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English Language Learners and Oral Language Anxiety:
An Approach Using A Constructive Play Set

A thesis submitted in partial satisfaction
of the requirements for the degree Master of Arts
in Education

by

Cindy Lee

2017

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ABSTRACT OF THE THESIS

English Language Learners and Oral Language Anxiety:

An Approach Using A Constructive Play Set

by

Cindy Lee

Master of Arts in Education

University of California, Los Angeles, 2017

Professor Alison Bailey, Chair

Studies have shown that on average, English language learners (ELLs) take seven to ten years under “optimal conditions” to acquire the language skills necessary to compete with native-born peers in the classroom (Cummings, 1991). There seems to be a lack of literature on the role of oral language anxiety for ELL student and how it may hinder their language production. The purpose of current study is to qualitatively investigate the role of incorporating LEGO® StoryStarter as manipulatives to facilitate communication through collaboration with peers to support their oral language production of anxious young ELL students. We interviewed six elementary ELL participants, paired them into dyads, and asked them to narrate stories together with and without LEGO®. Findings suggested that the use of LEGO® StoryStarter shapes the way that participants interact with each other, as it encourages communication not only with each other, but also with themselves. This study adds on to the lack of research on young ELL students.

The thesis of Cindy Lee is approved.

Carola Suárez-Orozco

Jeffrey Wood

Alison Bailey, Committee Chair

University of California, Los Angeles

2017

DEDICATION

I dedicate my thesis to my parents, friends, and family. I give special thanks to my loving parents, Ching-Jung Tang and Yung-Chuan Lee who have supported me throughout the entire graduate program.

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English Language Learners and Oral Language Anxiety:

An Approach Using Constructive Play Set

Studies have shown that on average, students will take seven to ten years under optimal conditions to acquire the language skills necessary to be competitive with native-born peers in the classroom (Cummins, 1991). Even under optimal conditions, the process of gaining language proficiency takes several years. Importantly, studies have found that limited English proficiency is correlated with lower trajectories of academic performance (Suárez-Orozco, Gaytán, Bang, O'Connor, Pakes, and Rhodes, 2010). When English learners are not able to participate and compete in mainstream classrooms, they often read slower than native speaker and struggle with cultural references. Their lack of language proficiency may also prevent them from being easily engaged in academic contexts and from performing well on “objective” assessments that are designed for native English speakers. Language skills affect students’ ability to detect social nuances in the school setting and are also highly predictive of academic success (Munoz-Sandoval, Cummins, Alvarado, & Ruef, 1998). Language proficiency also affects the degree to which students feel “connected” to what goes on in their classes, which is a key determining factor in academic performance (Steinberg, 1996). Finally, practicing speaking necessitates students’ oral language ability, but ELL students may feel reluctant and anxious to speak in English, as many of them reported being shy to speak up in class for fear of being laughed at (Calderón, Slavin, and Sánchez, 2011)

Who are ELL students?

The term “English language learners” is broadly defined as individuals who speak English as a second (or third) language or individuals who come from non-English speaking

homes or background and who have yet to reach proficiency in English. In California, students who are classified as ELL are required by the law to be assessed in English language proficiency (ELP). For example, California English Language Development Test (CELDT) assesses four domains: Listening, Speaking, Reading, and Writing. Performance levels for each domain range from Beginning, Early Intermediate, Intermediate, Early Advanced, and Advanced. Students in grades two through twelve are considered to have met the CELDT criterion for English proficiency when overall performance level is Early Advanced or above, and the domain scores for Listening, Speaking, Reading and Writing are at the intermediate level or higher. Under current state law (Education Code Section 313 [f]), students who are identified as English learners must participate in the annual administration of the CELDT until they are identified as Reclassified Fluent English Proficient (RFEP) (California Department of Education, 2015).

In the school year of 2014-2015, there were approximately 1.39 million ELLs in California public schools, in other words, 22.3% of the total enrollment in California public schools are classified as ELLs. The majority of ELLs (73%) are enrolled in kindergarten through 6th grade, the rest (27%) are enrolled in 7th through 12th grades (California Department of Education, 2015). Specifically, 80% of native-born second-generation students have been in U.S. schools since kindergarten, are still classified as limited English proficient when they reach middle or high school. As a result, high school students who are still classified as ELLs may be ineligible when applying for a four-year university due to English Language Arts course credit requirements (University of California, 2013). It is evident that preschool and elementary programs are not adequately addressing the needs of ELL students (Gándara and Hopkins, 2010). Bailey and Heritage (2014) have also argued that ELL students who enter school with a range of language experiences and language development needs are far from being well studied by

researchers or well addressed by educators in classrooms. It seems that the current literature does not offer a full description of the trajectories of English language development in children from language minority homes. The goal of this study is to qualitatively investigate and understand the challenges and difficulties that reticent ELL children encounter while acquiring English.

In order to speak a language effectively, it is key to practice using the language (Aydoğan, Akbarova, Doğan, Gonen, Tuncdemir, and Kerla, 2014). Practicing speaking necessitates students' oral language ability, but ELL students may feel reluctant and anxious to speak in English. Many of them have reported being shy to speak up in class and fear of being laughed at (Calderón et al., 2011). Furthermore, one of the key components in oral language development is narrative skill. It has been found that the ability to produce long coherent, and cohesive narratives develops during the school years (Hoff, 2014). Perhaps, starting from preschool, children have been exposed with teachers asking them to describe what they did over the weekend, recount events that happened at home, and summarize a story that they just read in class. After all, the production of narratives is all around children's daily oral language communication.

Some of the factors that influence English acquisition include oral language anxiety and personality differences. It has been found that the situation-specific anxiety that debilitates effect on the language learning was mainly reported in classrooms (Horwitz, 2001). Moreover, in an English as a second language situation, reserved and reticent students may often find themselves in situations where they must communicate in English. Researchers report that such situations are important for the learning of a second language. It seems that reticent and introverted students are usually at a disadvantage when it comes to creating opportunities to practice the second language unless they can take the advantage of the input generated by the more

extraverted students (Busch, 1982).

To support ELL children's English acquisition and language proficiency, this study incorporates LEGO® StoryStarter as manipulatives and explore its potential as an educational tool to facilitate positive learning experience of ELL children. The LEGO® StoryStarter ¹set is designed for elementary students and targets the English Language Arts curriculum. StoryStarter promotes story-making and narrative experiences in a group of two to five children. With basic bricks, characters, and building plates, LEGO® StoryStarter intends to scaffold children's narrative development, and encourage dialogue between students with collaborative learning, and may do so in part by diverting children's attention from their anxieties and reticence to participate in oral language tasks.

Literature Review

ELLs and English proficiency

Evidence from previous literature has suggested that English language proficiency is a significant predictor of positive academic adjustment in studies of first- and second- generation immigrant students. More specifically, English language skill exerted an understandable influence on academic achievement, and students with higher levels of English skills were more likely to receive better grades (Suárez-Orozco, Pimentel, & Martin, 2009). Oral comprehensibility is a critical component for students to master both in school and beyond. While oral proficiency can be developed within a couple of years, consistent with the aforementioned evidence, even in the best circumstances, with the highest-quality English

¹ The LEGO® StoryStarter set was generously provided by the LEGO Foundation to Dr. Alison Bailey and Dr. Carola Suárez-Orozco for conducting the current research.

language instruction, it can take seven to ten years to gain academic proficiency (Cummins, 1991).

Although it seems intuitive and critical that English proficiency is important in educational aspects, studies that specifically target elementary ELL children and the language anxiety that they may encounter during oral communication have not received much attention. Much of the research on language anxiety is based on foreign language courses for undergraduate students and/or adults. For example, Woodrow (2006) investigated the relationship between anxiety and second language performance on university students and found that the most frequent source of anxiety was interacting with native speakers. Moreover, Busch (1982) studied the relationship between personality differences and English as a foreign language proficiency of Japanese college students, and suggested that even introverted students may often find themselves in situations where they must communicate in English. There has been limited research on elementary ELL children and their language developmental needs.

Oral Language Anxiety

The main focus of the current study is the oral language anxiety in terms of learning English as a second language. In educational research, types of anxiety are classified as trait anxiety, state anxiety, and situation-specific anxiety. Trait anxiety is often known as a stable personality trait. A person who is trait anxious tends to feel anxious at various situations. On the other hand, state anxiety is a temporary condition experienced at a particular moment. The third type, which is focused in this study, situation-specific anxiety, recurs in specific situations (Spielberger, Anton, and Bendell, 1976). Language anxiety has been classified as a situation-specific anxiety rather than a trait anxiety (Horwitz, 2001). Anxiety reactions can be categorized as a reflecting worry or emotionality: cognitive factors which might be labeled “worry” or “lack

of confidence” and factors which refer to various indices of autonomic arousal or “emotionality.” Worry has been conceptually identified as any cognitive expression of concern about one’s own performance, while emotionality has been referred to as an automatic reaction, which tends to occur under examination stress (Leibert and Morris, 1967). Early researches into language anxiety often used the thirty-three item Foreign Language Anxiety Scale (FLCAS) to measure the anxiety levels of participants, and had been used on a large number of research projects (Horwitz, 2001). However, it is important to note the difference between learning English as a foreign language and learning English as a second language.

Personality and Cultural Differences

It has been mentioned earlier that personality variables may influence children’s success in second language acquisition. Studies in the 70’s examined personality and second language learning had indicated that outgoing personality was associated with success in language learning. Rossier (1976) tested fifty Spanish-speaking high school students who were classified as ELLs, appraising only their oral English skills. The results showed that extroversion was a significant variable in the development of his participants’ language proficiency. In another study by Cathcart, Strong and Wong-Fillmore (1979), researchers assessed kindergarteners, 1st and 2nd graders’ language proficiency included not only standard tasks, but also observation of the natural unelicited classroom language of the participants. The results showed that outgoingness was found to correlate with language proficiency for the 1st and 2nd graders.

Extroversion is generally categorized as a positive trait in western society; however, it may be less so in other cultures. In countries where introversion levels are high, the “cultural and social barriers” preventing a person from going out and getting input in the second language may be far greater than in other countries (Busch, 1982). Therefore, it is critical for researchers and

educators to take into the account the different personalities and backgrounds of students in regards to the language learning process.

Theoretical Approach

In order to facilitate and study interaction and the use of language in children, this study employed Vygotsky's sociocultural theory on the concept of mediation. For Vygotsky, the source of mediation was the behavior of another human being in social interaction or by a material tool. The current study is consistent with this theoretical stance by pairing participants into dyads to create social interaction and using LEGO® StoryStarter as a tool to generate opportunities for communication. The sociocultural perspective and the concept of mediation maintains that the emergence of strategies is a by-product of goal-oriented situated activity in which mediation through artifacts, discourse, or others plays a central role in apprenticing novices into a community practice (Donato and McCormick, 1994). Studies that focused on the application of Vygotsky's concept of mediation on second language acquisitions suggests that mediation can take the form of textbook, visual material, classroom discourse patterns, and opportunities for second language interaction, in which all forms of mediation are embedded in some context that makes them inherently sociocultural processes (Tharp and Gallimore, 2002).

The LEGO® StoryStarter is an educational tool that is ready-made for this type of collaborative learning. It is designed for elementary children and contains five building plates for creating story scenes are provided. Scenes are referred to as "scene structures," each scene structure has one building plate, allowing children to generate coherence in sequences of events that have a clear beginning, middle, and end. Moreover, the LEGO® StoryStarter set caters two to five students collaborating to create stories. Previous study (Sylla, Coutinho, Branco, and Müller, 2015) investigated the effects of manipulatives use in the classroom environment for

storytelling, and showed that children used the digital manipulative system to create stories, which helped foster the development of oral language and emergent literacy.

It was suggested in a review of effective instruction for English learners that collaborative learning is one of the most productive methods for teaching ELL children. In collaborative learning, teachers plan for students to work in small groups to help one another learn. Collaborative learning has been found effective for elementary and secondary students across a broad range of subjects, and it is especially so for ELL children who are learning to operate in English (Calderón, Slavin, and Sánchez, 2011).

Lastly, in relation to play and symbolic expression, Piaget (1962) proposed that, through play, children explore in a sensorimotor way with concrete objects that are symbols for something else that they have experienced directly or indirectly. In addition, ELL children who have not yet reached English proficiency could easily use LEGO® bricks to combine with nonverbal gestures to support their language and communication effectively. With the supplement of LEGO® pieces that entice children's interest and focus, children's attention on oral language anxiety is anticipated to be diverted or redirected (Clements, 1999; Sebesta and Martin, 2004; and Jordan, Miller, and Mercer, 1998), and able to engage with one another.

Research Problem and Questions

Although existing research had examined the relationships between language learning and oral language anxiety, studies that specifically focus on young ELL children and the oral language anxiety they may encounter had not been well addressed. The purpose of current study is to qualitatively capture the challenges of ELL children that teachers may overlook in classroom settings. This study does not intend to promote LEGO® StoryStarter as a substitution or replacement of current existing school curriculum; rather, to use LEGO® as an education tool

to support ELL children who have difficulties narrating stories or are reluctant to participate in class due to oral language anxiety or because they are at early stages of English language proficiency. The current study addresses four questions:

RQ1: How do elementary ELL students characterize their language proficiency and language learning experiences?

RQ1a: To what extent do their reported experiences indicate oral language anxiety?

RQ2: How do elementary ELL students participate in co-narrating stories without using manipulatives?

RQ3: How do elementary ELL students participate in co-narrating stories using LEGO® StoryStarter?

RQ4: In what ways do each dyad differ in terms of the co-narration context with and without using LEGO® StoryStarter?

Method

Site and Participants

This study qualitatively examined six elementary ELL children ($N=6$) attending the afterschool program at a university community pilot school. The community school is part of a partnership with a large public school district. In the academic year of 2015-2016, the student population was predominantly Latino (78 percent) and Asian (13 percent). In addition, 52 percent of the students were eligible for free or reduced price meal. Overall, 44 percent of the students are classified as English learners. About two-thirds of the residents in the school's neighborhood are foreign-born, primarily from Mexico, Central America, and Korean—among the highest percentage of immigrants in Los Angeles.

Through purposive sampling, we were able to recruit six elementary (i.e., one 2nd grader, two 3rd graders, two 4th graders, and one 5th grader) children who were Spanish-speaking and classified as ELLs. Flyers, parent consent, and child assent forms (Appendix A) that were translated in Spanish and Korean were passed out to parents at the site during recruitment period, although we were not able to recruit any Korean speaker as participants. We have informed the afterschool program coordinator, Ms. G, that we hoped to study children who were less comfortable speaking up in class or children who are typically shy. Ms. G then communicated with parents about the recruitment criteria of the study, parents who identified their children as shy then agreed for their children to participate in this study. Initially, there were eight potential participants and their parents/legal guardians expressed interests in the study; however, one of the participants was transferred to a different after school program within the community school, therefore, the research team had to drop another participant in order to keep an even number of participants since the study required participants be paired up into dyads.

Materials and apparatus

State-Trait Anxiety Inventory for Children

The types of data collection methods in this study only included the “trait inventory” of the State-Trait Anxiety Inventory for Children (STAI-C; Spielberger, 1973) in English. The trait inventory consisted of a 20-item “How-I-Feel Questionnaire,” and participants fill out the questionnaire by a pen or pencil. Sample items on the questionnaire include “I worry too much” and “I notice my heart beats fast,” participants were instructed to read each statement carefully and decide if it is *hardly-ever*, *sometimes*, or *often true* and check the box in front of the word that seems to describe them best. The purpose of the inventory was to provide the background information of participants’ anxiety level, and to reduce researcher bias from the interview and

observation data. The Trait Anxiety Inventory was not an outcome measurement in the study. In the case where participants may have had difficulties understanding the items or instruction, a Spanish-speaking research assistant was available to translate for the participants.

Although the STAIC was originally constructed and standardized for fourth, fifth, and sixth grade elementary school children, previous researchers (Papay & Hedl, 1978; Papay & Spielberger, 1986) have shown that the STAIC provides a valid and reliable means to measure trait and state anxiety in kindergarten through third grade children. Participants' A-Trait scores are for comparing students to the normative samples according to their age and sex.

Three interview sessions

In order to answer my research questions, three different semi-structured interview sessions were conducted with each participant individually. The interviews included open-ended, aged-appropriate questions, and were intended to elicit views and opinions from the participants. See Appendix B for an overview of interview protocols. The first semi-structured interview protocol was used to answer my first research question, and they included questions such as “what is difficult/hard about learning English?” and “what language do you speak at home?” Each interview was about 10 minutes and was not video-recorded. The second semi-structured interview protocol was used to answer my second research question, which included questions such as “what was easy/hard about having a partner when telling a story?” and “how did you feel when you're telling a story?” The second interviews ranged from 4 minutes to 8 minutes. Finally, the third semi-structured interview protocol was used to answer my third research question, which included questions such as “what was it like to tell a story with LEGO®?” and “what were your favorite and least favorite part about telling a story with LEGO® and with a partner?”

LEGO® StoryStarter

LEGO® StoryStarter set were provided for the purpose of one of the storytelling tasks during the third session. The StoryStarter set is a blue storage bin with sorting trays and is consists of 1,144 LEGO® elements with characters, animals, accessories, icons, basic bricks and five building plates. For the tasks in the current study, building plates were limited to three for the purpose of narrating a structured story with a beginning, middle, and end.

Procedure

One session was conducted per week for three weeks during the afternoons over the course of January 2017. To answer my first research question—how do participants characterize their language proficiency and language learning experience, participants were interviewed individually without video or audio recording in the first session. This was to ensure participants felt comfortable with the researcher and to build rapport and trusting relationships. First, I introduced myself as the researcher of the study and talked about my personal experience as an ELL when I first moved to the states from Taiwan:

“I moved to the U.S. with my family when I was 12, and at that time I did not speak English at all, therefore my first day of school was a disaster because of the cultural shock and language barrier. Nevertheless, I learned to speak English, moved on to college and now I am in graduate school conducting research to learn and help other children like me [...]”

Then, I explained that the purpose of my study was to help ELL children who may have had similar experiences as I did and to understand their English learning experiences. By talking about my personal experiences, I hoped the participants resonated and felt distant since they learned that, I am not a native speaker of English. After the initial interview and trust building,

the participants were administered the Trait Anxiety Inventory (Spielberger, 1972) individually for fifteen-minutes. The purpose of the inventory is to serve as a baseline of participants' characteristics and for researchers to triangulate the inventory and interview data for further data analysis. The inventory was not used to exclude anyone from the study.

During the second session, participants were paired into dyads with another participant who was also a reticent ELL speaker. Participants were paired closest by grade, since we recruited one 2nd grader, two 3rd graders, two 4th graders, and one 5th graders. However, the EL status of each participant was not taken into account when pairing up the dyads, the selection was based on participants' availability and convenience (i.e., whether participants were absent or not on the day of data collection). Since this is a small qualitative study, random assignment of participants was unattainable. All participants attend the same afterschool program at the same community school; therefore they knew each other before the start of current study. *Table 1* consists the breakdown of the grade level and gender of each participant in all three dyads.

Table 1
Breakdowns of all three dyads

Students	Dyad 1	Dyad 2	Dyad 3
Student 1	AL, 2 nd grade; female	IM, 3 rd grade; female	JS, 4 th grade; male
Student 2	CG, 3 rd grade; female	SM, 4 th grade; female	AG, 5 th grade; female

The first task in the second session required participants to listen to a short story read aloud by the researcher, *The Grasshopper and the Ants* (See Appendix C). Then, participants were given five minutes and asked to discuss with their partner in English and decide how they would retell the story with a beginning, middle, and end. Age-appropriateness and gender-neutrality were the criteria for story selection. After the participants have finished retelling the story, they then proceeded to the second task. The second task required each participant being interviewed individually with open-ended questions regarding the storytelling experience were asked. The

entire process of the second session was video and audio-recorded. (See Appendix B for interview protocol)

Lastly, the third session involved similar tasks as the second session. Participants listened to another short story read aloud, *The Golden Touch* (See Appendix D). Then, they were given 15 minutes to build the story together using LEGO® StoryStarter set and deciding how they would retell the story with a beginning, middle, and end. After they finished retelling the story, individual interviews with each participant were conducted regarding the storytelling experience with open-ended questions. The entire process of the third session was video and audio-recorded as well. Video recording of participants allowed the research team to analyze events retrospectively and capture simultaneous complex interactions between participants. Video recording also retains the captured data with no loss of its richness and for potential multiple reviewing. However, in the beginning of the study, participants were notified the right to refuse being recorded if they feel discomfort at any time during the study, and none of the participants refused to be recorded. *Table 2* demonstrates the design of the study.

Table 2
Study Design

Sessions	A-Trait from STAIC (Spielberger, 1976)	Storytelling Task	Individual Interview	Video- and Audio-recorded	Transcribed
Session 1	✓		✓		
Session 2		✓	✓	✓	✓
Session 3		✓ (with LEGO®)	✓	✓	✓

Data analysis

Multiple datasets were collected and analyzed to answer all research questions. Table 3 suggests the breakdown of each dataset corresponds to each research question. Research question one is answered by the first interview and the STAIC A-Trait inventory. Research question two is answered by the second interview and the first storytelling task. Lastly, research question three is answered by the third interview and the second storytelling task.

Table 3
Breakdown of data corresponding to use in research questions

Datasets	RQ 1	RQ 2	RQ 3	RQ4
STAIC A-Trait	✓			
Interview 1	✓			
Storytelling Task 1		✓		✓
Interview 2		✓		
Storytelling Task 2			✓	✓
Interview 3			✓	

The phases of data analysis in current study included: 1) Listening to the interviews and watching the video data 2) Transcribing videos 3) Initial coding 4) Pattern coding 5) Triangulation of the patterns and themes (Saldaña, 2013). Two undergraduate research assistants were involved during both data collection and data analysis stages, they assisted with video-recording and setting up sessions during data collection, as well as transcribing the interviews and storytelling tasks. All the interviews and storytelling data were transcribed within one month after the videos were recorded, which yielded 120 pages of single-spaced text. Once the data were transcribed, the research team began the process of initial manual coding, whereby the researchers individually examined the similarities and differences of interview responses across participants and across dyads.

In the beginning, researchers broadly categorized the interview responses as positive, negative, and/or neutral, then deliberately created sub-categories under these three broad categories. Next, the research team discussed the preliminary findings and reached consensus, then moved forward to pattern coding where each examined the relationships between sub-categories and codes. In the case of story structure and word counts, the research team came to agreement to determine the beginning, middle, and end of each story told by all three dyads. Word density ratio and frequency of turn-taking between dyads were calculated for further analysis of participants' language production. Diagrams and tables of categories and codes were created and organized into hierarchical landscapes for content analysis and pattern detection (Krippendorff and Bock, 2009). Lastly, the research team collaborated, reached intercoder agreement, and finalized the themes and codes for each research question.

Findings

Table 4 presents the background information of all six participants, including their home language, grade level, age, sex, A-Trait scores from the STAIC (Spielberg, 1976), in comparison with the population normalized A-Trait scores according to their grade level and sex, and their home languages. Surprisingly, all participants exhibited higher A-Trait scores than the norm, and the participants who are in the higher-grade levels (4th and 5th grade) exhibited lower A-Trait scores, this could have been attributed to the fact that participants took the A-Trait inventory during the first or second time that they have met the research team. Due to their ELL status and unfamiliarity with the research team, the participants may have felt nervous and anxious when taking the A-Trait inventory, especially when given the inventory in English.

On the other hand, all participants' reported Spanish being the language that they speak with (at least one of) their parents, five reported speaking English with siblings and/or cousins, and three reported speaking Zapoteco, an indigenous Mexican language, with their parents.

Table 4
Participants' background information

Participant Initials	Dyad	Grade	Age	Sex	STAIC A-Trait Score	Population A-Trait Norm (according to grade/sex)	Home Language
AL	1	2nd	7	F	69.0	39.1	Spanish and Zapoteco
CG	1	3rd	8	F	61.0	40.3	Spanish, Zapoteco, and English
IM	2	3rd	8	F	60.0	40.3	Spanish and English
SM	2	4th	9	F	70.0	38.1	Spanish, Zapoteco, and English
JS	3	4th	9	M	48.0	36.3	Spanish and English
AG	3	5th	10	F	45.0	38.7	Spanish and English

RQ1: How do elementary ELL students characterize their language proficiency and language learning experiences?

The transcript from the first interview data showed that there are three major themes and some sub-categories according to the English learning experiences of participants: *interaction*, *self-evaluation*, and *feelings towards learning English*.

Interaction

The first theme, “interaction” is coded and defined as participants’ language communication with people such as friends and family. All six participants reported they speak Spanish to at least one of their parents, and all six participants speak English to cousins and siblings. It seems that there may be a mix of generational gap because participants reported that they speak English to the people in their generation (i.e., cousins, siblings, and friends), and on the other hand, all of them reported that they speak Spanish to at least one of their parents while some reported that they speak a little “English mixed with Spanish” to a parent.

RQ1a: To what extent do their reported experiences indicate oral language anxiety?

RQ1a explored whether there was any indication of oral language anxiety in the interview responses of participants. As expected, participants reported some degree of anxiety in terms of feeling scared and afraid of speaking up. Particularly, sub-categories under *self-evaluation* such as *embarrassment in class* and *shyness* demonstrated indications of anxiety in speaking up in class.

Self-Evaluation

Throughout the interview, all participants provided their self-evaluation on English proficiency, and there are two subcategories: limited proficiency and proficiency. Here is an example of participants’ self-evaluation on limited proficiency:

“The more hard of English because sometimes I make mistake in English. And it’s kind of hard to write and spell.” – AL, 2nd grader

The data from the interview suggests that spelling, speaking, and pronunciation are the challenges being reported the most in terms of the English learning experience. Four out of six participants reported that they have difficulties spelling English words, moreover, four participants also reported that they find it hard to pronounce some words in English. In addition,

reading and writing were each reported as a challenge by two participants. Contrary to limited proficiency, participants also provided their self-evaluation on proficiency in English. Here is an example provided by a 3rd grader:

“Talking [is easy], you can just say it. [Be]cause you don’t really need to follow the rules.” – CG, 3rd grader

Although there were not consistent patterns of participants’ self-evaluation on proficiency, it seems that participants are able to communicate in English effectively under less-structured situations such as informal conversations outside of class with peers.

Embarrassment in class

When asked about their experience in terms of classroom participation, half of the participants reported some degree of fear of being laughed at and embarrassment in class.

“When I said the wrong answer, and the class laughed. I kind of feel like crying, but I remembered I have to be brave and stay strong.” –

AG, 5th grader

Participants across different grade levels mentioned that they feel embarrassed when asked a question that they don’t really understand or when they came up with the incorrect answers. One also explained that she didn’t know why the class was laughing at her because she didn’t understand English. The fear of being made fun of is the most prominent themes reported by the participants.

Shyness

In current study, participants’ self-evaluation of shyness is defined as their willingness to speak up in class. Four participants self-reported as shy, and although two participants did not directly describe themselves as shy, they both stated that they rarely talk or participate in class.

“Like um, I’m scared to talk in front of class, [be]cause I’m too scared to talk in front of my friends.” JS, 4th grader

In the case of JS, there seemed to be some indication of anxiety given that he expressed his fear of talking in front of the class. Interestingly, none of the participants reported that they volunteer to speak up in class. One participant reflected on the time she participated in class, and the teacher was very happy because she is the type of student who does not talk in class. It seemed that all participants were not comfortable with the idea of raising their hands or speaking up in class.

Feelings towards learning English

Fortunately, despite all the challenges and obstacles in learning English, participants still reported some positive feelings towards learning English. When asked which language they prefer to speak, five out of six participants stated that they prefer English than Spanish.

“My first native language is Spanish but I prefer English, it sounds smart when I say it.” – CG, 3rd grader

It was very interesting to see that participants prefer speaking English even though their first language is Spanish. Only one out of six participants expressed that she preferred to speak Spanish than English. The interview excerpts suggested that participants’ may have been influenced by peers, friends, and school setting, since English is the major language that they use in school.

In summary of participants’ background information and their overall English-learning experience, we know that based on the interview excerpts, participants tend to speak English with their peers, friends, and siblings. All participants communicated that one of the reasons that they do not speak up or participate in class due to fear of being laughed at, embarrassment, and

lack of proficiency in English. They also identified themselves as shy and that they talk more in less-structured situations such as outside of class than in class. In spite of all, five of six participants reported that they prefer speaking English than Spanish because it makes them feel smart and that they can learn more when speaking English. To further understand their differences in collaboration in terms of their introversion, the research team developed different research questions to explore participants' narrative experience in the co-narration context by first putting participants into dyads and then administering the storytelling task. Research questions 2 and 3 examine how and in what ways do the participants participate telling stories with and without LEGO® StoryStarter.

RQ2: How do elementary ELL students participate in co-narrating stories without using manipulatives?

To understand how participants participate without using manipulatives, we examined the data from the second interview and the first storytelling task. Table 1 displays the breakdowns of all three dyads according to their grade-level and sex, and Table 5 suggests the time and amount of words each dyad took to complete the storytelling task without LEGO® StoryStarter. In addition, the ratio was converted by the time in seconds divided by number of words, to standardize the comparison across all three dyads. Looking at the word density, Dyad 3 showed the highest density by speaking on average one word per second, while the other two dyads spoke about one word every two seconds. This could have been attributed to the developmental differences that Dyad 3 were the oldest dyad among all.

Table 5

The word count and time length that each dyad took to finish retelling the first story, without LEGO® StoryStarter. Ratio was converted to words per second to standardize the comparison across dyads.

Story 1 (oral narrative without Legos)	Dyad 1	Dyad 2	Dyad 3
Word Count	63 words	147 words	168 words
Time Length	2 min 7 sec	5 min 12 sec	2 min 49 sec
Ratio (words/second)	0.50 word/second	0.47 word/second	1 word/second

Three major themes emerged based on the second interview and storytelling observation: *collaboration, self-evaluation, and emotion-recognition*. Firstly, majority of the participants expressed that having a partner was helpful during the storytelling tasks, especially when one forgets a part about the story, the other person could chime in and remind one about the forgotten part. This serves as evidence suggesting that participants collaborate as they help each other complete the storytelling task. Secondly, participants from all three dyads exhibited self-evaluation of some degree on attention, story recall/memory, and knowledge of the story. It seems that there were some variations between how they evaluate themselves. For example, some participants were distracted by their partners, while others were not; some had difficulty recalling the story due to distraction or lack of English proficiency; some were not able to understand the story in the first place. Thirdly, participants from Dyad 2 and Dyad 3 reported some degree of uneasiness such as nervous, shy, and weird, but all due to different reasons. It would be substantial to breakdown the analysis according to each dyad since the patterns vary distinctively.

Collaboration

Collaboration was coded when participants explained their feelings towards having a partner during the storytelling task. Although one participant reported he did not like it when his partner asked him to start telling the story, the rest of the five participants reflected positively about having a partner when telling a story:

“It’s like she’s [partner] the one giving me company, cause even she’s older than me and even though she doesn’t know that much English, I could at least help her and if I don’t know some part, she could help me.” – IM, 3rd grader, Dyad 2

The interview data suggested that majority of (five out of six) participants find it helpful to have a partner when retelling a story together, especially when they forget a part of the story, their partners could remind them and help them finish the story; however, it was somewhat difficult for them to decide on turn-taking.

“Sometimes you couldn’t decide, um, who says the beginning, who says the middle, [and] who says the end.” – CG, 3rd grader, Dyad 1

Self-Evaluation

Similar to the first interview data, all of the participants provided their self-evaluation on the storytelling task. Since the task requires participants’ ability to listen, comprehend, process and organize thoughts, three sub-categories emerged and are analyzed by dyads: *attention*, *memory*, and *knowledge of the story*. *Attention* was coded whenever participants reflected about distraction or staying focus. *Memory* was coded when participants reflected on recalling and remembering the story. Lastly, *knowledge of the story* was coded and defined as participants’ comprehension of the story.

Attention

Dyad 1 was the youngest dyad of all three (participants are in 2nd and 3rd grade). Analysis of the videos during storytelling task and the second interview suggested that both participants were somewhat distracted by the presence of each other. It was observed that CG had multiple

instances of tickling AL while the researcher was reading the story out loud. Participants reported they were not able to focus on the story:

“For me, it was [AL], because she kept tickling me, and she also pulled on my skirt.” – CG, 3rd grader, Dyad 1.

The participants in Dyad 2 were in 3rd and 4th grade. Unlike Dyad 1, Dyad 2 was not distracted by the presence of each other, but one participant reported that she needed to hear the story more than one time to understand it, and she was also distracted by the pictures and posters up on the wall in the classroom.

Dyad 3 was the oldest dyads of all three, and the participants are in 4th and 5th grade. Neither of them had reflection on being distracted nor having difficulty paying attention.

Memory

Interestingly, Dyad 1 did not directly report anything regarding story recall. Perhaps the participants were challenged with distraction rather than the ability to recall the story.

Both participants from Dyad 2 commented on remembering and forgetting some parts of the story. Relating back to the previous sub-category, *Attention*, participant IM explained that she was distracted; therefore she didn’t remember much about the end of the story. On the other hand, her partner SM expressed that the easy part about having a partner is that *“sometimes we could remember things and so we could say it loud together.”*

When asked whether they think the way they told the story was the same as they imagined, participant JS expressed that he only remembered “just a bit,” which is the end of the story but not the beginning. As a result, his partner, AG pointed out that it was difficult for her because he forgot the part, *“because the middle part like, I needed help on one part, and he said*

that he forgot the story completely, so then it was kind of hard for me when he didn't remember [...]."

Knowledge of the story

When asked if they understood the story, both participants answered with "yes," however, when asked to tell what was hard about retelling the story, AL indicated "*it was hard from the story because I didn't know last [the end] and first [the beginning].*" Although she reported that she understood the story, she was not able to recall and retell the complete story by herself.

When asked whether they think the way they told the story was the same as they imagined, both participants responded with "yeah" and "kind of." Moreover, participant SM expressed that due to her and her partners' limited English proficiency, they were unable to comprehend the story completely, and not knowing certain words in the story made it difficult to perform the storytelling task,

"We couldn't understand some things, sometimes, we couldn't understand about the story, because we are both learning English, we sort of don't know it yet [...]. It was sort of different because I don't know what was the grasshopper, and so it was sort of difficult." – SM, 4th grader, Dyad 2.

Although there were no signs of distraction, participants' self-evaluation in Dyad 3 suggested that their ability to recall the story seems to be related to their ability to comprehend the story. Participant JS indicated that he did not understand the beginning of the story, which made the retelling part difficult because he couldn't do it when his partner asked him to say the beginning. His partner, AG, also communicated that he needed help because "*he said that he was confused sharing, and he didn't even know the whole story.*"

Emotion-Recognition

Despite participants' self-evaluation on their ability to recall and retell the story, all participants were able to reflect on their feelings and emotions during the storytelling task. Emotion-recognition was coded and defined as participants' self-reported reactions and feelings about either having a partner or retelling the story.

Both participants in Dyad 1 commented that it was fun telling a story with a partner, and AL expressed that the overall storytelling activity was "good." Participants in Dyad 2 communicated that both of them were nervous during the storytelling task, but for different reasons. Participant SM explained that her and her partner were both nervous and shaking in the beginning since it was their first time being partners and talking to other people,

"I was kind of nervous, and we were both shaking. It was at the end [where] we both took a deep breath so we could calm down [...], it was our first time being partners and it was [also] our first time talking to other people." – SM, 4th grader, Dyad 2.

On the other hand, participant IM felt nervous when her and her partners don't know a part of a story and as well as when she was being video-recorded,

"If like, if we both don't know it, because it gets me a lot more nervous [...]. It was nervous for me because for me, to get videotaped is something that I don't really do that much, so there was a little weird, but at the same time like I could do it. I like it because it gets me more used to being in camera, or like not getting shy no more, and like letting other people see me and I don't getting shy." – IM, 3rd grader, Dyad 2.

Participants in Dyad 3 had a very interesting dynamic between them. Participant AG pointed out that it was kind of weird because although she and her partner knew each other before, they have not talked in years, but it seemed that participation in current study became an opportunity for them to talk to each other again.

“It was kind of like weird because me and JS haven’t talked since years, cause he was in 3rd grade and I was in 4th grade, and then he was in a different classroom so we don’t get to see each other that much [...] and like we just started to be friends, and I thought me and him stopped being friends after years, and then he asked if I wanted to be his friend again, and we just came to be friends again.” – AG, 5th grade, Dyad 3.

When asked about their feelings about having a partner, participant JS said, “it was kind of shy, [be]cause I was friends with her.” And when asked about their overall feelings about the storytelling activity, he said, “uh shy, just shy.”

Since Dyad 3 is the oldest dyad and the only dyad consists of a boy and a girl, the self-reported emotions were different from that of Dyad 2 and Dyad 1. JS, who is in 4th grade, felt somewhat shy having a partner who he used to be friends with. On the other hand, AG felt weird about the reunion of their friendship.

RQ3: How do elementary ELL students participate in co-narrating stories using LEGO® StoryStarter?

Table 6 shows the time in seconds and the amount of words each dyad took to complete the storytelling task with LEGO® StoryStarter. In addition, the ratio was converted by the time in seconds divided by the number of words, to standardize the comparison across all three dyads

and the two storytelling tasks. Dyad 1 and Dyad 2 showed improvement in terms of word density while Dyad 3 remains the same.

Table 6

The word count and time length that each dyad took to finish retelling the second story, with LEGO® StoryStarter. Ratio was converted to words per second to standardize the comparison across dyads and story tasks.

Story 2 (oral narrative with LEGO®)	Dyad 1	Dyad 2	Dyad 3
Word Count	258 words	209 words	319 words
Time Length	7 min 2 sec	3 min 19 sec	5 min 40 sec
Ratio (words/second)	0.61 word/second	1.05 word/second	0.94 word/second

All dyads exhibited similar ways of participating in storytelling using Legos. Interestingly, participants in all dyads spoke Spanish to each other, but for different purposes, which would be analyzed separately by dyads. Four major themes emerged when analyzing the last interview and storytelling data: *inquiry, self-talk, characters/scenes assignment, and partner correction*. All participants engaged in “inquiry behavior” and asked questions to their partners and as well as to the interviewer regarding the pieces from the LEGO® StoryStarter set. Participants were curious about the function of some pieces and accessories in the LEGO® StoryStarter set. Next, while building the stories, participants engaged in “self-talk,” which includes talking, humming, singing, asking and answering questions by themselves. It was observed that at least one participant in each dyad was singing to herself/himself during the story-building task. Furthermore, with building plates that were offered in the LEGO® StoryStarter, participants were involved with “characters and scenes assignment.” It was observed that participants assigned different parts in the story to their partners, as well as different characters. Lastly, two out of three dyads exhibited correcting behavior, “partner correction” when their partner used the language inaccurately or when the story was not told the way that they have pictured.

Inquiry

For example, all dyads asked questions about the Legos when given time to build the story together. They engaged in inquiring the function of the Lego pieces,

“Was this for the arm?” SM took out a piece and asked.

Sometimes, they would ask the interviewer if it would be okay to use certain pieces for different purposes, the interviewer would always indicate that there is no right or wrong way, as long as they can use their imagination.

Self-Talk

Besides asking each other and the researchers questions, participants in all dyads seem to engage in self-talk, which includes talking, singing, humming, asking, and answering questions to themselves,

“Okay, this is not the same one. This is, oh! This is the head witch. Oh, witch head! Oh! Interesting! No, I don’t want that, this is more like for the guards.” CG talked to herself as she picked out different characters and pieces from the Lego box.

“See, gold, gold, gold, gold, into gold, into gold, into gold, everything has to be yellow.” SM hummed as she looked through the tray full of Legos.

“I’ll make two. Dun, dun, dun, dun. I’ll build like a wall over here.” JS hummed as he collected the pieces that he needed to build.

Characters/Scenes Assignment

Participants assigned scenes to each other using the story plates provided, and some of them also assigned their partners to build and create certain characters. CG and AL from Dyad 1 assigned story scenes with the help of Legos,

CG: She’s gonna tell the beginning

AL: No, I'm gonna tell the middle

CG: What? But you picked that last time!

AL: But I don't know how to pick something else

CG: Or you can tell it from the Legos. It would be easier, at least build something.

That's why I'm building a guard to protect King Midas. Why did you put all that?

On the other hand, AG and JS from Dyad 3 used Legos in order to assign characters for each other,

JS: Which one should we do for the um, the Queen?

AG: And the King

JS: Okay, you do the Queen and I do the King. This one.

AG: I think

Partner Correction

Besides inquiry, self-talk, and characters/scenes assignment, it was also observed during the storytelling task that participants correct each other regarding the content of the story, the use of Lego pieces, and the English language proficiency. In Dyad 2, IM corrected SM for telling the incorrect content of the story, and decided to tell the beginning by herself,

SM: It was um, a god, he went like, he touches and something and turns into gold

[IM whispers and waves her right hand at SM]

SM: Hm?

IM: That's this part!

[IM points at another story plate]

SM: Then what?

IM: The beginning, you don't remember the beginning?

[IM points at the first plate, shakes and lowers her head, takes a deep breath, and stands up to demonstrate the beginning]

IM: There was this man, that wanted um, a lot, he wanted gold, and so he went he saw um, and elf, and he wanted [...]

It was also observed that participants in Dyad 1 demonstrated the correction of the use of Lego pieces when retelling the story together,

CG: And then, at the end, okay. So when he watch, um, the gates close? AL, can you hold it for a bit? 'Cause I'm gonna do a little something

[AL holds up the chain with her hands]

CG: When he saw

[AL drops the chain]

AL: Sorry

CG: When he saw the gates close, because these two guards in here

AL: Close, right?

[AL puts down the chain]

CG: No!

AL: You said close

CG: I mean close, but stay it up, so it will look like a gate

[AL holds up the chain again]

Finally, it was observed that participants corrected their partners' English pronunciation and vocabulary, especially in Dyad 3. AG pointed out her partner's mistakes when JS mispronounce a word

AG: Is that the first part?

JS: What? No, it's

AG: The last part?

JS: Uh, it's the *medium*

AG: The middle?

JS: Yeah

Here's another example when JS put tress on the building plate,

JS: We can put *plaints*

AG: Plaints? What are plaints?

JS: Plants

Use of Spanish

It was observed that all three dyads used some Spanish to communicate with each other during the second storytelling task with LEGO® when exploring the building pieces from the LEGO® tray. Participants in Dyad 1 spoke Spanish to each other when they found chains and handcuffs while selecting accessories and building pieces from the tray. It seemed possible to suggest that the participants knew the words "chains and handcuffs" in Spanish but did not know how to say them in English. Next, the use of Spanish occurred in Dyad 2 when participants were

describing what the characters from the LEGO® tray look like, for instance, “*he is making fishes*”. Finally, participants in Dyad 3 spoke Spanish to each other when they were going through the tray and looking for particular pieces, they told each other to “*go away*” in Spanish as they were both in each other’s way of getting the pieces they wanted. It is interesting to see that although the use of Spanish all occurred when participants went through the LEGO® tray, the purpose of using Spanish shifts as the dynamics of each dyad differ.

Despite all the common themes and patterns across all dyads, each dyad had their own ways of retelling the same exact story, which is critical to examine and analyze the observation data from the storytelling task by each dyad. Hence, this leads to the last research question.

RQ4: In what ways do elementary ELL students (in each dyad) differ in terms of retelling stories with and without using LEGO® StoryStarter?

To compare the differences of how each dyad retold the stories with and without using LEGO® StoryStarter, we examined the amount of language input, number of turns each participant took, and story content. For the amount of language input, we calculated and compared the word density of each dyad in both storytelling tasks. We also compared the turn-taking frequency of each participant in both storytelling tasks in order to gain a different perspective of how language was generated from the word density. Lastly, we examined the story content and found that all three dyads included new elements to the story with LEGO®.

Word Density

Figure 1 demonstrates the word density ratio of both storytelling tasks (i.e., with and without LEGO® StoryStarter) for all three dyads. The oldest dyad, Dyad 3 showed no significant difference in terms of their word density of both stories, they went from 1 word/second without LEGO® to 0.94 word/second with LEGO® StoryStarter. However, the youngest dyad, Dyad 1

showed increase from 0.50 words/second without LEGO® to 0.61 words/second with LEGO® StoryStarter. On the other hand, Dyad 2 exceptionally showed the most increase in word density and efficiency among all three dyads. They went from 0.47 words/second without LEGO® to 1.05 words/second with LEGO® StoryStarter, and not only did their word density increased, but it also seemed that they were more efficient in retelling the story with LEGO® because they used less time to produce longer narratives with LEGO® StoryStarter (i.e., from 5 minutes without LEGO® to 3 minutes with LEGO® StoryStarter).

It would be possible to suggest that there seems to be a developmental difference since the oldest dyad, Dyad 3, had about the same word density ratio with and without LEGO®. Perhaps, the participants have been exposed to summarize or retell stories in their own words because they have been in school longer than the other two dyads have. On the other hand, Dyad 1 and Dyad 2 both showed increase in word density ratio, especially in Dyad 2, with doubled the words that they produced per second.

Figure 1

Word density ratio converted by the time in seconds divided by the number of words each dyad took to complete both storytelling tasks. The ratio has been standardized in order to compare across storytelling tasks and across dyads.

Dyad 1	Dyad 2	Dyad 3
Story with LEGO® (0.61 w/s) > Story without LEGO® (0.50 w/s)	Story with LEGO® (1.05 w/s) > Story without LEGO® (0.47 w/s)	Story with LEGO® (0.94 w/s) = Story without LEGO® (1.00 w/s)

Turn-Taking

To gain a different perspective of how language was generated differently in the context of with and without LEGO®, the frequency of turn-taking of each participant was examined in both storytelling tasks. All six participants took more turns when retelling stories with LEGO®, which is evidential for more communication and language input with LEGO® than without LEGO®. On the other hand, the turn-taking seemed balanced across all three dyads during both tasks. The participants in all dyads had close to equal numbers of turns, which suggested that there seemed to be an equal status partnership despite the differences in their age and/or English proficiency. Table 7 presents the number of turns taken in both context.

Table 7

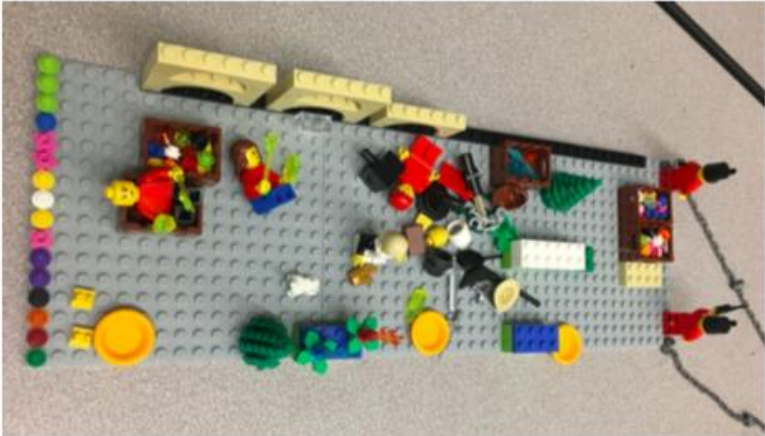
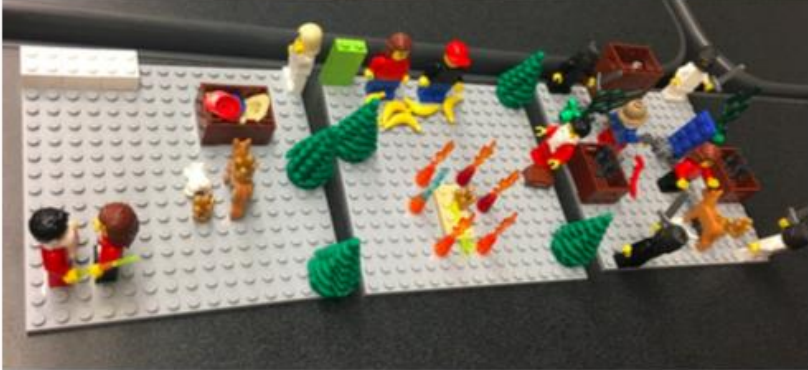
Number of turns each participant took in both storytelling tasks

Dyads	Story 1 (without LEGO®)		Story 2 (with LEGO®)	
	STU1	STU2	STU1	STU2
Dyad 1	3	2	5	4
Dyad 2	4	3	9	10
Dyad 3	3	3	4	5

New elements to the story

Unexpectedly, when provided with LEGO® StoryStarter, all dyads added new characters who were not in the story originally. Perhaps the various characters and accessories from the StoryStarter set inspired participants' creativity and imagination. For example, instead of having a "king" according to the original story, *The Golden Touch*, Dyad 3 decided to come up with a Queen and the queen's sisters. Another example from Dyad 2 was the addition of a wife to the elf from the original story, as well as a snake, some blood, a dead boy and a dead girl. These additional characters took parts of the language input and word counts from without LEGO® to using LEGO®, participants also demonstrated their use of exploratory ability with new ideas in terms of the narrative experience. Finally, Table 8 displays the photo data of the story that was built by each dyad, all with a beginning, middle, and end as the participants created and narrated.

Table 8
Photo data of Story 2 built by each dyad using Legos

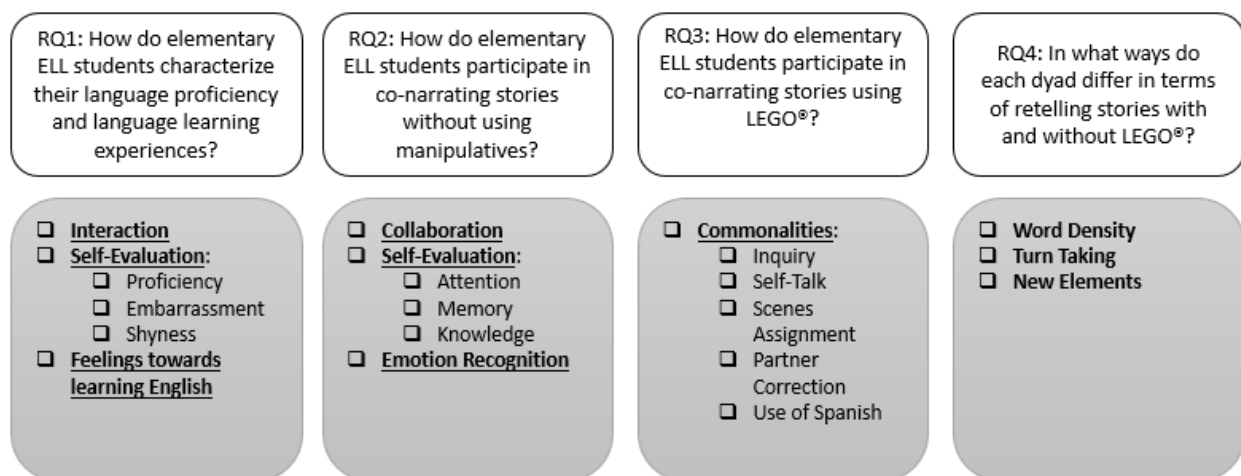
Story 2	Beginning	Middle	End
Dyad 1			
Dyad 2			
Dyad 3			

Discussion

The aim of current study is to understand the impact of a constructive play set—LEGO® StoryStarter on reticent ELL speakers in terms of oral language production in the co-narration context. Through three individual interviews and two different storytelling tasks, this study was able to examine young ELL students’ English interactions from a qualitative perspective. We studied six elementary ELL children and conducted three sessions of individual interviews, two storytelling tasks, and implemented a Trait-Anxiety inventory (Spielberger, 1976) to triangulated the data and investigate the four research questions. All participants scored higher than the norm sample on the A-Trait Scores, and this could have been attributed to the fact that the participants took the A-Trait inventory during the first or second time that they have met the research team. Due to their unfamiliarity with the research team, the participants may have felt nervous and anxious when taking the A-Trait inventory. Through pattern detection and data analysis, different findings and themes emerged regarding each research question. Figure 2 demonstrates the themes emerged based on each research question.

Figure 2

Major themes and patterns emerged based on research questions



Indication of oral language anxiety

All of the participants communicated that part of the reason that they do not speak up or participate in class is due to fear of embarrassment, fear of being laughed at, and lack of proficiency in English, which was consistent with previous literature reporting some ELL students feel reluctant to speak English for these reasons (Calderon et al., 2011). According to the literature, anxiety reactions can be categorized as reflecting worry or emotionality: cognitive factors which might be labeled “worry” or “lack of confidence” and factors which refer to various indices of autonomic arousal or “emotionality.” Worry has been conceptually identified as any cognitive expression of concern about one’s own performance, while emotionality has been referred to as an automatic reaction, which tends to occur under examination stress (Leibert and Morris, 1967). Participants indicated the concerns of being laughed at or being scared to talk in front of the class are aligned with the characteristics suggested in the literature.

More specifically, participants also responded that they tend to talk more in less-structured situations such as outside of class than in classroom settings. This could indicate that ELL children who are less comfortable with speaking up would benefit from great use of small-group instruction or pairs instead of the use of whole class instruction.

English language learning experience

Surprisingly, a majority of the participants prefers speaking English rather than Spanish, and two participants claimed “because I can learn a lot” and “it sounds smart when I say it.” Additionally, participants reported that they speak English to the individuals who are of their generation (i.e., cousins, siblings, and friends). Perhaps this could be related to the social dynamics that they have been exposed to, as suggested from the previous literature, that children prefer to learn from those who have been accurate in the past, and children value past accuracy

over familiarity (Corriveau and Harris, 2009). Therefore, although participants are more familiar with Spanish, they still prefer to speak English when they value accuracy.

Storytelling without using manipulatives

When participants were paired as dyads for the purpose of the storytelling task, they reported positively in regards to having a partner for reasons such as reminding each other about the task and providing each other company, which was expected referring back to the theoretical framework of the study. With Vygotsky's sociocultural theory with the concept of mediation and zone of proximal development, the dyadic setting provides equal status partnership; although the participants in each dyad differed in age, grade level, and EL status, it has been argued that when children play/work together, they act above their typical level of development and are able to regulate their own and their partners' behavior according to more general social scripts (Minick, 1987). In other words, partners in all dyads were able to contribute and make progress to the story regardless of their English proficiency or memory, as the theory of ZPD suggested, there is learning potential in peer groups where children have incomplete but relatively equal expertise, and each partner possesses some knowledge and skill but requiring the others' contribution in order to make progress (Minick, 1987). The sociocultural perspective and the concept of mediation matins that the emergence of strategies is a by-product of a goal-oriented situated activity in which mediation through artifacts, discourse, or others play a central role in apprenticing novices into a community practice (Donato & McCormick, 1994). These examples show how a small-group dyadic collaborative learning environment facilitates the learning of all members in the group (Calderon et al., 2011).

Besides the positive aspects of collaboration, participants also reflected on some degree of uneasiness in the co-narration context, including feeling nervous, shy, and weird. Dyad 3

reported feeling shy and weird due to the dynamics and friendship between both participants, and perhaps this could be interpreted by the developmental differences where participants are transitioning to preadolescence around age ten (Corsaro, 2005), and having friendship with the opposite sex at this age can be unexpected and different than at an earlier age.

Storytelling when using LEGO® StoryStarter

It seems that by having a constructive play set such as LEGO® StoryStarter encourages communication and facilitates active participation between the participants during the storytelling task. All three dyads engaged in “inquiry” behavior, which they seemed curious and asked each other questions regarding both the content of story and the building pieces in the LEGO® tray. Here is an example from Dyad 3 during the process of story building, and multiple instances of back and forth questioning to each other were observed in less than a minute:

AG: How do you put this on? Can you connect these?

[AG connects the pieces and hands it back to her partner, JS]

AG: How do you even connect these?

JS: And then the cat

AG: It came out again. I’m just going to put another thing on it, I’m a
put hair

JS: Me, too. Where’s gold?

AG: Look at that! Does it look nice?

[AG shows the LEGO® character to JS who is still looking through
the tray; JS laughs]

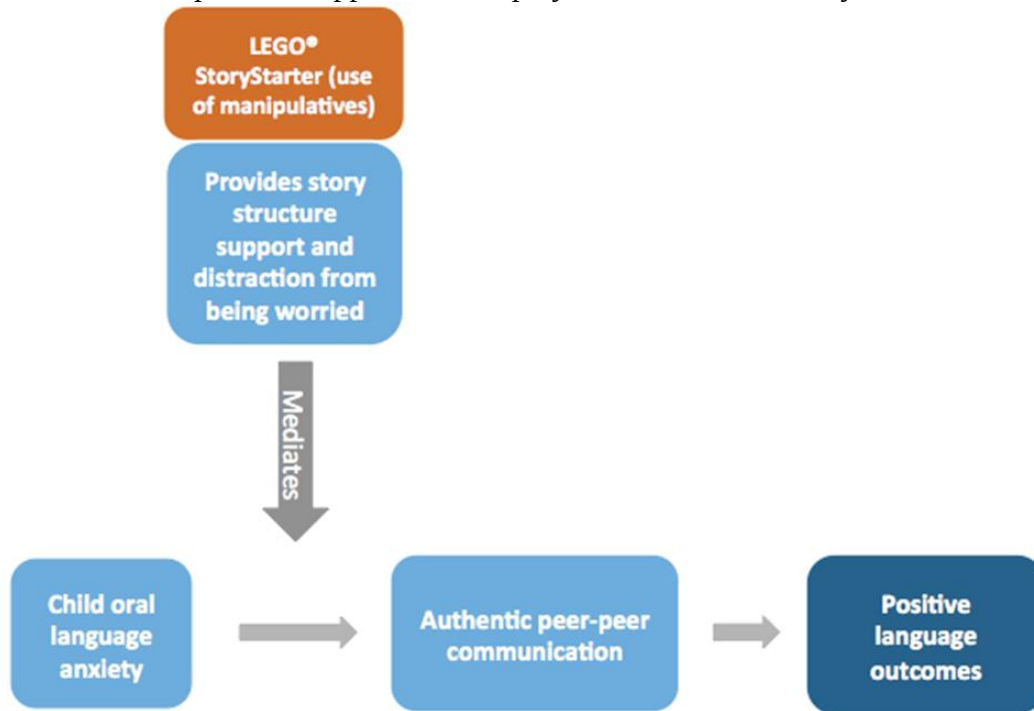
JS: Where's gold at? Where's gold at?

AG: Use bananas.

It was also observed that participants corrected each other in relation to the story content, English proficiency, and the use of LEGO®. Finally, participants also engaged in self-talk, which includes talking, singing, humming, asking, and answering questions to themselves.

Using the items in the constructive play set as manipulatives may shape the way that participants communicate with each other as well as how they express themselves. These findings parallel previous studies in which the effective use of manipulatives in teaching motivated children who had different learning styles and different learning abilities (Burton, 2009). Studies in the early 2000's on manipulatives focused on children's mathematical learning and found that manipulating objects decreases children's mathematics anxiety and increases the learning of mathematical content (Clements, 1999; Sebesta and Martin, 2004; and Jordan et al., 1998). This study expands on children's oral language development with similar uses of manipulatives that may lead to positive learning outcome. *Figure 3* shows the theoretical and practical approaches being employed in this study. Within the mediation concept of sociocultural theory by Vygotsky, this study incorporated the use of manipulatives with a constructive play set as a mediation tool, which provides story structure support and distraction for children from being worried. The relationship between oral language anxiety and authentic peer to peer communication may be moderated by the facilitation opportunity of the constructive play set which may eventually lead to positive language outcomes.

Figure 3
Theoretical and practical approaches employed in the current study



Storytelling with and without LEGO® StoryStarter

In order to compare the stories across dyads with and without a constructive play set—LEGO® StoryStarter, it was critical to standardize the word density ratio of word count to the time length. The results suggested that while Dyad 3 showed no difference in word density, both Dyad 1 and Dyad 2 showed increase in word density with the aid of the constructive play set. Most importantly, Dyad 2 was exceptionally efficient in retelling the story using the constructive play set with less time and more input of words.

Besides the word density ratio, the frequency of turn-taking of each participant was examined and analyzed. It is evidential to suggest that there were more communication and language input when participants used LEGO® during the storytelling task since all participants took more turns when retelling the stories with LEGO®. Casillas, Bobb, and Clark (2015) suggested that taking turns allows children to get feedback from other speakers, to adopt more

complex ways of coordinating with others, and to test hypotheses about the language they hear around them. Thus, with the increase of turn-taking frequency, it is again confirmed that participants elicited more language and communication with the use of LEGO®.

Finally, we also found that when using LEGO®, participants created new characters and added new storylines that were not scripted in the original story, which demonstrated participants' use of exploratory ability with new ideas in terms of the narrative experience. Consistent with the previous findings of Sylla et al., (2015) the possibility of actively influencing the story plot, and the availability of various characters provided a framework for the creative exploratory task, stimulating children's imagination, and triggering new ideas for the construction of narratives, thus creating opportunities for more diversified verbal interactions.

This study supported children's oral language development with using LEGO® as manipulatives in educational setting. With effective use of manipulatives, participants were able to connect ideas and demonstrate their exploratory ability and imagination with addition of new elements to the original story. This is also in line with literature that examined the use of digital manipulatives (Sylla et al., 2015). The physical blocks such as LEGO® and the digital content may gave children the freedom of physical movement, support the physical immersion in the story (i.e., such as gesturing to visible characters and accessory pieces), as well as the embodiment of different characters increasing the children's enthusiasm and involvement with the task (Sylla, Coutinho, and Branco, 2014).

Conclusion

In the United States, 4.6 million students are classified as ELLs in the school year of 2014-2015 (U.S. Department of Education, 2016), and to speak a language effectively, it is key to practice using the language, but unfortunately, many ELL students feel reluctant and anxious

about speaking up in class due to the fear of embarrassment, and this is the case for both participants in current study and existing literature (Calderón et al., 2011). To support the challenges and difficulties of ELL students, this study applied the sociocultural theory by Vygotsky on the concept of mediation (Donato & McCormick, 1994), where the source of mediation moderator was the behavior of another human being in social interaction or a material tool. By paring participants into dyads to create social interaction and a constructive play set as a tool to generate opportunities for communication, the current study demonstrated the theoretical and practical approach with Vygotsky's sociocultural theory.

Findings suggested that the use of LEGO® StoryStarter shapes the way that participants interact with each other, as it encourages communication not only with each other, but also with themselves. It was observed in multiple instances with the use of LEGO®, participants talked and sang to themselves, asked and answered questions, and corrected partners' errors. These examples of participation seemed to be facilitated by the incorporation of LEGO® as manipulatives, which is consistent with previous literature that the diversified verbal interactions play a major role in the development of oral language and early literacy (Collins, 1999).

This study adds on to the limited research on young ELL students (Bailey & Heritage, 2014), and we recommend the incorporation of dyadic collaborative instruction for ELL children (Calderón et al., 2011), and especially those who are reticent and less comfortable with speaking up in whole-class instruction. We also suggest the effective use of manipulatives and educational tool for ELL children who are learning to operate in a second (or third) language, to promote exploratory task, verbal interaction, and collaboration which have a great potential to foster learning, supporting activities within the classroom (Sylla et al., 2015).

The current study used strategic pairing of participants being trait anxious according to the A-Trait inventory in STAIC (Spielberger, 1976), to investigate the co-narration context between young ELL students. However, one of the limitations in this study was the lack of pre- and post- measurement of the State-Anxiety inventory, as well as a lack of range in trait anxiety since all participants scored above the norm samples in the A-Trait inventory. Another limitation of the study was the lack of meaningful random assignment of participants into dyads, due to a small sample size. Future studies should include pre- and post- measurements to further examine the difference, and incorporate a larger sample size with random assignment of participants. And because all of the participants in the current study are native speakers of Spanish, future studies should also recruit participants who are native speakers of languages other than Spanish. It would also be interesting to study dyads who do not share the same native language and analyze the different ways of communicating.

To conclude, this study explored the implementation of a constructive play set as a manipulatives support to young ELL students who may be reticent speakers and who are less comfortable with participating in academic settings. Our findings suggest that young ELL students may benefit from the effective use of manipulatives as it encourages and promotes verbal communication, which is a necessity to positive language and academic learning outcomes.

Study Flyer

UCLA

Are you an English learner?

PARTICIPATE IN A RESEARCH STUDY

Storytelling exercises with a LEGO® approach



We want to understand children who English language learners (ELLs) and their participation and storytelling experiences.

There are three sessions in this study, and in each session you will...

First session

-  Fill out a questionnaire about your feelings
-  Be interviewed

Second and third sessions

-  Tell stories aloud with another ELL child
-  Be interviewed and video-recorded

WHO?

Elementary ELL children

WHERE?

After school program at UCLA Community School

TIME?

One (1hr) session per week for three weeks (3 hrs total)

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Appendix B
Interview Protocols

Session 1 – Interview

1. What language do you speak at home?
2. Which language do you prefer speaking (English or Spanish)? Why?
3. What is the most difficult part about learning English? What about the easiest part?
4. Do you speak up or participate in class? Why or why not?
5. Describe the experience when you participated in class.
6. What makes you the most nervous (i.e., speaking up in class, talking to strangers, speaking to the teachers)?
7. What are your favorite subject and least favorite subject in school? Why?
8. Have you had any experience of telling a story? Can you describe the experience?

Session 2 (without LEGO® StoryStarter) – Interview

1. What was it like to tell the story with a partner?
2. What was easy and difficult about telling the story with a partner?
3. How did you feel about the experience?
 - a. What was your favorite part?
 - b. What was your least favorite part?
4. Do you think the way you told the story was the same as you pictured it? Why or why not?
5. Overall, what do you think of this activity?

Session 3 (with LEGO® StoryStarter) – Interview

1. What was it like to tell the story with a partner?
2. What was easy and difficult about telling the story with a partner?
3. What was it like to tell the story with LEGO® StoryStarter?
 - a. Was it easy or difficult? And why?
4. How was telling the story with LEGO® different from telling the story without LEGO®?
5. What were your favorite part and the least favorite part about this experience?
6. Do you think the way you told the story was the same as you pictured it? Why or why not?
7. How old are you?
8. When I write up the report, should I describe you as a he or a she?

Appendix C

Story 1 (without LEGO® StoryStarter) -- The Grasshopper and the Ants

The grasshopper is playing his fiddle, dancing and eating leaves. He notices some ants working hard collecting food. He laughs and calls an ant to him. He tells the ant that there is food on every tree and he sees no reason to work. He dances and sings. The ant begins to dance too. The queen ant arrives, carried in a sedan chair, and sees the ant playing instead of working. The ant notices the queen and immediately goes back to work. The angry queen warns the grasshopper that he will change his turn when winter comes. The grasshopper happily dismisses the queen's warning, saying that winter is a long way off.

Autumn passes and winter arrives. The grasshopper trudges through the snow, cold and hungry. He finds one withered leaf, but it blows away before he can eat it. Meanwhile, the ants are feasting on their stored food. The grasshopper knocks on their door and collapses. The ants carry him inside and warm and feed him. The queen ant approaches him. He begs to be allowed to stay. She tells him that only those who work hard may stay, and tells him to take his fiddle. Thinking that he is being dismissed, he starts to leave, but the queen tells him to play the fiddle. While the ants dance, he happily plays and sings a song.

Appendix D

Story 2 (with LEGO® StoryStarter) -- The Golden Touch

The extremely rich King Midas never cares for women nor wine and never gets enough of his gold, wishing that everything he touched would turn to gold. One day an elf named Goldie appears in front of him and offers him the Golden Touch, demonstrating its magical power by turning his cat to gold, then claps his hands to change it back. Midas tries to offer up everything he owns in exchange “My gold, my kingdom, everything for the Golden Touch!” But is warned by Goldie “To you, the Golden Touch would prove a golden curse.” Midas however derides this and exclaims “Fiddlesticks! Give me gold, not advice!” And Goldie gives him the Golden Touch, “I gave the advice, now I give you gold.”

At first Midas is happy about his newfound power. He turns many things in his garden to gold, then talks to himself in his mirror about turning the Earth and then the universe to gold. But then he finds out he cannot eat and cannot drink anymore; even his bite turns a roast chicken to gold. Deprived of his food and fearing starvation, he asks himself in his mirror “Is the richest king in all the world to starve to death?” He hallucinates himself as a golden skeleton form in his mirror that nods in reply to his question.

Horried, Midas tries to flee the castle, but as he approaches the castle gate, he sees his shadow morph into a golden Grim Reaper, and he flees back to his room. He summons the elf who agrees to take back the Golden Touch in exchange for everything Midas possesses. In return, Midas is given a hamburger!

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