An examination of vocabulary acquisition by kindergarten English learners

Judith L. Matuszewski

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ABSTRACT

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Northern Illinois University, 2017
Elizabeth Wilkins, Director

American classrooms are becoming increasingly diverse as students enter with native language knowledge (other than English). Addressing the needs of all students is more difficult given most teachers are native English speakers, have little experience with multiple language knowledge, and can be apprehensive about teaching ELs.

With this in mind, this study was undertaken to look at the feasibility of teaching kindergarten students strategies (e.g., use of picture dictionary, word wall, anchor chart use, partnering with peers), thus allowing the student to create their own understanding of English vocabulary rather than having an adult simply give the meaning to them or impart knowledge.

Kindergarten ELs were taught strategies, given time to practice, and encouraged to use strategies. Students were then observed using the presented strategies. Use of technology (ELs used iPhones to photograph resources they used) showed to what extent each EL understood and used the presented strategies.

Promising results showed ELs were able to understand, use, and adapt strategies, creating meaning for themselves as they acquired English vocabulary. PPVT and MLU testing showed increases and identified additional English words spoken. While this study included a small population, the findings point to strategy use for young ELs as promising. The potential application in classrooms could offer support for classroom teachers as they plan for more classroom diversity.
AN EXAMINATION OF VOCABULARY ACQUISITION BY KINDERGARTEN ENGLISH LEARNERS

BY

JUDITH L. MATUSZEWSKI
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A DISSERTATION SUBMITTED TO THE GRADUATE SCHOOL
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Doctoral Director:
Elizabeth A. Wilkins
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Knowing any writing is only as good as the edits, I am immensely grateful for Gail Jacky. Your steady guidance and needed laughs helped me reach the finish.

Family and friends who supplied coffee (with chocolate) allowed me to turn the dining room table into a research desk, asked where I was in the process, and offered words of encouragement, I thank you. To the students who inspire me daily, my gratitude. This work is not done alone. I am truly blessed in those who surround and support me.
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CHAPTER 1

INTRODUCTION

Kindergarten classrooms are full of energy, movement, and noise, and as a newcomer to the country, an English Learner (EL) can be easily overwhelmed. For example, Jai and his family had moved from South Korea just two weeks before the late August start of kindergarten. Upon meeting Jai and his family, as his kindergarten teacher, I asked the parents to transcribe critical words (bathroom, lunch, snack, help, and recess) into Korean to help build Jai’s confidence and support his understanding. His parents were encouraged to label Jai’s school materials with both Korean and English names. For the first two months of school Jai was silent, watching, pointing, and gesturing. Occasionally he would approach me and simply look. I offered potential options, listing them until Jai would shyly nod.

In the first week of November, Jai walked up to my desk and whispered “bathroom.” His first self-generated request. It was shortly after this when Jai again made a request: “storybot,” asking for an animated letter practice video, a repeated request of his classmates. His first request made sense, fulfilling a basic need. This second request, clearly a self-initiated request, was one he identified with and had learned from his peers. The pride and happiness were evident on his face when the video began. Simultaneously, I discovered that as his teacher, it was important I capitalize on the power of other resources, such as his peers in the classroom, for ELs, like Jai, as they make sense in an unfamiliar setting.
ELs now make up a greater concentration in elementary classrooms. U.S. Census Bureau (2009) information shows the number of children speaking a language other than English at home is 11.2 million, or 14% of the 77 million school-aged children. These numbers continue to grow. As classroom teachers find themselves in increasingly diverse classrooms (School Report Card, 2013; 2014; 2015), they need to find ways to support each individual student, in particular ELs. “Interventions that are more comprehensive are needed as are studies of how to accommodate the language learning and literacy needs within the same classroom of students with diverse skills and capacities” (August & Shanahan, 2010, p. 345). ELs differ in their English-speaking ability levels, often ranging from no English exposure to fluent bilingualism – “the use of two or more languages (or dialects) in everyday life” (Grosjean & Li, 2013, p. 7). That said, it is important to support classroom teachers faced with this increasing diversity.

In most cases, ELs are defined by district paperwork, simply identified by parents as exposed to a native language at home. This native language, spoken by those around the student, may or may not be exclusively used by the EL. Identified ELs often receive support from a trained instructor; however, this service is typically delivered once or twice daily in another classroom in short 10 to 30-minute segments (Calderón, et al., 2011). Students may be grouped with same-language or different language peers and may or may not come from the same classroom (Miramontes, et al., 2011; School Report Card, 2015). If prominent researchers are struggling to find what works, as evidenced by August and Shanahan’s (2006) contention that “there are still not enough studies exploring what works with English Learners” (p. 344), teachers have even more difficulty. Garcia (2011a) reminds us to look at the way ELs are supported in current classrooms and that current delivery of support needs to change. Even when ill-prepared to do so (Reeves, 2006), classroom teachers are responsible for the academic
advancement of all students, including ELs. While schools utilize English as a Second Language (ESL) teachers, the current delivery, an ESL teacher working with ELs in small pull-out groups or collaborating with a classroom teacher is a good start, but more needs to be done.

Interventions delivered in short bursts once a day or three times a week do not move ELs forward enough to close the achievement gap, a gap that drains financial resources and keeps ELs at a significant disadvantage (Crawford, 2004; Frattura & Capper, 2007; Goldenberg et al., 2013). Examples such as working with ELs in segregated spaces, removing ELs from their “average-to-above-average achieving, English-speaking peers” (Dove & Honigsfeld, 2014, p. 4) and “the fragmented special service delivery, frequent interruptions for pull-out services, and the social isolation that some ELs experience can be detrimental” (Dove & Honigsfeld, 2010, p. 9) and perpetuate academic gaps. Classroom teachers need effective strategies; they need effective tools at their disposal as they support the numerous ELs in their care.

English-speaking students constantly acquire new words during school activities; however, ELs are not as adept at this incidental acquisition (August & Shanahan, 2006). While good literacy instruction supports English-speaking students more than ELs, there is one area of exception. August and Shanahan (2008) shared that quality vocabulary instruction “seems to provide greater benefits for second-language learners than first-language learners” (p. 10). This instruction falls to classroom teachers, as they are responsible for literacy instruction throughout most of the school day. Classroom teachers take coursework specifically related to their craft; however, it is only recently that specific changes have been made to licensing requiring additional coursework focused on ELs (State Board of Education, 2015). While newer teachers, those with additional coursework are entering the field, those already working may not have this added background, may only have participated in workshops, may have investigated training on
their own, may or may not be familiar with the child’s culture, or may not even know where to find support. It makes sense that those classroom teachers may not have enough strategies to teach ELs; they need support to know how to scaffold learning for individual ELs as they work to acquire English vocabulary (Moughamian, Rivera, & Francis, 2009). In support, Goldenberg (2008) reported,

Vocabulary development is, of course, important for all students but it is particularly critical for ELs. There can be little doubt that explicit attention to vocabulary development—everyday words as well as more specialized academic words—needs to be part of English learners’ school program. (p. 23)

As a classroom teacher presents various words, defines those words, and allows students to participate in activities focused on making meaning, the new words become a part of the child’s background knowledge (Fisher & Frey, 2009). However, August and Shanahan (2006) posit that a minimum of eight exposures to a word may be necessary for an EL to make the word his/her own. When a student is unable to gain meaning from verbal activities because he or she does not understand the language, other cues are required. For example, students might look to peers. Also, the teacher might need to create and pair visuals. Additionally, pre-teaching and post-teaching (e.g., connecting with native language, connecting to cognates, acting out, connecting to previously read text and previous vocabulary, and re-teaching or revisiting a concept in a different way) could take place (Kindle, 2009). While these strategies are useful, they come at a price (e.g., additional time is needed for modeling, visuals need to be created requiring teacher skill and time, and re-teaching takes time away from whole class work to focus on individual students needing support) (Norton & Toohey, 2001).

Identification of resources to support scaffolding for ELs and to help teachers individualize learning is one way to move instruction for ELs forward (Calderón, et al., 2011;
Tapping into human resources that may be available, but are often unidentified, allows teachers to engage students and capitalize on the strategies students may currently be using to help them understand English vocabulary and create their own meaning (e.g., connecting to native language) (Slavin & Cheung, 2005). The relationships formed in the classroom between teacher and student and even those among students may foster learning. Pianta and Stuhlman (2004) found a connection between pre-school teachers and students’ receptive vocabulary scores. Pianta and Stuhlman did not find this same connection between “teacher-child closeness” and kindergarten students scores, but they did find that “teacher-child relationships appear to be both contributors to and indicators of children’s school adjustment” (p. 446). Pianta and Stuhlman’s research suggests that when students feel connected to the teacher and classroom, their achievement is stronger.

By finding ways to help classroom teachers become aware of the ways in which ELs work with each other (Calderón, et al., 2011) and how ELs use teacher/student or student/student relationships to make meaning, this available and previously untapped resource can become a scaffold for all. Therefore, the current study focused on vocabulary acquisition by ELs as viewed through a “translanguaging” (Garcia, 2011a) approach, identifying strategies employed by individual ELs in kindergarten. The study specifically targeted how ELs in a kindergarten classroom used human resources (e.g., teacher, native English-speaking peers, same language peers, and/or different language speaking peers) within the classroom (their community of learners or community of practice) (Lave & Wenger, 1991) to acquire new vocabulary.
Framework

A framework focused on an acceptance of translanguaging (Garcia, 2009) within a community of practice (Lave & Wegner, 1991) in a kindergarten classroom served as the foundation for this study. The following is an overview of these important constructs. More detailed information on each of the areas will follow in Chapter 2.

Translanguaging

Translanguaging (Garcia, 2009) is a way of thinking about ELs, native language, and learning English. Garcia and Wei (2014) define translanguaging as an “act performed by bilinguals for accessing different linguistic features or various models of what are described as autonomous languages to maximize communicative potential” (p. 160). When embracing the ideas behind translanguaging, teachers look to enhance communication and encourage connections between native languages and English as well as provide and/or model use of resources to help ELs bridge their learning of English. An example of this use may occur in a kindergarten classroom. A translanguaging approach looks slightly different from a typical classroom. Both types of classrooms have common items or concepts (e.g. shapes, colors, or numbers) easily visible and posted in the room. However, it is in that translanguaging classroom that the posters include more than simply a picture and the English word. In my classroom, the posters include the picture, the English word, and a native language label (see Figures 1, 2, and 3). Previously posted language resources remain in the classroom, adding to the currently posted language charts.
Picture dictionaries and baby first word books are on each group table and easily accessible. Students are taught to use items within their reach to help name, label, and identify.
When faced with multiple languages as resources, keeping a similar background color for a specific language is useful (see Figures 2 and 3, with Arabic words shown on brown backgrounds). Numerous pictures and photographs are posted in the room and available as resources since the pictures represent the students’ first language. Posted photos include children from many cultures. Words overheard may include a mix of English and other languages; for example, an EL may respond to a peer’s greeting using his/her native language, the greeting most familiar to them. A translanguaging viewpoint not only allows this native language use, but also encourages the use as a bridge to English acquisition.

**Community of Practice**

A community of practice (Lave & Wenger, 1991) in which students support each other and use the resources they currently have complements translanguaging, since viewing native language ability positively enhances an environment of acceptance. Lave and Wenger define a “community of practice as a set of relations among persons, activities, and world” in “which participants share understandings concerning what they are doing and what that means in their lives and communities” (p. 98). In relation to this study, even if students have attended preschool, the kindergarten world will be different, with a new set of relations with peers and activities. The first few weeks of kindergarten are spent meeting new friends, establishing a classroom community, thus, a community of practice focus is both developmentally and academically appropriate and directly connects with current best practice in kindergarten instruction. Student engagement, participation, and connections are critical to individual learning and academic growth.
Problem Statement

According to the Migration Policy Institute, U.S. public schools reported an increase in EL enrollment of 53.2% between 1997/8 and 2007/8 (Uro & Barrio, 2013). Early elementary classrooms are changing, and in some suburban classrooms ELs are a larger group than native English-speakers (School Report Card 2015, 2016, 2017). Additionally, no longer do we simply have classrooms where many students speak Spanish; some teachers now find themselves facing classrooms with numerous cultures and languages represented. This increase in diversity poses challenges, as research has shown that native English-speaking teachers teach as they were taught, using strategies that best support monolingual instruction (York-Barr, Gher, & Sommerness, 2007). Additionally, Reeves (2006) found that general education teachers are not prepared to support the ever-increasing numbers of ELs in their classrooms. Therefore, researchers like Ortega (2013), Grosjean and Li (2013), and Garcia (2011a) have proposed movement away from a historically monolingual approach, where English is the only language to a more inclusive environment where native language is used as a resource.

Connected with this movement toward a more inclusive approach is viewing ELs, not as “broken and in need of fixing” (Thomas & Collier, 2003, p. 61) but as students with more to offer. As identified by Gottfried (2014), “the number of EL classmates positively relates to the socioemotional outcomes of other students sharing the same kindergarten…classroom” (p. 39). As ELs are viewed more positively, those ELs feel a better sense of themselves and their connection in school. Research suggests that a caring environment, where students feel connected to their teachers influences academic achievement (Klem & Connell, 2004). Hughes and Kwok (2007) shared, “when students experience a sense of belonging at school and a
supportive relationship with teachers and classmates, they are motivated to participate actively and appropriately” (p. 39). This connection within a classroom is not easily achieved given the diversity represented in contemporary classrooms; finding that “teacher-child ethnicity match is associated with more positive teacher ratings of closeness” (p. 40). While Hughes and Kwok’s work focuses on a Spanish-speaking population, other researchers are finding similar results – teachers make a difference in academic achievement (Wright et al., 1997). A program out of UCLA is receiving current attention, focusing on “attitude rather than a program” (Avery, Cervone, & DiMartino, 2016, p. 1 emphasis in original). Further evidence is provided by Syrja (2011), emphasizing that good strategies work unless the teacher has not considered the differentiation needed when working with ELs. Given the expanding diversity experienced in many districts, more information is needed for classroom teachers when faced with classes that include more than two cultural or linguistic groups.

Classroom teachers in the district in which this study will take place are experiencing classroom makeups that include 10-12 cultures and/or languages represented in one room (School Report Card, 2014). While current elementary teachers are often white, with little diversity among the staff (School Report Card, 2015; Hyland, 2005), the diversity among the students is present. Finding a way to make the most of student-teacher relationships given this ethnic imbalance is intriguing and an area for study.

Purpose Statement

The purpose of this study was to examine vocabulary acquisition by kindergarten ELs within their community of practice through a translanguaging lens. This study examined various strategies employed by ELs in two kindergarten classes in an elementary school situated in a
large suburban district in Illinois. The study investigated how ELs used resources: human (teacher, native English-speaking peers, same language peers, different language speaking peers, relationships) and resources (books, posters, etc.) within the classroom (their community of learners) to acquire new English vocabulary.

Research Questions

The following research questions guided this study.

1. How do ELs utilize human resources (i.e. teacher, assistants, native-English speaking peers, same-language peers) to support their acquisition of English vocabulary?
   1a. How do kindergarten ELs utilize student/student relationships to create understanding and acquisition of English vocabulary?
   1b. How do kindergarten ELs draw on native language to create understanding and acquire English vocabulary?
   1c. How do kindergarten ELs utilize teacher/student relationships to create understanding and acquisition of English vocabulary?

2. How does an individual EL’s knowledge of English vocabulary change over time in a kindergarten classroom where ELs use available resources, including classmates, as they create understanding and acquire English vocabulary?

Significance of the Study

August and Shanahan (2006) commented that more work needs to be done to support ELs. While ELs are a researched population, much of this research has looked at and worked with Spanish-speaking ELs. Although there is an abundance of research with a Spanish-
speaking EL population, there are an additional 3.2 million ELs speaking languages other than Spanish (U.S. Census, 2009). Less research has focused on and/or identified ways to support ELs speaking other languages. Given current educational policy calling for high standards and strong accountability as well as annual reading and math testing and inclusion of all ELs in testing (Genesee, et al., 2005), additional research should include ELs who speak languages other than Spanish. Furthermore, classroom teachers, notably teachers within the district in which the study took place, have experienced an influx of ELs from various countries. This study expands the EL lens to include those students who speak not only Spanish, but also the multitude of languages represented in one kindergarten classroom.

By stepping back to closely observe students in a natural setting, it is hoped that data will be gathered that can give classroom teachers a better understanding of whether ELs see others as available resources in their classroom. Other collected information may include student characteristics (e.g., whether students interact with each other, how students talk with each other as they make sense of classroom activities, whether ELs gravitate toward others who speak their language, or simply speak a language other than English). Additionally, observing if as ELs become more comfortable over time, will those same ELs seek out English-speaking peers or teachers, will they stay silent, or will they try to figure things out on their own? Through focused examination, the researcher gathered data and identified patterns of behavior while learning more about how the ELs interacted with others to make meaning in the classroom through acquisition of vocabulary.
Methodology

A mixed-method design was used to examine ELs in two self-contained kindergarten classrooms. Data were collected using four methods: the Peabody Picture Vocabulary Test (PPVT) (Dunn & Dunn, 1997), Mean Length of Utterance (MLU) pre-/post-assessment (see Appendix A), observations, and photo review. At the start of the school year, the MLU measure was given to ELs to establish a baseline of the ELs’ English vocabulary use when asked specific questions (e.g., what do you do in school, what do you like, what is your favorite food, what is your favorite animal). Those questions were recorded, and the same questions were asked as a post-assessment at the end of the study. As an added measure, the MLU data were reviewed by identifying specific English vocabulary use (e.g., number of different words, number of nouns, verbs, adjectives used). A review of the data with the school Speech and Language Therapist (S/LP) was implemented to ensure proper calculations. Observations occurred over a four-week period, during Language Arts activities within the classroom, to collect data on the identified ELs. Those ELs were observed and field notes were generated to track their interactions with other students. Photos, taken by the researcher and by ELs, captured the interactions between ELs and the human resources they used. Discussion between the researcher and ELs after taking photos is included to reduce the potential for bias. The MLU were analyzed using descriptive and parametric statistics. The interviews and photos were analyzed using open coding (Corbin & Strauss, 2008), process coding, categorized coding (Silverman, 2006), and identification of patterns across identified cases using constant comparative thinking (Yin, 2010).
Organization of Dissertation

This study is organized into five chapters. Chapter 1 provides a general overview of the study, including the framework, problem statement, purpose statement, and research questions. A review of the literature related to the problem and the theoretical framework for the study are found in Chapter 2. The methods used to carry out the study are described in Chapter 3. Chapter 4 presents the findings from the collected data. Finally, Chapter 5 covers the discussion, implications, recommendations, and suggestions for future research.
CHAPTER 2

LITERATURE REVIEW

The following chapter reviews current EL research. It starts with the connection between vocabulary and comprehension and moves to the advantages of classroom teachers allowing students to utilize connections to their native languages. The chapter includes a review of literacy strategies (e.g., read aloud, paired multi-media, making connections). Then, a review of the connection between human relationships and language learning is described. Finally, the chapter ends with narrative about gaps in the current literature as well as the focus of this study.

Vocabulary and Comprehension

Comprehension is an important element of reading success, and vocabulary knowledge can enhance or detract from an EL’s understanding and reading comprehension. This is supported by longitudinal data collected by Hart and Risley (1995), who found

that differences in the amount of cumulative experience with … significant family experience [amount of talking that went on] were strongly linked to differences at age 3 in children’s rate of vocabulary growth, vocabulary use, and general accomplishments and strongly linked to differences in school performance at age 9. (p. 193)

Given that vocabulary knowledge in kindergarten and first grade is a significant predictor of reading comprehension in the middle and secondary grades (Cunningham & Stanovich, 1998), these early years can be problematic or can be used to an advantage (August et al., 2005). Entering school with pre-reading skills and English understanding can position a student for success, a position not often realized by ELs. Hart and Risley (1995) identified that “the
problem of skill differences among children at the time of school entry is bigger, more
intractable, and more important than we had thought” (p. 193). ELs may enter school with a
smaller vocabulary or a vocabulary base that teachers are unable to access due to language
differences (Bialystok, 2001). August et al. (2005) concur, finding that in addition to knowing
fewer words than English speakers, ELs knew “less about the meaning of the words that they did
know” (p. 51). Most students enter school with up to a 6,000-word vocabulary (Calderón et al.,
2011; Senechal & Cornell, 1993) and generally add 17 words per day to their vocabulary. With
a larger vocabulary, students are better able to connect to newly introduced concepts to gain
understanding and can tolerate a small portion of unknown words in novel text (August et al.,
2005). However, ELs do not keep pace with the vocabulary growth of English-speakers, falling
further and further behind in vocabulary development (Bemiller & Boote, 2006). August et al.
(2005) confirmed that there is a large gap in the breadth of vocabulary between the two groups
by collecting data from four schools in Virginia and testing both Spanish and English speaking
fourth-grade students using the Peabody Picture Vocabulary Test Revised (PPVT-R). They
found that even when given opportunities to build vocabulary, ELs continued to lag in
vocabulary acquisition. Also discouraging, Beck and McKeown (2007) found “that, once
established, differences in vocabulary knowledge remain” (p. 252). Filippini, Gerber, and
Leafstedt (2012) add to this concern, noting that ELs typically begin school with smaller
vocabularies, and even with intensive instruction, the growth made by an EL will not match an
English-speaking peer. This knowledge gap remains constant during the instructional year
(Filippini et al.).

In response, Coyne, McCoach, and Knapp’s (2007) comparative study looked at three
ways to present vocabulary instruction. For some teachers, instruction was based on helping the
students identify, understand, and, finally, comprehend the meaning of words in context. By identifying efficient supports, Coyne, et al. determined that “vocabulary instruction is long term and comprehensive, occurring before, during, and after reading” (p. 110). The researchers identified those supports – decoding, grammatical structures, background knowledge, comprehension skills, and respect for the primary language and home culture – as useful and efficient. They noted that “rich and varied language experiences” (p. 110) along with individual word learning are important strategies to support ELs. Additionally, they reported that teachers must make “clear the importance of learning as many words as possible each day” (p. 110).

While these ideas support important classroom strategies, Calderon et al. identified a number of challenges. The first difficulty occurred when selecting target words. Supporting earlier research (August et al., 2005), Coyne et al. identified ways to effectively build vocabulary knowledge, but they added that “although knowledge about how to teach vocabulary effectively is accumulating, what to teach remains elusive” (p. 146). Coyne et al. contended that there was currently no clearly identified list of words needed by all students to be successful. That said, the most cited list of target words comes from Beck and McKeown (2001), who identified Tier-2 words as important and useful words – words found frequently across various domains. These are words used by mature students, those readers who comprehend grade level and above material and show true word comprehension.

Whereas vocabulary knowledge is a good indicator of reading comprehension or difficulties (Carlo et al., 2004), more recently, Calderón, Slavin, and Sánchez (2011) added that early reading comprehension (understanding what is read and the ability to restate) “also predicts future reading abilities” (p. 110). Reading, a skill that can open doors or cause frustration, is the most focused on area in early elementary learning, since reading comprehension is critical for
academic success (Graves, 1994). The rich get richer and the poor get poorer (Stanovich, 1986), while a cliché, holds true for reading. Students who enjoy reading and find success in the process read more, learn more vocabulary, and gain understanding. Avid readers and students with a strong oral vocabulary have an advantage over those struggling with vocabulary and comprehension (Carlo et al., 2006). Skilled readers constantly encounter new words in print, in context, out of context, during read-aloud, and in conversation with peers and teachers. However, it is possible that these same words have completely different meanings in a variety of situations. Readers use background knowledge/previous experience during encounters with unfamiliar text to build understanding (Carver, 1994). Without sufficient background knowledge, comprehension suffers. For example, Carver (1994) found that if the proportion of unknown words is too high, more than 2%, comprehension is disrupted and new learning stops. Given the number of words students encounter each day, this disruption in comprehension becomes detrimental to learning.

Connecting to Native Language

Research has identified the positives in moving away from having ELs forget their native language toward embracing the connections between their native language and English. Teachers can look to Espinosa’s (2013a) comprehensive meta-study, Early Education for Dual Language Learners, which suggests numerous strategies. Espinosa echoes the findings of August et al. (2005), who in turn supported even earlier research by Cunningham and Stanovich (1998). This research suggests exposure to techniques that recognize the value of home language, adequate time to become proficient in the home language, and strategies that explicitly teach vocabulary help ELs make significant gains in vocabulary acquisition. Espinosa connects with
work by Goldenberg, Hicks, and Lit (2013), using the teaching of rhymes, letters and numbers in the home language and allowing everyone in the classroom to learn the greetings of all languages spoken by classmates. Espinosa adds to these strategies by connecting visual cues, physical gestures, and signals to specific vocabulary to support meaning making. While Espinosa and Goldenberg et al. promote strong connections among school, home, and home language, a limitation of the studies centers around the lack of diversity. Both studies focused only on Hispanic populations.

Expanding on the idea of connecting with native language, Morin (2006) completed an experimental study with native English-speaking students learning Spanish. Using explicit vocabulary instruction, meaning making, analysis of affixes and roots, and a bilingual dictionary, the control group could grasp and retain more vocabulary knowledge in all areas, making significant gains in receptive, productive, and sight word acquisition. The experimental group made gains, as expected; however, in that study, the ELs made similar or, in some respects, more growth than the control group. Morin posits this may be due, in part, to the fact that the experimental group had more to learn. Additionally, students in the experimental group could attach meaning to words not specifically introduced. ELs could apply the knowledge gained to new vocabulary, adding to a total increase in their vocabulary knowledge. The connections between the two languages helped to cement the learning.

Cognate Awareness

Previously, Huckin and Coady (1999) identified awareness of the cognate relationships that exist between Spanish and English, allowing students to extend knowledge and build a foundational understanding of individual word parts by connecting to knowledge they already
possess. However, Huckin and Coady cautioned, this ability to recognize and benefit from the use of cognates varies. Their study, done with university students, identified cognates as a potential strategy; however, using cognates as a strategy must be introduced, practiced, and fostered for the strategy to be effective. August et al. (2005) identified transfer, “the influences resulting from similarities and differences between the target language and any other language that has been previously (and perhaps imperfectly) acquired” (p. 52), as an important skill. For example, there are many similarities between Spanish and English, and awareness of some of those similarities may help an EL grasp English more quickly. August and Shanahan (2006) concur that connected first language learning is a support for students learning English. By looking at transferability within the two languages, the students built familiarity with English vocabulary by means of comparison with Spanish cognates – words that have a similar spelling or meaning in both languages. Additionally, Filippini et al. (2012) found that by focusing on teaching word parts or morphemes (the smallest unit of language that makes sense), students moved forward with knowledge that allowed them to apply that knowledge to similar words containing known morphemes.

**Word Learning**

While use of cognates helps move some ELs forward in their acquisition of English, August et al. (2009) identified the direct teaching of word parts to further facilitate vocabulary development, as ELs are less likely to create meaning from unfamiliar words without direct teacher intervention. As pointed out in earlier research (Carlo et al., 2004), the direct teaching of vocabulary strategies to help ELs infer meaning from text is necessary. ELs do not acquire vocabulary as English-speaking students do, picking up vocabulary incidentally during their
early years, observing and interacting with English-speaking role models, and participating in rich conversations and invested interactions (Hart & Risley, 1995). Direct teaching of words, including connecting to first language knowledge, is crucial for ELs to add to their personal vocabulary knowledge. Making a purposeful connection, creating a relationship, between a first language and English during this time is a benefit for ELs (Goldenberg, 2008).

Biemiller and Boote (2006) proposed novel ideas for testing and measuring word learning, an important building block of reading comprehension. No single strategy has been identified as the best for teaching vocabulary; however, this study successfully included the implementation and collection of data on three specific strategies: pre-testing, repeated readings, and introduction of word meaning. The researchers made a clear case for the strategic teaching of vocabulary despite having a limited sample and only one language spoken by students in the setting. Biemiller and Boote looked critically at repeated readings to determine the appropriate number of re-reads for their purposes. They found that exposing children to words repeatedly might increase their word learning, but too many readings might disinterest the children. While the study showed the number of words learned in two or four presentations were about the same, it became clear that re-reading allowed teachers to spend more time on additional words. Skilled teachers focused on different word meanings, reviewed previously discussed words, and made connections during each reading. While the researchers felt repeated readings held promise, they suggested this as an area for further focus.

Coyne et al. (2007) also looked at student vocabulary acquisition but compared three instructional strategies: extended instruction, embedded instruction, and incidental exposure. Researchers sought to identify breadth versus depth in vocabulary acquisition and hypothesized that embedded instruction would show the most growth. In this study, the researchers completed
testing; however, the bulk of the instruction came from the teachers, with whom students were already familiar. Students made gains with extended instruction, and even stronger gains with embedded instruction, confirming the hypothesis. Nevertheless, concerns arise when looking at the cost to provide this intense instruction. This experimental study’s demographic was a limitation given only Spanish-speaking ELs were represented. Biemiller and Boote (2006) expanded on Coyne et al.’s (2007) findings, identifying additional influential factors for increasing the acquisition of English vocabulary. The most noteworthy of these was teacher effectiveness. Even with teacher training and clear fidelity (commitment to identified curriculum, following identified steps), students from three of the six teachers in the study, one at each grade level, had substantially larger gains in both instructed and non-instructed word learning. While all of the teachers reported following the protocol, and classroom observations were on target, clearly something occurred to foster significant gains. Biemiller and Boote, unable to pinpoint specific characteristics of teacher effectiveness, suggested further study into teacher effectiveness when instructing students in word learning. These studies, even after noting different results, both pointed to directed vocabulary teaching as more effective than incidental exposure. Clearly, intense instruction is necessary; however, the means for providing that instruction remains unclear.

As evidenced, extensive instruction is effective, but difficulties include staff, cost, and time limitations. It is important to find a strategy, or strategies, that are realistic in classroom settings and delivered by classroom teachers. Identification and teaching of foundational skills is necessary so young learners, particularly ELs, obtain the necessary strategies to learn new words and apply that learning when faced with unfamiliar text.
Student Background Knowledge

When experiencing something new it is helpful to have some understanding, perhaps previous through experience or background knowledge. English-speaking students often have parents and older siblings who have brought school home; that is, they are familiar with the culture, expectations, and school vocabulary. Many families play school before their children attend kindergarten. However, most ELs do not have this experience; they “may not have had access to the early experiences which optimally prepare children for learning in school” (Ballantyne et al., 2008, p. 1). Short and Echevarria (2004) support the National Clearinghouse for English Language Acquisition in finding ELs have less access to early experiences that prepare them for learning; they may also have less exposure to strong English role models (Ballantyne et al., 2008). While changing this imbalance in background knowledge is not always possible, Genesse et al. (2005) contend that “we do not know to what extent ELs’ rates of achievement in oral English can be accelerated” (p. 369). Given this finding, in addition to my decades of experience with five-year-old students, I believe early kindergarten experiences offer a window of opportunity, a chance to accelerate EL achievement given the right strategies.

A focus on opportunities to build English oral language in concert with the use of native language expands the resources an EL can call upon in their acquisition of English. The challenge for classroom teachers is to find ways to best support ELs as they work to build crucial background knowledge. Paribakht and Wesche (1999) suggest that ELs with strong English role models may gain some vocabulary from incidental interactions; however, by the time they reach school age, incidental learning is virtually non-existent. Incidental instruction showed little growth for students. Similarly, Carlo et al. (2004) found young students often lack the needed skills to make meaning from words without direct instruction. The probability of learning a
word incidentally is about 15% (Carlo et al., 2004). This drops even lower when students lack skills for using context to make meaning of unfamiliar text.

Without background knowledge, strong English-speaking role models, and skills required to make sense of vocabulary, students continue to struggle (Hart & Risley, 1995). Coyne et al. (2009) caution, “Research has shown that students with smaller initial vocabularies are less likely than their peers with larger vocabularies to learn words incidentally while listening to stories” (p. 5). However, the methodology revealed an area of concern. In the study, graduate students, after training, provided direct instruction rather than having it presented by the teachers with whom students would already have built a relationship. Direct teaching of words, including connecting to first language knowledge, is crucial for ELs to add to their personal vocabulary knowledge. Making a purposeful connection, that is creating a relationship between a first language and English during this direct teaching of vocabulary, was found to benefit ELs (Goldenberg, 2008). While background knowledge may be greater for the EL if tested in native language (Tabors, 1997), accessing each individual ELs’ knowledge may be impossible. Given the numerous languages spoken, along with the large number of English-speaking teachers, this connection is unlikely to occur. As a bridge between the two divides, viewing native language as an asset rather than a negative is the focus of the following section.

Translanguaging

As evidenced by previous research, native language use is a benefit for ELs. In concert with and as an extension of this thinking, Garcia (2009) moved beyond simply acknowledging native language. Garcia (2011a) credits Cen Williams for the term translanguaging; however, Garcia’s (2011a) definition is the one that best applies in the context of this study. Garcia
explains that translanguaging goes beyond simply acknowledging the native language. Translanguaging allows an EL to read a situation and “soft assemble” language practices to fit the event (Garcia & Flores, 2013, p. 155). In other words, students may call on both languages to help make sense of a situation, using elements of native language as a support until the knowledge is acquired in English. ELs may have additional knowledge in a home language, but not in English (Espinosa, 2013a).

Translanguaging is an approach focused on “the practices of bilingual students and their teachers that are readily observable and that are different from our traditional conceptions of autonomous languages” (Garcia, 2009, p. 152). This way of thinking is not currently evident in kindergarten classrooms; in fact, it goes against the ideas of using English as the sole language for curriculum and curriculum delivery (Gottfried, 2014; Ortega, 2013). Garcia and Flores (2013) add to this thinking, and moving beyond with an even more progressive viewpoint, recognize multilingualism “for its connectivity and multiplicity” (p. 143), allowing for a more inclusive view and using multilingual ability as a positive rather than seeing the skills as negative or ignoring them altogether. Moving from a “subtractive” viewpoint toward an “additive” perspective (Garcia, 2009, p. 142) allows teachers to see students with differing language backgrounds as having more rather than as being deficit. Even more recently, this view of translanguaging (the interconnectedness of language as a starting point when working with ELs) moves thinking to a place where ELs call on both languages to make sense when participating in school activities. In a kindergarten classroom, these language activities occur in a variety of ways. Students may hear both familiar and unfamiliar greetings from the teacher and from their peers. Students may see languages other than English on resources used to identify foundational
concepts such as shapes and colors or use familiar items to help them understand concepts in a new format (see Figures 4, 5, and 6).

Figure 4: Use of color coded cards to facilitate reading of color words

Figure 5: Use of baby book resource to identify animal name
As shown in Chapter 1, important, daily vocabulary may be paired with native language. Additionally, students are encouraged to use strategies to help make sense of familiar and unfamiliar items. They are encouraged to include native language when working on English activities (see Figure 7). Photos, literature shared, and literature displays can include ethnic diversity. Resources and student materials might have two or more versions of a word or even a child’s name. This might include their photo connected with the native spelling, an English version, and possibly a phonetic version (see Figure 8).

Garcia and Sylvan (2011) view this to improve the lives of the speakers by not simply focusing on the learning of English, but on facilitating communication. It is in this way that students no longer shed their language or cultural identity; instead they embrace those unique elements of their personality to support their learning (Valdez, 1998). In this respect, the student is a richer version of him or herself; this richness is brought about by implementation of an inclusive, multicultural viewpoint (Garcia et al., 2011).
Garcia (2011b) challenges educators to acknowledge “monolingual, and even monoglossic bilingual practices, are not sufficient” (p. 157); current programming for bilingual education needs review. As most classroom teachers are monolingual, this becomes problematic; however, given the number of teachers in elementary classrooms, this is a great place to start – where much change could occur and numerous students could benefit. By concentrating on translanguaging, classroom practice has the potential to shift or change. Students are celebrated
for what they bring to the classroom (Ruiz, 1984), and learning is built upon their acquired knowledge. Moll and Dworin (1996) found that students’ thinking and learning is enhanced when able to do so in both English and native language. As an example, helping a student build vocabulary understanding by connecting to their native language facilitates acquisition in both languages, celebrates both languages and cultures, and supports the EL in learning English vocabulary (Samway & McKeon, 1999; Stahl & Yaden, 2004; Tabors, 1997; Thomas & Collier, 2003).

Community of Practice

Lave and Wegner (1991) support the idea of learners beginning at the periphery and slowly moving toward greater participation as they gain knowledge and learn the customs and rituals of the community. Throughout this process, “understanding and experience are in constant interaction” (Lave & Wenger, 1991, p. 52). In other words, because experience and understanding are deeply connected, learners must experience to understand and understand to experience. Rogoff (1994) contends that “learning and development occur as people participate in the sociocultural activities of their community” (p. 209), building on Hall’s (1993) findings that “the ability to participate as a competent member in the practice of a group is learned through repeated engagement in and experience with these activities with more competent members of a group” (p. 48).

While the concepts of old-timers and newcomers seem a bit out of place when thinking of five-year-olds, it fits quite well. English-speaking five-year old students are the old-timers in this scenario. Kindergarten students continue to build their beliefs and knowledge, and in this respect, the kindergarten classroom community of practice is a welcoming environment.
Children in a classroom create a community of practice under a teacher’s supervision. Lave and Wenger (1991) note the “changing relations between newcomers and old-timers in the context of a changing shared practice” (p. 49). Newcomers are those joining the community and the learning, with old-timers housing the knowledge and at times, power. However, partial participation as a newcomer does not automatically equate with disconnection from the community. A partial participation concept fits with a silent period for an EL, or a “sharing of only one-or two-word utterances” (Goldenberg, 2008, p. 12), during which ELs are somewhat disconnected from activities but are taking in much, if not all, of what is occurring around them (Roseberry-McKibbin, & Brice, 2000). ELs may not immediately participate in classroom activities, holding back due to language, cultural, or other constraints. It is during this time that the EL is observing, evaluating, and acclimating to the environment (Goldenberg, 2008). Through these early learning activities, “comprehensive understanding involving the whole person … activity in and with the world” occurs (Lave & Wenger, 1991, p. 33). According to Lave and Wenger, this acclimation is extremely important,

Viewing learning as legitimate peripheral participation means that learning is not merely a condition for membership, but is itself an evolving form of membership. We conceive of identities as long-term, living relations between persons and their place and participation in communities of practice. Thus identify, knowing, and social membership entail one another. (p. 53)

Engagement, participation, and connections are critical to individual learning and academic growth for all, but especially for the ELs (Butcher & Ramirez, 2008). Students learn best when immersed in and actively engaged in their learning (August et al., 2009). ELs create meaning as they participate in the actions of the classroom. They rely on the resources they themselves have and connect with peers to build additional resources. For ELs this becomes both supportive and concerning. As ELs, they struggle with the classroom language; however, in
working with peers, they are supported by kindergarten students who are more like themselves. It is through these interactions that understanding builds. Students speaking a language other than English can begin to acquire the words necessary for these interactions as they occur; however, it is within these interactions that scaffolding must occur and revisits to the material must happen for the acquisition to become permanent knowledge (Calderón et al., 2011). ELs must understand to engage in the experience, and understanding must be supported so that participation is achieved and learning begins.

Strategies

The next section identifies strategies (e.g., read-aloud, paired multi-media approach, and making connections) currently observable in many kindergarten classrooms. A review of specifically chosen strategies follows. The chosen strategies are developmentally appropriate for the kindergarten level, are observable, and have been studied and implemented over time.

Read Aloud

Read-aloud is a cornerstone of literacy development, an often-used classroom strategy (Cunningham, 2005; Fisher et al., 2004). Despite the popularity of read-aloud, it is difficult to “discern what makes read aloud experiences effective for enhancing children’s language development” (Beck & McKeown, 2001, p. 10). Read aloud is an effective strategy; differences come in the ways teachers use read-aloud. Over time, some teachers have been observed simply reading a story rather than capitalizing on the opportunity for instruction and discussion (Brabham & Lynch-Brown, 2002). McGee and Schickedanz (2007) contend, “The way books are shared with children matters” (p. 742). Interactional styles of read-aloud offer students more
opportunity to connect to the reading and make meaning from the unknown (Fisher et al., 2004). Carlo et al. al (2004) proposed use of read-aloud, paired with direct teaching of words. Brabham and Lynch-Brown (2002) conducted a noteworthy study at a professional development school site and compared three read-aloud styles as presented by pre-service teachers to a broad ethnic group of low to upper middle-income students. The findings identified interactive reading as the most effective, with gains averaging 5.24 items (Brabham & Lynch-Brown).

Expanding on this study of read-aloud styles, Biemiller and Boote (2006) confirmed reading aloud provides children with a powerful context for word learning/vocabulary development, however, the challenge is making this strategy, making read aloud, effective for all learners. A reading style that focuses on child participation is significant to vocabulary growth (Morrison & Wlodarczyk, 2009), whereas verbatim reading does not affect growth in the same way (Dickinson & Smith, 1994). Read-aloud is a strong tool for engaging young children and powerful for motivating and keeping the attention of young students (Fisher et al., 2004). A read-aloud introduces novel vocabulary to students, often using the “high utility words of mature language learners that are characteristic of written language” (Beck & McKeown, 2007, p. 253). Teachers draw students into the story and focus their attention on vocabulary (Kindle, 2009). Word introduction can be chance or planned; however, as shown, a prepared, planned presentation is more effective. In short, read-aloud done correctly can be a powerful vocabulary approach.

Paired Multi-Media Approach

Pairing a multi-media approach with strong teaching is another researched strategy. Beck and McKeown (2001) made a case for the use of direct, rich vocabulary instruction to support
early literacy learning. They identified the use of Tier-2 words as an additional element to support strategic vocabulary teaching. Previous research by Verhallen, Bus, and deJong (2006) identified a connection between greater vocabulary acquisition and the combining of a read-aloud, including sharing of pictures, with a multimedia presentation supporting the meaning of the text.

Silverman and Hines (2009) took the idea of word learning one-step further. The researchers successfully paired vocabulary instruction/word learning with multimedia enhancement. They combined educational programs, the introduction of specific vocabulary, and completion of vocabulary activities on home computers to conduct an experimental study, finding augmentation successfully contributed to the children’s learning by providing students with added tools for processing new information.

Although they found no effect for English-speaking students, the study identified ELs who experienced the enhanced intervention did show growth (Silverman & Hines, 2009), increasing in both vocabulary measures (one designed by the researchers and the PPVT). The research suggests pairing of multi-media with direct vocabulary instruction needs further study.

**Making Connections**

When students connect with text, learning occurs, vocabulary acquisition is greater, comprehension increases, and retention of vocabulary is stronger (Trelease, 2006). Student engagement fosters growth (Klem & Connell, 2004). This holds true for the connections students make with teachers and peers in the classroom; these connections foster academic achievement and engagement (Blum, 2005). Shonkoff et al (2004) confirm, “Young children experience their world as an environment of relationships and these relationships affect virtually
all aspects of their development” (p. 1). Relationships both inside and outside of school are important; “healthy development depends on the quality and reliability of a young child’s relationships with the important people in his or her life, both within and outside of the family” (Shonkoff et al., p. 2). While relationships cannot be connected to specific academic development, in my experience I have witnessed the effectiveness of these connections.

Students begin movement toward full classroom participation beginning with non-verbal communication. Observed examples of non-verbal communication include the tapping of an arm; standing directly next to another student; and/or following another, both physically and with eye movement as peers move through the day. These were important strategies used by ELs to successfully navigate their day. For instance, Sune, a Korean student and stronger English-speaker, would sign to use the bathroom, a learned classroom routine. Yi closely watched her peer’s actions and would produce the same movement just a beat after. Observing the girls, Sune would use the bathroom and upon her return, when Yi was allowed, she would step into the hall, look around, sometimes take a drink, but then return to the classroom. Her connection of using the bathroom after signing came much later in the year. Watching students learn vocabulary words, and watching those students build relationships with others, helped me identify a need for students to make authentic connections to previous knowledge.

If relationships affect growth (Pianta & Stuhlman, 2004), then helping ELs connect with human resources in the classroom setting as early as possible becomes crucial. English-speaking kindergarten students are learning words quickly, with ELs acquiring fewer or being unable to show their knowledge. The EL may understand the word in native language rather than English (Bialystok & Feng, 2009); in other words, the EL may be thinking about the English word but the thinking occurs in native language. When instances like this occur, are ELs using human
resources, their same language peers, other ELs, or even English-speaking peers to help them make sense of the vocabulary? It is the potential relationships, the connections made to human resources, that I hoped to capture and examine.

As more students enter classrooms with less English familiarity, teachers must change expectations. In Espinosa’s 2013(b) update to her previous work, she challenges the educational system to “capitalizing on the linguistic, cognitive, and social talents of young children who are developing capacities in more than one language” (p. 3). Espinosa (2013b) shares that “when seen through a Western scholarly lens, monolingualism is routinely accepted as the norm and bilingualism is accepted only as double monolingualism” (p. 141). Considering modern communication, this view must change. We can no longer simply expect English only. Current literacy and communication include complex ways of languaging, conversing across cultural and language differences, using multimodal strategies. Instruction needs to prepare students for this evolving communication. Garcia and Sylvan (2011) identified the need for “students to be aware of their own language practices as well as those of their peers as they are engaged in learning activities” (p. 398). To support this awareness, students must learn to recognize what they are doing. Teachers are called on to facilitate this awareness and learning—something brought about only by observation, examination, and focused evaluation. Teachers need tools to embrace students’ ability, an ability that does not manifest only in the English language or, at times, culture.

For all, when learning in a supportive environment, there is a natural literacy learning process (Espinosa, 2013a). Rowe (1993), in her review of previous studies and in her own work, focused on the literacy aspect of writing with young children found “a strong case for the social nature of literacy processes and knowledge” (p. 291), allowing the connections between literacy
and social interactions. Children, by experiencing great stories and participating in literacy activities (acting out stories, repeating rhymes, etc.), began to connect words and text and build vocabulary understanding. However, for ELs, this process must be supported in different ways (Reyes, 2006). Use of both native language and English is one way, as are drawing from native language to replace a word in the second language (Grosjean & Li, 2013) or even combining both languages and switching back and forth between the languages (Grosjean & Miller, 1994). Connecting with students (personally, culturally, through language) is another; however, the social influence of a teacher who does not speak the native language or understand the native culture and traditions will be less.

As a proponent of the social aspects of learning, Vygotsky (1978) states, “Learning awakens a variety of internal development processes that are able to operate only when the child is interacting with people in his environment and interacting with his peers” (p. 90). Students in classrooms need to interact with peers who are similar as well as very different from them. It is in these interactions that students practice familiar skills; additionally, they test and practice new skills. For an EL, these peer relationships will vary and can be dependent on a shared language or cultural background (Espinosa, 2013a). Some of the first learning experiences for an EL may include simply responding to a peer’s greeting. Hanks (1991) reported learning is “a process that takes place in a participation framework” (p. 15); students often gravitate toward the familiar and will seek out students who speak a similar language or have some other shared trait. In other words, ELs will participate with those with whom they feel most familiar; this is where the learning begins. “It is the community, or at least those participating in the learning context, who ‘learn’ under this definition” (Hanks, 1991, p. 15), stating that learning is “distributed among coparticipants, not a one-person act” (p. 15). It is within this community I focused my attention.
Findings of Note

Coyne, McCoach, and Kapp (2007) note that there have been more studies focused on the upper grades and vocabulary development and less with younger students. In addition to less focus on early learners, Beck et al. (2007) identified a lack of “emphasis on the acquisition of vocabulary in school curricula” (p. 252). While some research looks at vocabulary acquisition, questions remain surrounding acquisition of English vocabulary, student knowledge of vocabulary in native language, and use of academic versus social language.

The research of August et al. (2005) showed extensive instruction as effective, but limitations included lack of time and staff to implement. It is important to find a strategy that is realistic in classroom settings. Identification and teaching of foundational skills are necessary so young learners have the necessary strategies to learn new words and apply that learning when faced with novel vocabulary. This continued support of vocabulary knowledge makes a case for early intervention and a direct review of strategies that best promote vocabulary growth.

August and Shanahan (2006) identified “literacy programs that provide instructional support of oral language development in English and align with high quality literacy instruction are the most successful” (p. 4), supporting strategic teaching of English vocabulary. Butcher and Ramirez (2008) support their work and make a strong case for vocabulary development as a critical component of reading comprehension; in their list of EL guidelines for instruction, vocabulary development ranks first. Finally, Biemiller and Boote (2006) identified teacher effectiveness as a factor making a difference on student achievement, even with non-instructed vocabulary words. This unexpected result needs further investigation.
Gaps in the Literature

August et al. (2005) found very few “quasi-experimental or experimental studies focused on English vocabulary teaching among elementary-school-language-minority children” (p. 52). This lack of focus remains at the time of this writing. Given that the teaching of English vocabulary is within the grasp of educators versus affecting native language vocabulary knowledge, this was an area worth investigating.

While there is an abundance of literature focused on building background knowledge for early readers, there is little qualitative research on the same subject. Biemiller and Boote (2006) found reading instruction was enhanced by teacher effectiveness; however, very few studies have identified a way to maximize teacher effectiveness when presenting English vocabulary so ELs make the largest gains. Few studies look at intensive vocabulary instruction as delivered by classroom teachers. If a teacher establishes a relationship with the student, delivers the instruction, and collects the data, it makes sense that the resulting data may differ from previous studies.

Conclusion

This chapter reviewed research on ELs and vocabulary and identified best practices in literacy instruction. In the current study the researcher used a narrow lens to examine how ELs use human resources (teacher, native English-speaking peers, same language peers, different language speaking peers, relationships) within the classroom (their community of learners) to acquire new vocabulary. The following chapter focuses on the methods used in the study and includes the framework for the study and research questions.
CHAPTER 3

METHODOLOGY

The purpose of this study was to examine vocabulary acquisition by kindergarten ELs within their community of practice through a translanguaging lens. This study examined various strategies employed by ELs in two kindergarten classes in an elementary school situated in a large suburban district in Illinois. More specifically, the researcher investigated how ELs use human resources (teacher, native English-speaking peers, same language peers, different language speaking peers, relationships) within the kindergarten setting (their community of learners) to acquire new vocabulary.

Research Questions

The following research questions guided this study.

1. How do ELs utilize human resources (i.e. teacher, assistants, native-English speaking peers, same-language peers) to support their acquisition of English vocabulary?
   1a. How do kindergarten ELs utilize student/student relationships to create understanding and acquisition of English vocabulary?
   1b. How do kindergarten ELs draw on native language to create understanding and acquire English vocabulary?
   1c. How do kindergarten ELs utilize teacher/student relationships to create understanding and acquisition of English vocabulary?
2. How does an individual EL’s knowledge of English vocabulary change over time in a kindergarten classroom where ELs see available resources, including classmates, as they create understanding and acquire English vocabulary?

This chapter starts with an overview of the research design, including a description of the kindergarten classroom observed for the study. The participant description as well as data collection procedures and data analysis follow.

Research Design

While much of the previous research on ELs and vocabulary has focused on a quantitative assessment of their growth, a developmental lens was chosen for this study. Most of the study participants came from the researcher’s classroom of 20 kindergarten students. One EL came from the second classroom, a classroom chosen for the diversity within, and the skill of the teacher, a teacher with 25 years of experience and an ELL endorsement. Students were identified from these two classrooms after a review of district home language surveys. Permission and assent was obtained from both parents and students. After identification of the ELs, various methods were used to support or identify growth for each individual student. It was hoped that a mixed method approach would identify resources (both human and material) and strategies used naturally by ELs as they learn English vocabulary. Including both quantitative and qualitative research allowed each method to support the other. Decades ago Greene, Caracelli, and Graham’s (1989) meta-analysis made a case for mixed method studies, identifying five categories of mixed method: “triangulation, complimentary, developmental, initiation, and expansion” (p. 259). Table 1 shows how Greene et al. defined these constructs. Following the work of Greene et al. (1989), Patton (2001) emphasized the two methods as not mutually
exclusive, so both can be collected in the same study. Johnson and Onwuegbuzie (2004) agree, suggesting there is a movement toward embracing mixed methods not as a replacement of either quantitative or qualitative research independently but as a way to draw on the strengths and minimize the weaknesses in the research.

Table 1
Constructs defined by Greene et al. (1989)

<table>
<thead>
<tr>
<th>Triangulation</th>
<th>Complimentary</th>
<th>Developmental</th>
<th>Initiation</th>
<th>Expansion</th>
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<tbody>
<tr>
<td>“seeks convergence, corroboration, correspondence of results from the different methods.” (p. 259)</td>
<td>“seeks elaboration, enhancement, illustration, clarification of the results from one method with the results from the other method.”</td>
<td>“seeks to use the results from one method to help develop or inform the other method, where development is broadly construed to included sampling and implementation, as well as measurement decisions.”</td>
<td>“seeks the discovery of paradox and contradiction, new perspectives of frameworks, the recasting of questions or results from one method with questions or results from the other method.”</td>
<td>“seeks to extend the breadth and range of inquiry by using different methods for different inquiry components.”</td>
</tr>
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</table>

Quantitative Component

Quantitative research has been used extensively in vocabulary acquisition research. Researchers tracked student acquisition of vocabulary in experimental studies (August, et al., 2005; Beck & McKeown, 2007; Bemiller & Boote, 2006; Coyne, et al., 2007). Tracking the number of words that students learn is measured using numbers, thus a quantitative aspect is incorporated into this research.
Performance measures are a better choice for assessing ELs (Gottlieb, 2006; NAYEC, 2006). The PPVT has been used extensively (August et al., 2005; Calderón et al., 2005; Coyne et al., 2009; Silverman & Hines, 2009; Slavin & Cheung, 2005) to establish baseline and growth. Further, to expand on the data collected by use of the PPVT, the MLU measurement was the second test to be administered. This measure allowed the researcher to identify the number and types of English vocabulary words used by individual ELs. The number of different words was recorded and compared between testing sessions in addition to counting various types of words (e.g., nouns, verbs). Use of MLU also allowed the researcher to track changes in native language use by simply recording the number of native language words uttered, if so, in each testing session. MLU is a strong example of a performance measure (Hewitt et al., 2005) and has been shown to be predictive of future reading success (Snow et al., 1998). Therefore, the MLU measurement was used to identify individual student’s baseline skills in English and classroom speaking (Brown, 1973a). Snow et al. (1998) found that “expressive language (production) measures, which include mean length of utterance, sentence completion, tasks requiring the child to fill in morphological markers, and others [and found the measures] are about equally … predictive of reading as receptive language” (p. 111). Gutiérrez-Clellen (2002) recommended the use of narrative samples, and Hewitt et al. (2005) promoted similar measures, stating “unlike formal tests, measures used in language sampling are applied to natural communicative behaviors” (p. 199). Through use of this measure, one that focuses on natural behavior, the validity of the measure is strengthened (Hewitt et al., 2005). Finally, Rock and Stenner (2005) suggest individualized tests are preferred, citing “adaptability, attention span, and reliability” (p. 16) as some of the reasons. This supported the researcher’s use of individualized tests in this study.
Qualitative Component

Qualitative research was chosen, as it “involves an interpretive, naturalistic approach to the world” (Mertens, 2015, p. 236), a fitting approach for a kindergarten classroom setting. Additionally, relationships are not measurable in quantitative formats, thus use of a qualitative lens made identifying and understanding the relationships possible. Finally, qualitative measures allow for detailed description as well as the ability to delve deeper (Bogden & Biklen, 1992) and identify patterns of behavior (Creswell, 2013).

As far back as 1988, Chaudron saw an advantage to research in the classroom in that it could help “identify those characteristics of classrooms that lead to efficient learning of the instructional content, so that empirically supported [EL] teacher training and program development can be implemented” (p. 1). In my experience as a classroom teacher, I have found that the best strategies are identified in my day-to-day work. While Chaudron’s research focused on teachers of ELs in a self-contained classroom in which the teacher was fully trained in EL methods and all students spoke a native language other than English, I was curious to see if the strategies identified (i.e. turn-taking, questioning, scaffolding for ELs) in Chaudron’s study can support current classroom teachers, particularly teachers faced with numerous ELs in intact classrooms and those who are teaching without sufficient training or knowledge in these strategies.

Erickson (1985) speaks to our inability to “realize the patterns in our actions as we perform them” (p. 121). Classroom teachers do not have the time to focus observation on specific students and identify the patterns of behavior used to support individual student learning and vocabulary acquisition. Building on these ideas, this study examined daily interactions in
that hope that these observations would lead to an understanding of the realities constructed by kindergarten ELs, i.e. a narrative of strategies used by ELs in their natural learning environment, a cornerstone of qualitative research (Denzin & Lincoln, 2011).

Denzin and Lincoln (2011) define qualitative research as a “situated activity that locates the observer in the world...a set of interpretive, material practices that make the world visible” (p. 3). Rock and Stenner (2005) suggest an “approach to assessing behavioral readiness is direct observation” (p. 21) and that connections between text knowledge and the child’s personal knowledge are best learned through “direct observation and conversation with the child” (p. 22). Dyson and Genisi (2005) contend research is best accomplished in the natural environment. However, they note, “both teachers and students bring interpretive frames that influence their ways of attending and responding to others within the social activities of the classroom” (p. 11). Connecting with this thinking Denzin and Lincoln explain that reality is socially constructed. It is this social construction, within its natural environment—a kindergarten classroom of English-speakers and ELs in action—that I wish to explore further.

Reflecting on my experience, I find the most powerful aspects of my learning come from my direct work with students. Work by Yin (2010) suggests that multiple perspectives should be represented, so both observational activities and student-based activities will be part of the case study. It is for this reason that I wish to spend concentrated time observing students as they create their own connections, relationships, and understandings. Through previous observations of students in the classroom I have found many connections were being made, connections that had not been taught, modeled, or trained. It is these connections I wished to further explore.
School Context and Participants

This study took place in a large suburban unit district, as it is an example of the challenges of working with young ELs. The school in which the study took place has experienced steady growth, specifically in student diversity. Growth has occurred during the past decade and continues today (see Figure 9).

![Figure 9: Student demographics over time (2005-2015).](image)

However, the school’s staff does not match this diversity. While 90% of the teaching staff is White (the kindergarten teachers are white; school administrators are white, and all are native English-speakers), 63% of the students are Black, Hispanic, Asian, or Multi-Racial (School Report Card, 2015).

Two of the five kindergarten classes in this building were used in the study. As the researcher, one of the classrooms was my own. The other classroom was taught by a well-respected, tenured, kindergarten teacher. The two classrooms chosen generally house the larger number of ELs in kindergarten, allowing for the largest potential grouping of ELs, the unit of analysis for this study. Both classrooms adhere to the same curriculum, follow a similar behavioral plan, and the two classroom teachers collaborate on curriculum, classroom activities, and students. The students in the researcher’s classroom represented six languages (Mandarin,
Punjabi, Pashto, Tagalog, Telugu, and Urdu) in addition to English, and included 9 boys and 11 girls. The second classroom had an equal balance of 10 girls and 10 boys, representing four languages (Chinese, Maltese, Spanish, and Urdu) in addition to English.

Purposeful maximal sampling (Creswell, 2000) was used to select the study participants. District intake forms (see Appendix A) were reviewed to identify which students speak a language other than English in the home. Next, using the following criteria, ELs with the least exposure to English were identified (see Appendix B):

- number of significant others speaking native language to and with the child
- time in the United States (recent immigrant or vacation/school time spent in home country)
- number and age of older siblings in school (attendance in English schools/time spent)
- use of native language in more than home setting

Parents of ELs meeting the criteria were contacted by phone to set up a meeting with the researcher to explain the study. The parents were asked to give consent for their child/student to become a participant in the study (see Appendix C). After receiving parental permission, the students were asked for assent with a child friendly tool (see Appendix D). While the “sampling frame” (i.e., list of all school kindergarteners, kindergarten students enrolled in school, and kindergarten students enrolled in school and identified as EL by the parent questionnaire) was large, “the list of people who fit the conceptual definition” was considerably smaller (Mertens, 2015, p. 321). It was the identified students—two ELs from each of the following categories: least exposure to English, most exposure to English, and average exposure to English as identified on district and follow-up paperwork—who were the focus of this study. However, as the other students were observed and might be in the ELs’ or researcher’s photographs, parents of all students were contacted by letter to obtain permission (see Appendix E). After receiving parental permission, the general student body was asked to give assent by filling out a child
friendly tool (see Appendix F). In writing up the gathered data, pseudonyms were used, and all raw data were destroyed after the dissertation defense.

Data Collection

This section of the chapter provides information about each data collection technique used in the study. The four subsections include the Peabody Picture Vocabulary Test-Revised (PPVT-R) (Dunn & Dunn, 1997) and the Mean Length of Utterance measurement (Brown, 1973a) as well as observation and photo review.

Peabody Picture Vocabulary Test

The PPVT (Dunn & Dunn, 1997) is a standardized oral vocabulary test used in numerous research studies (August et al., 2005; Calderón et al., 2005; Coyne et al., 2009; Silverman & Hines, 2009; Slavin & Cheung, 2003). The PPVT identifies growth in individual students, and as a norm reference test, there are identified benchmarks that allow the researcher to compare EL progress with typical performance results.

The PPVT is a serial object-naming test that is reliable, valid, and easy to administer. When determining vocabulary growth, confrontation naming or simply object naming is a good place to start. This skill places more demand on retrieval and, thus, gives a stronger indication of comprehension skills. When using an object-naming test, a series of drawings of objects are shown and the student is asked to name each object. This naming measure is “a reliable predictor of future reading ability. On average, expressive vocabulary measures are associated ($r = .45$) with a considerable amount of variance in subsequent reading scores, which compares favorably with the effect sizes for receptive vocabulary and IQ” (Snow et al., 1998, p. 124) in addition to the correlation between “rapid serial naming speed has been shown to correlate with concurrent and future reading ability” (p. 126).
PPVT is a test that needs little preparation on the part of the administrator. It is an individually administered test. Adding another element to the study is the use of a classroom teacher as the PPVT-R examiner. Given the relationship between the classroom teacher and students, I examined whether that comfort level transfers to greater gains across testing sessions. As far back as 1974, Kicklighter, Powell and Parker had classroom teachers administer the PPVT to students with no adverse results. While this information does not hold true for testing situations with children having special behavioral or academic needs, use in a typical classroom setting is appropriate. Findings that are more recent could not be found; however, the authors of Where We Stand on Accessing Young English Language Learners point to the advantage of knowing one’s students during assessment (NACYC, 2009). Given this personal connection and the relational aspect to this study, the classroom teacher/researcher administered the test. This personal connection may have assisted the ELs and may warrant accurate test results.

**Mean Length of Utterance**

The MLU measurement was used to identify each student’s baseline skills in English and classroom speaking. Brown (1973b) identified the MLU as a strong measure of student language knowledge in early learning. While Brown focused on syntax and morpheme growth, Hewitt et al. (2005) found MLU useful in tracking the number and types of words spoken. I have found this a useful measure of words spoken by an individual student throughout his or her kindergarten year and as a comparative during and at the end of a school year. Additionally, keeping track of the total number of words spoken (TWS) on the MLU gives an indication of movement toward greater understanding and use of English by ELs. In my teaching, I have used both MLU and TWS to track the growth of students who often begin the school year nonverbally, a common trait for ELs. MLU is efficient and easily administered, delivered in less
than 10 minutes by the researcher or classroom teacher, by asking simple open-ended questions (i.e., what do you like to do at recess, what foods do you like) and transcribing each EL’s responses (Appendix H). Utterances and morphemes are identified, with further identification of the number of words and sentences, and finally the types of words used. Although researchers have used this measure with a pre-school at-risk population (Eisenberg, et al., 2001), Hewitt, Hammer, Yont and Tomblin (2004) supported the potential for language sample analysis with older students, and it has shown promise when used with a Spanish-speaking EL population (Gutierrez-Clellen et al., 2012). It is this language sampling that allows the researcher to identify the types of utterances produced by the student and investigate potential growth by comparison of various numbers (e.g. length of utterance, number of different words, and length of sentences). It is this oral language that connects with the EL’s future reading ability in English (Miller et al., 2006).

Research has supported the use of researcher developed measures as more sensitive to growth than standardized tests when looking at specific vocabulary growth (National Reading Panel, 2000). Miller, Heilmann, Nockerts, Iglesias, Fabiano, and Francis (2006) argue that “the ability to produce oral language in a communicative context should be considered the gold standard of language knowledge” (p. 31). Along with this academic support, use of the MLU in my classroom and in conjunction with the school speech therapist has proven useful in identification of growth and areas of weakness for individual students over time, especially the ELs. Bedore, Peña, Gillam and Ho (2010) determined that “MLU may contribute to our ability to differentiate children with low language ability in both Spanish and English” (p. 500). Snow, Burns, and Griffin (1998) looked at “expressive language (production) measures, which include mean length of utterance, sentence completion, tasks requiring the child to fill in morphological
markers, and others [and found the measures] are about equally … predictive of reading as receptive language” (p. 111). Using these measures allows teachers to identify a student’s baseline and to efficiently perform periodic checks throughout the year. I chose this measure because there is some basis in the prediction of ability: “English MLU was a useful predictor of ability” (Bedore et al., 2010, p. 506). Finally, research has identified a link between MLU and the use of different words in typically developing speakers of both English and Spanish (Gutiérrez-Clellen, 2002), thus the potential for comparing between and among both ELs and English-speakers might be possible. When reviewing the data, it was possible to identify any growth in use of nouns, verbs, sentence length, and variety of English used. In this way, not only could growth be observed, but potentially, the type of growth could also be tracked.

When used with a pre-school at-risk population, MLU has previously shown reliability ($r = .94$) (Bigelow, 2012). The MLU allows researchers to track both utterances, that is identify the number of words and sentences, and track the variety of words used as the student becomes more verbal in English. Use of this measure allowed the researcher to identify the specific words used by the students and identify the variety of words (e.g. use of nouns, verbs, adjectives) in addition to the general growth (e.g. number of words, length of sentences).

Performance assessment is currently the better assessment tool for ELs (Gottlieb, 2006; NAYEC, 2009). This measure was repeated at the end of observation and data collection and took up to 15 minutes to administer, as students were typically more verbal when presented with the measure later in the school year. Evaluation of the data took longer. Utterances were counted, and sentences were identified and counted, as appropriate. These collected data were compared to the initial measurement data.
While specific data on the validity of this measure was not obtainable, Hewitt et al. (2004) suggested that the use of language sampling offers greater validity in testing for language disorders, and even with a typical population, a measure like this “has the advantage of sampling a natural behavior of children” (p. 199). In addition, Hansen’s (1989) research shows that English use at school is a stronger predictor of English reading achievement over English use at home. Since the MLU measures English use at school, this allowed the researcher to view potential growth and to measure and compare across time, paralleling Genesee et al. (2005), who identified that “English use at school probably plays an even more important role in supporting higher levels of English language and literacy development” (p. 368). As in this research (Genesee et al., 2005; Hansen, 1989), English use at school has potential as a predictor of growth, and this skill is clearly measured with the MLU. Therefore, using such an instrument offered useful data for tracking authentic vocabulary growth for individual ELs.

The researcher administered the MLU to each EL by during the first week of this research, August 29-September 2, 2016. Each EL was tested in the kindergarten classroom, a familiar environment. The ELs spoke with the teacher at her desk during reading centers, a time when students were called to the teacher’s desk to work individually or in small groups. Data were collected and transcribed as the researcher spoke with each EL. Morphemes were identified and counted, along with utterances, and TWS through use of district methods and MLU calculations. The same measure was administered to each EL a second time following four weeks of classroom observation, October 10-14, 2016. Results from the second administration of MLU were transcribed and comparison of initial and final MLU data occurred. A review of the data was completed with the school speech therapist (A. Strassman, 10/15/2017).
Observations

As I reflect on my past work, it is evident that my best insights arise from direct engagement with the students. For these reasons, I spent concentrated time observing what students are doing. Therefore, data were collected through observation of the identified ELs in the natural setting of the kindergarten classroom. I recorded field notes in an observation log, following Yin's (2010) suggestion about focusing on one area rather than trying to capture everything in field notes. Following this thinking, I visually recorded, using arrows and initials, the interactions of identified ELs with their human resource: same language peer, different language peer, English speaking peer, and/or teacher (Creswell & Miller, 2000; Saldana, 2011; Appendix G).

Prior to the study, the observation log was field tested in the kindergarten classroom by myself and a respected peer. We observed, recorded, and compared collected narrative to identify consistency within the data. Specific attention was given to field-testing using time increments during English Language Arts activities similar to those used in the study.

Daily structured (Bryman, 1994) observations were completed in 10-minute increments focused specifically on English Language Arts activities (e.g., read aloud, writing work, letter work, vocabulary introduction) over a four-week period. The observations took place during four weeks in September and October (9/12-10/10). The researcher observed the participants in the classroom literacy centers each Monday, Tuesday, and Wednesday from 10:00 a.m. to 10:10 a.m. On Thursday and Friday, the observations took place from 2:30 p.m. to 2:40 p.m. during choices. Individual EL students were identified by number (e.g. EL 1, EL 2) in the written logs and gathered data. All observations specifically targeted the identified ELs.
The observations occurred in the two selected kindergarten classrooms because of the large numbers of ELs. During observation, there was limited interaction between the students and the researcher, similar to the classroom guided reading routine. The students learned the guided reading routine early in the school year, thus it was familiar to them that the teacher would not be available for student interactions during those activities. In this way, the observational data were collected as students followed their typical routine.

Nightly reflective writing and planning followed the data collection (Yin, 2010). Visual representations of the interactions were recorded, and additional visual materials were copied and memoed as needed (Yin, 2010). For example, student work after conferencing with a peer was included, along with visual and narrative collections of student interactions.

**Photo Review**

Photos were used as another data collection tool for this research. Schratz and Walker (1995) shared that the use of student photos makes “visible the invisible” (p. 250). In other words, I hoped to capture to invisible and identify resources used through the eyes of the ELs being observed. Flick (2009) noted that photos “are a non-reactive recording of an observation available for re-analysis” (p. 241); therefore, the researcher took photos of the environment, the students, and various interactions throughout the four-week observational window (September 12 to October 10). The pictures captured the “visual side of social settings and practices” (Schratz & Walker, 1995, p. 252) in the kindergarten setting. For the most part, photos were taken immediately following the observation time; however, there was occasionally a need to capture an image during the observation. Any additional write-up connected with the photo or photos occurred at another time.
As a final step, the ELs were given the opportunity to take pictures from their viewpoint. All students are instructed in iPad use as a part of the natural kindergarten program. Additionally, an iPhone was available for student use if they preferred to use the phone rather than the iPad. During the four-week observation period, the ELs were encouraged to take pictures as they completed their work, specifically looking for the resources they used to create understanding. Even this early in the school year, the students were aware of the available resources. The students had experienced modeling of available resource use – for example, resources pointed out repeatedly by the teacher. Additionally, the students were celebrated for using resources and individually praised as they utilized resources in their work. In my experience, students are excited to show the connections they have made and are proud of their ability to access needed information on their own. The photos provided opportunities for reflective review by both the researcher and students.

I checked with each EL after daily observations to see if photos were taken. If so, I encouraged discussion focused on how or why the resource was chosen (e.g., “I remember reading about spiders in this book”/when wanting to write the word spider or “she helped me spell her name”/when adding a friend’s name to a journal entry). I recorded the EL’s response, and at that point, I took on the role of observer as participant (Saldaña, 2011). Notes were taken during the conversations and were followed up with transcriptions of the conversations at the next natural break in the day (i.e., at lunch, or immediately after school ends). I continued to connect with each EL until three photo opportunities were collected. Because Harper (2004) cautions against the unequal power balance observed when using photos, it was hoped that by using photos from two perspectives and through conversation with a familiar adult, a clearer reflection of events would be possible.
To determine the effectiveness of the photo collection process prior to the dissertation study, a field test was conducted with a respected peer, a veteran kindergarten teacher (C. Dornbos, personal communication, 2016). During the first field test (February 10, 2016), it became clear that this teacher viewed human resources as a tool rather than a resource. While this distinction is not problematic in general, it caused difficulty when comparing the two collections. A second field test (February 22, 2016) was conducted in which the veteran teacher was asked to match photos with a researcher-identified label after choosing from a field of 12 potential labels (e.g., EL used a print resource/used the word wall by copying or taking a word card, EL observed print resource/looked at the word wall, EL partnered with EL/same language peer, EL observed EL/same language peer, EL met with the teacher/human resource, EL observed the teacher/human resource). In this second field test, labels were matched to appropriate pictures with an accuracy rate of 96%.

Table 2 shows how the research questions aligned with the data collection methods.

Table 2
Research Questions and Data Collection

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>MLU</th>
<th>PPVT</th>
<th>Observation</th>
<th>Photo Review</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. How do ELs utilize human resources (i.e. teacher, assistants, native-English speaking peers, same-language peers) to support their acquisition of English vocabulary?</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

Table continued on next page
Table cont. from previous page

<p>| | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1a. How do kindergarten ELs utilize student/student relationships to create understanding and acquisition of English vocabulary?</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>1b. How do kindergarten ELs utilize teacher/student relationships to create understanding and acquisition of English vocabulary?</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>1c. How do kindergarten ELs draw upon native language to create understanding and acquire English vocabulary?</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. How does an individual EL’s knowledge of English vocabulary change over time in a kindergarten classroom where ELs see available resources, including classmates, as they create understanding and acquire English vocabulary?</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Timeline

An interactive design (Maxwell, 2012) was used by placing the researcher into the natural setting for kindergarten ELs, the classroom. The researcher used a four-week observational window, focusing on and collecting data from daily English Language Arts and center activities. The structure of the study was “interconnected and flexible” (p. 3), as “in qualitative research, any component of the design may need to be reconsidered or modified … in response to new developments or to changes in some other component” (p. 2). As EL connections were identified, there were time and day modifications, so the most salient interactions were followed and captured (e.g., classroom interruption before the observation time caused center work to occur later than typical; if so the researcher moved the window forward or back to allow for the full 10-minute observation window during literacy activities rather than during interruptions). These interactions included observations of students looking to peers for assistance and support, students looking to adults for assistance and support, and identification of those looked to for that
support (e.g., same language peer, EL, English-speaking peer, teacher). Chaundron (1988) suggests that effective instruction for ELs is difficult to pinpoint, so it is important that “each characteristic of interaction that is considered to promote L2 (Language 2/language 2 for an EL is English) development needs to be individually investigated for its contribution to communication and learning” (p. 10). It is for this reason I wished to shine a narrow lens on individual ELs and how they made connections to make meaning of presented English vocabulary.

This research took place at the start of a new school year, so the data collection identified strategies used by the students naturally as they began the process of acclimating to a new setting. Data were collected over a period of six weeks (MLU measurement administered in the first (9/6/16) and again in the sixth week (10/14/16), with observational data collected in the interim four). Research began with identification of the participants (August 2016) and ended with the coding of data and the researcher’s write-up of coded data. A detailed researcher time line is depicted in Table 3.

The next section provides information about the data analysis processes used in this study. These processes included transcription, analysis, and integrity.
### Table 3

**Researcher Timeline and Dates**

<table>
<thead>
<tr>
<th>Activity/Measure</th>
<th>Date/Dates</th>
<th>Responsibility</th>
<th>Responsible Party</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participant Identification</td>
<td>8/22-8/26, 2016</td>
<td>Review of Records (Appendix A)</td>
<td>Researcher</td>
<td>Compile List of Appropriate Participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Filling Out Information Sheet (Appendix B)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student Start Date</td>
<td>8/23, 2016</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent Consent Obtained for ELs</td>
<td>8/29-9/2, 2016</td>
<td>Obtain Parent/Guardian Consent for each participant</td>
<td>Researcher</td>
<td>Update List of Appropriate Participants</td>
</tr>
<tr>
<td></td>
<td></td>
<td>(Appendix C)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parent Consent Obtained for Kindergarten Students</td>
<td>8/29-9/2, 2016</td>
<td>Obtain Parent/Guardian Consent for each participant (Appendix E)</td>
<td>Researcher</td>
<td>Update List of Classroom Participants</td>
</tr>
<tr>
<td>Student Assent Obtained from ELs</td>
<td>8/31-9/2, 2016</td>
<td>Present and Collect Student Assent on appropriate form (Appendix D)</td>
<td>Researcher</td>
<td>Update List of Selected ELs</td>
</tr>
<tr>
<td>Student Assent Obtained from Students</td>
<td>8/31-9/2, 2016</td>
<td>Present and Collect Student Assent on appropriate form (Appendix F)</td>
<td>Researcher</td>
<td>Update List of Classroom Participants</td>
</tr>
<tr>
<td>MLU</td>
<td>Baseline 9/6-9/9, 2016</td>
<td>Test Individual Students</td>
<td>Researcher</td>
<td>Log Individual Student Results</td>
</tr>
<tr>
<td></td>
<td>Final 10/14-10/19, 2016</td>
<td>Test Individual Students</td>
<td></td>
<td>Log Individual Student Results, Compare to Baseline</td>
</tr>
<tr>
<td>Field Test Observation Log/Connections Identified (Appendix G)</td>
<td>9/6-9/9, 2016</td>
<td>Field Test Observation Log/Tool</td>
<td>Researcher and Kindergarten Teacher</td>
<td></td>
</tr>
<tr>
<td>Observation of Identified Students</td>
<td>9/12-10/10, 2016</td>
<td>Daily 10-minute observations within the kindergarten classroom during English/Language Arts and Social Activity. Total = 50 minutes per week.</td>
<td>Researcher</td>
<td>Creation of Observation Logs</td>
</tr>
<tr>
<td>Student Photo Opportunities</td>
<td>10/3-10/17, 2016</td>
<td>Subjects will have three opportunities to use an iPad to take photos during English/Language Arts or Social Activity time.</td>
<td>Participants</td>
<td>Subject/Researcher Interaction</td>
</tr>
<tr>
<td>Interaction with Student over Photos taken</td>
<td>10/3-10/17, 2016</td>
<td>Opportunities for individual subjects to discuss photos, taken on iPad, during English/Language Arts or Social Activity time with researcher.</td>
<td>Researcher and Participants</td>
<td>Researcher will meet with student after each opportunity and log the child’s comments connected with pictures taken.</td>
</tr>
</tbody>
</table>
Data Analysis

This section of the chapter provides information about the data analysis processes to be used in this study. The data were analyzed in phases. First, the MLU scores were reviewed and compared to initial scores. Secondly, the transcribed observation logs were coded (Charmaz, 2014; Corbin & Strauss, 2008; Saldaña, 2012). The third step reviewed the photos taken by students and the researcher. Photos were coded to connect with identified themes and matched up with observational log codes, if appropriate. Finally, a peer debrief was included as an integrity measure (Creswell & Miller, 2000).

Peabody Picture Vocabulary Test

A comparison of scores was made once the second testing session was completed. The growth scale value (GSV) was used to identify student growth made as this score is used when a lesser period between testing occurs. A positive movement of eight is an indication of growth. In this way this test could be utilized as a measure of subtle growth.

Mean Length of Utterance

The MLU scores obtained at the start and end of the data collection were reviewed and compared. In this way, the student’s use of English could be measured against the baseline scores to see what, if any changes, had occurred. Gutiérrez-Clellan, Simon-Cereijido and Sweet (2012) found correlations between MLU and the number of different verbs used as well as between the MLU and the grammatical growth in the language. These findings encouraged me to continue to look at not only the number of utterances but, additionally, the types of words and sentences uttered. The number of different words used was preferred over the use of PPVT in
the diagnosis of speech and language issues with five-year-olds (Hewitt et al., 2004). While Hewitt et al.’s study focused on typical students, their research held promise for the current study. As a comparison, one to three English speakers participated in the final MLU measure. These scores were used as a benchmark for analysis.

More specifically, utterances were counted, sentences were identified if appropriate, and each was counted and compared to the initial measure. This was completed with a modified paired samples $t$-test (Crawford, et al., 1998). Crawford, et al. expanded on Payne and Jones’ 1957 research using a formula to compare the “difference between an individual’s scores on two tests” (p. 901 emphasis in the original). This potential difference, or lack thereof, was recorded and further explored.

Observations

After receiving IRB approval, the researcher identified observation times in the day to watch kindergarten students working with each other, applying modeled and taught skills and giving them opportunities to interact with each other socially. A period of four weeks was identified during which students were observed in Language Arts activities on Mondays, Wednesdays, and Fridays and in social interactions on Tuesdays and Thursdays. The researcher spent 10 minutes a day during those weeks doing the observations. Much of the study data were collected during these daily observations.

During the academic observations the researcher recorded where ELs were focused (e.g., eyes on teacher, eyes on a peer’s paper, eyes on posted chart) and started with EL1 and moved thru the numbers, returning to EL 1 after EL 5 or EL 6. This rotation continued for the 10-minute intervals. Notations were made about when ELs were seen connecting with peers, the
Determined among connecting with peers, the teacher and print were recorded.

**Coding**

All interactions were color-coded using an open coding system (Corbin & Strauss, 2008). This open coding broke the interactions into interaction types while looking for themes. From this information, I used “axial coding” to analyze the themes that surfaced during open coding (Corbin & Strauss, 2008).

Process coding involved identification of codes across the data, focusing on identification of human resources used by the identified students. Process codes (Saldaña, 2012) were then categorized to identify resources used by students to support vocabulary learning. Second, the data were reviewed for patterns of behavior; “the discernment of patterns is one of the first steps in the data analytic process” (Saldaña, 2012, p. 91). Silverman (2006) notes the need for careful identification of categories representative of and connected to the proposed questions. Keeping this in mind, the categories were focused on the relational aspects of the students’ interactions and patterns of behavior. These patterns of behavior were sorted into categories and reviewed to connect the categories to the proposed research questions.

Reflective writings from the researcher were coded in the same way, continuing to apply constant comparison thinking (Yin, 2010) and looking for relational patterns of behavior as the data is coded.
Photos

Photos and transcribed conversations about the photos were coded as observations, following the same process open, axial (Corbin & Strauss, 2008), and selective coding (Mertens, 2015) methods. Labels identifying categories of interactions were identified from previous field testing and were included when sorting photos into categories. Use of a constant comparison thinking (Yin, 2010) guided the researcher in using and coding the photographic data. Following the coding, the photos were sorted and connected, looking for cross-case (Stake, 2005) similarities. Connections to observational log data were drawn, if appropriate.

Integrity

All coding and photo work were peer reviewed by a well-respected, tenured, kindergarten teacher with EL certification to assure integrity (Creswell & Miller, 2000). This peer reviewed coding to assure that it was appropriate and that the themes connected with the coding. Random photos were reviewed and coded by the peer reviewer and matched to researcher’s coding to check for consistency. A final integrity check included a review of identified connections between and within cases by this same peer reviewer.

Strengths and Limitations

Strengths of this study include the use of mixed methods, an idea currently receiving more attention as a positive use of both quantitative and qualitative methods to enhance each other (Creswell, 2013) and to support the current focus on evidence-driven data (Denzin, 2009). While qualitative research focused on classroom teaching is a more recent development within
the field (Pianta et al., 2007), a focus on ELs and vocabulary acquisition is timely. There is a
clear academic gap regarding ELs, and vocabulary acquisition plays a role (Silverman, 2007). To
reduce questions about validity, the fieldwork followed an identified schedule, any needed shifts
or changes were noted, and the researcher kept detailed notes based on the proposed research
questions. Additionally, the use of a performance measure (i.e., the MLU) as a quantitative
metric gave a better view of student growth, given the EL population is often hard to assess
effectively. Combining baseline and growth data with qualitative narrative allowed the
researcher to look within and across student narratives to identify strategies students incorporate
naturally to make meaning of English vocabulary. Having qualitative data to draw from allowed
a more detailed narrative of observed behaviors.

Limitations included sample size and diversity, use of MLU with kindergarten students,
and researcher bias in observation. While there is much diversity within the chosen classrooms,
(e.g., language, culture, socio-economic class), the pool from which the sample was drawn is
homogeneous, living in the same neighborhood and attending the same school. That said, the
ELs were chosen from this homogenous group. However, gender, socioeconomic, family
culture, time in the United States, language spoken, and exposure to English were considered,
with careful attention given to identifying two individuals from each of three groups (least
exposure to English, average exposure to English, most exposure to English). Another limitation
is the use of MLU with kindergarten students. Currently MLU is not widely used beyond the
pre-school years (Hewitt, et al., 2005); however, having successfully used this measure in the
past I wished to investigate further applications of the MLU. To reduce opportunities for
research bias, the observation log was field tested using a respected peer. Both the peer and
researcher observed, recorded, and compared observational data to see if collected data were consistent.

Conclusion

This chapter explained the mixed methodology for the study, the rationale for choosing that design, and the data collection methods, including the PPVT and MLU measures (including TWS), observations, and photos. MLU and TWS data were compared, looking for changes between the first and final administration. Data analysis included process-coding, categorization of codes, looking for patterns across EL cases, and finally, an integrity check through peer review. The next chapter focuses on the findings of this study.
CHAPTER 4

STUDY PARTICIPANTS

Hyun

Hyun and his family moved from China to the United States 17 months before the start of this school year. While in China, Hyun attended a pre-kindergarten program. The program advertised an English teacher; however, there were limited interactions in English during his time there. Hyun enjoyed listening to stories and sharing rhymes and songs in Korean. Both Hyun and his sister began American school programs upon moving here. Hyun attended a preschool for three months before beginning kindergarten, whereas his sister spent those three months in third grade before matriculating to fourth grade.

Hyun and his older sibling attend the same school. While both are in the same building, they do not see each other often, as their respective classrooms are on different floors in the building. Both are happy when they happen to see each other in the hallway at various times throughout the week. Hyun witnessed his sister’s American school experience as he acclimated to the preschool program he attended. Both he and his sister are exposed to English throughout the school day but spend their time outside of school hearing and speaking Mandarin with family members.

Hyun, a tall kindergartener for his age, is extremely inquisitive; however, his questions are often difficult to decipher. When speaking with him, it can be difficult to establish context as he mixes up words, pronouns, or the order of words. For instance, during a lesson, Hyun asked
me to spell “please,” and I helped him do so only to find out he had labeled “police” cars with the word. Another example occurred when I told the class we would be going to meet with our fifth-grade buddies (a weekly event that occurred in the classroom or the computer lab). Hyun responded with “When the go, to in the bus, go to there, what’s where?” In this case I had context; however, at other times he might respond with “She that don’t like, she that no have” when speaking of an event with his mother and his attempt to borrow a supply from a peer. Happily, Hyun is not frustrated when asked to repeat himself or explain further so others can comprehend his comments. There are times, however, when he will simply repeat the same statement, making it difficult to understand. Hyun enjoyed looking at books, and knew how to manipulate a book, doing so alone or with a peer.

Albert

Albert has lived his entire life in the United States with his family. Previously, his parents lived in the Philippines before moving to the United States more than a decade ago. Albert attended no preschool; instead he spent time with his family before beginning kindergarten. His mother spoke of the difference between schooling in the United States and in the Philippines. She explained that in the Philippines there is much more lecture, whereas in the United States children are expected to come up with their own ideas, complete projects, and know and apply both math and science concepts. When describing Albert, his mom reports that he makes them laugh each day and is a “joy to our family.” Albert has an older brother (eighth grade) and sister (sixth grade) who attend a nearby middle school.

Before he attended school, Albert observed his sibling’s experiences in American school. Even now, after spending his day in an American school, he returns home to siblings who speak
English to him and who bring home their unique school experiences. Albert observes his mother and father share their native language with each other and speak English with their children. While Albert understands his parents when they speak Tagalog to him, his responses are in English. Albert converses with his siblings in English. Much of Albert’s time at home was spent as family time with less focus on pre-school activities. Books were read to him in English. Albert enjoyed reading books, hearing stories, and talking about books with his family, all in English.

Albert, a sturdy kindergarten boy, is one of the most talkative and clearly understood study participants. With dark hair and an easy smile, Albert exhibited grade appropriate language skills and was, in fact, the first of the class to introduce himself independently to peers after observing the teacher model this expected behavior. Albert confidently walked over to another student when I asked and shook the peer’s hand, stating, “I’m Albert.” He confidently shares stories, his ideas, his likes, and dislikes. When given a book, it was clear Albert was familiar with reading and enjoyed being read to, however, he was not reading English words on his own.

Ven

Ven’s family has lived in the United States for over 10 years. His older sibling has attended an English elementary school for three and a half years. Ven attended a local preschool, one focused on allowing students to work at their pace and follow their interests. Ven’s family is supportive of his work, asking early in the year if he was clearly understood, fitting in, and working to his ability.
Ven’s sister is in third grade in the school he now attends. He has experienced various American school activities through his sister’s school involvement (e.g., attendance at choral concerts, fund-raising fairs, and Open Houses). Both Ven and his sister experience English throughout the school day, and he spends much of his time outside of school experiencing and speaking English with friends and family. Ven and his family enjoy sharing stories and talking about books in English. In addition, he hears his parents use their native language with other family members, and when his grandparents visit for extended time, they too speak their native language with Ven’s parents.

Ven is a slight five-year old with a bright smile. Each day Ven exhibits his inquisitive and thoughtful nature. He asks questions in a clear voice and is persistent when finding answers for those questions. Ven was familiar with English books, even reading some of the English words in books presented as a read-aloud. He speaks quickly, clearly, and is quick to ask questions when he does not understand. Ven began the school year quietly observing activities around him. Extremely soft spoken at the start of the school year, he appeared a bit timid and shy, characteristics that no longer describe this curious student. Ven is a friendly boy who brings a genuine interest and sense of wonder to all he does.

Meena

Meena and her family have been in the United States for less than two years. Meena attended preschool in Pakistan. Her mother shared that Meena’s grandmother was a teacher in Pakistan. The family moved to the United States 16 months before Meena began kindergarten; however, she attended no schooling during that period. According to her mother, Meena speaks numerous languages (Urdu, Punjabi, and Pashto), as do the adults in her home environment.
Meena’s mom shared that much of their time at home was spent as family time, however, when Meena spent time with her Grandmother (a teacher in Pakistan), their work together was in Punjabi. Meena was familiar with books; however, during story time Meena was less likely to engage with the class or offer her thoughts. Her mom reports that Meena prefers life in Pakistan and would rather be there than in the United States.

Meena has a younger brother. She speaks often of her mother, both as mom and friend. She attends kindergarten with the previously introduced students and lives with her family from the same Chicagoland suburb. She and Albert are similar; their preschool experience was centered in the home, however, with a younger brother, Meena did not witness an older sibling bringing home the experiences of various American school activities. This school year has been difficult for her as she is often in tears over a classroom or recess situation but has trouble expressing what is causing the difficulties. Meena looks to an adult to solve her difficulties, often requesting assistance. At school, Meena is exposed to and expected to speak English, whereas at home she hears and interacts with the adults around her using numerous native languages.

Meena is a tall kindergarten girl who often wears her cold weather hat. Her long dark hair is pulled back from her face. While extremely talkative, Meena is at times, difficult to understand. She speaks her mind; however, it may or may not connect with the discussion occurring around her. Meena loves to talk about her family and the various activities she enjoys, sharing a warm smile as she does so. When talking about favorite foods or family she inserts a word familiar to her from her native language (e.g., poonjab for grandma).
Xavier and Lily

This family has lived in the United States for the entirety of the twin’s life. Xavier and Lily both attended preschool in a neighboring college campus community before moving to this affluent suburb to begin their elementary school career. Exhibiting school behaviors (e.g., sitting for stories, listening as the teacher read) along with behaviors that brought concern (e.g., little language observed, tears, difficulty separating from mom or sibling) was common at the start of the school year; however, as the school year progressed, the twins slowly began to show some independence in their classroom entrance. The two would walk to the first classroom where Xavier would squeeze his sister as she continued to her room. Occasionally, he would run after her to give her another hug or call out to her before walking into the room to start his day, with Lily responding to him with a smile or whispered Mandarin goodbye. This behavior differed from exhibited classroom behaviors as both rarely spoke for the first few weeks of school.

Xavier and Lily have lived only in the United States with their parents, who have been here for 20 years. Mom was quick to speak with me about supporting the children, wanting to know what she could do to work with them at home and wanting resources to assist them in learning English and specifically the Jolly Phonics sounds. Her concern about her ability to correctly make the sounds was shared as well. Mom eagerly accepted all shared information and followed up when she had further questions. Both children use and are expected to use English during the school day. While Xavier uses Mandarin with peers, he does not use it with the teacher. This also holds true for Lily; however, she remains the quieter of the two. Both hear and use Mandarin at home with their family and while exposed to English in pre-school spent
much of their time hearing stories in Mandarin at home, talking about stories in Mandarin, and for Xavier, reading some Mandarin words, and even some Mandarin writing.

Xavier is a small kindergarten boy, and Lily is petite. With dark hair and a slow to share smile, Xavier began his school year in tears. Tears were a daily occurrence for Xavier, which lasted for several weeks. His sister Lily with the same dark hair and no smile, while not crying each day, was slow to enter the building and walk to her classroom. At times, Lily would walk to her classroom as I worked to remove Xavier from his mom’s leg, shutting the classroom door to help him transition, so his school day could begin. However, after Xavier adjusted, he showed an interest in classroom materials. He was seen observing, looking intently at books or posters, and seeking out picture books to review. These descriptors for both students changed during the study; however, at the start both were noticeably reticent.

Study Participants: Description Summary

Even though the pool of kindergarten EL participants is somewhat homogeneous (i.e., same community), those chosen represent diversity in the areas of language/s spoken, exposure to English and native language, preschool experience, and finally, American school experience (see Table 4).

They represent a mixed group of ELs. That is, each of the six students has experienced English; however, each has done so in a different way. While three of the students are immersed in their native language once they leave school (Hyun, Xavier, and Lily), two spend much of the time outside of school hearing a mix of both their native language and English (Albert and Ven). Finally, one student (Meena) is exposed to numerous languages since her family members speak multiple languages at home.
Table 4

Study Participants

<table>
<thead>
<tr>
<th>Student</th>
<th>Country Born</th>
<th>Parent(s)'/Country of Birth</th>
<th>Native Language/s</th>
<th>English Exposure</th>
<th>Preschool Experience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hyun</td>
<td>China</td>
<td>China</td>
<td>Mandarin</td>
<td>Moderate</td>
<td>China/American</td>
</tr>
<tr>
<td>Albert</td>
<td>U.S.</td>
<td>Philippines</td>
<td>Tagalog</td>
<td>Maximum</td>
<td>Home</td>
</tr>
<tr>
<td>Ven</td>
<td>U.S.</td>
<td>Indian</td>
<td>Telugu</td>
<td>Maximum</td>
<td>American</td>
</tr>
<tr>
<td>Meena</td>
<td>Pakistan</td>
<td>Pakistan</td>
<td>Urdu, Punjabi, Pashto</td>
<td>Minimal to Moderate</td>
<td>Pakistan</td>
</tr>
<tr>
<td>Xavier</td>
<td>U.S.</td>
<td>China</td>
<td>Mandarin</td>
<td>Minimal</td>
<td>American</td>
</tr>
<tr>
<td>Lily</td>
<td>U.S.</td>
<td>China</td>
<td>Mandarin</td>
<td>Minimal</td>
<td>American</td>
</tr>
</tbody>
</table>

Organization of the Findings

This study was undertaken to investigate what ELs do to make sense of the English vocabulary presented to them daily. Data were collected both quantitatively and qualitatively. The following chapters present the data gathered to address research questions 1A, 1B, 1C, and 2, respectively.
CHAPTER 5

RESEARCH QUESTION 1A
How do Kindergarten ELs utilize student/student relationships to create understanding and acquisition of English vocabulary?

Data for research sub-question 1a were collected through the quantitative MLU measure. Qualitative measures were also used: observations, peer interactions (sorted by native language background and peer engagement), reflective paragraph words, and photos.

Quantitative

MLU

Data from the first session of MLU testing showed little support for student/student relationships as operationalized by the limited number of classmates named (less than 2 identified) and the mere fact no EL mentioned utilizing a peer for help. The only exception to this statement came from the MLU question that asked students “Who are your friends at school?” During the first session (held in September), Xavier, Lily, and Ven identified no one as a friend. Albert, however, identified three friends, but only one was a classmate. In the first session, Hyun identified his only friend as the Mandarin speaker and classmate he had met at the school Meet and Greet. Meena identified no friends but continually talked about things she did with her mother.
The second MLU testing session occurred five weeks after the initial implementation (October). It was in this session where a greater awareness of friends was evident. Meena identified nine classmates as friends, the largest increase from session one. While the number of friends identified by Albert dropped (from three to two), the two he named in this session were classmates. Ven and Hyun also named two classmates. Even Xavier could name a classmate, something he was unable to do at the first session, a session during which he spoke only seven words. Lily continued to have difficulty and was unable to identify any friends. Interestingly, it was during this second session that each EL scanned the room, looked for peers, and named classmates, everyone, that is, except for Lily.

These responses showed a change in the students’ awareness of their peers as friends and likely resources of support. This awareness is important as the ELs need to use language to learn language, and friends can serve as non-judgmental and available resources. For example, the peers afforded numerous opportunities to hear, practice, refine, speak, and converse in English. Friends and peers provided a natural occurring resource for English vocabulary practice through conversation. It was this repetitive conversing, this age-appropriate practice that moved the ELs toward English vocabulary acquisition. It was the ELs’ awareness of friends that became the catalyst for accessing a resource: classmates facilitated opportunities to further language growth in authentic academic activities.

As evidenced by an increased awareness shown through students naming peers in the MLU testing, their student/student relationships changed. While numerous factors may affect this growth (maturity, school experience), increased attention to building these relationships cannot be ruled out as a potentially influential factor.
Observational data were collected during a four-week period from September-October. The data gathered during that time were broken into observed interactions. The following sections explain in more detail the categories of interactions captured. Two themes emerged from the observations based on patterns of interactions: (1) native language background and (2) peer engagement.

**Native Language Background**

During the four-week observation window, the ELs interacted to answer questions, complete assignments, and play together. These interactions were captured by tallying the focus of each EL in a rotation (Appendix I). Beginning with Xavier and recording where his eyes were focused, I then moved to each subsequent EL in a repetitive pattern for the entirety of the ten-minute observation. Each sweep took 40 seconds with a look at the EL, notation made, and eye movement to the next EL in rotation. Generally, six to eight notations were made for each EL during each observation period. Lily was the only exception to this since she was in another classroom. That said, during academic observation I entered her classroom and tallied her focus each 40 seconds for 10 minutes. The data in Table 5 indicate the overall number of interactions with other ELs was larger than with English-speaking peers (64% to 36%).
Table 5

Student/Student Interactions by Native Language Background

<table>
<thead>
<tr>
<th>Week</th>
<th>Interaction with English-Speaking Peers</th>
<th>Interaction with ELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>23</td>
<td>53</td>
</tr>
<tr>
<td>Week 2</td>
<td>22</td>
<td>30</td>
</tr>
<tr>
<td>Week 3</td>
<td>20</td>
<td>32</td>
</tr>
<tr>
<td>Week 4</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Total # of Interactions</td>
<td>77</td>
<td>136</td>
</tr>
<tr>
<td>Percentage of Interactions</td>
<td>36%</td>
<td>64%</td>
</tr>
</tbody>
</table>

Table 5 shows that the number of times ELs interacted with English peers during the first three weeks of the study remained constant (n=23, 22, 20). However, during the final week of observation, this number dropped (n=12). The numbers also showed a downward trend when looking at interactions with other ELs (53, 30, 32, 21). These decreases might be explained by an increase in student independence and greater awareness of personal choice. Throughout the observational weeks, the students achieved more independence in choosing partners with whom to work. In other words, each EL made an independent choice of which peer to work with. At the start of the school year Hyun, Xavier, and Lily returned to familiar ELs; in fact, Xavier sought only Mandarin speakers and familiar activities (the same book repeatedly, played blocks with same classmate daily). During this same time Albert and Ven moved more fluidly within groups, at times playing with the same peers, however, not specifically seeking out specific classmates. Meena was less likely to seek out any peer, preferring to work by herself or engage with the teacher. Interestingly, while the researcher observed students working in partnership, as
a community of learners, the ELs simply saw a friend at an activity they wanted to join. It was this movement toward partnering that moved the ELs closer to true community of learners, and collaboration.

Furthermore, while the Mandarin speaking students consistently sought out each other during social interactions, this was less likely to happen during academic classroom observations. Classroom assignment is made randomly; thus, demographic groups are not intentionally placed together. Occasionally, students who speak no English are placed in a classroom with a similar native language speaker; however, this only occurs when the information has been shared with the school before class placement. That said, in this case, the Mandarin speakers were not all placed in the same classroom, making it harder to seek each other out during classroom academic activities. When the classes were together at recess or social times, the ability to gather was easier, and the Mandarin shouts, calls, and words could be heard, along with their laughter.

Lastly, as the weeks progressed, students were given more autonomy, which allowed them more choice in their activities and collaboration. The ELs began to make the deliberate choices to pair with a specific classmate. While the number of interactions with same language peers did not rise, it did stay constant during the final two weeks of observation.

Peer Engagement

Students in kindergarten are constantly learning new skills. These skills are learned as they engage with the teacher, peers, the environment, new learning strategies, and classroom resources. However, early in the school year, students are unfamiliar with each other and with strategies they can use to solve problems. Often for young children, the easiest solution is to ask
an adult. It is during the kindergarten experience that independence can be fostered and built. For example, rather than just go to the teacher for an answer, students are taught to seek out their own answer before resorting to having another answer for them. In this classroom I began the year with a focus on learning strategies that supported independence and learning (i.e., identification of resources other than the teacher, including peers and print). Behaviors were modeled, and guided practice frequently occurred so students could quickly apply the introduced strategies, believing that this knowledge allows for greater individual success. Thus, the classroom culture cultivated these interactions early in the school year via modeling, encouragement, celebration, and guided practice. Slowly this support was removed, and independence was expected.

Seeing peers as a resource is an important element as students gain independence. Given most students’ previous experiences are with adults rather than peers in providing answers or solutions, this movement toward seeing peers as a resource is crucial. Having alternative ways to solve problems allows students to build independence, which furthers academic growth.

Developmentally, kindergarten students move toward this independence in incremental steps. Some of those steps include building awareness of the resources available to the student via another student. After reviewing observational data, the following emerged as student/student or peer engagement: 1) looking at a peer’s paper, 2) talking with a peer, 3) working with a peer, and 4) physically connecting (e.g., touching arm, shoulder, or item in a peer’s hand). Table 6 details the types of peer engagements and number tallied by each student.
Table 6

Peer Engagement

<table>
<thead>
<tr>
<th></th>
<th>Looking at Peer’s Paper</th>
<th>Talking with Peer</th>
<th>Working with Peer</th>
<th>Physical Connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albert</td>
<td>2</td>
<td>18</td>
<td>21</td>
<td>0</td>
</tr>
<tr>
<td>Hyun</td>
<td>0</td>
<td>24</td>
<td>13</td>
<td>0</td>
</tr>
<tr>
<td>Ven</td>
<td>3</td>
<td>18</td>
<td>18</td>
<td>0</td>
</tr>
<tr>
<td>Xavier</td>
<td>2</td>
<td>26</td>
<td>16</td>
<td>10</td>
</tr>
<tr>
<td>Lily</td>
<td>0</td>
<td>19</td>
<td>20</td>
<td>3</td>
</tr>
<tr>
<td>Meena</td>
<td>0</td>
<td>11</td>
<td>10</td>
<td>0</td>
</tr>
</tbody>
</table>

Further distinction was given to gender groups, as shown in Table 6 with the boys highlighted in blue. Typically, kindergarten boys struggle more both socially and academically (Sax, 2001). In this study, this did not hold true when looking at peer interactions. Interestingly, the girls were the quietest and least social of the gender groups when working and playing. As the weeks progressed, this characteristic held true for Lily but became less so for Meena. The data revealed the boys were the more verbal and social, some from the beginning (Albert and Ven) and others who followed suit (Hyun and Xavier). This juxtaposition is significant and, as evidenced in my three decades of experience, is atypical.

Peer engagement for each EL varied. While some ELs immediately connected with their peers, others took longer to identify and use their peers as a resource. Table 7 shows the number of interactions captured for each EL based on the data from the observational sweeps.
During social activities, the ELs’ interactions were self-initiated. For example, Hyun sought out other Mandarin speakers and Xavier searched for his sister Lily, who often simply followed him. Ven and Albert, however, easily initiated connections with different friends. Academic activities (i.e., centers, reading at tables, and writing at tables in journals) included self-initiated interactions; however, some occurred simply due to student-created groupings. For instance, Albert would find a specific friend reading at a table and join him there. There were times when Ven approached a peer and asked to write in journals together. When making a choice Xavier might simply choose the same activity as the student before him in line.

Student interactions varied in type. Albert and Ven verbally engaged with peers, conversing comfortably back and forth and understanding the turn taking aspect of conversation. Both had the ability to speak back and forth with a peer, a more difficult skill for Hyun. Hyun’s interactions were more centered on asking a peer a question, often requesting a supply. Lily most often paralleled her peers, doing the same or a similar activity, but doing so just next to her peers. Interestingly, Xavier observed a peer and then paralleled the activity, similar to his sister. Meena spent most of her time working on her own. On the rare occasion Meena interacted with another peer, she consistently returned to the same familiar peer (Lin), a peer who shares a similar culture but not language.
While the previous paragraphs identified ELs working in concert with others, one exception was noted. During the first week of observation, the students worked in small groups at tables around the room. While Ven, Xavier, and Albert stayed at the tables with peers, Meena removed herself from the small group to find the teacher. She did this twice during this 10-minute session. Meena’s pattern of behavior continued throughout the study. Her behavior was different from that of her peers. Where her peers would interact in various ways, (e.g., move to sit by a peer or ask for or take a needed supply), she remained inwardly focused. Rather than look to a peer, Meena sought out the teacher or kept to herself; she was observed alone 11 times during the four weeks of observation. Albert and Xavier were identified in this same way; however, each was observed alone just one time. As the ELs slowly came together as a community of learners, it seemed Meena remained more inwardly focused. She was less likely to move away from her spot or her own work to collaborate with, or partner with a peer. Albert, Xavier, Hyun, and Ven were beginning to collaborate, to work as a community of learners, while Meena appeared content working alone.

Lily was observed during group work time in her own classroom. When observed in a small group she was often playing parallel with her peers. While not as inwardly focused as Meena, Lily remained quiet within the group. She worked in parallel rather than in concert with peers to assemble a puzzle. She colored next to, without sharing crayons, and continued to be less verbal, infrequently initiating with peers.

Reflective Paragraph Words

Observation of the ELs as they worked showed what occurred in a natural setting. Hoping to learn more, I spent time reflecting on the observational data, which allowed me to
review the data from a different perspective. As the researcher, I recorded reflections after each day’s observation. Then I merged my thoughts into written paragraphs, for a total of 26 narrative reflective passages over a one-month period (Appendix J). Next, I identified all verbs in the paragraphs and looked for those that referenced an interaction (i.e., working with a peer, looking at a peer or other resource, and talking with a peer). These interactions told me more. By reviewing the paragraphs and verbs, I obtained narrative information that identified whether the ELs applied the strategies I had presented in class (e.g., working with a peer, looking at a peer or other resource, and/or talking with a peer). Once identified and highlighted, the 71 verbs merged into two categories: student/student interactions (n=49) and teacher/student interactions (n=22) (Appendix J). Identifying the ELs’ reliance more on peers and print than on the teacher shows movement toward more independence. As presented earlier, this peer interaction afforded the students multiple opportunities to use, practice, and refine English vocabulary in authentic settings and application. Seeing ELs move toward larger numbers of interactions with peers showed movement toward less reliance on the teacher. It is this movement away from the teacher and toward classroom resources that identifies greater independence and understanding by the EL.

**Student Taken Photos**

While the reflections were from the researcher’s point of view, photographs gave each EL an opportunity to share. To minimize language needed, each EL was offered the opportunity to photograph resources they found helpful. After giving assent, the EL was given an iPhone. Each was instructed to “take pictures of things that help you” and allowed to do so uninterrupted until they returned with the phone. Upon completion, each was asked to review the photos and
explain why they captured the images they did. Table 8 lists the number of photos taken by each EL.

<table>
<thead>
<tr>
<th>Photographs Taken by ELs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lily</td>
</tr>
<tr>
<td>Hyun</td>
</tr>
<tr>
<td>Ven</td>
</tr>
<tr>
<td>Albert</td>
</tr>
<tr>
<td>Xavier</td>
</tr>
<tr>
<td>Meena</td>
</tr>
<tr>
<td><strong>Total</strong></td>
</tr>
</tbody>
</table>

Lily was the only EL who did not agree to take photos. While her teacher was not surprised by her refusal, it would have been interesting to see if Lily would have taken photos had she had been asked by her own classroom teacher rather than the researcher. In contrast to his twin, Xavier immediately took the phone and was off, returning with photos (n=12) that represented numerous print resources but no peers. Hyun and Ven needed a bit of coaxing to complete the task, as did Albert. Meena took the longest time to do so, but she took the most pictures (n=21).

While the 43 student-taken photos showed various resources (i.e., classroom created charts and posters, Jolly Phonics letters and illustrations, dictionaries, and baby books), only one photo specifically identified a peer. Hyun took the picture shown in Figure 10. When asked why he took the picture and how the subject of the photo helped him, Hyun stated, “M told me, this can color, this can write.” Hyun was clear about sharing his enthusiasm for this English-speaking peer as someone who helped him as he completed his work.
As an experienced teacher, I anticipated the ELs would capture peers in their picture taking. Therefore, the limited number of peer photos surprised me. It seemed as if the ELs were not aware of the human resources available within their classroom this early in the year. Hyun was the only EL who identified a peer in his photos. The photos taken by the four other ELs showed numerous print resources, a topic further explored in the answers to Research Questions 1b and 2.

**Researcher Photos**

The researcher also took photographs during the four-week observational window. A total of 35 photographs were obtained. The photographs were subsequently sorted into individual students and pairs of students. Twenty-nine of the photos (83%) captured individuals, with the six remaining photos depicting pairs of students (17%). Examples capturing individual students follow. In Figure 11 an English-speaker pointed to a resource to help Hyun spell the word plant.

![Figure 10: Hyun’s picture of an English-speaking peer identified as a resource.](image-url)
Figure 11: Researcher photo English-speaking peer sharing resource with EL

Figure 12 shows Hyun sharing the baby’s first words book by pointing out the father photo to another EL who asked about writing a family word. Hyun responded with “I know that” when the peer asked for help writing the word dad.

Figure 12: Researcher photo of EL sharing a resource with EL

Figure 13 shows Ven sharing that same frequently used classroom book to help an English-speaking peer identify and spell a number word.
In Figure 14 the ELs worked together to identify the spelling of a word, using a previously modeled resource, as they spell the color word orange.

Figure 15 shows ELs again working together using a classroom resource, a picture dictionary organized by categories, to complete a writing assignment.
Figure 15: Researcher photo of ELs working together using a classroom resource.

Figure 16 shows ELs in a reading group, watching a peer as they all worked together to complete the assigned activity.

Figure 16: Researcher photo of ELs working side by side.

In Figure 17, two ELs work together to find needed materials. However, rather than bring the materials to his peer, this EL identified where his peer will find the needed material. In this way, the EL is reminded of a strategy that can be used to solve a similar problem in the future.
When working on an activity, as seen in Figure 18, Albert helps a peer check the completed work by comparing it to the text found on the crayon.

These photos show the ELs supporting each other, but not doing the work for the peer. In other words, the EL is asked for help but they bring the peer to the needed item instead of bringing the needed material to the peer. Another example showed the ELs working with a peer and then expanding on the work together. For instance, in Figure 19, Albert worked with an EL at the table. More specifically, when the peer shared her idea of using crayons as markers to help her graph the colored blocks, Albert took her idea a step further.
Albert placed his crayons on his graph and moved on to color each leaf as a visual cue to know where to color the space for each graphed block. He proudly shared how he started with his friend’s idea and then made it his own.

RQ#1a Summary

The ELs moved toward English vocabulary acquisition in several ways. Observation of students during academic activities (e.g., writing in journals, reading) showed students moving toward using their peers as a resource. Examples of this awareness included ELs approaching a peer to ask for help, pointing out resources to others, bringing peers to appropriate resources, and not simply answering but showing peers where to find what was needed. Kindergarten students are typically not patient, so if a friend asks a question, they simply answer the question. What was observed during the latter weeks of this study pointed toward ELs who did not follow this pattern. Instead, the ELs helped their peer identify the needed material to make sense of the work on their own. The ELs were observed looking to peers and using peers to help them move forward in their assigned English work. Historically, when students exhibit helping behaviors,
they must have internalized the skill being shared. In this case, when the ELs provided support I knew they understood, the EL possessed the required skill or strategy knowledge to be a resource to others. Given their daily activities were presented and completed in English, this pointed toward understanding and acquisition of English vocabulary.

The gathered data showed the ELs gravitated toward others who spoke the same language. Given the classroom demographic, this was more difficult to do; however, students sought out similar peers whenever possible. This connection is further addressed in the answer to research question 1b. Interestingly, when same language peers were together, students were verbally engaged with each other but were reticent to share their native language with the English-speaking teacher. While possible that ELs saw little need to share their native language with one who does not speak or understand the language, more information can be gleaned from these interactions. Were students feeling more connected in the classroom to peers who spoke similar languages than they were to the English-speaking teacher, or was this simply a case of sharing native language only with those who speak a similar language?

The researcher’s reflection further revealed the students’ interactions and engagement. The identified verbs reflected the students working together, identifying student/student interactions, those activities the students engaged in to build relationships. It was during this engagement that English words were being learned, practiced, and used, as evidenced by the English resources brought into the interactions. While researcher photographs captured students working together, photographs taken by the ELs did not point to peers as a resource except for one photo taken by Hyun. This difference is curious as it identified a disconnect between resources used by ELs in contrast to resources identified by the teacher. While only one EL identified a peer during the photo taking opportunity, the number of interactions captured by the
researcher showed students engaged with each other (e.g., pointing out resources for peers, pairs of ELs working together to complete work) and beginning to see their peers as an available resource.

This awareness supports the idea of peer relationships being used to help the ELs build understanding, thus answering the proposed research sub-question as yes. Awareness of peers increased for each EL, allowing engagement with peers and, thus, helping the ELs move forward in their understanding and acquisition of English.
CHAPTER 6

RESEARCH QUESTION 1B
How do Kindergarten ELs draw upon native language to create understanding and acquire English vocabulary?

Data for research sub-question 1b were collected from administration of the two quantitative tests MLU and PPVT. The qualitative measures included Observations, Student-Taken and Researcher photos.

Quantitative

MLU

Past research (August et al., 2005; Cunningham et al., 1998; Espinosa, 2013a; Goldenberg et al., 2013) has identified skill in native language as somewhat predictive of second language acquisition. Ordonez, Carlo, Snow, and McLaughlin (2002) added to this in reporting “performance ability in Spanish was a reliable predictor of English performance” (p. 726). That said, it is not uncommon for ELs to present non-verbally, especially at the start of the school year. Students hesitate to use English, and are as reluctant to share their native language knowledge. This is a frustration facing classroom teachers. Historically, I too have observed students make gains in acquiring English; however, they need to use language to gain language. The dilemma becomes identifying ways to encourage language use by ELs so those same students will acquire English vocabulary.
While native language was not shared by any EL during the first MLU testing sessions, Meena did use words from her native language during the second session in October. The same questions were asked in both MLU sessions. Interestingly, MLU numbers increased, something further explored in the answer to Research Question 2.

During the second MLU session when Meena was asked “What do you like to eat?”, she replied “poogab” (type of sandwich filling) and named a family member as “poopafura” stating, “meatballs and noodles, poogab and poogab sandwich and those yummy foods that my mom gets and pizza my favorite and poopafura makes pizza.” When asked for more detail Meena focused on talking about pizza but did not elaborate when asked about poogab and poopafura. The MLU measure showed little native language use along with less overall language used by ELs. While English use, as tracked by TWS, did change after a month, it was difficult to connect native language as a useful resource in increasing the knowledge or use of English vocabulary as measured by MLU. Students may have used native language knowledge and simply not shared that with the English-speaking teacher. Additionally, while native language was encouraged and celebrated in the classroom, there was no invitation to use both native language and English given by the English-speaking teacher. Once again, this may speak more to ELs’ feeling that school is where English is used, rather than native language, an idea that deserves more attention.

PPVT

In a similar fashion, native language was not verbalized during the PPVT testing, which requires the student to point to a named item when given a choice of four pictures. During administration of this vocabulary understanding test, there were times when the students simply stated, “I don’t know” or “What’s that?” However, there was an interesting deviation from the
required pointing behavior when asked to identify “panda.” Rather than simply point to or verbally defer the question, each of the Mandarin speaking ELs (Hyun, Xavier, and Lily) identified the panda picture as “China.” None of the other participants did so; in fact, no other student named any picture. I found it more than coincidental that all three voiced China when seeing this photo in the array of four animals shown (panda, raccoon, porcupine, skunk, Figure 20).

![Photo array from PPVT.](image)

**Figure 20:** Photo array from PPVT.

**Qualitative**

**Observations**

Emerging from the collected observation data were the following themes: Native Language Presented, Language in Print, Student/Student Interactions, and Teacher/Student Interactions. These themes are further discussed in the following pages.

**Native Language Presented**

At the start of a school year I worked hard to help the students feel connected. This coupled with the idea that ELs are constantly faced with unfamiliar language encouraged me to look for ways to bridge this divide. To comply with the district’s curricular dictate to teach
nursery rhymes and poems and incorporate some familiarity, one classroom activity included playing different versions of popular children’s rhymes, including native language versions. These versions, along with the English version and printed poems in English, were all part of the lesson incorporating nursery rhymes. The printed versions became part of a book that students kept at their desks and referred to throughout the year. There were even some English variations (e.g., “The Itsy, Bitsy Spider” and “The Incey, Weency Spider”). All poems have drawings to support the poem, and students referred to the books as a resource for spelling both high frequency (i.e., the, and, is, etc.) and unique words (i.e., pail, hill, spider, etc.).

The students participated in acting out the poem “Head, Shoulders, Knees and Toes.” After presenting this activity several times, an English audio/visual version was shared. As the English version was played, three ELs (Hyun, Xavier, and Meena) in the room were silent and remained in their seats. Albert and Ven participated along with the rest of the class, moving hands to mimic the rhyme. When a Hindi version was played, Meena had little reaction, as did Ven. While listening to a Tagalog version, Albert voiced recognition, but both Xavier and Hyun immediately looked up to interact with the Mandarin version of the rhyme. Xavier kept his eyes on the screen, while Hyun stood beside his chair as seen in Figure 21.

Figure 22 shows Hyun began to mimic the movements. As he did so, he made mistakes and had some trouble keeping up with the visuals and words. However, he did not give up. He remained focused on the activity and even laughed a bit as he followed along, Figure 23.

---
1Lily was not observed in this activity.
Figure 21: EL participating with native language rhyme.

Figure 22: EL participating with native language rhyme.

Figure 23: EL participating with native language rhyme.
During this activity, confusion was evident on the faces of the other students who did not understand the words; however, they closely watched what Hyun was doing. Suddenly, Hyun knew something they did not, and they were curious. Each version of the rhyme had English-speaking students scanning the room to see what would happen next. After this activity ended Hyun continued to smile. Slowly, he was building confidence in a place unfamiliar to him.

This activity allowed students to connect with presented material in a different way, seeing a connection to their familiar native language and the English presented daily. This connection was reinforced when the familiar poems were paired with printed text. By having students review the printed poem and follow along, there were opportunities to match the words in their head to the words on the page. In the case of Xavier and Hyun, this connection became a multi-leveled visual (i.e., video and song to English poem, experience to printed text, printed text to English acquisition) to support learning, native language to movement, native language to English, and native language to printed English word. Furthermore, the English-speaking students viewed their EL peers in a different way. Suddenly, the ELs understood something presented in class that the English-speakers did not.

Language in Print

During the observation window, the ELs were repeatedly captured using photographs, those found in the presented classroom resources to support their work. Two classroom resources, baby’s first word books, are filled with clear photographs paired with the label/English word. Figure 24 shows this well used resource.
While each EL had a different background, spoke a different language, and had different experiences leading up to this kindergarten year, all could rely on pictures. These pictures, a universal first language in and of itself, became crucial to building understanding and knowledge of English vocabulary. The ELs began to repeatedly use the books to label their work, complete assigned work, look at the pictures, and begin to pair English vocabulary with familiar pictures. As the students became more confident with the resources, they could also use the books to identify needed words by category, as represented in Figure 25.
The universality of the photos and the ELs’ use of these classroom resources is further examined in the Researcher Photos section of this answer and in the response to Research Question 1c.

**Student/Student Interactions**

Collected data were reviewed to see how often the ELs interacted with other ELs. As previously seen, when interacting with English speakers, the interactions between ELs outnumbered those with English-speakers (64% to 36%, respectively). Curiously, a closer look at the data, Table 9 shows ELs interacting equally between similar and different language speaking peers. In other words, speaking another language did not keep ELs from interacting with each other.

<table>
<thead>
<tr>
<th>Observation Week</th>
<th>Same Language Peer</th>
<th>Different Language Peer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17</td>
<td>23</td>
</tr>
<tr>
<td>2</td>
<td>19</td>
<td>10</td>
</tr>
<tr>
<td>3</td>
<td>11</td>
<td>17</td>
</tr>
<tr>
<td>4</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>Totals</td>
<td>58</td>
<td>58</td>
</tr>
<tr>
<td></td>
<td>50%</td>
<td>50%</td>
</tr>
</tbody>
</table>

During the first two weeks of classroom observation, while the researcher heard languages other than English spoken, students shared few native words with the researcher. This was best exemplified by the Mandarin speakers who often sat together, speaking Mandarin rapidly among themselves. As the researcher approached, the students simply stopped talking or
shyly smiled. When asked to explain the conversation, the students became quiet. Even when a child was asked to help another by translating or speaking together, neither EL would comment on the Mandarin conversation. Interestingly, this may be because the ELs knew the researcher did not speak Mandarin, thus why share knowledge that would not be understood? 

One exception was during a large group activity during which Hyun spoke to Xavier, almost without thought, in Mandarin. The students were engaged in a direction following activity and were laughing and giggling as they stood up and sat down. At one point, Xavier remained standing, and Hyun commented, “坐下 (sit down)” Xavier did so immediately. In this case, when asked, Hyun shared his response with a slow smile, “I told Xavier sit down.” 

This premise is further exemplified by observational data collected on Hyun and Xavier during social activities. When outside, the two would run after each other only to stop, turn, find, and run to a third friend, a fellow Mandarin speaker from another class. Interestingly the classroom with this friend was often the last to come out to recess, thus allowing the researcher the opportunity to observe Hyun and Xavier as their friends exited the building. The group that played together most often included four boys (Hyun, Xavier, and two other Mandarin speakers who are not a part of this study). Occasionally, Lily would be a part of the group, but she often held back, playing alone or only with her brother.

When the siblings saw each other, they would instantly connect. Xavier watched for Lily to exit the building and immediately ran to her as she did so, at times wrapping his body around her and running into her so quickly that she wobbled. As the greeting occurred, it was obvious the two were more relaxed, quickly breaking into animated Mandarin conversations and physically touching each other. While these discussions may, or may not, directly relate to academic success, the connection affected each child’s comfort level at school, if only for a short
time. Smiles were evident, but those same smiles were not often seen during instruction. In fact, it was not until the third week of the observational window that Xavier began to smile during academic activities. With Lily, it took even longer.

Other observations identified students looking to connect with older students. This occurred several places in the school: on the way to P.E., on the way into the building from recess (as fifth grade buddies walked out to recess), or getting ready in the hallway/bathrooms for lunch. Xavier would scan the line or group as if looking for someone specific. At first, when asked, he would simply shake his head. Soon after he would nod his head when asked, “Are you looking for R?” It was not until the observation window had ended that Xavier finally walked up to R and smiled. It took even longer for Xavier to verbally greet this older friend.

Hyun also sought out students he knew spoke Mandarin. When an older boy dropped off artwork in the classroom, Hyun remembered he was one who spoke to him. A week later when Hyun saw this same boy in the library, he asked, “this who art draw?” and when he was told yes, greeted the boy with 你好 (hello).

While many of these examples simply show students finding others, specifically others like them, it speaks to a comfort level in an unfamiliar place. Finding something familiar, in this case language, helped to make them feel more comfortable and confident. For the teacher finding these native language connections allowed more relaxed interactions. During a second session with the fifth-grade partner class I checked in with Xavier and his Mandarin speaking partner. (Strategically, native language speakers are paired together during these activities whenever possible.) At one point, when checking in with the boys, I encountered a silent Xavier, but his older buddy was quick to share his memories of being a kindergartener and, like Xavier, not speaking English at school. As the weeks progressed and Xavier began to seek out this boy,
it cemented my belief that this connection to native language and this same language-speaking peer was important.

**Teacher/Student Interactions**

Use of native language was minimal between the teacher and the students. The teacher did not speak the represented languages of the classroom; however, all attempts were made to support ELs when they used native language. Students were encouraged to do so whenever possible. As the teacher, I included elements of translanguaging whenever possible. ELs were introduced to similar language speakers, welcomed with native language greetings, and native language was celebrated. Parents were asked to add native language on labeled student items. Anchor chart visuals (i.e., color, shape, number charts) included native language, and cultural and language background differences were celebrated and identified as ways that made each EL unique.

These observation data identified instances in which native language played a role in helping the ELs understand or acquire English. A further review of photos taken expands on the viewpoint of the ELs and the researcher during this same time.

**Student-Taken Photos**

Of the 34 student-taken photographs, only one showed a same language speaker. Ven was the only EL who photographed a peer, and this photo was of a peer reading, Figure 26, stating, “Reading-help us learn.”
While student taken photos taken did not show numerous peers as an identified resource, there were print resources represented. Photos of these classroom resources included resources that had been presented and modeled by the teacher. Of the 22 student-taken photos identifying print resources, 21 captured were printed in English yet only 1 showed native language as seen in Figure 27.

Figure 26: Student-taken photo of reading.

Figure 27: Native Language resource captured by Xavier.
After seeing this pattern, I reviewed the posted resources in the classroom and identified numerous English language resources and only six native language posters. So while there were native language resources, there was an unequal balance of native language and English resources. Although fewer native language resources were available, the ELs repeatedly returned to the printed English resources. The ELs spent time reviewing the books (e.g., alphabet books, dictionary, and Baby’s First Words) and shared these books with peers as they completed work. Clearly, these English resources were useful to the ELs. The clear photographs and pictures connected with simple text became important resources to help ELs understand and acquire English vocabulary. This reliance on language in print supports earlier statements in this answer and is further investigated in the answer to Research Question 1c.

Researcher Photos

Of the 35 researcher-captured photos, the following three showed a connection to native language. In Figure 28, colors are flanked by the Mandarin characters that name them, a posted native language resource captured by Xavier as one photo from his collection of 12.

Figure 28: Colors and Mandarin characters.
Figure 29 shows two same language speaking ELs as they worked together to use an English resource, specifically a photo book paired with one English word for each photo.

![Image](image-url)

Figure 29: EL supports same language EL to identify word and spelling.

Finally, Figure 30 shows the use of native language paired with an EL’s name. Early in the year the parents were encouraged to label their child’s supplies with nicknames and native language.

![Image](image-url)

Figure 30: EL uses native language clue.
Different versions of student names were used (e.g., in mailboxes, on folders, verbally, on classroom charts) and names were connected to student photos as shown in Figure 31.

![Figure 31: Student name and photo resource.](image)

English translations were paired with native language names to promote awareness and share language diversity. ELs were observed using posters, folders, and nametags with native language translations, seen in Figure 32.

![Figure 32: Posted native language resource.](image)
In addition to these items, the ELs capitalized on the English *Baby’s First Words* book with clear photos and single words labels as demonstrated in Figure 33.

![Figure 33: EL Sharing resource used to spell word.](image)

The students had observed the teacher modeling the use of a picture dictionary, participated in guided practice, and then moved to apply the strategy to their work, a skill depicted in Figure 34.

![Figure 34: EL independently using introduced resource to spell word.](image)
Figure 35 shows how the dictionary was used when an EL needed to spell tiger for her self-created book of animals.

Figure 35: EL sharing resource used to create animal book.

By the second week of observations, Ven had begun to ask, “Where is the baby book?” This was evidence of his reliance on the clear visuals that connected English words to pictures; he had made a connection to this photographic native language. Xavier, while not verbally making this request, was found repeatedly, seated quietly looking at page after page of this same book.

After learning that crayons and markers hold a clue, Albert adapted this knowledge to use the label to help him complete a sorting activity. The marker cap was a clear picture of the needed color and the marker color label allowed him to identify the matching text on the black and white sorting sheet as seen in Figure 36.

Ven consistently returned to the baby books to identify words, specifically animals, as he often wrote about animals. He would search for the book, at times asking others who had not returned it to the right spot, and look through the book to find the right animal as seen in Figure 37.
Figure 36: Matching marker label (text) to color word.

Figure 37: EL using modeled, printed resource.

From there he would identify the text and write the animal name in his work, as depicted in Figure 38.
In Figure 39, Xavier used both crayons and text to identify and match color words, a strategy introduced, modeled, and practiced frequently.

Figure 40 captured Xavier using the poem book containing color word songs to help him as he completed his work. He had identified resources to help him complete the assigned English work, and he now had strategies to call on to do so.
At a later point in the observation window Xavier began looking at a number chart, Figure 41, as he completed an activity.

This number chart was introduced during a counting activity; however, there had not been a specific lesson on using the number chart as a resource for math work. He did this independently, applying previous knowledge of a resource to a novel activity. Albert
independently used a shape chart, one posted at the front of the room, as seen in Figure 42 during a reading lesson to add shapes to his brainstorming sheet.

Albert copied the words to label the shapes he had drawn on his work. Once again, Albert independently found and used a familiar resource when participating in a small group reading activity as depicted in Figure 43.
When asked to create a list of animals, Albert did so by using the baby book full of animal photos and labels, finding the category needed, and proceeding to list animals by name. Finally, Figure 4 shows Hyun using the often used classroom resource to help him to find the English word to identify a specific family member.

Figure 4: Researcher photo of EL using baby’s first words resource.

This use of pictures, a commonality among these ELs, showed a reliance on the photos. As first introduced in the print section of this answer, these photos represented a first language of sorts that crossed native language differences. These resources and pictures, once introduced, became tools used by ELs to learn, review, and practice English vocabulary. These photos became the common language, crossing language barriers between ELs and even the classroom teacher. Further investigation of this resource, from the student point of view is found in the answer to Research Question 2.

RQ #1b Summary

Native language has been cited as an important element as students learn, serving as a direct correlation between proficiency in native language and English acquisition (August et al.,
I had previously considered native language an important element in teaching ELs, so focusing on native language and how native language influenced vocabulary acquisition was forefront as I identified questions to investigate. Surprisingly, native language was heard less than anticipated. This was particularly obvious in the MLU testing; however, the limited timeframe and small sample size pointed to more information needed to answer this question. Native language use occurred most frequently in less structured activities and with similar language peers. While the students gravitated toward similar language peers during academic activities, they did not do so to use their shared native language. This did not hold true for social activities, as same language speakers sought each other out and immediately shared native language conversation. Did this shift occur as a result of comfort level or due to the fact that English was the only language used in instruction? Even with an acceptance of native language, few activities used native language as a delivery method, and the English-speaking teacher taught solely in English. As an English-speaking teacher, I can foster and encourage use of native language, however, it is difficult to identify to what extent ELs use their native language to understand and acquire English vocabulary. Further study, especially study with teachers who speak a language other than English might offer better insight into the connections ELs make between native language knowledge and English acquisition.

While students worked to build understanding in English, native language resources were used less frequently. Interestingly, photographs and pictures became a much used resource, a native language used by all. These resources became a universal native language resource, one used repeatedly to help ELs understand and acquire English vocabulary. These clear visuals, found in classroom resources (e.g., baby’s first word books, dictionaries, crayon and marker labels) allowed ELs to identify, write, and use English vocabulary. While Meena used the
resources when prompted, other ELs (i.e., Albert, George, Xavier, and Ven) became independent in the use of these resources. It was this independence in using the resources that showed the ELs’ awareness of how pictures could support learning and understanding of English. Further understanding was exemplified by the ELs’ ability to share this information with peers by supporting others, showing them where to find needed information, and adapting the skill to other academic areas (i.e., math).

This awareness and use of pictures and photographs, a universal language, supported the research question, although not in the way anticipated. The reliance on photographs and print resources shifted focus. Photographs and pictures became the native language, one used by all ELs to create understanding and acquire English vocabulary.
CHAPTER 7

RESEARCH QUESTION 1C

The data for research sub-question 1c (How do Kindergarten ELs utilize teacher/student relationships to create understanding and acquisition of English vocabulary?) were quantitatively drawn from the MLU and PPVT testing sessions. Data were also gathered qualitatively from observations, researcher reflections, and the students’ and researcher’s photos.

Quantitative

MLU

Scores on the MLU increased for all ELs except for Albert, from the first testing session to the second, as depicted in Table 10. Given the students were ELs, many of whom started their school experience silently (Goldenberg, 2008; Krashen, 1981), even the smallest gain is important. Additionally, this test gathers data on English language use, so any growth in acquisition could be captured between the two testing sessions.
**Table 10**

MLU Comparison*

<table>
<thead>
<tr>
<th></th>
<th>MLU September</th>
<th>MLU October</th>
<th>Change in Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albert</td>
<td>5.7</td>
<td>5.3</td>
<td>-.4</td>
</tr>
<tr>
<td>Xavier</td>
<td>1.4</td>
<td>2.2</td>
<td>+.8</td>
</tr>
<tr>
<td>Lily</td>
<td>3.3</td>
<td>3.9</td>
<td>+.6</td>
</tr>
<tr>
<td>Ven</td>
<td>2.5</td>
<td>6.3</td>
<td>+3.8</td>
</tr>
<tr>
<td>Hyun</td>
<td>2.2</td>
<td>7.8</td>
<td>+5.6</td>
</tr>
<tr>
<td>Meena</td>
<td>5.7</td>
<td>12.8</td>
<td>+6.9</td>
</tr>
</tbody>
</table>

*Score range is based on participants’ answers, typical MLU matches age (i.e., 5 years of age/MLU score of 5.0).

When looking at the teacher/student relationship aspect of MLU, in this study the researcher, the teacher with whom a relationship was being established, tested the students. A positive relationship, which is foundational in kindergarten, sets the tone for the year and possibly a child’s school career (Klem & Connell, 2004). When students feel supported, they are more likely to take the risks necessary for academic success. During the MLU testing, five of the six ELs used more verbal English language, a clear example of moving from a silent period to using language, specifically English, in the classroom setting.\(^2\) The largest gains were seen in Hyun and Meena’s scores (adding 5.6 and 6.9, respectively); they were using more English words overall. A second look at their transcripts identified the types of words spoken (i.e., nouns, verbs). While not as large an increase, Ven also made gains (i.e., 3.8). He moved from one- and two-word answers to approximations of and complete sentences. Finally, although Albert spoke less (i.e., -.4), he shared mature language (i.e., completing thoughts, use of nouns and verbs). For example, Albert moved from stating “Video games” when asked, “What do you

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\(^2\) As a reminder, Lily is the only EL not in the same classroom on a daily basis with the researcher. Twins are not placed in the same classroom.
do at home?” to sharing: “I like to play Lego,” a complete sentence. Additionally, when asked, “What do you do at home?” Albert connected his thoughts, stating, “do homework and I make my own homework, and I’m working on my book, and I’m working on sight words. I’m reading them.” While his thoughts were connected, his repetitive use of the word and to connect his thoughts caused his overall MLU to drop.

The observed increases in words spoken may be connected to several possibilities: maturity, exposure to verbal English language by native speakers, teacher/student relationship, experiences with English-speaking teacher and peers, and language use. A more detailed look at language changes follows in the answer to RQ 2.

**PPVT**

The ELs were given the PPVT in both September and again four weeks later in October. Table 1 shows changes made for all ELs, with the largest of those increases being Ven’s, a 33-point gain. Hyun, Xavier, and Meena’s scores were next, adding 21, 18, and 17 points, respectively. Albert added 8 points, and Lily increased by 6 points.

On this test, PPVT (Form A), the identified mean for Fall kindergarten students was 88.3, with a standard deviation of 24.5. Albert and Ven scored two standard deviations above the mean (112.8-137.3), with Meena one standard deviation above (88.3-112.8) on the test. Lily, Xavier, and Hyun fell two standard deviations below (112.8 - 63.8) (Dunn & Dunn, 1997). Lily was the one student with whom the teacher/student interactions were minimal, as she was the only student studied from a different classroom. Also, Lily remained reticent to engage even when opportunities (i.e., recess, lunch, walking in the hallways) presented.
Table 11

PPVT Raw Score Comparative*

<table>
<thead>
<tr>
<th></th>
<th>Age</th>
<th>PPVT September</th>
<th>PPVT October</th>
<th>Change in Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ven</td>
<td>5.1</td>
<td>98</td>
<td>131</td>
<td>+32</td>
</tr>
<tr>
<td>Hyun</td>
<td>5.4</td>
<td>39</td>
<td>60</td>
<td>+21</td>
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<tr>
<td>Xavier</td>
<td>5.4</td>
<td>46</td>
<td>64</td>
<td>+18</td>
</tr>
<tr>
<td>Meena</td>
<td>5.0</td>
<td>63</td>
<td>80</td>
<td>+17</td>
</tr>
<tr>
<td>Albert</td>
<td>5.6</td>
<td>116</td>
<td>124</td>
<td>+ 8</td>
</tr>
<tr>
<td>Lily</td>
<td>5.4</td>
<td>46</td>
<td>52</td>
<td>+ 6</td>
</tr>
</tbody>
</table>

*Note: Age Norm for 5:0-5:11 is 110 (PPVT-4, Dunn & Dunn, 1997)

An increase in scores by all ELs on the PPVT could possibly have been influenced by the cultivated relationship between researcher and EL. That is, the researcher delivered the assessment both times, built a relationship with each EL in the weeks between testing sessions, and spent time supporting each EL in English language acquisition through classroom activities. While experience and maturity both play a role in growth, it cannot be ruled out that the teacher/student relationships may have also had an impact.

Qualitative

Strategies Presented and Modeled

Daily observations allowed opportunities for me to identify ELs using strategies I taught from the start of the school year. As the teacher, I consistently modeled activities students could then use to solve daily problems. Specifically, I would introduce the strategy, followed by modeling the strategy, then ask the class to practice the strategy, and repeat as needed. The most common strategies I employed with the class are listed in Table 12.
Here is an example to explain how these strategies were utilized in the class. The teacher and students created an anchor chart, such as the family chart, to help spell common family words (Figure 45). The chart was created during a large group lesson. Discussion of family members ensued, and students were asked to find photographs that represented family words in magazines. Throughout the year, students could refer to the chart and even add to the chart.

Table 12
Examples of Presented Strategies During First Weeks of School

<table>
<thead>
<tr>
<th>Week</th>
<th>Strategies Presented and Modeled</th>
</tr>
</thead>
<tbody>
<tr>
<td>August 23-26</td>
<td>Identify text on crayon label to spell color word. Present and post family chart (anchor chart). Present and post color word chart (anchor chart) to identify colors and match text.</td>
</tr>
<tr>
<td>August 29-Sept. 2</td>
<td>Present <em>Baby’s First Words</em> Resource Book Present and post Jolly Phonics picture, letter, model sounds/movements</td>
</tr>
<tr>
<td>Sept. 6-9</td>
<td>Present Alphabet Book Collection to match photographs to alphabet letters and words. Review and present Poem Book to support color words, poems, and rhymes</td>
</tr>
<tr>
<td>Sept. 6-30</td>
<td>Revisit Jolly Phonics Chart to support beginning sounds and text.</td>
</tr>
</tbody>
</table>
Strategies Implemented

The ELs’ ability to use various English resources showed me the ELs were seeing the presented resources as useful in understanding English vocabulary. As the ELs saw themselves as capable, rather than simply turning to the teacher as the problem solver, they became active learners. For the ELs, independent learning occurred after the ELs gained knowledge and skills needed to think through a problem to identify a potential solution. Key to this acquisition was repetitive and consistent strategy modeling, encouragement, and repeated practice that helped ELs become fluent and confident with the strategies. The strategies allowed the ELs to generate their own knowledge and construct their personal learning. When observing if an EL looked to, picked up, or moved to a posted anchor chart, dictionary, or classroom resource I identified the resource by writing which was referenced (e.g., book for Baby’s First Words Book, book/dictionary for dictionary, etc.). For example, when an EL used the dictionary I wrote book/dictionary on the data collection sheet during the observational sweep, Figure 46.
This movement toward personal learning was evidenced by the ELs’ use of print resources, an activity that increased during the four weeks of observation, as seen here in Table 13.

<table>
<thead>
<tr>
<th>Week</th>
<th>Number of Times ELs used Print Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>16</td>
</tr>
<tr>
<td>2</td>
<td>21</td>
</tr>
<tr>
<td>3</td>
<td>26</td>
</tr>
<tr>
<td>4</td>
<td>33</td>
</tr>
</tbody>
</table>

Learning strategies, finding answers to their own questions, and becoming independent learners began with the relationship, the guidance, the encouragement, and the repeated practice from a trusted other. In this case, the trusted other, classroom teacher and researcher, had a strong knowledge of the English language the ELs were working to acquire. After observing the
modeled use of the photo books and the dictionary, the ELs were identifying and using these resources to acquire English words and complete assignments, Table 14.

Table 14
Breakdown of Resources Used by EL

<table>
<thead>
<tr>
<th>EL</th>
<th>Total</th>
<th>Resource Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xavier</td>
<td>27</td>
<td>Crayon label text, Jolly Phonics poster, book*, color word poems</td>
</tr>
<tr>
<td>Albert</td>
<td>22</td>
<td>Crayon label text, book, anchor chart, magazine</td>
</tr>
<tr>
<td>Ven</td>
<td>18</td>
<td>Crayon label text, book, anchor chart</td>
</tr>
<tr>
<td>Meena</td>
<td>11</td>
<td>Crayon label text, number chart, book, dictionary</td>
</tr>
<tr>
<td>Hyun</td>
<td>7</td>
<td>Crayon label text, color word poems, anchor chart</td>
</tr>
<tr>
<td>Lily</td>
<td>3</td>
<td>Crayon label text, board (text written by teacher)</td>
</tr>
</tbody>
</table>

*book-used to identify Baby’s First Words resource

In this example of applying a strategy, Albert used a shape anchor chart to spell circle on his shape list, Figure 47, occurred for each EL at different times.

Figure 47: Researcher photo EL using print resource independently.

Xavier was captured using the alphabet book collection, a bin of books placed in ABC order, Figure 48.
It was these resources that he returned to often, using the pictures and text to help him make connections among alphabet letters, words that started with those letters, and English vocabulary, seen in Figure 49.

Further into the weeks of observation, Meena was captured using a print resource to support her learning. Students had been asked to retell a presented story, one in which cues to
the order of the story were presented on the board, and when Meena had difficulty at her table, she realized she could approach the board and look for help, seen here in Figure 50.

![Figure 50: researcher photo of Meena using posted printed resource.](image)

Even though Meena had to walk back and forth numerous times to write the needed word rather than bringing her paper to the resource, she had identified and solved the problem she was having by using print, a strategy modeled by the teacher.

In Figure 51, Hyun looks to a phonetic chart to help him identify the letter needed to spell his word. As previously noted, Hyun came to rely on pictures (e.g., lunch choices, animals, family members) to understand English vocabulary. In this case, he continued this strategy by looking to the phonics photos to identify the letter representing the “d” sound. He found the picture of the boy playing the drum and used that to identify the letter “d” to write on his work.
Teacher/Student Interactions

When ELs looked to the teacher as the problem solver, the ELs missed the opportunity to build independence and practice problem solving skills. Table 15 identifies the number of teacher/student interactions by individuals.

Table 15

<table>
<thead>
<tr>
<th>EL</th>
<th>Week 1</th>
<th>Week 2</th>
<th>Week 3</th>
<th>Week 4</th>
<th>Interaction with Teacher Totals</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xavier</td>
<td>8</td>
<td>10</td>
<td>3</td>
<td>4</td>
<td>25</td>
</tr>
<tr>
<td>Hyun</td>
<td>3</td>
<td>11</td>
<td>7</td>
<td>2</td>
<td>23</td>
</tr>
<tr>
<td>Meena</td>
<td>8</td>
<td>8</td>
<td>3</td>
<td>1</td>
<td>20</td>
</tr>
<tr>
<td>Lily*</td>
<td>9</td>
<td>5</td>
<td>3</td>
<td>0</td>
<td>17</td>
</tr>
<tr>
<td>Albert</td>
<td>3</td>
<td>1</td>
<td>8</td>
<td>2</td>
<td>14</td>
</tr>
<tr>
<td>Ven</td>
<td>5</td>
<td>2</td>
<td>3</td>
<td>1</td>
<td>11</td>
</tr>
</tbody>
</table>

*Note: Lily’s interactions were with her classroom teacher, not the researcher
A review of the observational data identified changes in the number of teacher/student interactions. It is important in that the ELs were gaining independence and moving forward in their learning. For this study, there is no comparative for English speakers; however, it is noted that these types of data would be informative.

At the start of the study, interactions were more directed by the teacher and included modeling, clarification of directions, reassurance, repeating directions, explaining word meanings, and helping find needed materials. As the weeks progressed, and for different ELs at different times, this shifted from teacher as solution to interactions that included ELs asking, “How do I spell…?” “Is this green?” (pointing to a word the student had just written on the paper). These types of questions allowed interactive discussion, modeled review, or served as encouragement to think about how they themselves might find the needed resource to check their work. This subtle shift is important in that the ELs were starting to implement learned strategy behavior. That is, the ELs began to see that what the teacher had presented allowed them to identify answers on their own. While not confident enough to complete the task independently, the ELs were moving closer toward exactly that.

In the following section, the interactions along with reflective data are combined to give a picture of the various teacher/student interactions captured for each of the ELs.

Reflective Paragraph Words

After a review of the reflective paragraphs, certain verbs emerged for identifying relationships or interactions. Looking more closely at those words to find those specifically tied to teacher and student uncovered words such as approached, reporting, questioning, physical (putting self into teacher’s space, touching, tapping, pushing paper at teacher), modeled,
consulting, prompted, reminded, encouraged, and questioned. Additional descriptors in this category included frustrated, struggled, cried, and crying; however, these words could be found in both teacher/student and student/student interactions.

While the ELs were recorded with some of the same descriptors, each had a specific teacher/student relationship personality. For instance, at first Ven repeatedly approached the teacher for reassurance and clarification, “Should I do?” while holding up his assignment or “Where should I start?” (when beginning a center activity). Eventually he moved to a place in which his need for reassurance was less, and I simply restated his question/s so he could identify the answer on his own. For example, when he asked, “Is this how I spell…?”, I would respond by asking him where he might find that word, if there was a way he could somehow check his answer, or if there was a resource he could use to help himself. By the end of the four weeks, Ven was helping peers find the resources needed to spell words on their own.

Like Ven, Hyun approached me for reassurance; however, the reassurances he needed were language based. Beginning on the first day of school, when presented with a photographic representation of lunch choices, as seen in Figure 52, Hyun came to rely on this visual.

He quickly grasped the concept of using the picture to support his understanding of the English words. He began by asking “What that?” when the lunch choice was unfamiliar to him, looking up expectantly and walking over to the computer in anticipation of seeing a visual representation of the unfamiliar word. He moved to using this strategy during academic activities by repeatedly asking “What that?” and looking to the computer. His strategy included refusing to move forward until he had received his answer. Many of Hyun’s interactions focused on clarification, asking for word definitions. For example, Hyun would ask, “What is…” followed by a specific word (i.e., tiger, folder, plus, notebook, chair pocket).
Albert generally approached me to share ideas, work, or stories. Albert was also willing to volunteer and support others when asked by me. An example of this occurred during the first week of data collection. I modeled a strategy for opening student water bottles. Albert could mimic this strategy and quickly became the “expert water bottle opener,” as seen in Figure 52, willingly volunteering to help others and smiling from ear to ear each time he did so. This designation clearly pleased Albert, as he quickly volunteered to help others. He was always willing when others requested help, including the principal, who came to request his assistance.

Figure 52: Photographic representation of lunch choices.
Meena, however, continued to need direction as well as repeated support and reminders. Where words like questioned, prompted, consulted, and reminded were found in Ven’s observations, Meena’s included questioning, reminding, modeling, and reporting. Meena often reported the behavior of others when questioned about her responsibilities. It became clear when she struggled with her assignment or was having difficulty she used this reporting as work avoidance. This frustration, in her case, teary-eyed and non-verbal, kept her from moving forward. Meena often struggled with a similar problem, and I reminded her of previous situations both earlier in the day and on previous days. The most exciting event occurred three weeks into the observation window when I responded to Meena with “How can we solve this problem?” After patiently waiting, asking the question again in a very soft voice, and smiling encouragingly, Meena surprised herself as she stated, “I can get the crayon bin,” thus solving her problem using a strategy that had been presented and modeled by me.

Whereas Meena could talk through her tears, Xavier’s tears were a sign of extreme frustration. Although I had seen his tears on a daily basis at the beginning of the school year, it was a new type of crying seen during academic work. His tears were a result of his inability to
express himself. Late in the first week of observation, while working with a peer, the peer took away Xavier’s scissors. Unable to ask for them back or even to express what frustrated him, he became extremely upset. This same reaction had occurred earlier in the week when Xavier had taken a glue stick from a peer’s hand and that peer had simply swiped it back. In both instances, Xavier became quite loud, and it was difficult to discern his predicament. However, slowly over the next few weeks, he became verbal and able to explain what was happening. This was only the result of modeling, patience, relationship building, and occurrence. Each time he experienced a frustration, he and I slowly worked through steps needed to solve the problem.

Lily remained the only EL with a less established teacher/student relationship. Given the fact that I was not her classroom teacher, this was not surprising. However, other Mandarin speakers in her classroom had greeting me during transition or social times. During a conversation (C. D. 11/16/2016), Lily’s classroom teacher shared that Lily remained quiet throughout the day. Generally, Lily did not initiate interaction and instead often played by herself, paralleling peers. Interestingly, her behavior did not change until much later in the school year when she began to respond to my greetings, and in April, she finally greeted me.

Student-Taken Photos

As required by IRB, each EL gave assent to be included in this study, but Lily was the only one who answered no when asked to take photos. Students were individually asked to give assent and complete the MLU and PPVT testing. Lily willingly completed MLU and PPVT testing in her own classroom; however, even when given a second opportunity to agree to take photos and even after Xavier completed his photo taking, she again declined. Questions arose as to her comfort level with me, as she was the only participant in a different classroom. As the
students became more comfortable in the classroom, they more freely shared their knowledge and were more likely to participate in classroom activities. However, throughout the observation window, Lily remained quiet. When passing in the hallway there was rarely a smile for me, but hugs, giggles, and touching her brother occurred often. I wondered if Lily was less comfortable, was she sharing less of her knowledge, was she less likely to make adequate academic growth because she was holding back? These questions concerned me as I compared Lily’s growth to that of the other ELs and, most specifically, to her twin brother.

**Researcher Photos**

Researcher photos were taken of the students; however, no opportunity was available to take photos of students interacting with the teacher. Thus, photographic evidence of interactions between the ELs and the teacher is lacking. That said, the teacher/student relationship was not insignificant. The teacher/student relationship supported growth, encouraged risk taking, and helped move ELs forward in their acquisition of English. As the teacher/researcher in this study, I experienced a change over time in how Hyun spoke to me and in the way Xavier had grown and now not only spoke to me, but also giggled, laughed, and shared stories about his life outside of school. Even Ven and Albert, students who began the year with strong verbal skills, approached me differently. Albert talked about his family, new clothing, and favorite sports teams. Ven asked increasingly more in-depth questions about topics that interested him: “Why is Uranus tipped?” or “How fast does a cheetah run?” – a fact remembered from a discussion about impalas and how they run quickly for extended distances. He connected information from two conversations and could make a prediction based on those remembered facts. While Meena and Lily took longer to exhibit some of these traits, it was just as exciting to see Lily smile in
greeting or hear Meena talk herself through a struggle during work time. These changes helped me see the growth each EL was making toward acquiring English understanding and knowledge.

Summary of Research Question 1c

The data indicate that teacher/student relationships made a difference for the ELs in this study. One, the relationship affected the comfort level of the ELs. ELs who were comfortable in the setting asked more questions, requested needed materials and answers, and looked for needed support. Second, a stronger relationship allowed the teacher to better understand each EL’s needs. This understanding translated into allowing a student extra time, additional modeling, question rephrasing, and identification of more resources as needed (e.g., photos of unfamiliar words, picture books, peers), and encouragement to expand on their interests.

Quantitatively, the scores (MLU and PPVT) increased. Note that these were measures administered by the researcher, who in this case was the teacher for five of the six ELs. While the MLU measure followed a specific script and PPVT delivery was standardized, the relationship between the tester and participant played a part. During the second PPVT testing each EL was more relaxed, and each was also more animated and more relaxed in the October MLU session. These observed behaviors suggest a greater level of comfort within the testing session. This may be in part due to maturity, a typical occurrence at this age level. However, when looking at the quantitative data, one cannot rule out the influence of a relationship on the results.

Qualitative data also showed the ELs’ interactions with the teacher changed over time. Early in the year, the ELs looked to the teacher for answers, reassurance, and solutions. As time moved forward, these same students began to shift and ask for confirmation or reassurance more
frequently. Finally, the ELs were observed applying presented strategies and moving toward independence when applying strategies to novel situations.

While this question focused on teacher/student interactions, it is important to note the reduction in teacher/student interactions is important. The data appear to indicate the ELs saw their peers and print as resources. This only occurred when the ELs experienced appropriate modeling and practiced with the teacher. The students became more independent; thus, the teacher became a final versus first solution. The ELs began to see peers and print as viable resources. Although growth varied for each EL, there were instances when each had the experience of working with a peer to solve a problem rather than having the teacher solve it for them. The ELs became more confident, their skills increased, and/or they could apply learned strategies to novel situations. As the ELs’ comfort and confidence developed, their performance increased. Scores rose as the ELs’ gained confidence. This confidence rose because of the positive relationship cultivated by the teacher, a relationship built on acceptance and celebration of each EL as a unique individual.

That said, more data could have been gleaned from the relationship, or lack thereof, between the researcher and Lily. Additionally, comparing Lily’s relationship with her classroom teacher to that of Xavier’s with the researcher would have offered additional insights and potential comparative data. This missed opportunity points to an area for further investigation.
CHAPTER 8

RESEARCH QUESTION 2

How does an individual EL’s knowledge of English vocabulary change over time in a Kindergarten classroom where ELs see available resources, including classmates, as they create understanding and acquire English vocabulary?

Research question 2 data were collected through both quantitative and qualitative measures. The quantitative measures included results from the MLU and the PPVT. The qualitative data were gathered through observations and researcher reflections along with student- and researcher-taken photos.

MLU

Language use is one indicator of understanding and comprehension, and equally important is the fact that using language supports language development. While research points to an initial silent period for ELs (Mohr & Mohr, 2007), research also shows that ELs’ language use should increase as they become more confident and familiar with the new language (Goldenberg, 2008). To examine this premise, the MLU scores were taken from the transcripts of the students’ speech two times during the research period – in early September and five weeks later in October. The same open-ended questions were presented to the ELs at both sessions. In this study, the MLU was determined by counting each word spoken. Each word was then counted by meaningful parts. For example, the word boys equals two morphemes since the “s” attached to boy changes the meaning of the base word boy. After obtaining this number, it is then divided by the number of utterances (complete thoughts).
The first MLU sessions occurred in September before the classroom observations began, asking each EL the same six open-ended questions, listed in Table 16.

Table 16
MLU Questions Asked

<table>
<thead>
<tr>
<th>Question</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who are your friends at school?</td>
</tr>
<tr>
<td>What do you do at school?</td>
</tr>
<tr>
<td>What do you do at home?</td>
</tr>
<tr>
<td>What do you like to eat?</td>
</tr>
<tr>
<td>Who is in your family?</td>
</tr>
<tr>
<td>What do you like to play?</td>
</tr>
</tbody>
</table>

It was during these first sessions, in September, that Xavier had no response when asked about friends at school; instead he remained silent. Similarly, Ven simply nodded his assent to the question, while Lily responded with “no friends.” However, while Lily verbalized this response, for four of the remaining five open-ended questions, she simply stated, “I don’t know” and named her kindergarten brother when questioned about her family.

MLU is not limited in any way other than the number of words spoken by the student being tested. According to Miller and Chapman (1981), a kindergarten age-appropriate MLU score is 5.63. In other words, the student should produce almost six utterances. For example, the student might state, this is my mom and dad, or I have my toys here. Only Meena and Albert reached this age-appropriate threshold, Table 17. The four remaining ELs, Hyun, Xavier, Ven, and Lily, fell below the identified age appropriate level (Miller & Chapman, 1981).
Furthermore, the overall language use during MLU testing was lower for all ELs when compared to three of their English-speaking peers who were identified as a representative high, average, and struggling classroom peer to use as an environmental comparison. Scores and examples for the three English-speaking peers are found in Table 18. Even the lowest score, that of a struggling English-speaker, was more than double the score of four of the six tested ELs.

### Table 17
September MLU/ELs

<table>
<thead>
<tr>
<th>EL</th>
<th>MLU</th>
<th>Question Asked</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meena</td>
<td>5.7</td>
<td>What do you do at home?</td>
<td>“kitchen at my home, we have blocks”</td>
</tr>
<tr>
<td>Albert</td>
<td>5.7</td>
<td>What do you do at home?</td>
<td>“I make my own word cards”</td>
</tr>
<tr>
<td>Lily</td>
<td>3.3</td>
<td>Greeting</td>
<td>“hi”</td>
</tr>
<tr>
<td>Ven</td>
<td>2.5</td>
<td>What do you like to play?</td>
<td>“play with Lego”</td>
</tr>
<tr>
<td>Hyun</td>
<td>2.2</td>
<td>Who is in your family?</td>
<td>“my sister”</td>
</tr>
<tr>
<td>Xavier</td>
<td>1.4</td>
<td>Greeting</td>
<td>“umm, hi”</td>
</tr>
</tbody>
</table>

### Table 18
September MLU English-Speakers

<table>
<thead>
<tr>
<th>English-Speaking Peer</th>
<th>MLU</th>
<th>Question Asked</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>8.5</td>
<td>What do you like to eat?</td>
<td>“Well, I like ‘Lunchables', pizza, and broccoli.”</td>
</tr>
<tr>
<td>Average</td>
<td>6.1</td>
<td>What do you do at school?</td>
<td>“I like to play with K.”</td>
</tr>
<tr>
<td>Struggling</td>
<td>5.2</td>
<td>Who is in your family?</td>
<td>“mom, dad, uncle, and me”</td>
</tr>
</tbody>
</table>

Another way to quantify the MLU is a count of the total words spoken (TWS). For this study, a transcript of each testing session was created (Appendix M). The TWS was collected for each question response and then combined to obtain a TWS for the six questions asked. At
times, ELs Hyun, Lily, and Xavier gave one-word answers; however, some responses were quite lengthy. The EL’s overall scores ranged from 7 to 87 TWS, averaging 37 TWS. The three English-speaking peers averaged 42 TWS, with scores ranging from 37 to 60 TWS. While the averages are close, Table 19 shows the range of scores and the wide differences between them. Hyun, Ven, Xavier, and Lily fell below the average and mean for both groups and the median for the English speakers.

Table 19
Total Words Spoken (TWS)

<table>
<thead>
<tr>
<th></th>
<th>Xavier</th>
<th>Hyun</th>
<th>Lily</th>
<th>Ven</th>
<th>Albert</th>
<th>Meena</th>
<th>Mean</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELs</td>
<td>7</td>
<td>14</td>
<td>15</td>
<td>19</td>
<td>54</td>
<td>87</td>
<td>33</td>
<td>17</td>
</tr>
<tr>
<td></td>
<td>High</td>
<td>Average</td>
<td>Struggling</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English-Speaking Peers</td>
<td>37</td>
<td>49</td>
<td>60</td>
<td></td>
<td></td>
<td></td>
<td>49</td>
<td>49</td>
</tr>
</tbody>
</table>

During the second testing session, five weeks after the first, the average TWS for the ELs increased from 37 to 95 TWS. While all of the ELs except Albert increased their word use, there remained a large discrepancy between the highest and lowest number of TWS, Table 20. In other words, while their TWS was increasing, the score did not increase at the same rate. The quality of verbalizations varied from EL to EL.

Table 20
Comparative of Pre/Post Test Total Words Spoken

<table>
<thead>
<tr>
<th></th>
<th>Xavier</th>
<th>Hyun</th>
<th>Lily</th>
<th>Ven</th>
<th>Albert</th>
<th>Meena</th>
</tr>
</thead>
<tbody>
<tr>
<td>ELs/September</td>
<td>7</td>
<td>14</td>
<td>15</td>
<td>19</td>
<td>54</td>
<td>87</td>
</tr>
<tr>
<td>ELs/October</td>
<td>13</td>
<td>164</td>
<td>18</td>
<td>23</td>
<td>45</td>
<td>310</td>
</tr>
</tbody>
</table>
Further review of the MLU transcripts showed a larger number was not automatically a better score; conversely, a smaller number did not immediately equate to less growth. The variety of words used by the EL indicated the need for further examination of the transcripts.

Albert’s numbers decreased; however, his verbalizations became more complex. Where he previously responded with “Video games” when asked “What do you like to play,” he was now using a full sentence, “Hopscotch, I like to play Lego.” Additionally, his first response to “What do you do at home?” included a repetitive, “I play with my toys, I don’t play video games, I play video games when there is no school.” It was during the second session when Albert expanded his answer to “What do you do at home?” by sharing, “I make up my own homework and I’m working on my book and I’m working on my sight words. I’m reading them.”

Another example of misleading numbers was Hyun’s pre- to post-TWS increase. Simply looking at the number of words spoken by Hyun did not tell the whole story. Hyun shared little during the first MLU testing session, responding with one-word answers. In the second session, once again most of Hyun’s answers were short, one word or nods. However, his answer to a question about favorite food launched a long, repetitive story about his mom and how she does not like fish. It was Hyun’s lengthy response to “What do you like to eat?” that increased his overall score. This response encompassed many of his spoken words:

fish um my sister like the cow, I like fish any fish, my sister and me like animal, I like to eat water animal, my sister likes chicken pig cow I just like fish and fish is a water animal, I like to eat fish but I don’t like to see fish and I don’t want to see bird, like chicken, chicken is a bird and I just see (pantomime fishing) this fish so I don’t like fish she right here have something (used hands to draw lines on side of his throat, mimicking gills) so I don’t like fish my mom go to school and she see the bird and see the feet and she pet it and she ahhhh and she (moved foot as if to push and wobble head) and she feed it.
While his response was lengthy, his answer strayed from the asked question, he used words repeatedly, and he had difficulty recalling English words. That said, this was movement forward since Hyun used English even when he could not identify the word he wanted.

Like Hyun, connecting back to the asked question was an area of concern for Meena as well. Although Meena’s numbers increased substantially, she was an exception. Her numbers increased, naming more people and using more words; however, her sentences tended to ramble, and her comments were not always connected with the previous statements. An example of this occurred when asked, “What do you do at home?” Meena’s response, “I play with my toys, and I have my brother, and I have my actually it’s not where my family is sleeping with me I am pretty scared of everything like Halloween and monsters” started out addressing the question and then moved away from the answer. Although longer, her responses were only somewhat connected to the asked question. While loosely connected, Meena’s answers also point to language maturity questions. Without further data, it is impossible to identify whether Meena was having trouble stringing thoughts together based on native language or maturity. While learning language pragmatics is a typical aspect of kindergarten, Meena is working to learn both the pragmatics of, and English language, while still honoring her native languages. That said, her responses point to the need to gather more information specifically focused on language maturity and pragmatics, areas that should be further looked at both in English and her native language/s. Given the timeframe of this study, these data could not be collected, however, as her teacher, I moved forward addressing language development by working with the school support team to gather more information for Meena. With school and family support, Meena continued to gain English language skills throughout the school year.
While Xavier and Lily added minimal words to their score, they were now communicating more clearly. Lily moved from multiple “I don’t know” statements to answering the asked questions. In this second session, she replied with one, two, and three words answers, as shown in Table 21. Although Lily’s response was still negative, she did respond to “Who are your friends at school?” with a close approximation of a sentence during the second testing session. She connected a verb with a noun and additionally used “a” correctly with the singular “ball”. Finally, she applied “s” to make the words friend and strawberry plural appropriately.

Xavier also made verbal gains, expanding his original answers as seen in Table 22.

Table 21
Lily’s MLU Transcripts

<table>
<thead>
<tr>
<th>MLU Question</th>
<th>September</th>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>Who are your friends at school?</td>
<td>“no friend”</td>
<td>“uhh, I no have friends”</td>
</tr>
<tr>
<td>What do you do at school?</td>
<td>“I don’t know.”</td>
<td>“uhh, play”</td>
</tr>
<tr>
<td>What do you do at home?</td>
<td>“play”</td>
<td>“umm, play a ball”</td>
</tr>
<tr>
<td>What do you like to eat?</td>
<td>“I don’t know.”</td>
<td>“umm, strawberries”</td>
</tr>
<tr>
<td>Who is in your family?</td>
<td>“I don’t know.”</td>
<td>“umm, dad, mom and my brother, and me”</td>
</tr>
<tr>
<td>What do you like to play?</td>
<td>“I don’t know.”</td>
<td>“umm, ball”</td>
</tr>
</tbody>
</table>
Like Lily, Xavier moved toward greater understanding of English by incorporating words to identify ownership – for example, using “my” to connect family members to himself and expanding his answer to “What do you do at home?” with a close approximation of a sentence. Admittedly, these examples are singular in nature, yet these data point to growth in the twin’s acquisition of English. These subtle changes represented a greater understanding of English vocabulary and application, warranting further study.

What occurred for some ELs was not simply an increase in simple numbers, but in the variety of words used (i.e., nouns and verbs), seen in Table 23.

<table>
<thead>
<tr>
<th>Nouns and Verbs Used in MLU Sessions</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Noun Use</strong></td>
</tr>
<tr>
<td><strong>September</strong></td>
</tr>
<tr>
<td>Lily</td>
</tr>
<tr>
<td>Ven</td>
</tr>
<tr>
<td>Xavier</td>
</tr>
<tr>
<td>Hyun</td>
</tr>
<tr>
<td>Meena</td>
</tr>
<tr>
<td>Albert</td>
</tr>
</tbody>
</table>
All ELs exhibited language use changes. An increased use of verbs and nouns is consistent with enhanced understanding of English (Gottlieb, 2006). Nouns and verbs represent more complex language, and use of these more complex words is one indicator of English vocabulary acquisition on the Teachers of English to Speakers of Other Languages (TESOL) Order of Acquisition of Grammar (Gottlieb, 2006). This complex language use was evident in the following ways. For example, where previously Hyun simply shared a name when asked “Who are your friends at school,” it was during the second session where he clearly identified Xavier, adding his last initial, “Xavier, I say Xavier T.” Xavier also moved forward in answering “What do you do at school?” by stating, “play my sister” instead of saying simply “sister” as he did in the first session. Not only did the boys add words, Hyun was now precise and specific in his answer. Xavier carefully connected his answer back to the question asked. Ven moved from a nod when asked “Who are your friends at school?” to identifying two classmates by name. As shown, the variety of words changed from the first to the second MLU session. While verb usage can be telling, in this case, the questions bias the answers toward noun usage by asking about friends and activities that pushed students to list nouns. There were increases in all but Albert’s use of nouns. Meena’s scores showed the most significant changes; however, as previously stated, when looking more closely at the transcripts, there are times when her words were repeated or her responses did not connect back to the asked question.

Another indicator of increasing acquisition of English included the students’ use of high frequency words. High frequency words are introduced by the teacher and seen by all students daily. For example, when introducing the high frequency word “my,” the word would be written on the board in front of the students, students would be asked to use the word verbally, repeating
“my” along with an item that belonged to them. After introduction, the word is posted on the word wall in the classroom, Figure 54.

![Classroom word wall resource](image)

**Figure 54:** Classroom word wall resource.

Students continue practice by writing the word and are encouraged to use the words in daily work. During MLU assessment students used the words verbally; this use represented an increased awareness of these presented words. Table 24 shows an increase in use by all ELs.

<table>
<thead>
<tr>
<th></th>
<th>September</th>
<th>October</th>
</tr>
</thead>
<tbody>
<tr>
<td>Xavier</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Hyun</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Ven</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Lily</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>Albert</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>Meena</td>
<td>5</td>
<td>7</td>
</tr>
</tbody>
</table>
The verbal English language used by the ELs increased, yet the ELs still lagged their peers. Bialystok’s (2008) research supported these findings, stating, “average vocabulary size of the bilingual children was smaller than their monolingual classmates” (p. 4). This appeared to hold true when reviewing the results of these ELs; however, this research also identified growth was happening during the short time frame in which the data were gathered.

**PPVT**

The PPVT, a widely used assessment tool (August et al., 2005; Calderón et al., 2005; Coyne et al., 2009; Silverman & Hines, 2009; Slavin & Cheung, 2003) was administered to the six ELs between September 6 and 9. Each student was individually tested by the researcher, an idea supported by Rock and Stenner (2005). Testing took place in the EL’s classroom. The test duration was recorded for all sessions. Follow up testing occurred from October 7 to 9 in the same manner. As represented in the parent consent forms, no PPVT testing occurred on the same day as the MLU measure. Table 25 shows the growth captured for each EL.

<table>
<thead>
<tr>
<th></th>
<th>PPVT Pre-test</th>
<th>PPVT Post-test</th>
<th>Change in Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ven</td>
<td>111</td>
<td>134</td>
<td>+23</td>
</tr>
<tr>
<td>Hyun</td>
<td>67</td>
<td>82</td>
<td>+15</td>
</tr>
<tr>
<td>Meena</td>
<td>86</td>
<td>99</td>
<td>+13</td>
</tr>
<tr>
<td>Xavier</td>
<td>72</td>
<td>84</td>
<td>+12</td>
</tr>
<tr>
<td>Albert</td>
<td>118</td>
<td>124</td>
<td>+ 6</td>
</tr>
<tr>
<td>Lily</td>
<td>72</td>
<td>76</td>
<td>+ 4</td>
</tr>
</tbody>
</table>

*PPVT Standard score for five-year old is 100.
The increase in standard scores for the ELs echoed previous increases (see answers to RQ 1b and 1c). These scores pointed to growth and, more importantly, identified growth in a “translanguaging” (Garcia, 2013a) classroom. All results showed an increase for each EL, although some were larger than others. While it is impossible to determine the exact cause, it is possible that giving ELs the tools to help them make sense of the English presented to them on a daily basis helped them move forward academically.

Only Albert and Ven exceeded their chronological age, with Ven showing the most growth (+23 score increase). Surprisingly, Meena’s chronological age and age equivalent at the time of the second testing were not far apart. In September, Meena’s was 5.0 years old and scored at the age equivalent of 4.0 years. In October, Meena’s age was 5.1 years, and her age equivalent score jumped up to 5.0 years. Although only aging one month, she had made a year’s gain on this test. This brings up numerous questions about her daily performance not being reflective of her true ability. Since she was the EL with the most varied native language background, it begs the question of how much her experience with various native languages, or lack of experience with English, connected with or deterred from her acquisition of English vocabulary. GSV is used when looking at repeated administration of the PPVT, scores are shown in Table 26. Dunn and Dunn (2007) identify a change of +8 as significant when using this test as a repeated measure.
Four of the six ELs (Hyun, Meena, Ven, and Xavier) surpassed this threshold (+8), with two of the four more than doubling growth. Each EL increased his/her scores; however, the scores for Albert and Lily did not reach the identified threshold. Looking at Albert’s results more closely, it becomes clear that his pre-test score placed him far above age level—in fact, placing him at the equivalent of a 13-year old. Given that information, it seems reasonable that his growth would be less, but he did still make growth. Growth was also seen in Lily’s score; however, she did not meet the significance threshold. Again, it is important to remember Lily was not a member of the same classroom as the other ELs.

Comparing these ELs’ scores to research by Bialystok (2008), all of them met or exceeded a mean score of 95 for ELs aged 5-9. Ven’s score increased the most, supporting earlier evidence of his ability to internalize strategies and apply the learned strategies to his work. Albert’s daily performance showed not only confidence with his skills but the ability to adapt, mimic, and springboard from presented strategies to make them his own as see in Figure 55, in which he adapted a peer’s strategy to make it his own. Albert observed a peer using the dictionary to write a word. He then took a book from the pocket on his chair (seen on chair of
peer where books and other personal items are stored). This was an animal book he had read and contained the word he needed to complete his work.

![Figure 55: Albert adapts strategy from EL peer.](image)

Lily’s scores showed the least amount of growth, something echoed by her MLU performance. Daily classroom performance continued to show her as a quiet student who rarely volunteered, shared stories, or asked questions. Additionally, even when attempts by adults and, occasionally, peers were made to interact with her, she remained quiet. Lily’s typical response was a nod or shy smile. It took until mid-April before she verbally responded when I attempted to engage her.

Observations

When looking around the classroom, acceptance of native language is seen; native language resources are posted alongside those same English resources. Students are encouraged to share their language, their culture, ideas fostered in a translanguaging environment. However,
as I reflect on this information, I realize that all instruction, except for specifically planned activities, is presented in English. As an English-speaker, this is to be expected. But, this makes me wonder, if all instruction is in English, how can students feel comfortable using native language in a place where most of the language they hear is English?

Observational data did not directly identify growth in language skills as asked in this question; however, looking at the data to find trends in use of resources resulted in the following information. The number of times an EL connected with a human resource (teacher, peer) decreased, but the number of times an EL used a text resource (book, poster, print) increased during the four-week period. This information is telling, as student growth stems from independence in learning (Anderson & Nagy, 2003).

One example of this increased independence in learning was identified by Ven’s behavior. Ven had attended a local Montessori pre-school program. In a program of that type, students are allowed freedom, independence is fostered, and students are encouraged to be inquisitive. In kindergarten, Ven observed various modeled strategies, asked numerous questions, and quickly began to apply those strategies to his daily work. At the start, he required individualized reassurance. But by the second week of observation I began to turn the question around and respond with “What do you think you should do next?”, “Where might you find that word?”, “Did you use a resource to check?”, and “Where can you look to check?” Slowly, Ven became more confident, even moving toward becoming a resource himself. Ven was excited to share his knowledge of animal names by bringing the baby book to a friend who wanted to spell a specific animal (Figure 56). His interest was evident as he stated, “I know how, I can show him.”
Student-Taken Photos

Each student had the opportunity to photograph resources that supported their learning. While the photos cannot show numerical growth, they showed numerous English resources that modeled and/or were useful for introducing sound, letter, or word strategies. The student photos included a poster, Figure 57, captured by Xavier as a tool used to help him write.
Another photo taken by Xavier, Figure 58, identified a resource he used. When asked why he took this photograph he responded, “Read.”

The picture shows “tricky words,” that is those words not following a pattern identified in the Jolly Phonics program and had to be memorized by students rather than sounded out. There was additional overlap between these words and the High Frequency words introduced. Xavier captured a class anchor chart depicting family members, Figure 59 and paired the pictures with English words.

He again pointed out this family chart as a tool that helps him to learn by stating, “Helps me learn” when I asked him what this resource helped him to do. The family chart had been introduced to the class, and the students had helped to find the identifying pictures. The chart remained in the same spot for the year, occasionally added to by the students. New words were added as students identified other family members or versions of the previously mentioned members (i.e., mommy, daddy, etc.).
Finally, Xavier sought out the activity seen in Figure 60. He specifically identified this game, searching for it on a shelf where it had been put away. When asked why it was important for him to find this activity, he commented that it “helps me learn color words.” The item had been introduced as a math center and used during the first three weeks of the school year. Weeks later Xavier still recalled it as a useful English resource.
Hyun chose to take only two photos. One was the picture of an English-speaking peer; however, his second photo included the posted resource seen in Figure 61. The poster includes pictures beginning with the sound of the printed letter and English words (i.e., Bb, bear, and picture of bear, etc.). The pictures are commonly connected with the letters and represent basic English words (i.e., apple, kite, moon, zipper, etc.)

![Figure 61: Hyun’s photo of English phonetic and picture resource.](image)

Albert’s photos also identified resources. He included the alphabet, Figure 62, stating, “Helps me know letters after one of the other ABCs.” Additionally, he included a phonetic support card given to each student to keep at their seats as a resource, Figure 63: “It can help me know the letters.” He continued to comment on the other items behind the chart (reading books, alphabet charts, etc.) by sharing, “I mean the whole thing—the whole reading bag.”
He referenced the reading bag, a tool all students have at their seats. This bag holds books introduced at guided reading, books shared to support high frequency word learning, alphabet letter charts, and books created by the students. Once again, these books and charts were available to students at all times. Students were encouraged to revisit the books in their bag daily. In addition to the phonetic charts, Albert referenced classroom resource books in his
photographs. When first looking at the next photo, Figure 64, I thought he was simply identifying books in general; however, his statement, “The book right here (points to First 100 Animals) helps me know how to spell animals” explained his view.

![Figure 64: Albert’s photograph of English classroom resource.](image)

Finally, in Figure 65, Albert captured this dictionary, stating, “It can help me find words in the book.”

![Figure 65: Albert’s photo of English resource.](image)
Ven took three pictures, one of which did not identify a resource but instead was an activity, Figure 66. When asked about the picture, his response was “the sort, make you learn.”

Figure 66: Ven’s photograph of sorting activity.

This activity had been presented to the class. The students had been asked to sort the items and then verbally explain the way or ways in which the items had been sorted. This verbal activity required explanations of the sorting they created; the explanations were done in English to both teacher and peers.

Ven also referenced an activity in his remaining two photos. In Figure 67, Ven identified “Reading,” and his final photo, Figure 68, extended his explanation of reading in that “Reading helps us to learn.”
Meena’s photographs were different from her peers’. Meena’s perspective was clear in a few of her captured images. “I did take picture of me cause I remind me who taking picture” was her comment when asked about Figure 69.
Interestingly, Figure 70 shows the work of a peer. When asked about this picture, Meena shared, “I take a picture of this because J asked me, and I asked her that you asked me to take a picture of this.” Although, when asked to clarify what I asked her to take a picture of she could not explain further.

When asked about Figure 71, Meena commented, “I like shapes.”
Meena also captured an anchor chart in one of her photos, Figure 72. When asked she exclaimed, “I use that picture so I can remember how to write words, I remember I writed this one a long time, right here” and pointed to the hexagon.

While Meena’s photos captured fewer presented resources, her verbal explanations were, at times, telling. For example, Figure 73, was described as “gray soft thing is for sitting.” As an
experienced kindergarten teacher, I know that at this point in the school year an EL should be able to identify the item as a chair.

Similarly, when asked about Figure 74, Meena stated, “I took a picture of those cause those are the things we need when we need to color a picture or use a marker.”

Figure 73: Meena’s captured photo of a chair.

Figure 74: Meena’s photo of crayons, pencils, and markers.
While it is possible Meena simply forgot the word she needed, her daily performance pointed to confusion or difficulty with language based activities, something I, as her teacher, needed to be aware of to provide support.

Researcher-Taken Photos

The researcher’s photos are no different than student photos in that it was not possible to show numerical growth; however, growth was seen from a different perspective. As the teacher, it is not often I sit back and simply see what students are doing. I am most often facilitating, thus immersed in what is happening. By stopping to observe and capture pictures I could see what students were doing, how they were using identified resources. For example, in Figure 75 an EL applied a modeled strategy and used the strategy independently to write a number word she needed in her work.

Figure 75: Independent use of text strategy.

Further evidence of understanding the usefulness of various resources is seen when a student takes a strategy and makes it their own. For example, during the third week of
observations, an EL has created his own version of a color word match by placing crayons on the page as a visual, Figure 76. In this way, the EL has moved forward in learning by applying and using the strategy in a way that supports his needs.

Figure 76: Independent application of presented strategy.

Finally, students using previously presented strategies and moving beyond the presented to create their own strategy qualifies as growth. After having seen and used “Post-it tabs” to identify color word poems and nursery rhymes in a resource book, an EL (part of the classroom, but not one of the six observed) applied a version of this strategy to her personal reading notebook. By tabbing the needed page, she could quickly find the spot when called to reading group. This clear example, seen in Figure 77, showed me she had made the learning her own.
Summary for RQ 2

The final research question asked if scores for each EL changed over time as each EL became more aware of available resources, including classmates, in the classroom. Throughout this study, I looked to identify growth in English language acquisition quantitatively and qualitatively and found that academic growth was unique to each student.

While ELs did not specifically verbalize peers as a resource, the data supported their collaboration. Beginning by becoming more aware of the others in the classroom, the ELs worked together more frequently as the year moved on. The community of learners within the classroom became evident as the ELs worked side by side, consulted with each other, and offered help to peers. It was clear that, although the researcher could identify the community of learners, the ELs did not see peers as a resource; they worked together but did not verbalize peers, or this community of learners. Although not verbalized, ELs did become proficient in connecting with the community to support their acquisition of English vocabulary.
In addition to a greater awareness of peers, the ELs increased their total number of words spoken. Coupled with this increase were changes in the types of words used by each EL. Where “I don’t know” and silence were frequent at the start of the study, these answers were shared less often as the students moved forward in the year. While maturity, familiarity, and expectations played different roles for each student, each was introduced to the use of resources and given ample practice opportunities with resources and language in the classroom. Frequent practice speaking with peers may be another reason for this increase. As presented earlier, their peers were an important audience for the ELs by allowing them numerous daily opportunities to practice English in an authentic way. Given English words were spoken most often, this increase may be connected.

Use of the standardized PPVT test allowed an opportunity to highlight growth over time. Four of the six ELs made significant gains (>8), significant growth according to the test creators. Growth was captured through use of the MLU measure. The ELs became more expressive as the year progressed; however, simply speaking more was not the only indication of growth. The ELs began to use different words, sprinkling in more verbs, responding with words rather than actions, and initiating interactions. Undoubtedly, maturity and exposure to an English-speaking classroom played a part, but tied to that growth, acceptance of native language and celebration of such (for example including native language on anchor charts, teaching with native language, or simply using native language words or greetings) allowed each EL to feel comfortable, thus supporting each as he/she acquired English vocabulary.

Student taken photos offered a window into each EL’s personality. Surprisingly, the photos matched each student more closely than I might have imagined and helped me move forward in planning for each. For example, review of Meena’s work confirmed my suspicions
that she was struggling with English labels and talking around words. Similarly, I confirmed that although Xavier used less verbal language, his photos clearly showed his grasp of available resources. In this case, his silence did not represent confusion; instead he was still in the silent period. Albert was extremely efficient and viewed resources globally, identifying groups of items that supported his work. Ven and Hyun took fewer pictures; they too were likely to be less verbal, while still accomplishing what they needed to move forward both in the photo activity and in their daily work. Growth was achieved for each; however, the growth was individualized and revealed through a combination of both obvious and subtle patterns. Both were persistent in getting what they needed, Hyun using looking to the computer, Ven with consistent questioning. While it is true that this data collection is time-consuming, this clear understanding strengthened my planning for each.
CHAPTER 9
DISCUSSION, IMPLICATIONS, RECOMMENDATIONS, AND FUTURE STUDIES

Based on the findings from this study, three major contributions to the field will be explained. Then a discussion of the data in relation to each research question and past literature will be described. Finally, recommendations for practice, suggestions for future research, and limitations of the study will be detailed.

Major Contributions

This study contributes to EL research in three ways. First, allowing and encouraging use of native language along with English in this study supported previous research (August et al., 2005; Cunningham & Stanovich, 1998; Espinosa, 2013a; Goldenberg et al., 2013) as well as played a part in the ELs’ acquisition of English vocabulary. The ELs accomplished vocabulary growth in a classroom in which native language was celebrated (e.g., greeting students with native language, asking students to share words from their native language, posting native language words, etc.). This study differed from others (August et al., 2005; Filippini et al., 2012) in that ELs did not speak the same native language. In fact, for this study six languages were represented (Chinese, Hindi, Tagalog, Urdu, Punjabi, Pashto), with Meena’s family speaking a mix of three (Urdu, Punjabi, and Pashto). Previous research has focused on English-speakers learning vocabulary (Beck & McKeown, 2001; Beck & McKewon, 2007; Biemiller & Boote, 2006; Coyne, McCoach, & Kapp, 2007) or Spanish-speaking bilingual populations (August,
Carlo, Dressler, & Snow, 2005; Bialystok, 2008; Butcher & Rameriz, 2008; Espinosa, 2013a; Loftus et al., 2010; Ordóñez, Carlo, Snow, & McLaughlin, 2002). One study looked at children speaking Mandarin or Cantonese (Chase & Johnston, 2013); however, most references used at the time of this writing included Spanish-speaking populations. The ELs acquired English vocabulary within this setting, even with the diversity of native language spoken.

Second, this study identified the potential for teaching strategies (e.g., use of print resources including anchor charts, word walls, and dictionaries, collaboration with peers) with ELs, even at a young age. The ELs, once taught, could solve problems by seeing peers and other classroom resources, in addition to the teacher, as available to support their acquisition of the English language. For example, anchor charts listing specific word groupings (i.e., color words, family words, classmate names) were introduced and referenced. This differs from previous studies (August et al., 2005; Beck & McKeown, 2001; Calderon, 2000; Coyne et al., 2007), as past research focused on teaching specific words (i.e., Tier 2 words, Beck & McKeown, 2001 and cognates, Huckin & Coady, 1999). While it is important to identify specific vocabulary needed by ELs, this study focused on finding tools to be used by students to create their own understanding. For instance, the use of picture dictionaries allowed ELs to see a representation of the English vocabulary word and study the text and picture at their own pace; pictures gave the ELs a familiar visual to support learning. This study connected with the thinking of Hart and Risley (1995), who note that students need to develop the skills required to make sense of vocabulary. Connected first language learning supports learning of English (August & Shanahan, 2006), as evidenced by the connections between pictures and vocabulary learning. Students will give up when their inability to comprehend is too high (Carver, 1994), so this study sought to give ELs the tools to reduce their inability to comprehend and thereby to create their
own understanding. Coyne et al. (2007) speak of ongoing, long-term, comprehensive vocabulary instruction, an idea that connects with this study’s focus on giving ELs the tools and freedom to create personal understanding when needed. Coyne et al. identified the importance of “learning as many words as possible each day” (p. 110). An old concept, nonetheless, teaching a child to create understanding of words is more powerful than simply giving the meaning to the child. ELs are then able to use strategies on all text encountered rather than waiting for help to understand a word.

Finally, student-taken photos identified each EL’s thinking, showing his/her understanding and use of the presented strategies. This tool became a window into each, even if the EL had a limited grasp of English. Bialystock (2001) shared teachers are often unable to truly assess ELs due to language differences; however, this can change by allowing ELs to share what they know using less language. In other words, the ELs took control by identifying which resources supported them. During the individual discussion after the photos were taken, there were familiar visuals to support each EL. Conversely, when an EL did not take photos, a different message was clear: the EL did not feel comfortable doing so. More needed to be done to support Lily, including more time spent in relationship building, allowing her additional opportunities to observe resource use, and guided practice in using those resources. Having Lily’s classroom teacher invite her to take the photos might also have allowed a different outcome. While technology has various applications and potential (Silverman & Hines, 2009), having students take photos to show their thought process was a novel way to view technology use. Rather than have the EL sit back and view technology, this study identified the potential for technology used by the EL. It was this realization, this shift of control to an often silent EL, that became the most important outcome of this study. Data were collected to answer the proposed
research questions. The collected data and the questions posed for this study are presented in the following sections.

**Research Question 1**

The results of this study identified how ELs could learn strategies and use introduced classroom resources to support their acquisition of English vocabulary. The need to learn the vocabulary, as identified in the current study, is similar to Bialystok’s (2001) research, which shows vocabulary differences were problematic. The ELs needed to be taught crucial English words, such as “water” and “bathroom,” immediately. For some ELs, the English words pair with thinking in native language (Bialystok & Fen, 2010), not English. School-related concepts such as “line up” or “follow” needed to be modeled and practiced. Additionally, August et al. (2005) identified that the ELs not only knew fewer words, but they knew less about the words they had. Muñoz and Singleton (2011) point to additional research needed on identifying the age of “first significant exposure” (p. 15). In other words, at what age was the EL first exposed to the new language? Because of both research and personal experience, it became imperative to find ways to address this discrepancy at an early age.

Hart and Risley (1995) identified skill differences were a greater influence than previously thought. As far back as 1979, Cummings suggested fostering a relationship between first language and English was a benefit for ELs. Goldenberg (2008) concurred with this thinking. Ruiz (1984) celebrated ELs for what they bring into the classroom, an idea further expanded by Garcia (2011) and her “translanguaging” viewpoint. Both Ruiz (1984) and Garcia suggested that learning and thinking are enhanced when ELs can do so in both languages. By viewing an EL’s native language ability as additive (Garcia, 2011), ELs are seen as having rather
than not having. The ELs made gains partly because the focus was not on their deficits (Garcia, 2011), but instead it was on how to move the EL forward, and this included the use of native language. In this way, both the ELs and their classmates saw what the ELs had to offer, even if it was not through using English.

Bialystok (2001) shared that teachers are often unable to assess an EL’s true vocabulary knowledge because of language differences. Given the ELs in this study spoke numerous languages, chances of a teacher being fluent in all were slim; thus, a way to instruct and assess each EL without knowledge of numerous native languages was needed. To address this need, the current study sought to identify ways to support ELs even without speaking their native language. This support was structured to introduce the ELs to strategies that allowed them to create meaning and understanding on their own. Strategies (use of classroom resources, dictionaries, word walls, text on supplies) to combat skill differences were introduced, modeled, and practiced, with ELs expected to make these strategies their own. Skill differences influenced how quickly each EL could grasp the various concepts and begin to apply strategies in his/her daily work (Hart & Risley, 1995). It became clear that teaching skills at an early age put strategies for making sense of their own learning at the students’ disposal. Connecting with Biemiller and Boote’s (2006) assertion that ELs continue to lag in vocabulary development, it made sense to identify strategies the ELs could implement independently. In other words, it was important to find the best ways to help students connect with and internalize learning on an individual level. Therefore, this study looked at ELs in kindergarten to identify the interventions they employed to close the vocabulary gap more quickly.

Given the diversity in the classroom studied, elements of Garcia's (2011) translanguaging were incorporated. These elements included greeting students in their native language as well as
allowing, and even encouraging, use of native language in class and incorporating visuals whenever possible (Espinosa, 2013a; Goldenberg et al., 2013). Simple acceptance of the ELs’ use of native language was foundational (Blum, 2005), as was observation of peers sharing their knowledge of native language with the teacher and others to foster an additive view (Garcia, 2001). In other words, how did the EL’s native language enhance their learning and what native language/English connections supported the EL while acquiring English? Garcia (2011) promotes this view in which ELs have something to offer as an element of a translanguaging environment.

With only one teacher in current diverse classrooms, there are times when the teacher is simply not available, or a student must wait to receive help. Moll and Dworin (1996) identified the concept of community of practice, noting that experience and understanding go hand in hand. For this reason, the current study looked at peer relationships as one support for ELs in that students working together could create age-appropriate experiences leading to understanding. Given the targeted class had 20 students, opportunities to engage with peers were numerous. These opportunities allowed for frequent language exposure, verbal practice, and authentic engagement. Students were observed engaging with peers, identifying with peers, observing peers completing activities, and working in partnership with each other. The peers provided age-appropriate language role models and allowed the ELs to practice their new skills in a less formal and more authentic/naturalistic setting (Nelson-Barbar et al., 2013). These interactions enhanced each EL’s learning. For example, after Albert realized the dictionary could help him with English words, he pointed out to others the dictionary if they needed help. Meena walked to an anchor chart with a peer, and they talked together about the chart, with the peer typically pointing out the needed word. Hyun persisted with peers until they explained what he needed to
his satisfaction; in fact, if he still felt confused he might approach another peer. As the ELs and peers worked together, connections were made; the ELs related with their peers, enhancing their English vocabulary acquisition.

As the ELs connected with each other and their English-speaking peers, the ELs increased their understanding. This understanding was evidenced when the ELs were seen supporting each other, not by simply telling an answer but by sharing the strategy used to find the answer. An example was seen when Hyun shared a dictionary with a peer to find a needed word or when Albert took a peer to an anchor chart; learning was internalized and transferred. This type of learning allowed deeper understanding and permanence; the “teaching” EL exhibited a greater understanding of the skill or strategy so he could present it to a peer. Someone more closely connected to age and skill shared information in a manner to which the EL could better relate. The idea of greater understanding needed when teaching others is not new; the idea that this is an option at this young age is certainly something that merits further study. There is something to be gained by teaching ELs to interact with each other and by using these interactions strategically. Overlaying student/student interactions with native language fosters better learning. For example, an environment in which all languages were celebrated allowed same language peers to speak with each other in native language or English. Further, by encouraging curiosity about languages, the ELs did not have to hide their native language knowledge. In fact, there were times when they “taught” words to their peers or the teacher. Additionally, the data confirmed that students spent time with same language speakers (Bloom, 2005). Observational data identified Xavier looking to connect with an older Mandarin-speaking student. This occurred in several places (i.e., on the way to PE, on the way into the building from recess as the fifth-grade buddies walked out to recess, and at bathroom break before lunch).
At first, when asked, Xavier would simply shake his head. Soon after, when asked, “Are you looking for R?” he would nod his head. It was not until the observation window had ended that Xavier finally walked up to R and smiled. It took even longer for Xavier to engage verbally. Hyun also sought out students he knew spoke Mandarin. When an older boy dropped off artwork in the classroom, Hyun remembered the boy. A week later when Hyun saw this same boy in the library, he asked, “This who art draw?” and when told yes, greeted the boy with 你好 (hello).

While these examples simply show students finding others, specifically others like them, it speaks to a comfort level in an unfamiliar place (Shonkoff, 2004). Finding something familiar, in this case language, helped to make the ELs feel more comfortable and confident. Finding these native language connections allowed the teacher to check in with a student more confidently. During the second session with the fifth-grade buddy class I spoke with Xavier and his Mandarin speaking partner. While conversing with the boys, Xavier did not say anything, but his partner shared his memory of being a kindergartener and, like Xavier, not speaking English at school. As the weeks progressed and Xavier began to seek out this boy, it cemented my belief that his connection to native language and this peer was important.

An example of naturally occurring native language use presented itself outside of the observation window. Two months after data collection ended, the class studied numerous versions (Goldenberg, 2013) of “The Gingerbread Man.” One version, “The Runaway Rice Cake,” included the Chinese word 南高 (nan gao/rice cake). During the story read-aloud I attempted the Chinese word, while both Hyun and Xavier pronounced it correctly (McGee & Schickedanz, 2007; Fisher et al., 2004; Klem & Connell, 2004). Of course, everyone turned to the boys as they pronounced the word and again each subsequent time it appeared in the story,
where I simply stopped and turned to them to say the word correctly. This would not have occurred earlier in the year; neither boy would have shared the word or willingly translated for the English-speakers in the class. By fostering the environment, one in which the boys felt safe and accepted and where native language was celebrated, both were willing to risk and share native language knowledge.

As the study progressed, individual native language played less of a role than anticipated. As it turned out, anchor charts used by ELs were overwhelmingly English. A review of classroom resources identified more English resources than native language; however, throughout the study, the ELs returned to pictures as a support. Pictures surfaced as a universal native language, one used by all ELs as they worked to create understanding of English vocabulary. By reducing reliance on English only (Gottfried, 2014; Ortega, 2013) the ELs were free to use native language and English to make sense of their work. The ELs could rely on both languages (Espinosa, 2013a; Morin, 2006) as they worked to create meaning.

As reported, a focus on strategies, including peers as support and celebration of native language, all played a positive role in this study. Coupled with this is the facilitation of each element. The facilitator of these elements is the teacher, playing a key role. The following section addresses the importance of the teacher as identified in this study.

Teacher Facilitator

The teacher through presenting and modeling strategies, introducing and encouraging peer support, and celebrating use of native language moved each EL closer to the goal of English vocabulary acquisition. It is this same classroom teacher who must make critical, evaluative decisions, on the fly, and must understand and evaluate each student. This is more difficult when
teachers and students speak different languages. However, researchers like Valdez (1998) suggest structured observation as one way to identify unique elements that support learning, an idea echoed in this study. Observational data provided a window into the thinking of each EL, showing his/her personalities and needs. While not a new concept, teachers observe students daily, but observation is underutilized. By taking time to strategically watch the students, I saw each EL as an individual and identified how to best support the EL in a way that connected with what each required—i.e. Xavier needed time to immerse himself in pictures, words, and texts. Albert needed praise and encouragement, and Ven required reassurance and a push to expand his thinking. Hyun relied on pictures, pictures I could provide for him by watching his behavior. He knew when he needed the support and his look to the computer identified this need without using words. While Meena required more verbal and visual support, consistent reassurance, and a better focus on how she learned allowed her to make gains. Taking time to see how each EL approached the tasks helped me to individualize my support to maximize their English vocabulary acquisition, an idea connected to “early and accurate identification of students who may benefit from additional supplemental intervention” (Loftus et al., 2010, p. 134). This, along with student-taken photos and the ensuing discussion, corroborated this knowledge. Better understanding of each EL gave me better insight into what each needed. Contrasted with this knowledge, my relationship with Lily was almost non-existent. My knowledge of her learning and process was unknown, resulting in a smaller increase.

While the sample size is too small for any definitive results, it is interesting that when the participants were asked to take a risk and present their viewpoint or thoughts, Lily refused to do so. When asked if she would be willing to take photos, she stated no. When I spoke with Lily’s teacher, the teacher was surprised by the fact that Lily refused, so I asked Lily again the next
day, and her answer remained the same – she would not take photos. Interestingly, in contrast all of the participants in my classroom took the iPhone and immediately began, almost before the directions were finished. With additional time, it would have been interesting to see if Lily would have taken photos if asked by the most familiar adult in her case, her classroom teacher. If so, it would have offered an opportunity to study the relationship between Lily and her teacher in comparison to the relationship between her twin, Xavier and his teacher. For the remaining ELs, a varying number of photos were taken, yet the five were willing, even excited, to do so. While there was a lesser relationship between the researcher and Lily, the relationship may not have been the only reason behind her refusal, although it did play a role.

These data pointed to a lack of relationship, given Lily and I spent the least amount of time together. Given Lily was a student in the other classroom, it is difficult to determine the role relationship played, her classroom teacher wasn’t the one asking her to participate. Even though I was a known adult, I was not the person with whom she felt most comfortable. As the school year came closer to the end, time outside of this study window, Lily did interact, sharing smiles and speaking with me, however, this comfort level took months to build. Was it maturity, additional time to feel more comfortable, or something else that allowed her to interact more fully? Further investigation is warranted, looking at the relationship between student and teacher across classrooms.

Summary

This research question asked if student/student interactions, native language, and teacher/student interactions played a role in acquisition of English language for ELs. As evidenced in this study, the three elements came together to create an environment in which the
ELs made gains. Structuring peer interactions was necessary to create situations in which the peers supported each other while allowing each to create his/her own understanding. Individual native languages played a role, albeit a lesser role than anticipated; however, pictures became a type of universal native language, one that merits additional study. Finally, teacher/student interactions based on a foundation of acceptance are important. Teacher effectiveness in knowing and understanding ELs and fostering interactions is key (Valdez, 1998). As evidenced by gains made for five of the six ELs, this relationship has some influence on English acquisition. Further study in larger applications should follow.

Research Question 2

This question focused on whether the ELs’ knowledge of English changed after becoming aware of available resources, including classmates, within their classroom. All of the ELs moved forward in their acquisition of English, and their scores increased – albeit differently. However, not all of the ELs’ language gains were reflected in their increased scores; thus, the qualitative measures helped round out the collected data. Using a mix of quantitative and qualitative measures offered a balanced assessment of each EL.

MLU

Each EL increased his/her MLU and moved closer to the suggested MLU of 4.7 (Brown, 1973). Use of MLU supported research from the National Reading Panel (2000), suggesting an experimenter-developed measure. Length of utterance growth slows as students reach school age (Scott & Windsor, 2000); however, as ELs in kindergarten, the students in this study fell below expectations from the start. As a measure of average utterance length (Klee, 1992), the
MLU was used to identify growth for the ELs. Hickey (1991) voiced concerns when testing non-English speakers using MLU, noting MLU and age correlation is simply that – a correlation. Given his caution, multiple aspects of the test were included (e.g., TWS, type of words used, sentence length) to provide a more detailed picture of each EL.

While three of the tested ELs remained below the age correlation, each showed movement from initial scores. The ability to capture this growth came from the flexibility of the measure. For example, review of the MLU transcript allowed identification of movement from silence or use of “I don’t know” to actually answering questions, as seen by comparing data from the two testing sessions. The increase in MLU numbers pointed to more verbalization made by the ELs.

In addition to obtaining the MLU score, the ELs’ TWS were collected. Once again, the scores varied widely for each EL, but this variance helped to identify strengths and weaknesses in overall English acquisition. For example, a larger score could identify mastery of English, or it might point to an EL using numerous words in place of the required English word. An example of this was “gray soft thing is for sitting” rather than simply using the word “chair.” Both naming the object and being able to describe it are important skills, but using the definition of the object rather than the name shows a less mature understanding (Ordóñez, Carlo, Snow, & McLaughlin, 2002). It was information like this that presented a better understanding of how ELs used English and their spoken words.

The size of gathered language samples in this study was different from previous studies. Research ranges from suggesting sample sizes that include 100 collected utterances (Brown, 1973) to 30-minute collected samples (Miller & Chapman, 1981). At this point in the school year, given only one researcher, a shorter timeframe, and identified students who were non-
English speakers, no minimum was placed on the number of utterances and each EL was given an opportunity to answer each question. All ELs were asked the same questions with no time limit. The questions garnered language from all ELs, even given numerous native language backgrounds. However, spending more time gathering the responses or allowing additional time between testing sessions could yield informative data and identify the usefulness of MLU with additional native language speakers.

Even with the concerns identified in this study, the MLU was an efficient measure for identifying language concerns, confirming “gut-feelings” and measuring growth. Teachers have little time in their day for added testing; however, the MLU feels more like a conversation. Once comfortable with transcribing student speech, the measure gives a teacher the opportunity to connect with a student, learn more about that student, and gather evaluative data. Little set up is required, few materials are needed, and the measure is portable. Thus, the time used is only for the test itself, so testing can occur as opportunities present. In a busy classroom, during an identified testing window, the teacher can simply call up a student as time permits to work through the entire group. Data are quickly gathered, and review of data can occur after all students have been tested. The current study identified ways to use the MLU to show growth for ELs, an idea that connects with research by Chase and Johnston (2013), who found language sampling useful with a Mandarin or Cantonese speaking population. With some slight changes, as identified in the future research section of this document, using the MLU as a tool to support ELs acquisition of English vocabulary is appropriate.
While numerous languages were spoken by the ELs in this study, there is evidence of correlation between ability in Spanish and PPVT scores (Ordóñez et al., 2002). The researchers suggest that items known in the native language became English labels to be learned, an intriguing idea. In this study, students with stronger native language knowledge (Ven and Albert) did have higher scores on the PPVT. Given we do not yet know how we can enhance the vocabulary of young children (Beck & McKeown, 2007) or even what words to teach (Beck & McKeown, 2007; Coyne et al., 2004), it appears that the PPVT may point to words, or categories of words, to be introduced as support for ELs acquiring English vocabulary.

The MLU and PPVT scores rose, even within the short study timeframe. While increases are not related to only one element, these results point to a positive result when focused on learning from ELs and identifying strategies to support those ELs. It is also noted that the researcher tested all of the ELs. As the researcher, I felt more confident during the second testing sessions, feeling better about my knowledge of each EL as an individual. Given the MLU is scripted and the PPVT is standardized, there were no changes made in administration. However, there is a possibility my demeanor or delivery may have been altered. While impossible to measure, this may also be one factor in the rise of scores.

Observations

Observation of the ELs played a large role in this study, allowing opportunities to capture individual students using the presented strategies and working with peers in a natural setting (Dyson & Genisi, 2005). This idea connects with research by Denzin and Lincoln (2011) that
puts the observer in the setting, making visible practices as they occurred. Dyson and Genisi shared, "Both teachers and students bring interpretive frames that influence their ways of attending and responding to others within the social activities of the classroom" (p. 11). Instruction that works with English speakers is not helping ELs make needed gains (August, 2006). Removing the teacher from the interactions to observe and identify how the ELs worked together or applied strategies was the goal. Capturing what the ELs did naturally to create meaning (Denzin & Lincoln, 2011) and reflecting on those interactions helped identify what the ELs did as they worked to acquire English vocabulary. It was this observation that identified how the ELs used resources, how they interacted with each other, how they made connections to make sense of English vocabulary (Beck & McKeown, 2007).

As identified in the testing data, each EL differed in his/her ability to internalize the information and then apply this knowledge to his/her work. Biemiller and Boote (2006) identified the need for addressing individual differences at an early age. By teaching strategies and encouraging use of the strategies, I could individualize learning for each. Individual awareness of these strategies (i.e., use of dictionaries, anchor charts) was important, as it was through use of strategies the ELs created meaning on their own. The EL was in charge of his/her own learning and could use the presented strategy along with any inherent knowledge, including native language. Previous research (August et al., 2005) found positive results for students who used similarities in their native language when learning English. By looking to native language, background knowledge, and vocabulary instruction, the current study looked for strategies that could be used by ELs, even if those similarities did not exist (August, 2006). For example, cognates between Spanish and English are helpful as ELs learn English; however, these cognates do not support Mandarin-speakers. Additional research highlighted use of native language
ability when learning English rather than discounting native language knowledge (Biemiller & Boote, 2006; Espinosa, 2013a).

Summary

This question focused on whether scores would increase given an awareness of resources available within the classroom. Based on the gathered data, there appears to be support for this assertion. The ELs could grasp various strategies and apply them to their daily work. True, each learned the strategies at a different pace; however, all could utilize some element of the modeled strategies. It was in this way that the ELs participated in creating meaning, meaning that came from their backgrounds and their experience. In this way, learning was individualized. Current vocabulary instruction, or lack thereof, in the early grades is not working (Stanovich, 1986). Teachers do not have a clear notion of what to teach (Biemiller & Boote, 2007); there is currently no one identified instructional technique that helps to close the vocabulary gap (Bialystok, 2008). The current study was undertaken to identify alternatives to current instruction, instruction that often does not meet the needs of diverse learners. Introduction of strategies to the ELs surfaced as having potential. This offered ELs tools to become active in their role as learners.

Connected with strategy use was the teacher/student relationship. The teacher’s relationship with and clear understanding of each EL was important. Structured observation of the ELs gave an opportunity to collect important data on the ELs and how each used, or did not use, the presented strategies. Seeing the ELs where they were and moving from that point rather than expecting ELs to learn like English speakers allowed the use of native language and background knowledge. It gave them time to immerse themselves in pictures and the opportunity
to interact with peers to create meaning (August & Shannahan, 2006; August et al., 2009). These elements worked together to create an environment focused on vocabulary intervention (Beck & McKeown, 2007; Loftus, et al., 2010) in which ELs made vocabulary gains on a daily basis (Coyne, et al., 2007).

Limitations

Previous research has investigated bilingual populations but rarely groups of non-English speakers, speaking different languages, in the same classroom. In contrast, this study followed a small group of students—five ELs in one classroom and a sixth, the twin of one of the five, in a different classroom—among whom numerous native languages were spoken. This focus on speakers of more than one language in the same classroom was informative; however, a study limitation was the number of ELs followed. With only six identified students, there was less opportunity to compare data across language speakers. For example, it was difficult to identify if Mandarin speakers and speakers of Urdu used similar strategies.

A second limitation of this study was the placement of studied ELs. While five of the six were in the same classroom, the sixth student was a member of another kindergarten class. Data were more easily collected on the five ELs in the same classroom, with less collected for the remaining. While in general, as a venue for comparison, placement of participants in two classrooms is helpful, in the current study it made it more difficult to obtain data, specifically on relationships.

The study timeframe was a third limitation. Relationship building takes time, and given kindergarten students’ age and unfamiliarity with school, time is even more important. Students are learning about themselves and each other as well as cultivating a relationship with an
unfamiliar adult, and for some, this may be the first outside of their family relationships. Beginning observations within the first month of school reduced the available time for relationship building and learning about each individual. Students need to navigate a situation that may be new to them with their new peers. Tied with these elements are two others: learning school culture and a new language. Thus, a study with a longer timeframe would have given students more time in these activities, the teacher more time with each student, and everyone more time to cultivate their relationships.

Future Research

Given the strategy introduction and relationship aspects captured in this study, I suggest further study of the teacher/student relationship. Different teachers might approach these areas in other ways, as individual teacher personalities connect with students in different ways. For that reason, more data, specifically focused on teacher/student relationship building should be gathered. One suggestion for future research includes expansion of the number of ELs studied and inclusion of more kindergarten classrooms to offer more information about those relationships. More students, native languages, teachers, and classrooms using strategy implementation could provide further evidence of, or discount, the findings of this study.

A second suggestion includes increasing the time between testing sessions. Kindergarten students grow in various ways during the school year, and maturity is one of the ways. It is difficult to know which aspect is behind an EL’s gains. A longer span between testing sessions would give ELs more time to acclimate to the setting and to become more comfortable, potentially showing their true skills.
Along with an increased timeframe is the suggestion of a third testing session. Use of a testing session at the midpoint and a final session at the end of the year would yield more data about whether ELs use strategies to support English vocabulary acquisition. Careful planning would need to be done to identify observational windows at points during the year to avoid obtaining overwhelming amounts of data (I suggest pre-test/post/test dates with at least eight weeks between). In addition, beginning a data collection routine early created a natural environment, one in which the students quickly became comfortable. This allowed data collection in a more authentic setting. However, I found it would have been helpful to have another researcher take photos throughout data collection. Additionally, resulting from the data collection in this study was the idea of a coded data collection sheet, one that would still have room for EL-created strategies but on which data could be collected more efficiently by following expanded codes for frequently used resources (e.g., D for dictionary, AC for anchor chart, etc.).

Tied with the success of translanguaging (Garcia, 2009) and strategy introduction (e.g., use of human resources, print resources, anchor charts, etc.) in this study, I suggest further study of both. Encouraging teachers to

- allow use of native language,
- ask parents to collaborate with the teacher by providing native language translations for commonly used words (i.e., bathroom, snack, lunch, colors, numbers, and names)
- encourage peer interactions and facilitate similar language conversations
- celebrate native language ability (e.g., use native language greetings, share books from various cultures)
• find ways to authentically include native languages through song or conversation
  (i.e., invite teachers, staff, or other students into the classroom who can converse
  with native language speakers)

These ideas create a classroom culture of acceptance and show native language ability in a
positive light. ELs are not less because they do not speak English, but each has information
about another language to share, information that can be used to support their acquisition of
English vocabulary.

The final, and most important, suggestion for future research is wider implementation of
technology to help the ELs share their perspectives. The pictures and subsequent discussions
provided opportunities to build on the teacher/student relationship and offered insight into their
learning styles and personalities. It was this information that led to better planning for each
individual, better understanding of each EL, and stronger English vocabulary acquisition.
Utilizing technology to capture pictures of helpful resources and participation in follow up
discussion to gather individual thoughts, the researcher identifies how each EL is, or is not, using
strategies to acquire English vocabulary. In this way, ELs have a voice in sharing what works
for them, rather than teacher determination, as each make sense of English vocabulary.
Introducing strategies at the kindergarten level and determining the use of such strategies by the
ELs can be informative. In this way, the ELs can drive their learning versus the current practice
of teaching ELs the same way we teach English-speakers.

Conclusion

This study was undertaken to investigate the usefulness of teaching strategies to
kindergarten ELs as a way to create active learning as the ELs work to makes sense of English
vocabulary. Five-year-olds have much to learn when they enter kindergarten; however, it is also an optimal time to teach ways to create meaning on their own. By giving ELs the tools they need to find answers themselves, a new learning situation is created. Students no longer must wait for an adult to explain something to them. They can begin to find answers on their own.

Kindergarten is a good time to practice and perfect this skill. In addition, by creating a community within the classroom where ELs are celebrated for the additional knowledge rather than for what they do not have, peers can look to each other to help support their acquisition of English. Peers supported the learning of others as seen in the collected data. While this is not something that will work for all students, as a teacher, having students collaborating with each other provides opportunities to identify they have mastered the skill (to teach you must understand) and allows help to be given to the neediest (those students who cannot identify and use the presented strategies).

The most important finding from this study was the use of iPhones by ELs to share their thinking. ELs could provide a window into how they viewed available resources in the classroom. Interestingly, the composition of the photos mirrored the language ability of the ELs at that time, offering useful feedback that was used to evaluate and plan for instruction. Technology allowed ELs to express themselves even if they had limited English language ability.
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SCHOOL DISTRICT

Home Language Survey

Dear Parent/Guardian,

The federal NCLB Title III Act and the Illinois School Code require that each school district administer a Home Language Survey to every student entering the district's schools for the first time. This information is used to report to the state the number of students whose families speak a language other than English. It also helps to identify the need for English Language Learning services in the schools. Your cooperation is helping us meet this important legal requirement.

Student Name_________________________ Grade__________

School_________________________ Birthdate__________ Gender__________

County of Birth_________________________ Home Phone Number________________________

1. Is a language other than English spoken in your home? YES NO
   If yes, what language?________________________

2. Does your child speak a language other than English? YES NO
   Note: Foreign languages the student has learned in school do not count.
   What language, other than English, does your child speak?________________________
   Can your child read this language? YES NO Can your child write this language? YES NO

   *** If the answer to question #1 AND #2 are both NO, you may stop here. If the answer to EITHER question is YES, please continue. If the answer to EITHER question is YES, the law requires the school to assess your child's English language proficiency.***

3. Which language is spoken most often in your home?________________________
   Please be specific. (Example: Mandarin, not Chinese)

4. Does your child ________
   understand English? YES NO speak English? YES NO
   read English? YES NO write in English? YES NO

5. Which language does your child speak most often with his/her parents?________________________

6. Which language does your child speak most often with his/her friends?________________________

7. Where did your child attend school last year?________________________

8. Was your child in a bilingual or ELL/ESL program during the last school year? YES NO

9. Was your child ever in a bilingual or ELL/ESL program? YES NO
   If yes, what grade(s)?________________________ Where (school/district)?________________________

10. If you speak a language other than English, would you be willing to occasionally translate at school if needed? YES NO

   Parents/Guardian Signature________________________ Date__________

OFFICE USE ONLY

HOME LANGUAGE on student's language record will match language listed in question 1.
OTHER LANGUAGE on the student's language record will match language listed in question 1.
APPENDIX B

STUDENT IDENTIFICATION/LANGUAGE EXPOSURE SHEET
Gender ___________________ Age _______________ Student Pseudonym ____

Yes on District Paperwork _______(see Appendix A)

Native Language ______________________________________________________

Time in United States _________________________________________________

Additional time spent in home country/yearly __________________________

Use of native language/ home_______ Attends native language school _____

How often? ______________

Number of others speaking native language to and with child __________

Please list

Relationship__________________________

Age _______ Years in American School ________

Relationship__________________________

Age _______ Years in American School ________

Relationship__________________________

Age _______ Years in American School ________

Relationship__________________________

Age _______ Years in American School ________

Relationship__________________________

Age _______ Years in American School ________

Relationship__________________________

Age _______ Years in American School ________
APPENDIX C

KINDERGARTEN/ENGLISH-SPEAKING STUDENT PARENT CONSENT
Please read and sign below.

I agree to have my child participate in the research project titled *Vocabulary and English Language Learners* being conducted by [Redacted], a doctoral student at [Redacted] University in the Department of Leadership, Educational Psychology & Foundations. I have been informed that the purpose of the study is to gather information on how English Language Learners learn new English vocabulary.

I understand that if I agree to have my child participate in this study, my child will be asked to do the following: be observed by the researcher and be photographed in the classroom as a part of the daily routine (e.g., working in centers, reading stories with partners, writing with partners). Some of the photographs will be used in the writing of and defense of the dissertation written at study completion, which upon completion will be available online to other scholars who study this topic. Students will not be named in any photographs.

I am aware that my participation, and that of my child, is voluntary and may be withdrawn at any time without penalty or prejudice, and that if I have any additional questions concerning this study, I may contact [Redacted] or [Redacted] faculty member, [Redacted]. I understand that if I wish further information regarding my rights, or the rights of my child as a research subject, I may contact the Office of Research Compliance at [Redacted] University at [Redacted].

I understand that the intended benefits of this study include providing information on how English Language Learners learn new English vocabulary in the kindergarten classroom. This information will help to inform teachers and how teachers plan for English Language Learners.

I understand that all information gathered during this study will be kept confidential by use of pseudonym, shredding of data once study is completed, no identification attached to photos taken, and use of information only for purposes of this study and written professional papers. I understand that my consent to participate in this project does not constitute a waiver of any legal rights or redress I might have because of my participation, and I acknowledge I have received a copy of this consent form.

I agree to have my child participate in this study

Signature ____________________________
Date __________________             

I agree to have my child photographed as a part of this study

Signature ____________________________
Date __________________             

APPENDIX D

KINDERGARTEN STUDENT ASSENT
I will help Mrs. Mat learn about students.

I will help Mrs. Mat learn about words.

I will help Mrs. Mat by being in pictures.
APPENDIX E

EL PARENT CONSENT
Please read and sign below.

I agree to have my child participate in the research project titled *Vocabulary and English Language Learners* being conducted by [REDACTED], a doctoral student at [REDACTED] University in the Department of Leadership, Educational Psychology, & Foundations. I have been informed that the purpose of the study is to gather information on how English Language Learners learn new English vocabulary.

I understand that if I agree to have my child participate in this study, my child will be asked to participate in two testing activities, the first set in August and the follow-up set in October. These tests are a part of this study and will identify words your child understands and uses in his/her speech.

The first test is the Peabody Picture Vocabulary test. The student will be asked to point to a picture from a choice of 4. This is a standardized test, given to the student in the classroom, by the researcher and should take between 5 and 15 minutes in August and 10 to 25 minutes in October.

The second testing activity (the Mean Length of Utterance test) will include a discussion with the researcher about what the child likes to do in school to count the number of words spoken by the child. (A copy of the questions to be asked is attached to this consent form.) The researcher will speak with the child, in the classroom, for 3 to 10 minutes in August and 6 to 15 minutes in October. The tests will be given during the guided reading/individualized instruction time.

My child will not be asked to complete both tests on the same day.

Additionally, the students will be asked to do the following: be observed by the researcher, be photographed, be asked to take photographs in the classroom using an iPad (provided by researcher), be asked questions about the photos taken and about which resources the child is using to learn new words, as a part of the daily routine (e.g. working in centers, reading stories with partners, writing with partners). The students will not be identified in any photographs, and care will be taken to keep their faces obscured when possible. Some of the photographs will be used in the writing of and defense of the dissertation at study completion. This dissertation will upon completion, be available online to other scholars who study this topic.

As a part of this study, the researcher will also review the Home Language Survey filled out when registering at school. In addition, the researcher will ask questions about the language(s) spoken at home and the amount of time my child hears and speaks his/her native language. This written information will only be accessible to the researcher, and all information will be kept secure using student pseudonyms.

I am aware that my participation, and that of my child, is voluntary and may be withdrawn at any time without penalty or prejudice, and that if I have any additional questions concerning this study, I may contact [REDACTED] or [REDACTED] faculty member. [REDACTED]. I understand that if I wish further information regarding my rights, or
I understand that the intended benefits of this study include providing information on how English Language Learners learn new vocabulary in the kindergarten classroom. This information will help to inform teachers and their planning for English Language Learners.

I understand that all information gathered during this study will be kept confidential by use of pseudonym, shredding of data once study is completed, no identification attached to photos taken and use of information only for purposes of this study and written professional papers.

I understand that my consent to participate in this project does not constitute a waiver of any legal rights or redress I might have because of my participation, and I acknowledge I have received a copy of this consent form.

I agree to have my child participate in this study

Signature ____________________________________________________________
Date __________________

I agree to have my child take photographs and be photographed as a part of this study

Signature ____________________________________________________________
Date __________________
APPENDIX F

EL ASSENT
I will help Mrs. Mat learn about students.

Yes  No

I will help Mrs. Mat learn about words.

Yes  No

I will help Mrs. Mat by taking and being in pictures.

Yes  No
I will help Mrs. Mat learn about students.

Yes  

No

I will help Mrs. Mat learn about words by pointing to pictures when she asks me a word.

Yes  

No

I will help Mrs. Mat by talking to her about what I like.

Yes  

No
APPENDIX G

CONNECTIONS MADE VISUAL
APPENDIX H

MEAN LENGTH OF UTTERANCE DATA COLLECTION SHEET
Greet Student

Student Response

Who are your friends at school?

Student Response

What do you do at school?

Student Response

What do you do at home?

Student Response

What do you like to eat?

Student Response

Who is in your family?

Student Response
What do you like to play?

Student Response _____________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________

Tell me a story. (Prompts may include-tell me about your weekend, your pet, your family, playing at recess, or eating lunch with friends at school).

Student Response _____________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
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<table>
<thead>
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<th>Morphemess</th>
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APPENDIX I

FIELD NOTES
Date: 3/3/14

1. Whiteboard
   @ table 1
   Teacher
   Paper/pencil
   Whiteboard
   English pair
   Teacher

2. English pair
   @ table 2
   English pair
   Teacher
   Whiteboard
   Paper/pencil
   English pair
   Teacher

3. Out of room
   10:07
   @ table 2
   English pair
   (During observation - pulled out for testing)

4. Teacher
   @ table 3
   Teacher
   EL student
   English pair

5. Teacher
   @ table 4
   Teacher
   EL student
   English pair
   Group EL pair

6. Not observed
   __________

Activity: cut and paste at individual tables
Students are doing center activities focused on color words, numbers, letter art.
introduced count in strategy in numbers
it walked around to find each other, speaking Chinese, then went to get a tube of planks and began to build silently.
Activity did not last itself too much.

Students remained at table.
* switch mode to alternate student / EL 4 problem from classroom 

For duration of observation, time / additional academic concerns identified
APPENDIX J

RESEARCHER NOTES
Students were asked to complete a large group activity. Each teacher led an activity where a page was projected and students completed the activity as modeled. The placement of words became a major issue. This was a concept that many students found confusing. A word search was included to identify where a word was.

While I remained in her seat and generally helped from (making small, little progress), I was asked to stand and was matching words from the projected page. The students worked at their tables.
Today’s observations during recess break, while academic classrooms observed many connections were made. Siblings came out of the door onto the fenced playground looking for something someone. The two girls, each other and ran roughly into each other and continued walking and laughing. Then continued together running in the field where they ran and ran and ran.

2, 3, 4, and 5 played with pipe and ran running or running if walked the playground coming up to the teacher at one point to report a young child.

9/13
Today's observation began with four at a table, frustrated and referring to something not visible. She grabbed a pen and began writing and questioning, thinking, "What do you need?" and then, "Try to solve the problem. What can you do to solve the problem?" After some moments, she thought aloud, "Then, I think we need to get answers from the computer."

She then did so and went on to do her work.

5 was using the computer and strategy to identify errors and complete work as assigned.
During recess/play time, students were given the chance to choose activities and partners. 1, 2, 3, and 5 were in groups of three playing blocks, building "sticks" to hit hopscotch with. The sticks built by others at times made it difficult for others to join in. Student B spent her time by herself coloring at her seat. Student C was engaged in a group of students building a tower with pattern blocks.
I spent time at the teacher aide physically close? Often starting with me and moved to putting papers in teacher's face and at no point asking "what next?"

This worked with the teacher as they modeled a color and strategy. The teacher used the strategy and applied it to further work.

2 and 3 have used strategy to apply to book.

Teacher used strategy with chart 3 to use it to check work after they asked teacher "in this guest?"

4 was seen the strategy however still was unsure and solving equations teacher modeled strategy again.
EL1 has begun coming up to me and physically putting his body in my space—just today he moved from this behavior to leave for my attention.

EL3 came to tell me asking how to spell a word. I modeled use of the picture dictionary finding it in the books on each table.

EL4 was introduced to the count on strategy in math—identifying the larger of the two dice numbers and continuing from that larger number.

EL2 and EL5 are independently using picture dictionaries to find words to table pictures in their groups.
Almost instantly the Chinese EIs found each other on the playground, sidling up to each other as they quieted the building and running toward the other then collecting the other kindergarten speakers. There is a mix of spatial contact and Chinese even the quoted of two students are boisterous and chatty, speaking quickly and with much expression (smiles, eyes open, swaying, bucking, etc). English speaking students do not appear to “join” the group. The group of EIs stick together (Chinese). Other EIs are observed in a mix of English and EL peers.
When teaching the week students are seen using various resources in the room. Daily prison posters are currently posted and used in various lessons. The introduction letter observation of students looking toward the poster was frequently observed when students were writing or working on written activities. The teacher models the use of both posters and annotations. Annotations are used in a variety of ways to cue students as the teacher notes. The student is given a letter or combination of letters. Students ask the teacher throughout the day to spell words in answers questions. Students can use the posters as they work with each other.
Observation of students engaging in the photographic body book occurred during the students' expected to write nine and exhibit more independence while sent off to answer their own questions. The teacher uses "where would you find that," "have you spell that or do you know while you have seen that word," "how do we spell...

Students are also observed using their books and resources with each other. Students are encouraged to not give answers to each other but to help support one another to find answers themselves through group..."
During remediation, for students as they work to independently solve problems was a focus during this observational timeframe. Students asking questions that allowed for self-sufficient solutions were given a reminder. El H struggled with independent solutions even on the most conceptually straightforward and misleading scenarios. Often in a day, revisions to his work lead to the struggle with grasping the situation and ways to solve problems. Even after modeling, El H continues to struggle even when prompted, reminded, and encouraged.
Watching students today saw
a few & applying strategies while
others approached the
teacher for answers to their
questions. Observing the third
student and noticing
coming with same friend taking
account of the work of others
and also looking towards
others. One did spend
much of her time looking
down at her paper only
asking the teacher for help.
During play time today, students were scattered around the room playing mostly w/ blocks. While listening to the one head conversing in Chinese. These were two blocks each she not and each together with those times were announced. One took a box of connecting blocks and immediately began chatting and building.
Today brought an interesting event. When completing a fall leaves page, students used crayons to identify color names. One student placed her crayons on the color word. Another student commented on this behavior but added, "I put them on the top so I could see the [sic] color word." Students were excited to help me, they used crayons to finish their work. (pic)

9/28
Play looks different for all the ELs in this group. While the Chinese group grantees toward each other, the other ELs seem to have less connection with the same peers. Often the other ELs will interact with peers from other classes and at times other grades. Recently observed during the time is that the connections being made with buddy classes. In this group EL 2 has been reaching out other Chinese speakers who have been partnered in class group activities—5th-grade students are partnered with 6th in activities focused on literacy, math, and technology.
I am beginning to observe students use strategies on their own—excluding their own adaptation of various strategies—including pairing crayons to color words, pairing numbers/numerals/visuals, use of dictionaries or being/reading books. Watching students connect with materials and each other in beginning to occur without teacher interaction or modeling. Students are beginning to independently connect with each other and the various classroom resources. 

Was focused using a number grid (independently) when given a task involving writing numbers.
While some students are applying introduced strategies and even in some cases, staging strategies the new activities they are still a number of students who do not automatically apply or even attempt problem-solving strategies. As a default, students often may stall and remain stuck, many appeal a teacher repeatedly, and at times complete an activity incorrectly. Independence continues to build for most students, with the independent ‘overflow’ from one activity to others even if not beneficial. As I finish out this week I am looking to identify if students approach the same pens or of
Shifting my focus (I’ve been very aware of my Chinese population) from this core group to all ELLs I find more diversity in the combinations over. Where these of ELLs have peers that speak a similar language they do not mimic the behavior of the Chinese EL community. Only ELL/EFL does not have a same language peer that he moves from group to group. I will look over his data too see if he tends to migrate toward other ELLs or English speakers or both.
APPENDIX K

REPRESENTATIVE SAMPLE OF MLU TRANSCRIPT
Greet Student

Student Response

Who are your friends at school?

Student Response

What do you do at school?

Student Response

What do you do at home?

Student Response

What do you like to eat?

Student Response

Who is in your family?

Student Response

I like to play with the letter toy the ones at my home (Morphemes – 14)

My blocks the toy tiger or mine and my color blocks (M – 13)
But I don’t have pink or purple so my * needs to Deliver lots of pairs of toys (M – 20)
[*family word said but unsure of mom/dad?]
and I like playing with my toy bear and my toy (M – 12)
(oh yeah) my toy hairbrush for my doll and my toy kitchen (M – 10)
and I like playing with my (M – 7)
(let me think)
a little bit (M-3)
(let me think)
my kind of things at my home too same like my letter (M – 13)
let me just think about them (M – 6)
And the other things I like to play with toy trucks (M – 13)
actually the toy shark I brother’s toy (M – 9)
I think I’ll just play some games (M – 9)
also my blocks stick to each other like magic (M -10)
So the block are the square hole (M -7)
Some other things I like are playing mermaid and shark and crocodile (M – 14)
when the shark and crocodile chase you (M – 7)

What do you like to play?

Student Response _____________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Tell me a story. (Prompts may include-tell me about your weekend, your pet, your family, playing at recess, or eating lunch with friends at school).

Student Response

____________________________________________________________________________
____________________________________________________________________________
____________________________________________________________________________
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