about how they will implement a new instructional strategy.

## Next Steps - Coaching Cycle

- Share 5E lesson plan with instructional coach (ELL teacher) in PLC meeting next week
  - Make sure you add language objectives and the language function (see pp)
- Coach will observe short lesson looking specific for academic language supports
- Discuss/reflect in PLC the following week
- Questions/Concerns?

**Note to Trainer:** 3:20-3:50

Share the coaching procedure with teachers. Teachers will work with their building ELL teacher to engage in instructional coaching. Teachers will share their 5E lesson plan (something they already do) with the ELL teacher during PLC (already planned time) and get feedback. Then, the teacher will implement the lesson with the coach observing. Coaches will use the feedback tool already in place at the school.

Purpose – to share the next steps with teachers and explain how they will be supported during implementation.



## Formative Evaluation

Access the Google forum and complete the following questions:

- What is your definition of language functions?
- In what ways do you think this definition changed as a result of the PD session?
- What did you learn in this session that will most effectively help you support ELs in academic language of mathematics?
- Comments/Questions

**Note to Trainer:** 3:50-4:00

Explain to teachers that they will complete the evaluation on the Google forum.

Purpose – to understand what teachers have learned today and how to support for subsequent sessions.

## Appendix B: Interview Guide

### **Introduction**

*Thank you for agreeing to be a part of this important study. You are the expert in your classroom and I am excited to hear your perspective. As a reminder, all information you provide for this study will be confidential. This study is in no way connected to XX School District. This interview will be recorded so that it can be transcribed later. Is it okay to record this interview?*

*Before beginning the interview, I would like to get to know you more. Tell me a little about yourself.*

*In this interview, we will be talking specifically about instructional practices used with ELs in English language arts, mathematics, and science. I understand that you may or may not have had any training in how to teach ELs except for what the district or your school has provided. The instructional practices that we are going to discuss are based on the research I have done for my literature review. Please feel free to interrupt me or add more information to a previous question as we go throughout the interview.*

### **Opening Questions**

1. How long have you been teaching?
2. Can you tell me about the ELs you currently have in your classes?
3. How do you decide which instructional practices to use with ELs?

### **Part I - Scaffolding and/or Supports**

4. What types of scaffolding and/or supports do you use to help ELs in English language arts, mathematics and science in fifth grade?
  - a. Can you share with me your thoughts about using native language to help support ELs?
  - b. Can you share with me your thoughts about using multiple modalities to help support ELs?
  - c. What are your thoughts about using graphic organizers to support ELs?
  - d. Can you share with me your thoughts about using one-on-one support or small group instruction with ELs?
  - e. During mathematics and science instruction, what are your thoughts about using literacy strategies to help support ELs?
5. Could you please provide an example of how you scaffold a lesson or provide support for an EL in your classroom?
6. Could you please describe any problems or barriers you have experienced implementing support for ELs in fifth grade? If so, what?
7. What other information would you like to add about using scaffolding and/or supports for ELs?

**Part II – Building Prior Background Knowledge**

8. What are your thoughts about building background knowledge with ELs in English language arts, mathematics, science in fifth grade?
9. Could you please provide an example of how you build prior background knowledge for an EL in your classroom?
10. Could you please describe any problems or barriers you have had building background knowledge for ELs in fifth grade? If so, what?
11. What other information would you like to add about building background knowledge for ELs?

**Part III – Cooperative Learning**

12. What are your thoughts about using cooperative learning with ELs in English language arts, mathematics, and science in fifth grade?
13. Could you please provide an example of how you use cooperative learning in your classroom with ELs?
14. Could you please describe any problems or barriers you have had using cooperative learning with ELs in fifth grade?
15. What other information would you like to add about using cooperative learning with ELs?

**Part IV – Academic Language**

16. What are your thoughts about developing academic language with ELs in English language arts, mathematics, and science in fifth grade?
17. Could you please provide an example of how you develop academic language in your classroom with ELs?
18. Could you please describe any problems or barriers you have teaching academic language to ELs?
19. What other information would like to add about academic language for ELs?
20. Are there any other thoughts about teaching ELs that you would like to add?

*This is the conclusion of the interview. Thank you for your participation. Would you like a copy of the transcript of the interview once it is transcribed? Also, information about how to access the interview will be emailed you at the conclusion of the study. Results will be disseminated to stakeholders at the conclusion of the study. Do you have any final questions and/or concerns?*

## Appendix C: Observation Protocol

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Teacher (pseudonym): \_\_\_\_\_ Building: \_\_\_\_\_

Subject: \_\_\_\_\_

Learning Objective: \_\_\_\_\_

**Observed Instructional Practices:**

(Mark only as it applies)

☐	INDICATORS OF INSTRUCTIONAL PRACTICE	NOTES
	<u>SCAFFOLDING/SUPPORTS</u> Native language <ul style="list-style-type: none"> <li>• Vocabulary, comprehension activities, asking questions, responding appropriately, negotiating meaning, reconciling confusion, increasing understanding, increasing engagement, collaborating, discussing, assistive technology, expressing feelings, choice, instructing</li> </ul>	
	Multiple modalities <ul style="list-style-type: none"> <li>• Visuals, technology, videos, animations, multi-sensory</li> </ul>	
	Organizers <ul style="list-style-type: none"> <li>• Organizing information, clarifying relationships, writing, technology-based advanced organizers (TABOs), increasing engagement, interactive, make meaning, reducing language demand, problem solving language</li> </ul>	
	One on one or small group <ul style="list-style-type: none"> <li>• Individualized phonics, comprehending, spelling intervention</li> </ul>	
	Literacy strategies <ul style="list-style-type: none"> <li>• Before, during, after reading; pre-teaching vocabulary, cultural knowledge, discussing, meaningful connections, reading comprehension strategies in problem solving, text-based questioning</li> </ul>	
	<u>BUILDING PRIOR BACKGROUND KNOWLEDGE</u> <ul style="list-style-type: none"> <li>• Background information, sharing experiences, motivating, including, pre-assessing knowledge, predicting, purpose for reading, pre-teaching academic language</li> </ul>	
	<u>COOPERATIVE LEARNING</u> <ul style="list-style-type: none"> <li>• Working together, motivating, authentic academic discourse, communicating, listening, speaking, constructing meaning, negotiating meaning, drawing conclusions, home culture, exploring together, learning together</li> </ul>	

ACADEMIC LANGUAGE

- Word maps, student-friendly definitions, chunking with words around it, discussing, synonyms, antonyms, word parts
- Literal meaning, connotations, syntactical forms, morphological forms, semantic relations, collocations
- General: many opportunities, multiple exposures, authentic contexts
- Discipline-specific: explicit instruction, graphic organizers, students collaborating, videos
- Oral language development: visuals, retelling a story
- Increasing conceptual understanding while solving problems
- Dynamic Strategic Mathematics (DSM): academic language of mathematics, simple/complex word problems
- Constructing answers, arguments with evidence, asking questions
- 5R: repeating, revealing, repositioning, replacing, and reloading
- Contextualized Vocabulary Instruction (CVI): learning word meanings through text and concepts, teaching in context

## Appendix D: Sample of Coded Data

#### 4. What types of scaffolding and/or supports do you use to help ELs in English language arts, mathematics and science classes?

*I try to use pictures as much as I can if there is something that can be illustrated. I know it is a little bit more challenging in math so I think she finds other ways to do that, but in science, a lot of things can be illustrated unless they are very abstract. If they are abstract, I am just going straight to translating to try to explain. But there are some things I am not sure how much science our Arabic student had in Egypt where she came from because there were just some very basic ideas where she was like, well, that is not like how that works. She just didn't have the background. So sometimes it turns into a side conversation where everyone else is working and she and I are having a side conversation where I am building that background for her so she can kind of connect the dots because there are huge gaps because she wasn't here before third grade. That is definitely something I do for scaffolding for her. Sometimes I am sketching things out and labeling thing. Or I am asking her to draw it. If any of the ELs offer connections to something they have seen or heard or read, I'll try to incorporate that. We were doing a lesson on animal adaptations with science last week and our student from the Congo we were watching a video from that Planet Earth series and they mentioned elephants in the*

Jamie Cardwell 6/6/2017 16:24  
Comment [33]: Visuals

Jamie Cardwell 6/6/2017 16:24  
Comment [34]: Translation

Jamie Cardwell 6/6/2017 16:24  
Comment [35]: Reteach

Jamie Cardwell 6/6/2017 16:24  
Comment [36]: Visuals

Color codes used in typological analysis:

**Pink** – scaffolding/supports

**Orange** – prior background knowledge

**Yellow** – cooperative language

**Blue** – academic language

## Appendix E: Themes Analysis (academic language)

16		17 (example)		18 (barriers)		19 (anything else)	
daily academic language	(17%)	knowledge of students	4 (57%)	T lack of knowledge and training	5 (56%)	important	1 (100%)
very hard	1 (4%)	intentional teaching	1 (14%)	very hard	3 (33%)		
use strategies	(57%)	strategies	7 (100%)	communication with home	1 (11%)		
very important	(48%)	difficult	1 (14%)	language barrier	1 (11%)		
build foundation	(57%)			personal dictionaries are too cumbersome	1 (11%)		
bilingual support	1 (4%)			lack of time	1 (11%)		
teach in context	(22%)						
real life examples	2 (9%)						
Responses	23		7		9		1

Appendix F: Supporting Quotations for Themes Analysis

Source	Quote	T lack of knowledge and training	very hard	communication with home	language barrier	personal dictionaries are too cumbersome	lack of time
A-3-1	Just my own barriers where my knowledge, again, being able to figure out where that student is. And again, not having formal training that makes it pretty difficult.	X					
A-3-2	Academic language is just very, very hard and because they are learning a second language, it is that much more difficult. So, I try to draw as much as I can. It is just hard sometimes for homework purposes because you know and sometimes I try to remember as much as I can that so and so needs this in Spanish or you need this in this language, but sometimes I forget. This is the only barrier sometimes that communication with home.		X	X			
A-5-1	Unfortunately, I have never done a whole lot of training on working with ELLs. I have a whole lot of them, but I just haven't had the training.	X					
B-3-1	I don't know when the word sounds the same, but means something else in their language or when I could use their background knowledge to make a connection to the new word.	X					
B-4-1	I think it can be a real challenge if there aren't words in their home language that are similar enough to what we are talking about here. Sometimes the concepts just don't match. It can be a challenge if it just doesn't match up. Just trying to stay on top of it for multiple languages. That has been really a challenge this year.				X		
B-4-2	Knowing which words to use and finding which ones to focus on.	X					
C-3-1	X						
C-4-1	X						
C-4-2	The problem with the dictionaries is that they have a hard time staying together and it is so much information. The squares in it is so much and can be overwhelming. The kids don't use them the way they are supposed to be used. They are not referring back to what they have done before It goes in there and it is done. The students confuse words especially within the same unit. They will be familiar with the words, but they will use the wrong word for the wrong thing. They use the wrong words for stuff. Spelling really trips them up too. Spelling or pronunciation is difficult for them.		X			X	
C-5-1	X						
D-3-1							
D-4-1	A barrier for that is I wish we had a way to go through the words again and practice like we do with other things. But we just don't have time for it. Do we want to learn new words or keep on rehashing out these old words?						X
D-4-2							
D-5-1							
E-3-1							
E-3-2							
E-4-1							
E-5-1	Maybe like myself like some of the things just thinking about how I can make the word relevant to them especially with science. So, just the words themselves or the academic language themselves can be difficult.	X	X				
F-3-1							
F-3-2							
F-4-1							
F-4-2							
F-5-1							



## Appendix G: Observation Tally Sheet

<b>INDICATORS OF INSTRUCTIONAL PRACTICE</b>	<b>3<sup>rd</sup></b>	<b>4<sup>th</sup></b>	<b>5<sup>th</sup></b>	<b>Total</b>
<b><u>SCAFFOLDING/SUPPORTS</u></b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Native language</b> <ul style="list-style-type: none"> <li>Vocabulary, comprehension activities, asking questions, responding appropriately, negotiating meaning, reconciling confusion, increasing understanding, increasing engagement, collaborating, discussing, assistive technology, expressing feelings, choice, instructing</li> </ul>				
<b>Multiple modalities</b> <ul style="list-style-type: none"> <li>Visuals, technology, videos, animations, multi-sensory</li> </ul>	<b>7</b>	<b>7</b>	<b>5</b>	<b>19</b>
<b>Organizers</b> <ul style="list-style-type: none"> <li>Organizing information, clarifying relationships, writing, technology-based advanced organizers (TABOs), increasing engagement, interactive, make meaning, reducing language demand, problem solving language</li> </ul>	<b>2</b>	<b>2</b>	<b>0</b>	<b>4</b>
<b>One on one or small group</b> <ul style="list-style-type: none"> <li>Individualized phonics, comprehending, spelling intervention</li> </ul>	<b>3</b>	<b>3</b>	<b>3</b>	<b>9</b>
<b>Literacy strategies</b> <ul style="list-style-type: none"> <li>Before, during, after reading; pre-teaching vocabulary, cultural knowledge, discussing, meaningful connections, reading comprehension strategies in problem solving, text-based questioning</li> </ul>	<b>4</b>	<b>4</b>	<b>0</b>	<b>8</b>
<b><u>BUILDING PRIOR BACKGROUND KNOWLEDGE</u></b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>5</b>
<ul style="list-style-type: none"> <li>Background information, sharing experiences, motivating, including, pre-assessing knowledge, predicting, purpose for reading, pre-teaching academic language</li> </ul>				
<b><u>COOPERATIVE LEARNING</u></b>	<b>5</b>	<b>5</b>	<b>5</b>	<b>15</b>
<ul style="list-style-type: none"> <li>Working together, motivating, authentic academic discourse, communicating,</li> </ul>				

<p>listening, speaking, constructing meaning, negotiating meaning, drawing conclusions, home culture, exploring together, learning together</p>				
<p><b><u>ACADEMIC LANGUAGE</u></b></p> <ul style="list-style-type: none"> <li>• Word maps, student-friendly definitions, chunking with words around it, discussing, synonyms, antonyms, word parts</li> <li>• Literal meaning, connotations, syntactical forms, morphological forms, semantic relations, collocations</li> <li>• General: many opportunities, multiple exposures, authentic contexts</li> <li>• Discipline-specific: explicit instruction, graphic organizers, students collaborating, videos</li> <li>• Oral language development: visuals, retelling a story</li> <li>• Increasing conceptual understanding while solving problems</li> <li>• Dynamic Strategic Mathematics (DSM): academic language of mathematics, simple/complex word problems</li> <li>• Constructing answers, arguments with evidence, asking questions</li> <li>• 5R: repeating, revealing, repositioning, replacing, and reloading</li> <li>• Contextualized Vocabulary Instruction (CVI): learning word meanings through text and concepts, teaching in context</li> </ul>	4	3	0	7

## Appendix H: Audit Trail

4/1/15	Received permission from assistant superintendent of human resources to conduct research at site
4/11/16	Received IRB approval
4/11/16	Sent an email to schools A-F requesting to conduct research
4/12/16	Received permission to conduct research at school C and emailed all teachers in third, fourth, and fifth grade
4/13/16	Received permission to conduct research at school E and emailed all teachers in third, fourth, and fifth grade
4/14/16	Received permission to conduct research at schools A, D, and F
4/15/16	Emailed third, fourth, and fifth grade teachers at schools A, D, F, and repeat email for school C
4/19/16-5/26/16	Interviewed and observed teachers in schools A-F
4/20/16	Received permission to conduct research at school B
4/21/16	Emailed third, fourth and fifth grade teachers at school B
5/16/16-7/23/16	Transcribed data
7/24/16	Began coding data and identifying themes
8/7/16	Transferred codes to analysis chart and began identify supporting quotations
9/4/16	Tallied survey data
9/18/16	Compared interview and observation data to identify themes and patterns
10/7/16	Sent proposed themes to chair
11/13/16	Confirmed themes, discussed possible project direction with chair and identified sections of literature review
11/16-1/17	Wrote data analysis
1/24/17	Call with chair and committee member about analysis and possible project direction
1/17-3/17	Conducted literature review and completed data analysis

## Appendix G: Academic Language Development Observation Form

Teacher:

Observer:

Date:

Content Objective:			
Language Objective:			
Language Function			
Inquiry/seeking information	Summarizing & Informing	Comparing & Contrasting	Sequencing & Ordering
Classifying	Analyzing	Inferring, Predicting, & Hypothesizing	Justifying & Persuading
Problem Solving	Synthesizing	Evaluation	Cause & Effect
Procedure:			
Supports Used: <ul style="list-style-type: none"> <li>○ Modeling</li> <li>○ Sentence frames</li> <li>○ Paired discussion</li> <li>○ Group discussion</li> <li>○ Whole group discussion</li> <li>○ Organizers</li> <li>○ Other</li> </ul>			
Comments:			