EFFECTS OF PEER RELATIONSHIPS AND CHILD BEHAVIORS ON PRESCHOOLERS' LANGUAGE COMPETENCIES

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To the Dean of the Graduate School:

I am submitting herewith a dissertation written by Chia-Jung Yeh entitled "Effects of Peer Relationships and Child Behaviors on Preschoolers' Language Competencies." I have examined this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Child Development.

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Accepted:

Interim Dean of the Graduate School

DEDICATION

To My Family

獻給一路支持我完成夢想的家人

For My Father and Mother, Chiu-Kuei Yeh and Chin-Yu Hung

特別是我的父親，葉秋桂先生和我的母親，洪金玉女士，

總是一路的力挺，支持和鼓勵。

For my grandfather and grandmother

還有疼愛我的外公，洪文德先生和在天上的外婆洪王怨女士。

For my siblings, Ling Lan Yeh and Huang Yen Yeh

以及我的姊姊，葉玲蘭女士和弟弟，葉皇延先生的理解和支持。

For my American family

最後還要感謝一路陪著我**完成這趟學術之旅的每位美國家人**

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ABSTRACT

CHIA-JUNG YEH

EFFECTS OF PEER RELATIONSHIPS AND CHILD BEHAVIORS ON PRESCHOOLERS' LANGUAGE COMPETENCIES

DECEMBER 2013

The purpose of this study was to investigate preschoolers' peer relationships, social behaviors, and language competencies, and to further explore the predictors of language discourse ability scores. Another purpose of this study was to examine differences in preschoolers' language competencies and child behaviors when compared by peer relationship classifications, child genders, ethnicities, home languages, and parental education levels. Interactionism, Social Behaviorism, and Cognitivism were integrated and applied as a theoretical framework in this study.

Participants included 105 preschoolers, their parents, and fourteen classroom teachers from seven classrooms in one Head Start Center situated in Dallas, Texas. Peer relationships were assessed individually using sociometric techniques. Language competencies were assessed individually using the Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] (Blank, Rose, & Berlin, 2003), including Expressive and Receptive Subscales, and Language Discourse Ability scores. The social behaviors were determined by teachers' ratings using the Child Behavior Scale (Ladd, 2010).

The results indicated that statistically significant differences were found among peer relationship classifications, genders, and home languages in preschoolers'

language competencies. In addition, other statistically significant differences on the effects of social behaviors were found when comparing by the grouping variables of peer relationship classifications, child genders, and ethnicities, regardless of parental education levels and their home languages. Certain types of peer relationship classifications, home languages, and social behaviors were predictors of preschoolers' language competence.

Children identified as Popular in their peer relationship classifications had higher Discourse Ability Scores when compared to those of Neglected preschoolers. Finally, the findings of this study are important for teachers, parents, and teacher educators to better understand that peer relationships in classrooms may play an essential role in preschoolers' language competencies. These results point to the importance of considering peer relationships and social behaviors when examining preschoolers' language competencies.

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CHAPTER I

INTRODUCTION

In examining the academic literature for the early childhood period, peer relationships are the variable which has been most often mentioned. Social interactions begin very soon after birth (Hay, Caplan, & Nash, 2009) and these interaction experiences with peers can lay an essential foundation for later school success (Faria, 2009; Ladd, Herald, & Andrews, 2006). In addition, language competence is also a critical element associated with later school achievement (Ntuli & Pretorius, 2005; Roberts, Burchinal, & Zeisel, 2002). Language is not only unique to human beings, but it is also the main process for communication that allows each of us to share and understand each other's ideas, thoughts, and feelings, and further enhances a sophisticated level of cognitive development (Thomas, 2005; Bruner, 1983). Several studies have revealed that social acceptance and social interaction with peers can be an essential aspect or variable to consider that promotes speech and language competence (Laws, Bates, Feuerstein, Mason-Apps, & White, 2012; Sato & Ballinger, 2012).

Social interactions provide children a good foundation for enhancing language competency (Hoff, 2009). The results from several studies have revealed that there is an association between language competency and peer relationships (Gulay, 2011b; Katz, 2004). Peer relationships and language development have a reciprocal relationship which intertwines and interacts with each other. The more peer interactions and friendships

children have, the more language capacity is acquired. The more friendships a child possesses, the more benefits there are for their language acquisition.

However, the majority of peer relationship studies have focused on school-aged children (Laws et al., 2012; Lindsey, 2002; Walker, 2009); and most of them have examined peer relationships associated with play (Fanger, Frankel, & Hazen, 2012; Walker, 2009) and social emotional competence based on the social emotional developmental perspective (Gulay, Ogelman & Seven, 2012) rather than those associated with language competency (McDevitt & Ormrod, 2002). There is a need for future research to explore peer relationships and language competency for preschool-aged children because different developmental stages might reveal different results from various age ranges.

In addition, social behavior can impact types of peer relationships, such as peer acceptance or peer rejection (Ladd et al., 2006; Gulay, 2011). Social behaviors are often intertwined with peer relationships and affect children's later emotional and school development (Hawley, Johnson, Mize, & McNamara, 2007; Ladd, Herald, & Kochel, 2006). For example, Faria (2009) examined whether different types of social behaviors and peer interactions can predict later school readiness. This study linked social behaviors with peer interaction. Several studies have investigated peer relationships through examining children's social behaviors (Keane & Calkins, 2004; Walker, 2004). As a result, when exploring children's peer relationships, their social behaviors should also be considered in order to have a comprehensive understanding of children's social

development. Therefore, this study explored the effect of peer relationships and child behaviors on preschoolers' language competencies. This chapter includes problem and purpose statements, theoretical framework, definitions, assumptions, and delimitations.

Statement of the Problem

The association between peer relationships and language competencies have been revealed in several studies (Gulay, 2011 b; Longoria, 2006); however, most focused on children with language impairments (Kirby, 2008; Justice, Petscher, Schatschneider, & Mashburn, 2011). Longoria (2006) found that children who had language verbal difficulty were associated with social difficulties. Yet, the association between social competence and language capacity has not been fully explored in children with potential risks, like children from low-income families, rather than children with language impairments.

Several studies have discovered that children with lower socioeconomic status had difficulties related to language delay and certain behaviors (Hart & Risley, 1995 & 1999; Hammer, Farkas, & Maczuga, 2010; Qi & Kaiser, 2004; Qi, Kaiser, Milan, & Hancock, 2006). Longoria (2006) discovered that children from low-income families displayed lower expressive and situational knowledge compared to other children. These children have higher risk factors that impact their language performance and social development (Qi & Kaiser, 2004). Therefore, it is very important to examine these high risk groups and their peer relationships, behaviors, and language competencies for future practical intervention.

In addition, few studies have examined peer relationships and language competencies together for children without language impairments. Gulay (2011b) investigated the effects of peer relationships and gender on Turkish children's language skills. However, this study was conducted in Turkey and only utilized teacher's reporting as the instrument to collect peer relationships and language skills data. No combination of instruments with both teacher's reports and children's perspectives were applied. Multiple data collection methods are equipped to overcome some of the limitations so that research objectives can be achieved. In addition, no similar study in the United States that examined similar variables and explored the effect of peer relationships on language competence was discovered. As the result, this study attempted to fill this research gap by using multiple data collection methods to obtain both teacher and children's perspectives regarding their peer relationships.

Some studies have used checklists and conversational rubrics as tools to collect peer interaction language samples (Timler, 2008). These checklists do not require a transcription of the entire language sample and do not address whether they are standardized. The validity of the assessment and instrument should be a concern. Marjanovic-Umek, Fekonja, Podlesek, & Kranjc (2011) discovered that there was synonymous agreement on children's language assessment between parents and preschool teachers. However, some studies simply used a language checklist from only the parents or teachers rather than performing language assessments for children alone, and the results failed to consider the variability factors that this type of assessment creates.

As a result, this study will utilize a standardize assessment to evaluate preschoolers' language competency. In addition, a parental demonstration questionnaire will be utilized to support the dimension of parenting and family surroundings.

Furthermore, many relevant factors working in conjunction with each other impact language competencies, rather than peer relationships and social behaviors alone (Umek, Fekonja, Kranjc, & Bajc, 2005; 2008; Hammer, Farkas, & Maczuga, 2010). Ethnicities (Ima & Labovitz, 1991), genders (De Lisle, Smith, & Jules, 2005; Gulay 2011 b), and parental education level (Hammer, Farkas, & Maczuga, 2010; Lappegård, Rønsen, & Skrede, 2011; Umek et al., 2005) have also been found to impact language competencies.

In summary, to better assess peer relationships, social behaviors, and other possible factors which can impact language competency, a multiple data collection approach is needed. Using one single data collection approach may not reflect the multiple dimensions of peer relationships during the early childhood period. A combination approach with multiple data collection methods would better reveal the intricacies of peer relationships. Based on these previous research limitations and research gaps, this study wants to investigate peer relationships and the language competency of children from low-income families to reveal whether peer relationships, social behaviors, and other factors could be predictors of language competency.

Statement of Purpose

The purpose of this study was to explore whether peer relationships, teacher ratings of child behaviors, child genders, ethnicities, home languages, and parental education levels are predictors of language competence. If so, which variables will be the most effective predictors of language competency? Another purpose of this study was to examine whether peer relationships, teacher ratings of child behaviors, child genders, ethnicities, home languages, and parental education levels affect language competencies.

Theoretical Framework

Interactionism, social behaviorism, and cognitivism were the three developmental theories used as the theoretical framework for this study. The three theories provided a good guideline to frame this research design for examining whether peer relationships and social behaviors and other factors can affect preschoolers' language competencies. In the next chapter, this researcher will provide a detailed explanation of how the three theories can work together to support the research development.

Research Questions

a) Are there significant differences in preschoolers' language competencies when compared with peer relationship classifications, genders, ethnicities, parental educational levels, and home languages?

b) Are there significant differences in teacher ratings of child behaviors when compared with peer relationship classifications, genders, ethnicities, parental educational levels, and home languages?

c) Which predictor variables of peer relationship classifications, teacher ratings of child behaviors, child genders, and home languages are most influential in predicting preschoolers' language competency?

Definitions of Terms

Language competency – This term focuses on classroom discourse as communication competency referring to the capacity of conversation and narratives which require a variety of cognitive, linguistic, and pragmatic competencies (Hoff, 2009; Nippold, 1998).

Peer relationships **–** This term refers to interpersonal relationships with peers in the same classroom and usually involves reciprocal social interaction among their peers who are normally at similar ages.

Child behaviors **–** For this study, this term is defined as a variety of children's social behaviors while interacting with peers in the classroom (Zimmons, 1997).

Assumptions

Assumptions include:

1. Parents and teachers honestly and accurately filled out the demonstration questionnaires.
2. Teachers honestly and accurately reflected children's social behaviors by answering the questions in the Child Behavior Scale for children in their classrooms.
3. The scores of teacher ratings of child behavior for the same children were not different between the two classroom teachers.

Delimitations

The following delimitations were addressed and applied in this study:

1. Convenient and purpose sample strategies were applied in this study rather than applying random sample strategies.

2. Due to the large number of potential participants in the study population, the population involved in the current study focused only on preschoolers in Head Start Programs, ages 3 to 5, located within the North Dallas area.

3. In order to control the variation in teacher ratings of child behaviors, the classroom involved in the current study focused only on federal Head Start programs which requires teachers to have an Associate's degree rather than Head Start programs in school districts where teachers are required have a Bachelor's degree.

Summary

In summary, both peer relationships and language competencies are essential factors related to later school success, performance, and other dimensions of development. However, previous studies have not explored how relationships with peers and social behaviors promote language learning and capacity for children without focusing on children with language impairments alone. Many studies have shown that social economic status can be a risk factor that influences children's language competency. Therefore, this study will investigate the effects of peer relationships, social behaviors, child genders, ethnicities, home languages, and parental education levels on language competencies. In addition, this study explored peer relationships, social behaviors and language competencies of children who come from low-income families and explore what predictor variables can predict language competency.

CHAPTER II

LITERATURE REVIEW

Introduction

This chapter provides a theoretical background from the developmental theories and current studies as a foundation to frame the design of this study. To gain a clear picture on the research design, the chapter includes the following topics, the theoretical framework, peer relationships and classifications, peer relationships and social behaviors, behavior assessments, language competence and assessments, additional influences on language competence, peer relationships, and social behaviors, as well as the conclusion addressing the framework of the research design.

Theoretical Framework

Over the past few decades, researchers, linguists, and psychologists have used different perspectives to investigate language and social development. Many professionals remain interested in how children understand and acquire language and social competence. Different theorists have tried to identify specific questions directly relating to exactly when human beings begin to acquire language and develop relationships with their peers. In addition theorists want to learn where they start, with what, and how, and whether all humans learn the same way, as well as whether peer relationships and language acquisition have age restrictions in one's ability to learn. Language acquisition is like any other complicated system that must be unraveled by exploring a variety of theories. Peer

relationships and social interaction provide an essential opportunity for language development (Longoria, 2006). This study will be constructed based on the three theories of interactionism, social behaviorism, and cognitivism to explore how children develop their language competence and the essential variables that play a role in facilitating that development.

Interactionism

Social Interactionists, Lev Vygotsky (1978) and Jerome Bruner both stressed that social settings play an essential role in developing language competencies (Thomas, 2005). Language development emphasizes that the interaction between other peers, parents and other caregivers; therefore, peer relationships and interaction is foundational to developing language skills (Bruner, 1983; Hoff, 2009). These interactions with experienced elders and peers can serve as scaffolding for a child's language learning process. Language can only be learned in the context of interaction with people who want to communicate with one another.

Another essential framework that supports social interaction's effect on language competency is the Zone of Proximal Development (ZPD) theory shaped by the sociocultural theory (Vygotsky, 1978). The ZPD theory is the hypothetical gap between the learners' current developmental level and the potential developmental level under an adult or capable peer's assistance and guidance (Vygotsky, 1978). Vygotsky believed that learning is interpreted as an intricate, social act facilitated within a specific cultural

environment (Schwieter, 2010). Consequently, language competence should be promoted through interaction with other experienced peers.

Social Behaviorism

One of key proponents for social behaviorism is Albert Bandura (1977). Social behaviorists extended the beliefs and principles from behaviorists, like Skinner and Pavlov, who asserted that learning needed to go through behavioral conditioning and reinforcement. Bandura (1977) proposed that learning occurs by observing other peers and the outcomes of action, like reward and punishments from others. Imitation of adults, caregivers, and other elders, and the repetition of new words, phrases, and sentences are essential approaches to language learning from a social behaviorists' perspective (Lamb, Bornstein, & Teti, 2002; Rebecca & LouAnn, 2000). Furthermore, when an infant makes a suitable sound like "Ma", the infant's main caregiver might make a happy sound and smile at the child. The infant may keep making the same sound to make the adult happy. The mother's smile can be considered as reward outcome of the infant's sound and speech. A positive reward after a child's action can motivate learners to make more effort in learning tasks (Thomas, 2005). From this belief framework, peer relationships can be explained as various aspects or outcomes of socialization behavioral characteristics and be considered as an essential social reinforcement with both positive and negative functions. An interesting example about aggression behavior from children can be promoted by observation of significant others, peers, or the media and through positive reinforcement received by reorganization and discussion with their peers (Bandura, 1973). Therefore,

language and social behaviors can be learned through mimicking their peers. Whether these learning processes and behaviors would be long-lasting was based on the feedback or rewards received from their social interaction and peer relationships.

Cognitivism

In contrast with behaviorism, cognitivists assert that behaviors cannot be understood without understanding what is going on inside the human mind. Two well-known cognitivist developmental theories are the Piaget's (1951) Cognitive Development Theory and Vygotsky (1962) Social Cognitive Developmental Theory can serve as foundational backgrounds for this study. Language is a complex symbol system full of abstract grammatical and syntax rules. To understand this complex system, cognitivists believe that researchers should explore children's cognitive process. Jean Piaget (1951) asserted that language is a cognitive and perceptual procedure that follows the stages of development. The maturation of children's cognitive development can be an aspect of whether children can process the language symbol system. Piaget believed that children must understand a concept before they can acquire the particular language form which expresses the concept. Language comes after thought and reflects the thought (Piaget, 1972). In contrast to Piaget's theory, Vygotsky (1962) asserted that social interaction settings play an essential role in the acquisition of knowledge and language, as this researcher mentioned earlier (Thomas, 2005). Language can assist and drive a higher level of thought and cognitive operation. Many child development experts are aware that the importance of social pragmatic skills to cognitive development is foundational in

promoting future learning success (Correll, 2008). Both Piaget and Vygotsky placed an emphasis on the value of social interaction. Piaget (1972) believed that social interaction with adults and peers provided an opportunity for children to experience disequilibrium or cognitive conflict forcing change and development. Vygotsky (1962) believed that social interaction is the key in assisting children to move toward a higher cognitive level and enhance their problem-solving stage (Noormohamadi, 2008). Even though both of the theorists held different perspectives in viewing social interaction, they both emphasized the importance of social interaction to the growth of language competence.

In summary, three of the major child developmental theoretical brands, interactionism, social behaviorism, and cognitivism, all recognize the importance of social interaction with peers in motivating language competence. The qualities or feedback of peer relationships served as a behavior outcome for language competence based on the social learning theory. Experienced peers with higher language competence can also assist other children in enhancing their language capacity from the perspective of interactionism. Finally, language competence can reflect a human's cognitive stages; however, social interaction with peers can offer the opportunity for cognitive conflict and further facilitate advanced language competence.

Peer Relationships and Classifications

Peer relationships and peer interactions occur very young during infancy once they notice and respond to other's cries (Ladd, Herald, & Andrews, 2006; Hay, Caplan, & Nash, 2009). Even little babies have displayed the capacity early interactions with others

through some simple actions like showing interest, pointing out others, offering objects to others, imitating actions, and direct smiles. By ages 2 to 3, toddlers can participate in reciprocal play with higher complex forms with other peers. Children were concurrently involved in different types of peer relationships at the beginning of the developmental stage.

Coie and Cillessen (1993) revealed that one of the most influential and powerful predictors of child development are peer relationships. Many studies findings revealed the influences of early peer relationships on child development (Bloger & Patterson, 2001, Coie et al., 2003, Ladd, 1990; 2006). Wentzel (2009) indicated that having friends has been related to the positive aspect of motivation and classroom engagement in school-related activities and is further associated with cognitive adjustment and development (Wentzel, 2009). Making new friends was linked to progress in school achievement. Compared to children with fewer friends, children with more friends and positive relationship with peers developed more a positive perception of school and better academic accomplishment. Ladd et al. (2006) indicated that children with more positive peer relationships acquired further support from their peers; and these positive social peer interactions and peer relationships provided children more opportunities to experience intimacy and emotional ties with others and facilitate the development of a higher level of self-esteem.

Children with interpersonal and emotional difficulties increase the possibility deficits in their academic development and psychological dysfunction through childhood

(Ladd, 2006). For example, around 40 % to 50% of rejected children are extremely aggressive and these rejections and negative social interaction experiences can hinder their school performance and create adjustment problems because these negative experiences with their peers can be a serious stressor in their early school setting (Coie et al., 1993). Furthermore, the aggressive-rejected social characteristics become one of the high risk factors for delinquency problems and school dropout. Ladd et al. (2006) also found from prior research studies that these early social interaction difficulties with peers can impact later negative school attitude, school absenteeism, and lower academic achievement. Therefore, peer relationships play an essential role in academic, behavioral, and psychological growth across all domains of development.

After discussing the critical role of peer relationships, this researcher will review what methods can measure peer relationships and how should peer relationships be classified.

Peer Relationship Classifications

Peer relationships are an effective tool in preschoolers' development of their social, emotional, and linguistic skills. These skills are required for peer interactions, especially language and linguistic skills (Gulay, 2011b). Examining peer relationships is extremely challenging because there are variety of perspectives, approaches, and techniques to classify peer relationships (Berndt & McCandles, 2009).

Classification of peer relationships has been expanded over the past decades, from the initial conceptual distinction between peer acceptance and friendship, toward

pursuing the degree of concordance that exists among different peer relationships, and moving towards combining all types of peer relationships with higher rates of acceptance by peer groups and the amount of friendships acquired with quality and stability (Ladd, 1999). The sociometric method is the most common and useful approach to classify children's peer relationships (Cillessen, 2009). There are many types of sociometric technology; separating or cross-gender nominations; limited to three nominations or unlimited nominations; choosing both least-liked and most-liked nominations, or using positive most-liked nomination strategies (McKown, Gumbiner, & Johnson, 2011). The purpose of using the sociometric technique is to identify five sociometric status groups which include popular, rejected, neglected, controversial, and average children (Cillessen, 2009).

Several scholars have summarized three major types of sociometric methods which include nomination, paired comparison, and the peer rating scale (Balda, Punia, & Singh, 2005; Cillessen, 2009). The traditional and most frequently applied method is the nomination method. This method is normally associated with the paired comparison technique and includes both positive and negative nominations which ask participants to identify the number of peers (usually three) they most like and dislike playing with. A rating-scale technique requires each participant to rate their peer using a Likert-scale.

The quantification method of the sociometric technique and procedures was initially created by Asher and Dodge in 1986 and uses a substitution of the lowest play rating score for a disliked score from a negative nomination. In other words, this

alternative method using positive nominations was only highly accepted in early childhood to classify peer relationships types (Walker, 2004). McKnown et al. (2011) further pointed out a major concern of only choosing positive nominations because parents and school staffs were concerned when their children were asked for least-liked nominations, or any peer nomination, and that it may intensify exclusion and misery for children who were not well-accepted by their social groups.

The sociometric method has been extensively applied in a variety of studies. For example, Asher and Dodge (1986) developed an alternative sociometric technique to determine social status by examining two samples of participants. Researchers assigned 200 middle school children from grades 3 to 6 in Illinois to sample 1 group with the traditional sociometric technique, and assigned 547 children from grades 2 to 4 in Indiana to the sample 2 group with the alternative technique. Compared and contrasted with the traditional sociometric technique and the alternative technique without negative nominations, this study proposed that the alternative sociometric technique with positive nominations and rating scale measures had a high percentage of identified rates and the stability to define rejected children more so than the traditional technique. This alternative technique could be an acceptable method of determining social status. Even though there is no evidence to make the claim that the negative nomination measure is harmful, some scholars remain concerned over whether utilizing the negative nomination technique could create a stigma or trauma for rejected children. This alternative technique

involves a less controversial procedure, even though it was not preferable in determining social status.

Walker (2009) recruited 187 preschool-aged children with 94 boys and 93 girls to examine sociometric stability and the behavioral correlates of peer acceptance in early childhood. Based on Asher and Dodge's (1986) sociometric approach, this author applied a combination of positive nominations techniques to identify the social status of 70 children as rejected, neglected, or popular. Though observing these children during free play in the preschool centers and a MANOVA statistical analysis, the author discovered that children with different social statuses display different characteristics in their free play. The results revealed that popular children were involved in more cooperative play, in enduring connected conversation, and in demonstrating more successful conversational initiations, compared to other groups of children, such as neglected or rejected children. Rejected or neglected children were more likely to be involved in parallel play, onlooker behavior, or alone-directed behavior compared to popular children. Furthermore, after 6 months the applied sociometric technique was repeated. This researcher found that social status taxonomies of preschool-aged children displayed a moderate to high rate of stability for children who were classified as popular, rejected, and neglected children.

Another study investigated whether teacher rated social behavior revealed differences between gender and among social statuses in Australian preschoolers (Walker, 2004). This study recruited 182 four to five year-old children with 92 boys and 90 girls from eleven suburban and community-based preschools in Queensland, Australia. Based

on sociometric interviews combined with the positive nomination technique and previous research criteria (Asher, & Dodge, 1986), this researcher divided 182 participant preschooler children into five different social status groups, including popular, rejected, neglected, controversial, and average children. MANOVA and ANOVA statistical analysis were conducted to determine sex and social status differences in preschoolers' social behaviors. The results revealed that gender differences occur in some negative social behavior. Based on teachers' rating results, girls exhibit less negative behavior compared to boys. Boys in group entry and conflict resolution have a higher likelihood of expressing aggressive and/or disruptive strategies compared to girls. Compared to other social status groups, rejected preschoolers were less likely to be involved in prosocial cooperative behavior and exhibited lower success rates in their group entry strategies (Walker, 2004).

After reviewing the measurement approach of peer relationships and classifications, this researcher will continue to discuss peer relationships and their impact on social behaviors in the next section.

Peer Relationships and Social Behaviors

The formation of peer relationships is a complex process that depends on a variety of characteristics, such as social behaviors, skills, personalities, and interactional styles. Various social behaviors can shape different types of peer relationships (Gulay, 2011a). On the other hand, peer relationships classification is partly shaped by children's social behaviors (Ladd, Herald, & Andrews, 2006). Peer relationships classification is

intertwined with children's social behaviors. For example, anxious, depressed, withdrawn children correlated with a greater risk for certain types of peer classification, such as neglect and rejection (Ladd, Herald, & Kochel, 2006).

Ladd, Herald, & Andrews (2006) indicted that many studies have discovered the connection between children behavior and their acceptance or rejection. For instance, Dodge (1983) observed 48 second grade boys in six play groups on their behaviors and utilized Sociolmetric interview to classify their social status to popular, rejected, neglected, controversial, and average group. The findings of the study by Dodge (1983) found that rejected or neglected boys represented more inappropriate behaviors, such as hitting and hostile verbalizations, comparing to other social status groups. Rejected groups involved in aggressive actions and behaviors more than others. These boys who were well accepted by their peers displayed more social interaction and cooperative play, especially, rarely occurred aggressive behaviors. As the result, children's social behaviors can impact their social peer status or peer relationship classification.

A longitudinal study conducted by Keane and Calkins (2004) comprised of 105 family participants and their children to explore the effects of toddler and preschooler behaviors on their peer social status. Keane and Calkins (2004) revealed that aggressive behavior accelerates the relationship of social status for boys, and sharing and engaging in sneaky behavior predicts peer relationships classification for girls. Another study discovered that children with higher anxious-withdrawal behaviors were easily excluded by peers in their group (Gazelle & Ladd, 2003). Although many studies have revealed

the association between aggression and peer rejection, no consistent conclusion has been reached. Some studies did not discover an association between peer rejection and aggressive behaviors; yet, other studies revealed the link between the two (Bolger & Patterson, 2001; Peets, Hodges, & Salmivalli, 2011; White & Kistner, 2011). Therefore, it is necessary to continue to explore how social behavior informs or connects with peer relationships classification.

Several other studies have examined the connection in different settings, such as in play or involving a problem-solving situation. Zarbatany (1985) investigated the effects of sociometric status on the subjects' social problem strategy use and goals, as well as explored the differences in preschoolers' social problem-solving behaviors among three different social status groups. Based on the sociometric technique with both positive and negative nominations and sociometric ratings, this study classified 103 preschool children into three groups - popular, average, and rejected. These children were situated in a designed play situation with their most or least preferred peers to examine their social problem-solving strategies. The results revealed that social problem-solving strategies were different between the three social status groups. However, the results were opposite from the original expectations that popular children would apply more positive and social strategies to get the toy, and rejected children would utilize more forceful and assertive strategies to get what they want.

Another study observed the behaviors of 48 second grade boys in six play groups and utilized sociometric interviews to classify their social status as popular, rejected,

neglected, controversial, or average (Dodge, 1983). The purpose of this study was to examine the behavioral experiences of peer social status. The results revealed that rejected or neglected boys exhibited more inappropriate behaviors compared to other social status groups. Rejected groups were involved in aggressive actions and behaviors more than others. The boys who were well-accepted by their peers displayed more social interaction and cooperative play skills, and rarely displayed aggressive behavior. As the result, children's social behaviors can impact their social peer status or peer relationships classification.

Behavior Assessments

In the previous, this researcher concluded that peer relationships classification was related to social behaviors, but how do studies measure numerous behaviors. The Child Behavior Scale (CBS) is an effective teacher-report instrument with reliable and valid information which was developed more than a decade ago and has been used extensively in many studies to evaluate children's behavior and their peer relations in a school setting (Graham & Coplan, 2012; Ladd, Herald-Brown, & Andrews, 2009). Comparing CBS to another similar teacher rated instrument, the Teacher's Report Form (TRF), Ladd et al. (2009) indicated two benefits of using CBS. First of all, CBS is more effective and economical compared to TRF because of the design with fewer items per subscale. The second benefit is that the item content and terminologies of CBS reflect more real classroom circumstances. Therefore, it is the most effective instrument to measure preschoolers' behaviors and peer relationships in classroom settings. The limitations of

using other instruments to measure children's behaviors and relations are that they are more difficult, expensive, and time-consuming that requires observations for either examiners or administrators.

The Child Behavior Scale (Ladd & Profilet, 1996) has been applied in many studies across domains and age boundaries. The initial scale was created for preschool children. As an example, Gulay (2011a) conducted a study by recruiting 277 five to six year-old preschoolers and their parents in Turkey to examine prosocial behaviors whether they were linked to other variables, including parental acceptance-rejection, peer relationships, general social development and social skills. Furthermore, by using multiple regression, this study also examined whether these variables were predictors of prosocial behaviors. This researcher utilized multiple instruments to evaluate these variables, including the Child Behavior Scale, Social Skills Form, Social Development Subscale, The Victimization Scale, as well as the Parental Acceptance-Rejection Questionnaire (PARQ). The child Behavior Scale was used to evaluate prosocial behavior and peer relationships. The results revealed that all of these variables are powerful predictors of prosocial behaviors and they were linked to social behaviors.

Another study examined whether the Child Behavior Scale (CBS) could be extended over a broader age spectrum from preschoolers' age to children from ages 6 to 13 year-old (Ladd, Herald-Brown, & Andrews, 2009). This study was designed as a longitudinal study with multiple sample groups. First group consisted of 396 children and the researchers monitored their progress from the 1st through the 8th grades. The second

group consisting of 100 children were recruited from the 5th grade, then combined with the first group and monitored them through the 8th grade. The results revealed that CBS is a reliable and valid instrument to assess children, ages 5-13, social behaviors and peer relationships; and it also can be used to connect both positive and negative growing trajectories from childhood to early adolescence.

The Child Behavior Scale has not only been utilized in the United States, it has also been applied to studies outside of the United States. One study recruited 60 six year-old participants (30 girls and boys) in Turkey to examine the effect of a social information processing model on 6 year-old preschoolers regarding their social competence and peer relationships (Gulay, Ogelman & Seven, 2012). The researchers applied a hypothetic method to determine children's social information processing capacity. The Child Behavior Scale and Peer Victimization Scale were applied to evaluate preschools' peer relationships; and the Preschool Taxonomy of Problem Situations (PTPS) was used to assess social competence. Two subscales of the Child Behavior Scale, including "prosocial behavior with peers" and "exclusion by peers" were utilized to represent peer relationships variables. Based on liner regression analysis results, the researchers found that the social information processing model was an effective predictor of their social competence and peer relationships.

In summary, the Child Behavior Scale is an effective assessment to evaluate children's social behavior through teachers' perspectives. It also provides an assessment tool to predict later interpersonal risks and competence at school (Ladd, Herald-Brown,

and Andrews, 2009). Language competence is one of the most important tools for social communication and the operation of advance cognitive thinking and learning (Longoria, 2006; Thomas, 2005).

Language Competence

Language competence is analogous to conceptual and cognitive competence (Diesebdruck, 2007; Siegal & Surian, 2007). Several scholars have also indicted that cognitive factors, like the reasoning process, could impact language comprehension, and that they were always addressed and placed in the same domain (Craig & Dunn, 2010; McDevitt & Ormrod, 2002; Hoff, 2009). Siegal and Surian (2007) pointed out that children's limitations in conversational comprehension might be caused by characteristics of their conceptual development, such as it being hard for the child to separate reality from fantasy, and the difficulty in understanding assignments or tasks. Therefore, language competence cannot be thought of as separate from cognitive competence. In addition, language acquisition covers many dimensions, including syntax, vocabulary, semantics, and linguistics (Hoff, 2009). Conversational competence is a complex interpersonal procedure interacted by a broad range of components in language acquisition, such as syntax, vocabulary, phonology, semantics, linguistics, and pragmatics. The capacity of conversation also acquires a combination of cognitive, linguistic, and pragmatic competencies (Hoff, 2009; Nippold, 1998). The following section will briefly review the developmental features of language acquisition during the preschool period.

In the development of conversational capacity, children by age 3 have become a fluent speaker demonstrating advanced skills in the lexicon and grammar of their native language even though they still have some overgeneralized syntax errors (Siegal & Surian, 2007; McDevitt & Ormrod, 2002). In the syntax developmental stages, preschoolers have advanced their syntax capacity from the initial two-word utterances or telegraphic speech, moving to the multiple words stage which gives them the capacity to develop longer sentences, toward compound sentences without understanding the passive tense or voice, and finally moving on to the compound sentence stages with more refined clauses expressing complex and multiple concepts (Craig & Dunn, 2010). By four and half years-old, children have developed a good command of most syntax.

The language developmental curves for preschoolers from 2-6 years-old have several features. These preschoolers have experience with vocabulary and syntax spurts, are capable of constructing narratives, and are involved in the challenge of pronouncing some phonemes (McDevitt & Ormrod, 2002). At this point in language development, several phenomena emerge, including overgeneralizations in syntax rules, and the overdependence on word order and context rather than syntax while inferring messages. After reviewing preschoolers' language competence, the next section will discuss the various instruments current studies have used to evaluate language competence.

Language Competence Assessments

Many language assessment instruments were utilized in previous studies to evaluate language competence, language skills, or language proficiency (Esquinca, Yaden,

& Rueda, 2005). Five of the most popular assessments that were reviewed by Esquinca et al. (2005) for second language learners, included Language Assessment Scales (LAS), the Language Proficiency Tests (LPT), the Woodcock-Munoz Language Survey (WML), Language Assessment Battery, and the Basic Inventory of Natural Language. Only IPT can be used to assess language proficiency for preschoolers, but the instrument mostly measures vocabulary, comprehension, syntax, and verbal expression rather than oral conversation capacity.

The Peabody Picture Vocabulary Test (PPVT-III) is another popular standardized assessment which can be applied for assessing preschoolers' receptive language (Longoria, 2006). Many studies have utilized this vocabulary test to measure preschoolers' language competence (McCormack, Harrison, McLeod, & McAllister, 2011; Sato & Ballinger, 2012); however, this assessment can only reflect the receptive comprehension rather than other aspects of language. For instance, Fiorentino and Howe (2004) conducted a study to assess the language competence of 25 preschoolers through PPVT and explored whether language competence and school readiness would affect narratives capacity. This study revealed that children with higher language competence and school readiness had a better capacity to organize their narratives. Another study observed and filmed 64 children, 11 to 61 months old, during free play and analyzed a transcription of the utterances and calculated the mean of the utterance length to represent language competence (Nærland, 2011). The variety of utterance and the length of utterance represented the language competence in this study. Some inconsistencies have been found through reviewing these

current studies. Some researchers asserted that a child's pragmatic skills are language competence and should be measured by the length of utterance; other studies utilized standardize vocabulary assessments to evaluate language competence.

There is a need to explore other language competence assessments which might offer a better method to evaluate the oral capacity of conversational dialogues in order to reflect language competence for preschoolers. Nippold (1998) indicated that spoken communication was the major source of input of language stimulation for children before age 6. Researchers who explore preschoolers or young children's language competence should focus more attention on the capacity of conversation.

The main purpose of this current study is to examine whether peer relationships and social behaviors can be predictors of language capacity. Therefore, the language instrument should be able to reflect discourse capacity and language communication ability. The Preschool Language Assessment Instrument, Second Edition (PLAI-2) is an instrument used to evaluate preschoolers' oral language capacity, including their expressive and discourse ability (Blank, Rose, & Berlin, 2003). PLAI-2 is also a standardized instrument which can evaluate the capacity of children to competently integrate cognitive, linguistic, and pragmatic components to manage communication (Boit, 2010). PLAI-2 can also be applied to preschoolers with language impairments or languages delays. Comparing similar language assessments, the Peabody Picture Vocabulary Test, and the McCarthy Scales of Children's Abilities, Lehrer and deBernard (1987) recruited 120 preschoolers with special needs for their study. These children displayed speech

impediments, language impairments or language delays. The purpose of the research was to examine the validity of the Preschool Language Assessment Instrument (PLAI) and whether it was a valid diagnostic tool for language impaired preschoolers. Based on factor analysis, the results revealed that PLAI was a valid assessment which achieves the criteria for both divergent and convergent validity for language preschoolers with language impairments.

One study s applied PLAI-2 to evaluate children with language impairments (Razgunas, 2007). This experimental study examined the effects of an intervention of shared book-reading questions during book-reading activities on their language progress. This study recruited 8 African American preschoolers with speech or language impairments from a Head Start program with speech-language intervention. The 8 children completed diagnostic evaluations through a set of different standardized measurements. PLAI-2 was used on pre- and post-tests before and after book-reading to measure these preschoolers' language abilities. Using ANOVA statistical analysis, the results found that both groups of preschoolers improved their language competence, but the intervention group with embedded questions progressed faster on pronounced language and had better abstract language skills and higher generalization abilities.

The PLAI has been applied in several studies to evaluate language competence for general preschoolers (Ellis, 2011; Jambunathan & Norris; Yi, 2010). For example, Ellis (2011) utilized a combination of language competence assessments, including the PLAI-2 and the Test of Language Development - Primary, Fourth Edition (TOLD-P:4) in this

study. The purpose of this study was to examine whether six classroom observation predictor variables: emotional support, classroom organization, instructional support, teacher education level, the number of years of teaching, and teacher responses to a knowledge questionnaire was associated with the two language competence assessment scores for 95 preschooler participants. The results revealed that no relationship existed between the six predictor variables and the subtests of the TOLD-P:4, but some predictor variables, like teacher educational level, experience, knowledge and emotional support, were associated with preschoolers' PLAI-2 scores.

Another study also utilized the PLAI-2 to evaluate English competence. Yi (2010) conducted a qualitative study to examine the social relationships and English learning of three Korean preschoolers in two English speaking classrooms. Using participant observations, interviews, and videotapes of multiple data collection methods, Yi (2010) found social interaction with peers facilitated their English learning and competence. Friend selection and attitudes toward peers impact friendship development, language development, and comprehension. Using the PLAI-2, this researcher identified the three preschoolers' discourse abilities in their language development. Yi (2010) stated that the PLAI-2 reflected the purpose of this study by focusing on social interaction and language expression capacity.

Jambunathan and Norris (2000) used the same assessment to investigate thirty-nine 3 to 4 year-old preschoolers on the association between language competence and self-competence. Language competence was measured by the PLAI. Self-competence was

assessed with the Pictorial Scale of Perceived Competence and Social Acceptance for Young Children (PSPCSA). The results revealed that reasoning about perception in the PLAI was statistically related to peer acceptance of the PSPCSA. In other words, language competence was related to peer acceptance. These results motivated future researchers and scholars to examine the relationship between language competency and peer acceptance. Peer acceptance involved linguistic skills and capacity. Social interaction facilitates language competence and social status may contribute or hinder language development. Accepting the effect of peer relationships on language competence, this study also wants to explore whether some other additional factors may also play a role in impacting language competence.

Additional Influences on Language Competence

Many direct and indirect factors can affect language competence, such as direct factors like peer relationships and social interaction (Lamb, Bornstein, & Teti, 2002); however, other indirect factors like ethnicity, gender, parental educational level and home language have been inconsistently placed in many studies based on different research interests. In this section, this researcher will introduce other variables that may impact language competence, including ethnicity, gender, parental educational level, and home language.

Genders

Children's genders have been examined for their effects on children’s language development in many studies (Bielen, & Malkowska-Zegadlo, 1998; Umek, Fekonja,

Kranjc, & Bajc, 2005; 2008); however, most of the studies focused on toddlers' language competence. For example, Marjanovic-Umek, Fekonja, Podlesek and Kranjc (2011) conducted a study with 140 toddlers from ages 16 to 30 months to explore whether preschool teachers could accurately evaluate a toddler's language competence. The researchers also developed comparable results which were assessed by parents. Marjanovic-Umek et al. (2011) also examined whether the toddlers' gender and parental education level would be one predictor that influences language competence. Using the "Communicative Development Inventory" assessment to measure toddlers' language competence, Marjanovic-Umek et al. (2011) discovered that both toddlers' gender and parental education level were significant predictors of toddlers' language competence. The language assessment outcomes by parents and preschooler teachers had a low to moderate relationship, and the scores evaluated by preschool teachers were lower than scores from parents.

However, the gender factor does not only affect young toddlers, it also impacts preschoolers and even children in elementary school. For example, De Lisle, Smith, & Jules (2005) conducted a national assessment on language performance and mathematics for 52,284 elementary school students in Trinidad and Tobago to determine whether gender impacted language performance. Male students had lower scores on language arts, especially for lower grade level students, compared to female students. Female students exhibited advanced assessment performances.

Parental Educational Level

Parental education level is another indirect factor that may influence language competence. Lappegård, Rønsen, & Skrede (2011) indicated that the fathers' educational level was frequently considered as a powerful predictor of childrearing behavior. Educational level is a personal preference, but it can be aligned with later useful resources, like lifestyle, income level, and parental involvement. Castillo, Welch, & Sarver (2011) found that fathers with higher education levels engaged in more positive interaction with their school-aged children. These relevant resources parents can offer their children can indirectly impact child development based on parental educational level. For instance, one study used secondary data from the Head Start Family and Child Experiences Survey (FACES) in 1997, to examine what predictors would influence early reading outcomes of preschoolers in Head Start programs (Hammer, Farkas, & Maczuga, 2010). Though a series of regression analyses, this study revealed that mothers' education level and their ethnicity impacted children's vocabulary ability. Furthermore, mothers' education and children's gender and age also impacted their letter-word identification capacities. Ethnicity also was identified as one of the predictors for children's reading abilities.

Another study also found that mothers' education level affects children's language competence. Umek et al. (2005) conducted a longitudinal study with 82 children separated into two groups based on when they entered preschool. The first group entered

school at around 3 years-old; and the second group entered school around one year-old. Using the Language Development Scale and a Story Telling Test to evaluate their language competence, this study discovered that children from mothers with higher education levels demonstrated better and more advanced language competence compared to the performance of children from mothers with less education.

Home Languages

Some researchers have been concerned that children with multiple languages may exhibit lower language performance levels on their language assessments. Tabors (2008) indicated that exposure was one of four factors that predict language proficiency for second language learners. The more children were exposed to language, the more language proficiency they achieved. If children speak a language other than English at home, these children may face difficulties learning at school where the language spoken at school was different than at home. Even though no research has directly revealed that home language is a powerful predictor of language competence, the findings from several studies revealed that a different home language other than English was a factor that impacts children's peer relationships and peer interactions (Howes, Sanders, & Lee, 2008; Ting, 1999). For instance, Howes et al. (2008) conducted a study with 170 preschoolers who were new to the classroom to examine the effect of ethnicity and linguistics on their reaction behaviors and peer interactions when they entered new peer groups, This study found that children with a different home language other than dominant school language struggled in interactions with their peers longer than children with the same home and

school language. Consequently, the effect of home language on language competence rather than peer interactions alone should be further explored.

Finally, after reviewing current studies, these aforementioned indirect factors may come into play in affecting children's language competence. Several of these studies have embedded these variables with other direct variables like family involvement, relationship with teacher or peers, or social interaction based on their study interests and areas. This current study will examine the following four variables - ethnicity, gender, parental education level, and home language – in addition to peer relationships and social behaviors as independent variables to explore whether these factors could be predictors for preschoolers' language competence.

Ethnicities

Ethnicity or race is one of the predictors that could affect language competence. Several studies have revealed that ethnicity matters for children's school performance and language competence. The U.S. Department of Education (2007) reported that ethnically diverse children demonstrated different performances on their language and literacy achievement according to the National Center for Education Statistics (NCES) report. The study drew on data from a longitudinal study with three waves of recruitment. The study utilized the third wave data on 8,750 preschoolers from the Head Start programs in 2005-2006 to examine a variety of variables to draw causal inferences and provide descriptive information addressing these preschoolers' progress. The results revealed that

the performance of language knowledge and skills were statistically different and white preschoolers' scores were higher than black and Hispanic scores.

Another study with 21,000 elementary school student participants investigated whether ethnicity could be a predictor or mediating variable related to language proficiency and test performances (Ima & Labovitz, 1991). Based on multiple regression statistical analysis, this study revealed that test performance was strongly associated with ethnicity. In addition, one of the identified predictors of test performance was language status. Language competence was more possibly related to the performance of memorization, and consequently effort, yet least associated with mathematics.

Peer Relationships, Social Behaviors and Language Competence

Many developmental theorists, like Vygotsky, Piaget, Bruner, and Bandura, all emphasized the effects of peer interaction on children's development. Even though they did not specifically address the relationship between peer relationships and language development, they provided the outline to explore the association among peer relationships, social behaviors and language competence. This section will provide a review of previous relevant studies to determine the design for this current study. Justice, Petscher, Schatschneider, & Mashburn (2011) examined the effect of peers on language development for 338 preschoolers from 49 classrooms. The findings revealed that the group with lower language skills had the strongest peer effect on their language growth. The findings demonstrated that peers' language skills are linked to the development of children' language skills. However, it is still unclear whether the effects come from peer

interactions or peer relationships. This study only defined the effect of peers on language skills rather than social interaction.

Many studies have revealed that behavior problems frequently occur in conjunction with language impairments (Horowitz, Westlund, & Ljungberg, 2007; Redmond, 2011; Van Daal, Verhoeven, & Van Balkom, 2007), but social behaviors also were connected to peer relationships based on prior interactions. There is a need to explore whether language competence is linked to peer relationships. Based on a qualitative research approach, Tempest and Wells (2012) investigated peer interactions in an informal context with a 5 year-old boy with speech difficulty (PSD), on his social interactions and how they form alliances. Although this qualitative study did not reveal whether the alliances were affected by his speech difficulties; this study offered a better understanding of how the child used his language tools when involved in an argument and how he tried to develop relationships with others. Horowitz, Westlund, & Ljungberg (2007) conducted a study with 31 boys, ages 4-7 years-old, to examine non-reconciliatory managing approaches of peer conflict behaviors. The researchers dividing these boys into two groups, including 20 boys in the typically developing language group (TL) and 11 boys in the language impairment group (LI). Analyzing their conflict reaction behaviors by coding their videotaped conflict behaviors, this study revealed that children with language impairments displayed lower levels of aggression in conflict situations, but utilized more active withdrawal behaviors to avoid conflict. The boys with language impairments experienced more difficulty in dealing

with conflict management strategies and possessed lower reconciliation rates compared to the group with typical developing language.

Another longitudinal study in Australia also examined the association among language, social behaviors, peer relationships, and school performances on children with language impairments (McCormack, Harrison, McLeod, & McAllister, 2011). This study compared two age ranges, from 4-5 years-old, and 7-9 years-old. The results found that children with language impairments at ages 4-5 had lower achievement in all school assessments. These children demonstrated fewer peer relationships, more bullying behaviors and less satisfaction at school compared to their peers without language impairments. Using factor analysis, another study identified speech, syntax, semantics, and phonology as four language factors that affect the three most common behavior problems, including withdrawn, aggressive, and somatic complaints (Van Daal, Verhoeven, & Van Balkom, 2007). Based on correction analysis, Van Daal et al. (2007) recruited 71 five year-old children with language impairments to examine the relationship between their language proficiency and behavior scores. The findings concluded that the scores on the Children Behavior Checklist (CBCL) were strongly associated with three language factors, phonology, semantics and syntax, but not speech.

The majority of these studies discussed the relevant association among peer relationships, social behaviors and language competence, but most of them focused on children with language impairments. Few studies examined the connection between the three factors for preschoolers without any form of language impairment or communication

disorder. Although two studies explored the relationship between language competence and peer relationships, they were not conducted in the United States. For example, von Grunigen, Kochenderfer-Ladd, Perren, & Alsaker (2012) designed a study with 541 kindergarteners from both immigrants and Swiss natives to examine the relationship among local language competence, social behaviors, and peer relations in Switzerland. Utilizing structural equation models, the researchers found support for their prior hypothesis that social behaviors are mediators between local language competence and peer relations. Even though this study was not conduced in the United States, it provides a fundamental framework to connect language competence, social behavior, and peer relationships.

Another study with 236 five to six year-old participants in Turkey was designed by Gulay (2011b) to examine the effect of peer relationships and gender on their language skills. In this study, Gulay (2011b) utilized the Child Behavior Scale and the Peer Victimization Scale to measure peer relationships. The Marmara Development Scale was used to evaluate language skills. The findings from this study revealed that certain types of social behaviors significantly predicted language skills. When controlling for gender, this study discovered that language skills can be statistically predicted by "prosocial behavior, asocial behavior, exclusion, fearfulness/anxiety, hyperactivity/distractibility, and victimization variables" (Gulay, 2011b). However, aggression was not a strong predictor for language skills after controlling for gender.

Summary

In summary, peer relationships, social behaviors, and language competence are three variables that are always intertwined with one another. The effects of peer relationships have been revealed in several studies for children with language impairment; however, few studies examined the link among the three variables for children without language impairments. Some of these studies recruited children from other countries rather than the United States; therefore, this current study seeks to determine the association among the three major variables, including language competence, peer relationships, and social behaviors, as well as the other additional variables like gender, parental education, home language, and ethnicity. In order to better understand the effects of peer relationships and social behaviors on language competence, this study will be conducted in the United States. The next chapter will present the research design, methodology, data collection procedures, and data analysis.

CHAPTER III

METHODOLOGY

Introduction

The purpose of this study was to examine the differences in preschoolers' language competencies and teacher ratings of child behaviors when compared by peer relationship classifications, teacher rating child's behaviors, child's genders, home languages, parental educational levels and ethnicities. In addition, this study further explored whether peer relationship classifications, teacher's rating of child behaviors, and child's genders are significant for predicting preschoolers' language competency.

This chapter provides a framework of how the study conducted and processed this research, divided into sections as follows: (a) Research Design; (b) Research Setting; (c) Sample; (d) Protection of Human Participants; (e) Instruments; (f) Data Collection Procedures; (g) Data Analysis Procedures; and (i) Summary.

Research Design

A non-experimental descriptive research design was used to investigate teacher ratings of child behaviors, peer relationship classifications, and preschoolers' language competencies. This study was to examine the differences in preschoolers' language competencies and teacher ratings of child behaviors when compared by peer relationship classifications, teacher rating child's behaviors, child's genders, home languages, parental educational levels and ethnicities. Peer relationship classifications, teacher's rating of

child behaviors, home languages, and children's genders were investigated as predictors of preschoolers' language competency.

Research Setting

This study was conducted at one of federally funded urban Head Start centers located within Dallas County, Texas. Children in Head Start Programs come from families that meet the income guidelines for the federal poverty level. The Head Start center houses eight classrooms and has an enrollment of 148 preschoolers, from ages 3-5. This Head Start center utilizes creative arts instruction offering computers in each classroom. Classroom learning environments are designed with various learning centers in each classroom where preschoolers can engage in different types of exploration in dramatic, constructive, language, and computer centers offering positive social interactions and circle time learning. Children with special needs are assigned to each classroom. Each classroom has one lead teacher and one assistant teacher. The ethnic make-up of this center was comprised of 60% Hispanic, 30% African Americans, 10% Caucasian and mixed races. Some of Hispanic parents and preschoolers only speak Spanish. One of teachers in each classroom can speak Spanish. The dominant classroom language is English while teachers implemented classroom activities or instructions. One of teachers would assist individual Hispanic preschoolers whose home language was Spanish when needed.

Sampling Strategies

This study applied multiple sampling strategies to locate research participants. Purposive, convenience, and cluster sampling strategies were conducted to select children from low-income families in the Head Start program in order to examine and answer the research questions and objectives. Purposive sampling was applied to recruit participants based on the specific purpose of exploring the research questions. In order to meet the research requirements, this study recruited children, ages 3 to 5 years-old. Convenience sampling also was applied to select the Head Start centers that were willing to participate in this study and was easily accessible. Using clustered sampling designs, once the volunteer Head Start centers are determined; this researcher recruited teachers at this center to participate in this study on a volunteer basis. Finally, the parents were recruited and provide permission by filling out the supplied consent form allowing their children to take part in this study.

Sample

The participants of this study were comprised of preschoolers, ages 3-5 years-old, parents, and teachers. There were 105 preschool participants (N = 105) recruited to take part in the language competence assessment and peer relationship classification interview for this study. Parents of these preschool children (N = 105) were recruited to fill out the *Parents' Demographic Questionnaire* to provide further insight for this study. There were teachers who participated from the Head Start preschool program (N = 14), recruited to

evaluate children's social behaviors, and fill out the *Teachers' Demographic Questionnaire*.

The total number of participants was 224, including 14 preschool teachers from the seven Head Start classrooms and 105 parents and their children who study in the Head Start programs.

Protection of Human Participants

This study was approved by the Institutional Review Board (IRB) of Texas Woman's University in Denton, Texas, and received an approval letter before beginning the research *(Appendix A).* Based on the research design and the purpose of this study, some identifiable information from preschoolers were initially collected. Only initial data collection procedures using sociometric techniques with 4" × 5" color photographs of the preschoolers and their first names were identifiable information in order to increase the accuracy and avoid memory and language barriers for preschoolers. However, this identifiable information was only used to develop the photo arrangement for peer relationship classification interviews and then all identifiable information was transformed to specific identified codes.

In addition, these 4" × 5" color photos remained in the children's classrooms under the safekeeping of teachers. These digital photos were deleted immediately from the researcher's computer after the color photos were printed. After completing the peer relationship classification interviews, these photographs were given back to the classroom teachers as one of the incentives. Other data collection and data analyses were

safeguarded by assigning a code to match the *parent's demographic questionnaires, teachers' demographic questionnaires* and *teachers' rating Child Behaviors,* and *the preschoolers' scores on the Preschoolers' Language Assessment Instrument (PLAI-2).* Only this researcher and the research advisor could access the data.

Furthermore, all participants were required to read and sign a consent form before participating in this study. The participants were informed about the purpose of this research, research procedures, potential risks, and that no penalties and risks would result from their withdrawal from this study. Preschoolers also were given the option to decide whether they would like to participate in the peer relationship classification interviews and preschoolers' language assessments.

Instruments

The researcher utilized the following instruments: the Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] (Blank, Rose, & Berlin, 2003); the Child Behavior Scale (Ladd, 2010), and a combination of sociometric techniques with positive nominations and a rating scale (Asher & Dodge, 1986; Walker, 2004), Parents' Demographic Questionnaire, and Teacher Demographic Questionnaire.

Language Competencies

Language competencies were measured by the Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] (Blank, Rose, & Berlin, 2003). This is the second revision of a classic individually administered test lasting approximately 30 minutes

based on a nationally representative sample of 463 children, from ages 3 to 5, in 16 states in the U.S. The purpose of using PLAI-2 is to assess children's abilities to meet the demands of classroom discourse. The major benefit of this individual test is that it offers detailed pictures for children to learn the demands of classroom discourse.

The Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] (Blank, Rose, & Berlin, 2003) is a 70-question instrument that measures preschoolers' language discourse competency based on four dimensions of cognitive modes, including Matching, Selective Analysis, Reordering, and Reasoning. PLAI-2 includes 17 questions on Matching, 17 questions on Selective Analysis, 15 questions on Reordering, and 21 questions on Reasoning. The preschoolers were asked 70 questions in the entire language assessment. If children provided the correct answer, they received one point for the question; otherwise, they got 0 points.

Matching requires preschoolers to select objects to name, to follow actions, or to perform imitation, such as "Show me the telephone?" or "What is this called?" (Blank, Rose, & Berlin, 2003, p. 2). Selective Analysis means that preschoolers make selections based on function, multiple features, or integration of characteristics; for instance, "I draw with a _____?" or "What shape are the wheels?" Reordering means that preschoolers can name or select important aspects of objects, or act according to linguistic constrictions; for example, "Show me the part of the egg that we don't eat." Reasoning means that preschoolers predict outcomes and explain answers, for instance, "What will happen to the cookies when we put them in the oven?"

Items from these four dimensions are combined to produce Receptive and Expressive Language Competence Subscales. The Receptive Language Competence Subscales measures children's abilities to understand and respond nonverbally to items in the assessment instrument presented verbally. The Expressive Language Competence Subscale measures children's abilities to respond verbally. The Discourse Ability Score provides an overall measure of children's language competencies, reflecting both receptive and expressive communication skills.

Validity and reliability. Blank, Rose, and Berlin (2003) reported the coefficient alpha for PLAI-2 was 0.80 for the Receptive Language Competency subscale. In the Expressive Language Competence subscale, the coefficient alpha was 0.83. In the Language Discourse Competence, the coefficient alpha was 0.94. The PLAI-2 had higher test-retest reliability in Receptive Language Competence Subscale scores (r = 0.86), Expressive Language Competence Subscale scores (r = 0.88), as well as Language Discourse Ability scores (r = 0.90) based on the reports from Blank, Rose, and Berlin (2003). Construct-identification concurrent validity is adequate (0.50 to 0.69) (Blank, Rose, & Berlin, 2003). Overall, the Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] (Blank, Rose, & Berlin, 2003) demonstrates adequate reliability and validity.

Peer Relationship Classifications

Peer relationship classifications were measured by the Sociometric method (Asher & Dodge, 1986). The Sociometric method is a traditional and most commonly used

method to evaluate inter-personal relationships with children (Balda, Punia, & Singh, 2005). The purpose of using this technique is to identify five sociometric status groups, including popular, rejected, neglected, controversial, and average children.

This study used a combination Sociometric technique with positive nominations and a rating scale (Asher & Dodge, 1986; Walker, 2004). Asher and Dodge (1986) stated that this alternative combination Sociometric technique that combines positive nominations and rating scale measures had a high percentage of identifiable ratings and the stability to define the peer relationship classification of the children participants.

Photographs of each child were taken individually in order to overcome any potential memory and language barrier problems that might occur by relying on names only for preschoolers (Balda et al., 2005). The peer relationship classification interviews were individually conducted with each preschooler in a private quiet room at the Head Start center.

The child was asked to identify three peers whom they most like to play with (positive nominations) (Walker, 2004). Each of the three peers who were selected received a score of 1. Then the child was shown photographs of all of their peers in the same classroom and asked how much they enjoy playing with them (Balda et al., 2005). The child was asked to place each photograph into one of the three boxes with three different happiness levels of expression, including a happy face, a neutral face, and a sad face (Walker, 2004). It was explained to the preschool participants that the happy face means they like to play with that particular child a lot; the neutral face represents that

they like to play with the child a little bit or sometimes; and the sad face represents that they do not like to play with the child. After the children understood the meaning of the three facial expressions, they were asked to place those photographs in one of the three boxes that were most appropriate. The photographs in the happy face box were given a score of 1; those in the neutral face box received a score of 0, and those in the sad face box received a score of -1 as the Low Play Rating score (LPR).

For each child, scores were computed as follows: "(a) number of positive nominations (Liking score); (b) number of low play ratings (LPR score); (c) a social preference score (SP) based on subtracting the number of low play ratings (LPR) from the number of positive nominations (Liking); and (d) a social impact score (SI) computed by combining the number of low play ratings (LPR) and the number of positive nominations (L)" (Walker, 2004, p. 17). These scores then were converted into standardized Z scores.

The researcher followed the procedures outlined by Walker (2004). Children were classified into sociometric groups as follows: "Popular (L score greater than 0, LPR score less than 0 and SP score greater than 0); Rejected (L score less than 0, LPR score greater than 0 and SP score less than -1.0); Neglected (L score less than 0, LPR score less than 0 and SI score less than -1.0); Controversial (L score greater than 0, LPR score greater than 0 and SI score greater than 1.0); and Average (SP score between -.05 and .05 and SI score between -.05 and .05)" (p. 17).

Teachers' Ratings of Child Behaviors

Teachers' ratings of child behaviors were measured by the Child Behavior Scale (Ladd 2010) which is a teacher-rating instrument covering 59 items with six subtests, including Aggression, Prosocial Behavior, Asocial Behavior, Excluded by Peers, Anxious-Fearful Behavior, Hyperactive-Distractible Behavior. The purpose of this questionnaire was to assess children's social skills. Teachers rated each child using a 3-point Likert rating-scale, ranging from doesn't apply (1), applies sometimes (2), until certainly applies (3). The range of test-retest value is 0.54 to 0.83; inter-rater reliability is 0.81- 0.88; internal consistency is 0.77-0.96 (Ladd & Profilet, 1996).

Parents' Demographic Questionnaire

Parents' demographic questionnaire was used to describe the sample based on the purpose of this study. *Parents' demographic information* contained 11 questions: (1) gender of respondent, (2) relationship to the child, (3) ages, (4) ethnicities of parents, (5) home languages of parents, (6) home language of children (7) educational background, (8) parents' country of origin, (9) Children's country of origin, (10) current college enrollment (11) job training enrollment (Appendix B).

Teachers' Demographic Questionnaire

Teachers were requested to fill out the *Teachers' Demographic Questionnaire*, including the following 7 questions: (1) gender of respondent, (2) ages, (3) ethnicities, (4) current job title, (5) years of working, (6) educational background and (7) professional development training (Appendix C).

Data Collection Procedures

The current study collected data from teachers, parents, and preschoolers in one Head Start center. Strategies used in this research included teacher invitation conferences, teachers and parents' research packets which were comprised of an invitational flyer, two copies of the consent form, and a questionnaire. The following session presents the recruitment and data from teachers, parents, and preschoolers.

Teachers' Recruitment and Data

Teachers were invited to participate in this study through invitation conferences. Teachers' recruitment and data were comprised of teacher invitation conferences, teacher research packets, participation and benefits.

Teacher invitation conferences. This researcher conducted conference meetings with potential volunteer teachers and any teachers who had questions about this study. Invitation conferences for teachers were conducted at the beginning of the spring semester in February of 2013. In this conference meeting, this researcher explained the research purposes, procedures, the teacher rated Child Behavior Scale (Ladd, 1996), and the teacher demographic questionnaire, as well as a description of the responsibilities and benefits of participating in this research.

Teacher research packets. Teachers received a teacher research package, including an invitation flyer, a formal introduction letter, two copies of the consent letter, and a demographic questionnaire which required about 10 minutes of their time. Teachers' data was based on *Teachers' Demographic Questionnaires* to describe the teacher sample.

Participation and benefits. Teachers' involvement in this study was strictly voluntary and they could withdraw from the study at any time without penalty. Following the completion of the study, teachers received a $15 gift card as appreciation of their participation. Teachers also received the results of this study if they request them from this researcher. Teacher participants assisted this researcher in completing the following items in the research:

1) Distributed the flyers and parental research packages to parents of children in their classroom.
2) Filled out the following information: the consent form for their participation, *Teacher's Demographic Questionnaire*, and the teacher rated *Child Behavior Scale* (CBS) for each preschooler who took part in this study.
3) Filled out the consent forms and *Teacher Demographic Questionnaires* which took less than 10 minutes and the CBS scale which required about 5-10 minutes for each preschooler in their classroom.
4) Teachers in the same classroom could work together to fill out the CBS scales.
5) The total amount of time teachers spent filling out the CBS scales took approximately 3.5 hours.

Parents' Recruitment and Data

Parents were informed about this study through distributing invitation flyer by classroom teachers. Parents' recruitment and data were comprised of invitation flyer, parental research packets, participation and benefits.

Invitation flyer. The invitation flyer included the research purpose, data collection procedures, benefits for the participants, and contact information for this researcher. These flyers were distributed to each parent through classroom teachers.

Parental research packets. The parental research packages were distributed to parents through the classroom teachers. This package contained the formal introduction letter, two copies of the consent letter, and the parental demographic questionnaire which required approximately 10 minutes to complete. Parents returned the sealed package to the classroom teachers. Parents' data was based on *Parents' Demographic Questionnaires* to describe the sample of parents and children.

Participation and Benefits. Parental involvement in this study was strictly voluntary and they could withdraw from the study at any time. Parent participants filled out the *Parent Demographic Questionnaire* and consent form acknowledging their permission to allow their children's participation in this study. Following the completion of the study, parents received a copy of their children's language competence report from the researcher in June, 2013.

Preschoolers' Recruitment and Data

Preschoolers whose parents gave consents would participate in this study. Preschoolers' recruitment and data were comprised of photographs taking, peer relationship classification interview, and the preschool language assessment.

Photographs taking. Consent for taking photographs of the children was obtained by the Head Start personnel when parents enrolled their children. Two weeks before the peer relationship interview, this researcher took a digital photo of each preschool participant on a digital camera and printed it with their first name. The SD card on a digital camera with the images was reformatted, thus erasing the photographs. These 4" × 5" color photos remained in the children's classrooms under the safekeeping of teachers. These digital photos were password protected in the researcher's computer and only this researcher had access to open and process the data. The digital photo files were deleted immediately from the researcher's computer after the color photos were printed. After finishing the data analysis, these photographs were given back to the classroom teachers as one of the incentives.

Peer Relationship Classification Interview. The preschool children who participated in the peer relationship classification interview had parental consent. The interviews were conducted in the middle of March toward early April. The sociometric interviews were individually conducted in a private quite room and follow the *Script of Peer Relationship Classification Interview* (Appendix D). The child was asked to identify three peers whom they most like to play with (positive nominations). Then, each preschool child was shown photographs of all of their peers in the same classroom and asked how much they enjoy playing with them. The child was asked to place each photograph into one of the three boxes with three different happiness levels of expression. Each interview lasted around 15 minutes.

The Preschool Language Assessment Instrument, 2nd Edition [PLAI-2]. The preschool children who participated in the preschool language competence assessments needed to have parental consent. The language assessments were held in a quiet and private place from the middle of April to the middle of May. An individually administered test lasted about 25-30 minutes. This instrument includes a colorful printed picture book for preschoolers and the Examiner Record Booklet for use during the assessment. This researcher assessed 4-6 preschooler participants each day. Preschool children were guided by this researcher or one of the research assistants to leave their classrooms to participate individually for the language competence assessment. The whole evaluation process was supervised by one of the educational specialists in the center, but the preschoolers' evaluation results were not shared with other children or other parents. After the assessment, this researcher or a research assistant guided the preschooler participants back to their own classrooms. Those children whose parents did not offer consent to participate in this study were not assessed and they stayed in their classrooms and continued their activities without negative consequences. The Preschool Language Competence Assessment script is provided as an attachment (Appendix D).

Preschool participants received animal stickers from the researchers' hometown in Taiwan as a thank you for their participation after completing the language competency assessment and peer relationship interview.

Data Analysis Procedures

Quantitative data was analyzed using the Statistical Package for the Social Sciences (SPSS, version 19). To answer the first research question regarding the differences in preschoolers' language competencies when compared by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages, ANOVA (Mertler, & Vannatta, 2010) was used to analysis the mean of Discourse Ability Scores differences among each group. In addition, MANOVA was used to analysis differences in the means cores of Receptive and Expressive Language Competence subscales when compared by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages. To answer the second research question regarding the differences in teacher ratings of child behaviors when compared by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages, MANOVA (Mertler, & Vannatta, 2010) was conducted to explore the differences among groups in the scores of a set of Child Behavior Scales. To answer the third research question regarding the effects of four predictor variables on language competency, multiple regression (Mertler & Vannatta, 2010) was conducted to determine which predictor variables of peer relationship classifications, teacher ratings of child behaviors, child genders, and home languages are most influential in predicting preschoolers' language competence. The following section is the summary table of research questions, variables and statistical methods (Table 1).

Summary

In summary, the Child Behavior Scale (CBS), Preschoolers' Language Assessment Instrument-second edition (PLAI-2), and Sociometric technique were utilized to collect the data based on this descriptive research design. Preschoolers' Language Assessment Instrument-second edition (PLAI-2) was used to determine preschoolers' Language Discourse Competence. Sociometric technique was utilized to determine peer relationship classifications. Teachers' ratings of the Child Behavior Scale (CBS) were presented preschoolers' social behaviors and skills. The three research questions were explored using ANOVA, MANOVA and multiple regression in this study. These data is analyzed and presented in Chapter 4.

Table 1
Summary of Research Analyses

Research Questions	Variables and assessments	Statistical Method
1. Are there significant differences in preschoolers' language competencies when compared by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages?	DV: the Discourse Ability Scores based on Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] IVs: Peer relationship classifications, genders, parental educational levels, home languages , and ethnicities	ANOVA
	DV: Receptive and Expressive Language Competence subscales Scores. IVs: Peer relationship classifications, genders, parental educational levels, home languages , and ethnicities	MANOVA
2. Are there significant differences in teacher ratings of child behaviors when compared by relationship classifications, genders, ethnicities, parental educational levels, and home languages?	DV: the Child Behavior Scale (CBS) IVs: peer relationship classifications, genders, ethnicities, parental educational levels, and home languages	MANOVA
3. Which predictor variables of peer relationship classifications, teacher ratings of child behaviors, child genders, and home languages are most influential in predicting preschoolers' language competency?	DV: the Discourse Ability Scores using Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] IVs: Peer relationship classifications, teacher ratings of child behaviors, genders and home languages	Multiple regression

CHAPTER IV

RESULTS

Introduction

This chapter presents the findings and information relating to the data analyses of this dissertation. The purpose of this study was to investigate preschoolers' peer relationships, social behaviors and language competencies and further examine differences in preschoolers' language competence and child behaviors when compared by peer relationship classifications, child genders, ethnicities, home languages, and parental education levels. Another purpose of this study was to explore the predictors of language competence. This chapter begins with a brief overview of the participants' demographic information collected from preschoolers, parents, as well as preschool teachers, and further addresses a summary of the results, including preschoolers' language competence, child behaviors, and peer relationship classification reports. The last section addresses findings connected to the three research questions, as well as a brief summary of this chapter.

Data Analyses

Description of Sample

Research information packets which were approved by the Texas Woman's University Institutional Review Board with consent forms and demographic questionnaires were distributed to 148 parents who enrolled their children in one of the

Head Start Centers in Dallas, Texas. This Head Start Center has 8 classrooms. The packets were completed and returned by 115 parents, representing a return rate of 77.70%. However, four preschoolers dropped from the school in the middle of the semester without completing the language assessments. In addition, one of eight classrooms received 6 out of 19 consent forms from parents who returned the research packets, so the return rate of this classroom was 31.58%. The return rate percentages for each class are presented on Table 1 below. This study excluded six participants in the only classroom that had a return rate of less than 50 % in the data analysis.

After excluding one classroom, the final sample size for this data analysis included 105 preschoolers and their parents in seven classrooms. The data analysis was based on 105 preschoolers out of 148, representing a final return rate of 70.95%, as well as 14 teachers, including 7 lead teachers and 7 assistant teachers for a return rate of 87.5%. The following section based on the demographic questionnaires presents descriptive information on the children, parents, and teachers who participated in this study.

Table 2

Frequencies and Percentages of Parents Who Gave Consent

Room Numbers	Total	*f*	%
Room 1	18	16	88.89
Room 2	19	6	*31.58*
Room 3	19	15	78.95
Room 4	18	11	61.11
Room 5	19	19	100.00
Room 6	19	16	84.21
Room 7	18	14	77.78
Room 8	18	14	77.78

Note: n = 148

Interpretation of Data

Children's Demographic Information

The children's demographic information was collected from the *Parents' Demographic Questionnaire* and the Head Start Center. The *Parents' Demographic Questionnaire* included 11 items that described the composition of the family. Most of information was collected from the *Parents' Demographic Questionnaire*, items 6, 9, 12, and 13, regarding the children's home languages, countries of origin, ages, and the length of enrollment. Genders and the children's dates of birth were provided by the Head Start Center. The following section is divided into two parts, including a summary report of age and the length of enrollment at Head Start with the means and standard deviations, as

well as the other summary report of genders, countries of origin, and home languages of children with frequencies and percentages.

Children's age and the length of enrollment. The age range of the preschoolers in this study was from 3 years and 7 months (43 Months) to 5 years and 7 months (67 Months); the average age was 4 years and 6 months (56.02 months). The length of enrollment in the Head Start program ranged from 2 months to 36 months and the average length was 13.5 months. A summary table of Children's Age and the Length of Enrollment at Head Start is shown in Table 3.

Table 3

Means and Standard Deviations of Children's Age and the Length of Enrollment

Descriptions	*M*	*SD*
Preschoolers' Age by Months	56.02	7.05
How long enrolled in the Program (Months)	13.50	7.63

Note: n = 105

Children's genders, countries of origin, and home languages. The preschoolers' sample was comprised of 51 girls (48.6%) and 54 boys (51.4%). Based on the parents' demographic reports, 103 out of 105 were born in the U.S. (98.1%), only two preschoolers were not born in the U.S. (1.9 %) and one of two was reported being born in Mexico. One other preschooler did not mention the country of origin. The combination summary reports of gender, country of origin, and home language is shown in Table 4.

Table 4

Frequencies and Percentages of Children's Genders, Countries of Origin, and Home Languages

Descriptions	*f*	%
Gender		
Girl	51	48.6
Boy	54	51.4
Country of Origin		
U.S.	103	98.1
Outside of U.S.	2	1.9
Home Language		
English	58	55.2
Spanish	23	21.9
Both English and home languages	24	22.9

Note: n = 105

Parents' Demographic Information

Parents' demographic information was collected from 10 questions on the *Parents' Demographic Questionnaire*, items 1-5, 6-8, and 10-11. The detailed descriptive data of parents is divided into three parts, including respondent information, parents as a unit, and family background with separate father and mother information.

Respondent information. The research packets included two copies of parental consent forms, a *Parents' Demographic Questionnaire*, a research flyer, and an introduction letter and were distributed to parents in either English or Spanish. The language section of the research packets was determined early by the classroom lead

teacher before distributing the packets based on whether the main caregiver could understand English or not. There were 68 out of 105 parents who utilized the English version of the research packets (64.8%) and 37 out of 105 parents who utilized the Spanish version (35.2%). The majority of the respondents were females (93.3%), while only 7 respondents were males (6.7%). The respondents' role with their children consisted of a majority of mothers (91.4%), a few fathers (5.7%), two grandmothers (1.9%) and one stepfather (1%). The summary report is shown in Table 5.

Table 5

Frequencies and Percentages of Language Version Packets, Respondent Genders, Relationship with Children

Descriptions	*f*	%
Language Version of Research Packet		
English Version	68	64.8
Spanish Version	37	35.2
Respondent Gender		
Female	98	93.3
Male	7	6.7
Respondent Role to Children		
Mother	96	91.4
Father	6	5.7
Stepfather	1	1.0
Grandmother	2	1.9

Note: $n = 105$

Parental unit. This session included the parents' countries of origin, current college enrollment, and enrollment in a job training program. Of the 105 families taking part in this study, 54 parents were born in the U.S. (51.4%) and 51 parents were born outside of the U.S. (48.6%); 52 parents were currently enrolled in college (50.5%), while 51 parents reported no college enrollment (49.5%). There were 23 parents who reported being enrolled in a job training program (22.3%) and 80 parents who never enrolled in a job training program (77.7%). The summary report is shown in Table 6.

Table 6

Frequencies and Percentages of Parents born in the U.S., College Enrollment and Job Training

Descriptions	*f*	%
U.S. Born		
Yes	54	51.4
No	51	48.6
Current College Enrollment		
Yes	52	50.5
No	51	49.5
Enrolled in Job Training Program		
Yes	23	22.3
No	80	77.7

Note: $n = 105$

There were 51 out of 105 parents who were born outside of the United States, but only 43 parents reported their countries of origin in the *Parents' Demographic Questionnaire*. The majority parents came from Mexico (60.5%). There were 10 parents (23.3%) who came from other middle and South America countries, including 3 Cuba, 2 Panama, 1 Bolivia, 1 Colombia, 1 Guatemala, 1 Nicaragua, and 1 Peru. Six parents came from Africa (14%), including 4 Ethiopia and 2 Kenya. Only one parent reported the country of origin in Germany.

Table 7

Frequencies and Percentages of Parents' Countries of Origin

Descriptions	*f*	%
Country of Origin		
Mexico	26	60.5
Other countries in South America	10	23.3
Africa	6	14
Germany	1	2.3

Note: $n = 43$

Family background. This portion includes parents' ages, ethnicities, levels of education and home languages. Parents were asked to fill out their ages within five categories as shown in Table 8 with separated columns for mothers and fathers. There were 105 mothers and 63 fathers who reported their ages. Slightly more than half of the mothers and fathers were Hispanic. There were 60 out of 105 mothers who reported as Hispanic (57.1%), 33 mothers were African American (31.4%), 34 out of 64 fathers reported as Hispanic (53.1%), and 23 fathers were African American. Regarding parental education levels; parents were asked to report their highest level of education separately

within eight categories, including elementary school, some high school courses, high school diploma, and some college courses, associate's degree, bachelor degree, some graduate degree courses, as well as master or doctoral degree (Table 9). Regarding the parents' home language; they were asked to identify their home languages as follows: English, Spanish, both English and Spanish, and other (English and other languages). The combination summary table with frequencies and percentages is shown in Table 8 and 9.

Table 8

Frequencies and Percentages of Parents' Ages and Ethnicities

Descriptions	*f*	%	*f*	%
Ages	Mothers (*n* = 105)		Fathers (*n* = 63)	
Under 25	21	20	10	15.90
26-35	48	45.7	33	52.4
36-45	35	33.30	18	28.60
46-55	0	0	2	3.2
Above 56	1	1.0	0	0
Ethnicity	Mothers (*n* = 105)		Fathers (*n* = 64)	
Asian American	0	0	1	1.6
African American	33	31.4	23	35.9
Caucasian	8	7.6	3	4.7
Hispanic	60	57.1	34	53.1
Mixed Races	4	3.8	3	4.7

Table 9

Frequencies and Percentages of Parents' Education, and Home Languages

Descriptions	*f*	%	*f*	%
Education	Mothers (*n* = 103)		Fathers (*n* = 60)	
Elementary School	3	2.9	2	3.3
Some High school Courses	6	5.8	8	13.3
High school Diploma	31	30.1	27	45.0
Some College	38	36.9	15	25
Associates Degree	9	8.7	2	3.3
Bachelor Degree	12	11.7	5	8.3
Some Graduate Degree Courses	2	1.9	0	0
Master or Doctoral Degree	2	1.9	1	1.7
Home Languages	Mothers (*n* = 105)		Fathers (*n* = 64)	
English	50	47.6	31	48.4
Spanish	33	31.4	16	25
Both English and Spanish	19	18.1	15	23.4
Other (other languages)	3	2.9	2	3.1

Teachers' Demographic Information

The teacher research packets with a pair of teacher consent forms, a *Teacher Demographic Questionnaire*, a research flyer, and an introduction letter were distributed to sixteen teachers in eight classrooms. Considering the return rate of parents' research packets, this study excluded one of classroom from this study. The total number of participants' was14 teachers, including 7 lead teachers and 7 assistant teachers in seven classrooms who participated in this study.

Teachers' demographic information was collected by the *Teachers' Demographic Questionnaire* with 7 questions, including genders, ages, ethnicities, job title, years of teaching experiences, education levels, as well as professional development. The lead and assistant teachers were determined by their job title from the demographic questionnaires.

Teachers' demographic information. Table 10 presents ages and years of teaching experiences with means and standard deviations. The average age of lead teachers was 38.71 years old; the age range from 30 toward 49 years old. The average years of their teaching experience was 11 years and the range of teaching years were from two years toward 20 years. The average age of assistant teachers was 26.71 years old; the age range from 22 toward 35 years old. The average years of their teaching experience was 1.69 years and the range of teaching years were from half year toward 3 years.

Table 10

Means and Standard Deviations of Teachers' Ages and Years of Teaching Experiences

Descriptions	Lead Teachers (n = 7)		Assistant Teachers (n = 7)	
	M	*SD*	*M*	*SD*
Ages	38.71	7.80	26.71	4.72
Years of Teaching (Years)	11.00	7.19	1.69	1.02

Table 11 presents ethnicities and education levels of teachers. The lead teachers' ethnicities were composed of three African American (42.9%), three Hispanic (42.9%) and one Caucasian (14.3%). In teachers' education level, three teachers reported with bachelor degree (42.9%), two reported with master degree and above degree (28.6%), one reported with associate degree (14.3%), and one reported with taking some graduate courses (14.3%). The assistant teachers' ethnicities were composed of six Hispanic (85.7%) and one African American (14.3%). In assistant teachers' education levels, three assistant teachers reported taking some college courses (42.9%), two reported with associate degree (28.6%), one reported with high school diploma/GED (14.3%), and one with bachelor degree (14.3%).

Table 11

Frequencies and Percentages of Teachers' Ethnicities and Levels of Education

Description	Lead Teachers (n = 7)		Assistant Teachers (n = 7)	
	f	%	*f*	%
Ethnicities				
African American	3	42.9	1	14.3
Caucasian	1	14.3	0	0
Hispanic	3	42.9	6	85.7
Education				
Associate Degree	1	14.3	1	14.3
Bachelor Degree	3	42.9	2	28.6
Some Graduate Degree	1	14.3	3	42.9
Master Degree and Above	2	28.6	1	14.3

Professional development. There were six teachers who did not fill out the question on professional training in the demographic questionnaires. Lead teachers reported that they attended training through Head Start. One teacher emphasized all of the training on education, early childhood, and child abuse; another teacher emphasized the training on early childhood, and one teacher reported psychologist training. Two assistant teachers reported CDA courses as training; one of them stated that she obtained an associates' degree in education as well as an EC-6; another mentioned that she continued her bachelor's degree at the University of North Texas (UNT); another reported she received training through Head Start; and finally, one reported educational training.

Language Competence Assessment Report

PLAI-2 (Blank, Rose, & Berlin, 2003) is a standardized assessment comprised of Receptive and Expressive Language Competence Subscales. The raw scores of Receptive and Expressive Language Competence Subscales were calculated by adding specific items from Matching, Selective Analysis, Reordering, and Reasoning dimensions. These raw scores were transformed to scaled scores with a mean of 10 and standard deviation of 3 and percentile scores based on norms by age groups. The Discourse Ability Scores combined the Receptive and Expressive scaled scores to create a total scaled score that was then transformed to standardized scores with a mean of 100 and standard deviation of 15, as well as percentile scores based on norms published in the Examiner's Manual. Finally, Levels of Language Competence for preschoolers were determined by prescribed ranges of the Discourse Ability Scores describing outcomes from Very Poor to Very Superior.

A total of 105 preschoolers participated individually in the language assessment using Preschool Language Assessment Instrument, 2nd Edition. In every age group, the standard deviations indicated large variability in children's language competencies. The sample included 14 three-year-old preschoolers, 50 four-year-old preschoolers, and 41 five-year-old preschoolers. The range of Discourse Ability scores for three year olds was from 37 to 91, with a median score of 69. The range of Discourse Ability scores for four year olds was from 9 to 99, with a median score of 75. The range of Discourse Ability scores for five year olds was from 16 to 98, with a median score of 63.

Table 12
Means and Standard Deviations of Discourse Ability Scores, Receptive and Expressive Language Competence Subscale Scores by Age Groups

		Discourse Ability		Receptive		Expressive	
Age by Years	*n*	*M*	*SD*	*M*	*SD*	*M*	*SD*
3	14	58.57	27.36	65.29	19.86	52.00	29.30
4	50	62.54	31.31	65.44	27.01	57.42	31.00
5	41	63.46	32.40	61.63	25.96	61.61	32.76

Table 12 presents the means and standard deviations by age groups of the Discourse Ability Scores, Receptive and Expressive Language Competence Subscale Scores. Preschoolers displayed lower Expressive Language Competence Subscale scores than Receptive scores. In addition, the large standard deviations showed high variability in preschoolers' language competencies. In the Expressive Language Competence Subscale Scores and Discourse Ability Scores, 5 year-olds demonstrated higher scores than 3 year-olds, yet 3 year-olds displayed higher scores in Receptive Language Competence Subscale Scores.

Table 13 presents the means and standard deviations of the Discourse Ability Scores and the Receptive and Expressive Language Competence Subscale Scores for all 105 preschoolers. The large standard deviations also showed high variability in preschoolers' language competencies.

Table13
Means and Standard Deviations of Discourse Ability Scores, Receptive and Expressive Language Competence Subscale Scores

Scales	*M*	*SD*	*Minimum*	*Maximum*
Discourse Ability	62.37	31.01	1	99
Receptive	63.93	25.61	9	99
Expressive	58.33	31.35	1	99

Note: *n* = 105

The majority of preschoolers in this sample were identified as Average and Above Average in the levels of Language Discourse Competence according to the Discourse Ability Scores. Few preschoolers were identified as Poor and Very Poor in the levels of Language Discourse Competence. The levels of Language Discourse Competence are presented in Table 14 and Figure 1.

Table 14
Frequencies and Percentages of Levels of Discourse Competence

Levels of Discourse Competence	*f*	%
Very Superior	5	4.8
Superior	18	17.1
Above Average	26	24.8
Average	36	34.3
Below Average	14	13.3
Poor	5	4.8
Very Poor	1	1.0

Note: *n* = 105

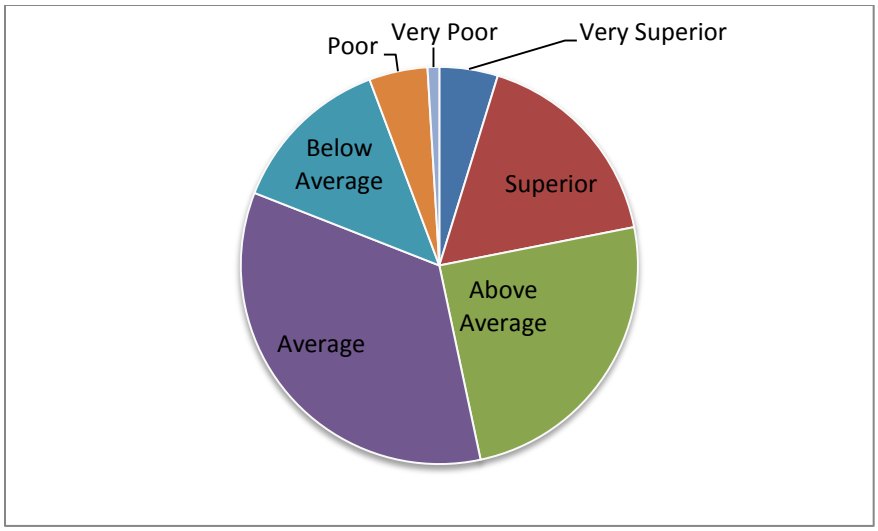

Figure1. Levels of language discourse competence.

Child Behavior Scale Assessment Report

Child Behavior Scale (CBS) (Ladd, 2010) is composed of 59 items grouped within six subscales, including Aggressive with Peers (AG), Hyperactive Distractible (HD), Asocial with Peers (AS), Anxious-Fearful (AF), Prosocial with Peer (PP), and Excluded by Peers (EP).

The first subscale of Aggressive with Peers (AG) was composed of 7 items, including items 4, 16, 23, 35, 36, 38, 48. The second subscale of Hyperactive Distractible (HD) included items 1, 2, 11, and 17, four items. The third subscale of Asocial with Peers (AS) included items 25, 31, 32, 51, 55, 57, six items. The fourth subscale of Anxious-Fearful (AF) included items 6, 8, 12, 19, four items. The Fifth subscale of Prosocial with Peer (PP) included items 26, 28, 34, 40, 46, 53, 56, seven items. The sixth subscale of Excluded by Peers (EP) included items 5, 27, 30, 33, 43, 45, 54, seven items.

The Child Behavior Scale (CBS) with 59 items were rated by 7 classroom lead teachers on a 3-point Likert-type scale, ranging from 1(Doesn't apply), 2 (Applies Sometimes), toward 3 (Certainly applies). Reliability coefficients of the Child Behavior Scale (CBS) subscales and overall selection are shown in Table 15 below.

Table 15

Reliability of CBS Subscale and Total Overall Scale

Subscales	Cronbach's Alpha	Number of Items
Aggressive with Peers (AG)	0.86	7
Hyperactive Distractible (HD)	0.88	4
Asocial with Peers (AS)	0.83	6
Anxious-Fearful (AF)	0.63	4
Prosocial with Peer (PP)	0.83	7
Excluded by Peers (EP)	0.84	7
Overall Scale	0.88	59

Aggressive with Peers (AG). Based on the teachers' reports, "Argues with peers" occurs most frequently with ratings of "Sometimes and Certainly" applying to only 35.2% of the children in the sample. "Kicks, bites, or hits other children" occurs least frequently with "Doesn't Apply" ratings for 90.5% of the children. The details of Aggressive with Peers (AG) are displayed in Table 16.

Table 16

Frequencies and Percentages of CBS - Aggressive with Peers (AG)

Items	Doesn't Apply		Applies Sometimes		Certainly Applies	
	f	%	*f*	%	*f*	%
4. Fights	78	74.3	23	21.9	4	3.8
16.Bullies	87	82.9	16	15.2	2	1.9
23.Kicks, bites, hits	95	90.5	8	7.6	2	1.9
35.Aggressive	89	84.8	11	10.5	5	4.8
36.Taunts, teases	87	82.9	14	13.3	4	3.8
38.Threatens	92	87.6	13	12.4	0	0.0
48.Argues	68	64.8	33	31.4	4	3.8

Note: n = 105

Hyperactive Distractible (HD). Generally, teachers' ratings indicated that Hyperactive Distractible behaviors were not applicable for the majority of the children. "Poor concentration or short attention span" was a behavior rated as "Sometimes and Certainly" applicable to 38% of the children. The details of Hyperactive Distractible (HD) are displayed in Table 17.

Table 17

Frequencies and Percentages of CBS - Hyperactive Distractible (HD)

Items	Doesn't Apply		Applies Sometimes		Certainly Applies	
	f	%	*f*	%	*f*	%
1.Restless, doesn't keep still	77	73.3	16	15.2	12	11.4
2.Squirmy, fidgety	70	66.7	24	22.9	11	10.5
11.Poor concentration	65	61.9	32	30.5	8	7.6
17.Inattentive	69	65.7	34	32.4	2	1.9

Note: n = 105

Asocial with Peers (AS). Asocial with Peers were not applicable for the majority of the children based on teachers' reports. Withdrawn from peer activities was a behavior rated as "Sometimes and Certainly" applicable to 29% of the children. The details of Asocial with Peers (AS) are displayed in Table 18.

Table 18

Frequencies and Percentages of CBS - Asocial with Peers (AS)

Items	Doesn't Apply		Applies Sometimes		Certainly Applies	
	f	%	*f*	%	*f*	%
25.Prefer to play alone	88	83.8	14	13.3	3	2.9
31.Likes to play alone	87	82.9	16	15.2	2	1.9
32.Keeps peers at distance	93	88.6	11	10.5	1	1.0
51.Solitary child	92	87.6	12	11.4	1	1.0
55.Avoids peers	96	91.4	9	8.6	0	0
57.Withdrawn from peer activities	75	71.4	27	25.7	3	2.9

Note: n = 105

Anxious - Fearful (AF). Anxious-Fearful behaviors were not applicable for the majority of the children based on teachers' reports. Cries easily were a behavior rated as "Sometimes and Certainly" applicable to 27.7% of the children. The details of Anxious-Fearful (AF) are displayed in Table 19.

Table 19

Frequencies and Percentages of CBS - Anxious-Fearful (AF)

Items	Doesn't Apply		Applies Sometimes		Certainly Applies	
	f	%	*f*	%	*f*	%
6.Is worried	94	89.5	9	8.6	2	1.9
8.Appears miserable, distressed	91	86.7	11	10.5	3	2.9
12.Fearful or afraid	90	85.7	12	11.4	3	2.9
19.Cries easily	76	72.4	22	21	7	6.7

Note: n = 105

Prosocial with Peer (PP). Commonly, teachers' ratings indicated that Prosocial with Peer behaviors were applicable for the majority of the children comparing to other social behaviors. "Helps other children" was a behavior rated as "Sometimes and Certainly" applicable to 80% of the children. The details of Prosocial with Peer (PP) are displayed in Table 20.

Table 20

Frequencies and Percentages of CBS - Prosocial with Peer (PP)

Items	Doesn't Apply		Applies Sometimes		Certainly Applies	
	f	%	*f*	%	*f*	%
26.Helps	21	20	27	25.7	57	54.3
28.Recognizes feelings	20	19	30	28.6	55	52.4
34.Concerned about distress	38	36.2	30	28.6	37	35.2
40.Kind toward peers	20	19	31	29.5	54	51.4
46.Cooperative with peers	13	12.4	35	33.3	57	54.3
53.Concern for moral issues	30	28.6	34	32.4	41	39
56.Offers help	26	24.8	29	27.6	50	47.6

Note: n = 105

Excluded by Peers (EP). Generally, teachers' ratings indicated that Excluded by Peers behaviors were not applicable for the majority of the children. "Excluded from peers' activities" was a behavior rated as "Sometimes and Certainly" applicable to 16.2 % of the children. The details of Excluded by Peers (EP) are displayed in Table 21.

Table 21

Frequencies and Percentages of CBS - Excluded by Peers (EP)

Items	Doesn't Apply		Applies Sometimes		Certainly Applies	
	f	%	*f*	%	*f*	%
5.Not much liked	94	89.5	11	10.5	0	0
27.Peers refuse to let child play	93	88.6	12	11.4	0	0
30.Not chosen as playmate	90	85.7	13	12.4	2	1.9
33.Peers avoid this child	93	88.6	11	10.5	1	1.0
43.Excluded from peers' activities	88	83.8	15	14.3	2	1.9
45.Ignored by peers	95	90.5	9	8.6	1	1.0
54.Ridiculed by peers	90	85.7	15	14.3	0	0

Note: n = 105

Overview of Child Behavior Scale. Prosocial with Peers (PP) was most applicable, with ratings in the positive range in the sample; Excluded by Peers (EP) was least applicable based on the mean ratings by teachers. The details of mean and standard deviations of each child behavior scale are displayed in Table22 below.

Table 22

Means and Standard Deviations of CBS Average Scores in Each Subscale

Subscales	*M*	*SD*
Aggressive with Peers (AG)	1.22	0.35
Hyperactive Distractible (HD)	1.41	0.54
Asocial with Peers (AS)	1.18	0.32
Anxious-Fearful (AF)	1.20	0.33
Prosocial with Peer (PP)	2.25	0.56
Excluded by Peers (EP)	1.13	0.26

Peer Relationship Classifications

The Sociometric method combined positive nominations and rating scale measures (Asher & Dodge, 1986; Walker, 2004) was utilized to determine the peer relationship classifications. Five levels of friendship categories, including popular, rejected, neglected, controversial, and average children, were determined based on the procedures outlined by Walker (2004) using the four scandalized Z scores of Liking scores (L scores), Low play rating scores (LPR scores), a social preference score (SP), and a social impact score (SI) (p. 17).

Liking scores (L scores) was calculated based on the number of times each preschooler was selected by their peers in the positive nomination session. Preschoolers in this study were asked separately in the private interview room to determine the three

peers whom they most like to play with (positive nomination) (Walker, 2004). A picture of children whom was selected by their peers each time was given a score of 1 as liking score through the number of positive nominations (L score). After completing all of interviews in each classroom, this researcher calculated all of liking scores how many times each child was selected by their peers.

The low play rating (LPR) was based on rating scale procedure outlined by Walker (2004). Each preschooler in this study was requested to place all of their peers' photographs from the same classroom into one of the three boxes with different happiness expression: a happy face, a neutral face, and a sad face. The photograph of the peer was placed in the sad face representing that the child who place the peer photograph into the box did not like to play with the child. Using how many times, each preschooler was placed into the box with sad face to determine the low play rate (LPR) scores.

A social preference score (SP) was calculated through subtracting the low play rating score (LPR) from the liking score (L scores) (Walker, 2004). A social impact score (SI) was calculated through adding the number of low play rating scores (LPR) and the liking score (L scores) (Walker, 2004, p. 17). The four scores, including L scores, LPR scores, SP scores and SI scores, were converted into the standardized Z scores. Some preschoolers were not matched either of category, like popular, rejected, neglected, controversial, were placed as average category.

Table below presents the means and standard deviations of the four raw scores. The average L score was 2.39; the range of L scores from 0 toward 7. The mean of LPR

score was 4.19; the range of LPR scores from 0 toward 11. The average of SP scores was -1.80; the range of this score from -11 toward 5. The mean of SI score was 6.58; the range of this score from 2 toward 16.

Table 23

Means and Standard Deviations of the Four Raw Scores

Descriptions	*M*	*SD*
L Scores	2.39	1.88
LPR	4.19	2.54
SP	-1.80	3.63
SI	6.58	2.61

Note: *n* = 105

Table24

Means and Standard Deviations of the Four Z Scores

Descriptions	*M*	*SD*
Z of L Scores	-. 00731	.89930
Z of LPR	.03336	1.01386
Z of SP	-. 04586	.98624
Z of SI	-. 01142	.94115

Note: *n* = 105

Based on the Z scores, this study determined that 33 preschoolers were popular (31.4%) and average from their peers' perspectives, 22 preschoolers were rejected by their peers (21%), 11 preschoolers were neglected, and 6 preschoolers were controversial

(5.7%). The summary table of the frequencies and percentages of friendship classification presents below. The friendship distribution figure presents below as well.

Table 25

Frequencies and Percentages of Peer Relationship Classifications

Peer Relationship Classifications	*f*	%
Popular	33	31.4
Average	33	31.4
Rejected	22	21.0
Neglected	11	10.5
Controversial	6	5.7

Note: *n* = 105

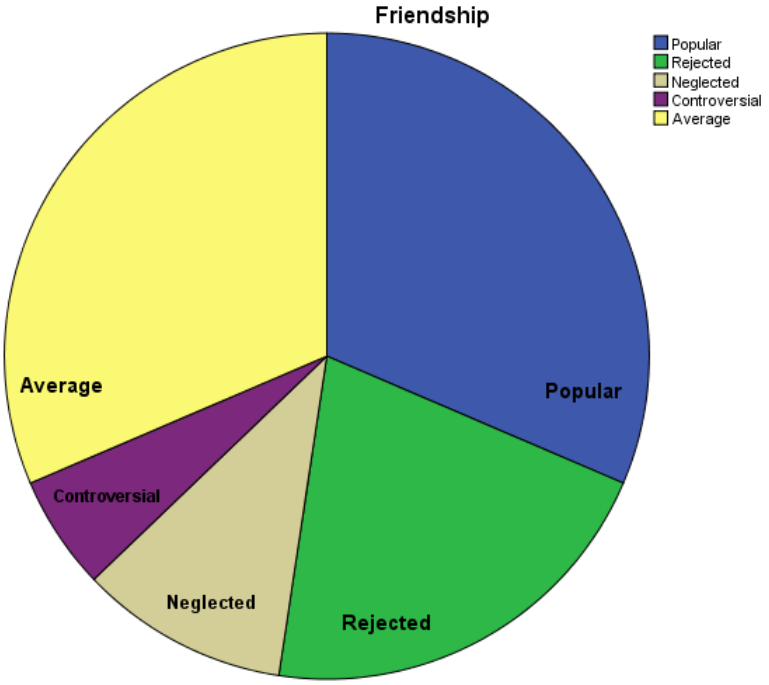

Figure2. Peer relationship classifications.

Research Question One

Research Question One: Are there significant differences in preschoolers' language competence when compared by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages?

An analysis of variance (ANOVA) was utilized to determine the mean scores differences in preschoolers' language competences when compared by peer relationship classifications, child genders, ethnicities, parental educational levels and home languages.

Furthermore, Receptive and Expressive Language Competence were two subscales of Language Discourse Competence. A higher level of interactive and positively significant relationship was found between Receptive and Expressive Language Competence Subscale Scores ($p < 0.01$) using Person correction analysis as shown in table 26.

Table 26

Correlations between Receptive and Expressive Language Competence Subscale Scores

n = 105	Receptive	Expressive
Receptive	1.00	--
Expressive	0.71 **	1.00

Note. $^{**}p \leq 0.01$

A one-way multivariate analysis of variance (MANOVA) was utilized to determine whether the receptive and expressive two subscale average scores of Preschool Language Assessment Instrument (PLAI-2) would be significant differences by

comparing to peer relationship classifications, genders, ethnicities, parental educational levels, and home languages.

Peer Relationship Classifications

Five categories were defined in the original peer relationship classification based on the sociometric method, including 33 Popular, 33 Average, 22 Rejected, 11 Neglected preschoolers, and 6 Controversial preschoolers. The total number of preschoolers was 105. In this analysis, 11 Neglected and 6 Controversial preschoolers were combined as one category as Neglected or Controversial with 17 preschoolers, so the number of category changed from 5 toward 4, including Popular, Average, Rejected, Neglected or Controversial.

The results of ANOVA indicated that there are significant differences in preschoolers' discourse competence, $F(3, 101) = 5.04$, $p < 0.05$, The Dunnett T3 post hoc analysis revealed that the average score of discourse competence for popular preschoolers was significantly higher than the group of rejected and the group of neglected or controversial ($p < 0.05$). Table 27 presents means and standard deviations of the Discourse Ability Scores by peer relationship classifications. Figure 3 presents line chart of Discourse Ability Scores by peer relationship classifications.

Table 27

Means and Standard Deviations of the Discourse Ability Scores by Peer Relationship Classifications

Peer Relationship Classifications	Discourse Ability Scores		
	n	*M*	*SD*
Popular	33	75.80	20.92
Average	33	64.52	33.14
Rejected	22	51.00	33.67
Neglected or Controversial	17	46.89	29.62

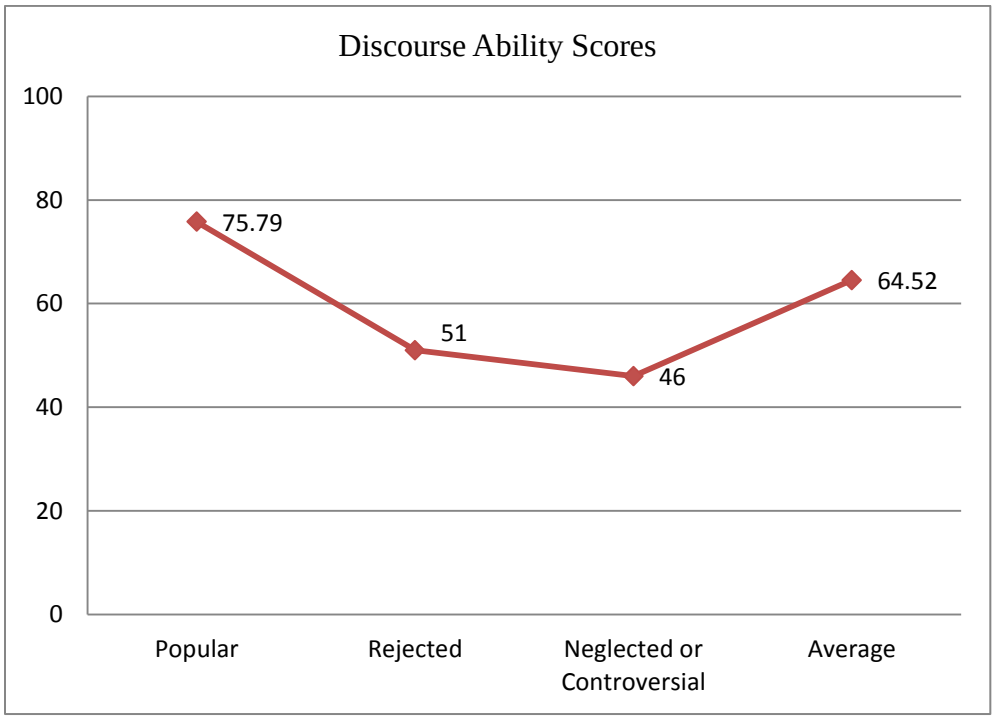

Figure 3. Discourse ability scores by peer relationship classifications.

A one way multivariate analysis of variance (MANOVA) was conducted to determine the differences in Receptive and Expressive Language Competence Subscale Scores when compared with peer relationship classifications. MANOVA results revealed significant differences among the peer relationship classifications on the average scores of Receptive and Expressive Language Competence Subscale, Wilk's $\Lambda = 0.14$, $F(2, 100) = 309.22$, $p < 0.001$, $\eta 2 = 0.86$. The effect size ($\eta 2$) of 0.86 is considered large (Cohen, 1988). Analysis of variance (ANOVA) was used on each dependent variable, Receptive and Expressive Language Competence Subscales, as a follow-up test to MANOVA. Peer relationship classification differences were significant for the Receptive Language Competence Subscale scores, $F(3, 101) = 4.71$, $p < 0.01$, partial $\eta 2 = 0.12$; were also significant for Expressive Language Competence Subscale scores, $F(3, 101) = 3.82$, $p < 0.05$, partial $\eta 2 = 0.10$. The Bonferroni post hoc analysis revealed that the language performance of Popular preschoolers was significantly higher than the group of Neglected or Controversial ($p < 0.05$) and Rejected preschoolers ($p < 0.05$) in the Receptive Language Competence Subscale scores. On the Expressive Language Competence Subscale scores, the performance of Popular preschoolers was significantly higher than Neglected or Controversial preschoolers ($p < 0.05$).

Table 28 presents means and standard deviations of the Receptive and Expressive Language Competence Subscale Scores by Peer Relationship Classifications.

Table 28

Means and Standard Deviations of the Receptive and Expressive Language Competence Subscale Scores by Peer Relationship Classifications

Peer Relationship Classifications		Receptive		Expressive	
	n	*M*	*SD*	*M*	*SD*
Popular	33	73.61	17.48	70.88	24.47
Average	33	67.39	27.30	59.09	32.65
Rejected	22	54.00	29.17	49.36	33.32
Neglected or Controversial	17	51.29	22.80	44.12	30.83

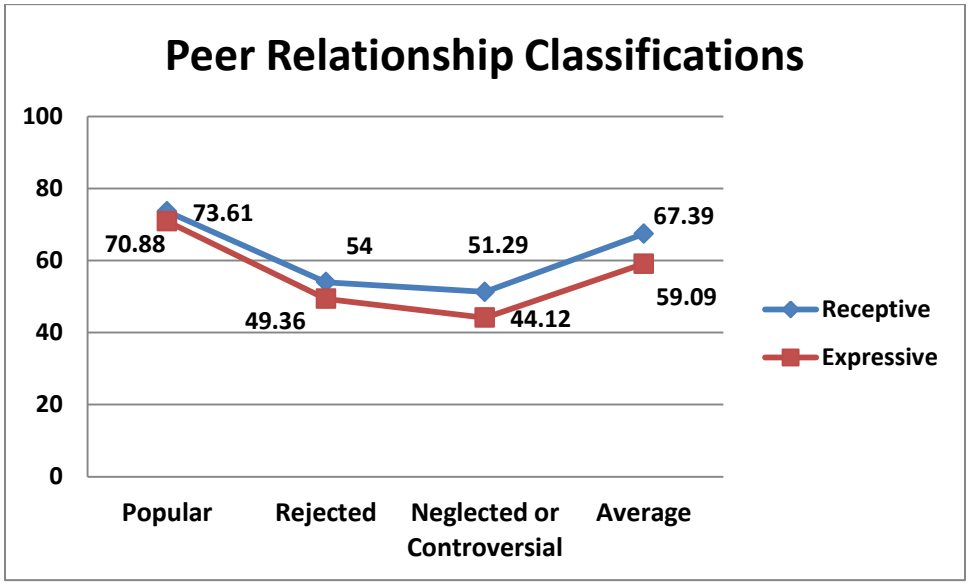

Figure 4. Receptive and expressive language competence subscale scores by peer relationship classifications.

Genders

The ANOVA results indicated that there are significant differences between girl and boy in their Discourse Ability Scores, $F(1, 103) = 7.13$, $p < 0.01$. A summary table below presents means and standard deviations of the discourse ability scores by genders. Figure 5 presents line chart of Discourse Ability Scores by genders.

Table 29

Means and Standard Deviations of the Discourse Ability Scores *by Genders*

Genders		Discourse Ability Scores	
	n	*M*	*SD*
Girl	51	70.45	25.12
Boy	54	54.74	34.19

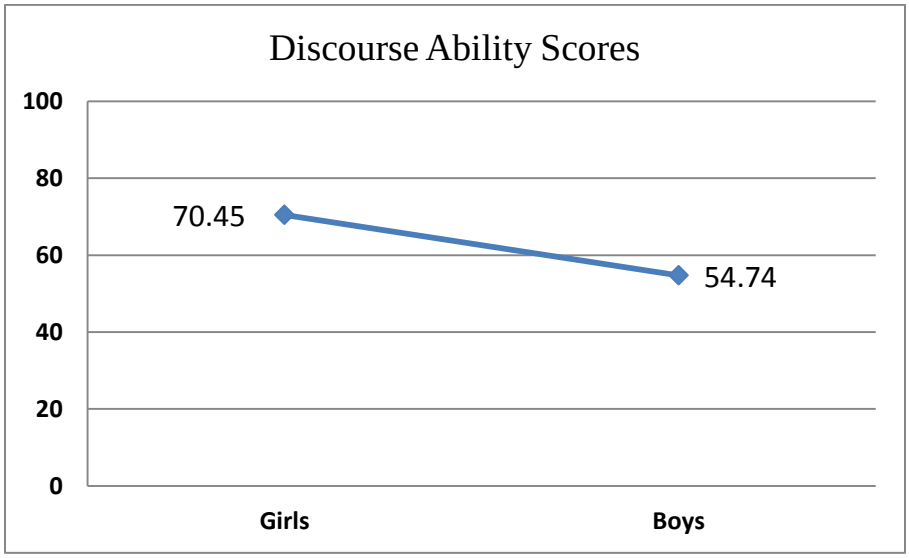

Figure 5. Discourse ability scores by genders.

MANOVA results revealed significant differences between gender groups on the average scores of Receptive and Expressive Language Competence Subscales, Wilk's $\Lambda = 0.91$, $F(2, 102) = 4.82$, $p < 0.001$, $\eta 2 = 0.09$. The effect size ($\eta 2$) of 0.09 is considered medium (Cohen, 1988). Analysis of variance (ANOVA) was used on each dependent variable, Receptive and Expressive Language Competence Subscale Scores, as a follow-up test to MANOVA. Gender was not significant for Receptive Language Competence Subscale scores, $F(1, 103) = 2.54$, $p = 0.11$, partial $\eta 2 = 0.02$, but it was significant for Expressive Language Competence Subscale scores, $F(1, 103) = 9.16$, $p < 0.01$, partial $\eta 2 = 0.08$. Table 30 presents means and standard deviations of the Receptive and Expressive Language Competence Subscale Scores by genders. Figure 6 presents line chart of Receptive and Expressive Language Competence Subscale Scores by genders.

Table 30

Means and Standard Deviations of the Receptive and Expressive Language Competence Subscale Scores by Genders

Gender		Receptive		Expressive	
	n	*M*	*SD*	*M*	*SD*
Girl	51	68.00	22.46	67.51	25.53
Boy	54	60.09	27.93	49.67	34.00

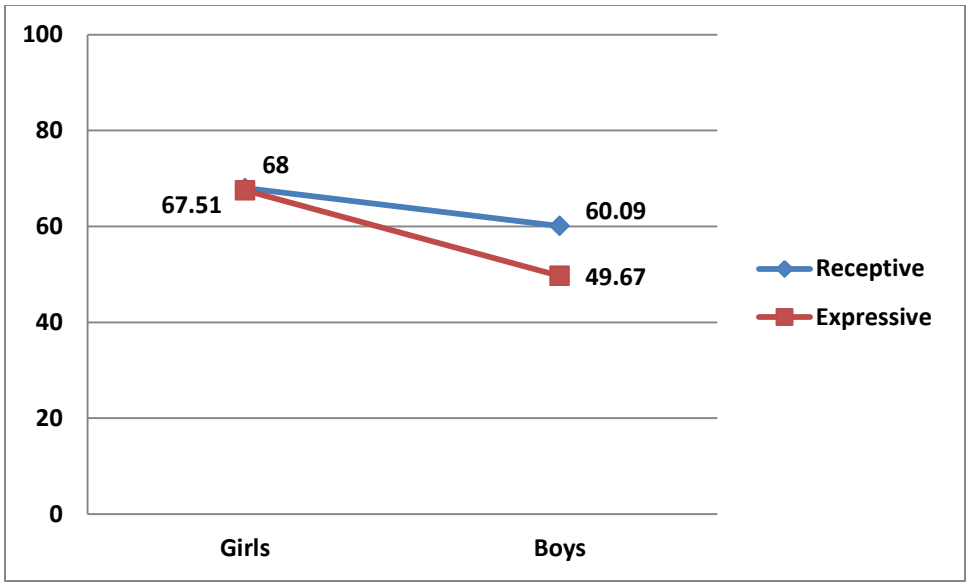

Figure 6. Receptive and expressive language competence subscale scores by genders.

Ethnicities

Ethnicities were based on mothers' ethnicities based on *Parental Demographic Questionnaires*. In this analysis, Caucasian and mixed races group were combined together as the group of Caucasian or others. The ANOVA results indicated that there were no significant differences in preschoolers' Discourse Ability Scores among three ethnicity groups, $F(2, 102) = 1.46$, $p = 0.24$. Even though no significant differences among ethnicity groups in the mean scores of Discourse Ability, the group of Caucasian or other (M = 74.25) was higher than the group of African American (M = 64.97) and Hispanic (M = 58.57).

Table 31

Means and Standard Deviations of the Discourse Ability Scores by Ethnicities

Ethnicities	Discourse Ability Scores		
	n	*M*	*SD*
Caucasian or Others	12	74.25	22.90
African American	33	64.97	31.92
Hispanic	60	58.57	31.58

MANOVA results revealed significant differences between ethnicities on the average scores of Receptive and Expressive Language Competence Subscales, Wilk's $\Lambda = 0.90$, $F(4, 202) = 2.67$, $p < 0.05$, $\eta 2 = 0.05$. Analysis of variance (ANOVA) was used on each dependent variable, Receptive and Expressive Language Competence Subscales Scores, as a follow-up test to MANOVA. Ethnicity was not significant for Receptive and Expressive Language Competence Subscale Scores, $F(2, 102) = 0.66$, $p = 0.52$, partial $\eta 2 = 0.01$; not significant for expressive scores, $F(2, 102) = 2.92$, $p = 0.06$, partial $\eta 2 = 0.05$.

Table 32

Means and Standard Deviations of the Receptive and Expressive Language Competence Subscales by Ethnicities

Ethnicities		Receptive		Expressive	
	n	*M*	*SD*	*M*	*SD*
Caucasian or Others	12	71.83	20.75	70.92	23.39
African American	33	62.21	27.43	64.85	30.82

Hispanic	60	63.30	25.54	52.23	31.96

In this sample, based on the means of Receptive and Expressive Language Competence Subscale scores in the summary table above, the means in Receptive and Expressive Language Competence Subscales, and Discourse Ability Scores, the group of Caucasian or Others had slightly higher scores compared to the other two groups. In the means of Receptive Language Competence Subscale scores, the Hispanic group was slightly higher than the African American group, but in the mean scores of Expressive Language Competence Subscale scores and Discourse Ability Scores, the African American group was higher than the Hispanic group.

Parental Educational Level

Parental educational level was based on mother's educational level for this analysis. In the original *Parents' Demographic Questionnaire*, 8 categories were reported in the parents' educational level, including elementary school, some high school courses, high school diploma, some college courses, associate's degree, bachelor degree, some graduate degree courses, and a masters or doctoral degree. In this analysis, the 8 categories were integrated into three major levels, including high school or less, some college and college degree or above. The ANOVA results indicated no significant differences in preschoolers' Discourse Ability Scores among different groups whose mothers had different educational levels, $F(2, 100) = 0.16$, $p = 0.87$.

Table 33

Means and Standard Deviations of Discourse Ability Scores by Educational Levels

Peer Relationship	Discourse Ability Scores		
	n	*M*	*SD*
High School or Less	40	60.83	30.67
Some College	38	63.03	31.43
College Degree or Above	25	65.20	31.39

MANOVA results revealed no significant differences among the three levels of educational groups on the average scores of Receptive and Expressive Language Competence Subscale, Wilk's $\Lambda = 0.97$, $F(4, 198) = 0.66$, $p = 0.62$, $\eta 2 = 0.01$. Even though there were no significant differences in Receptive Language Competence Subscale scores among the three preschool groups whose mothers had different educational levels, the means of Receptive and Expressive Language Competence Subscale scores was slightly higher in the group of mothers with a college degree or above compared to those of the other two groups.

In this sample of the population, the means of Discourse Ability Scores and Receptive and Expressive Language Competence Subscale scores all displayed higher scores in those of groups whose mothers had a college degree or above compared to those mothers without a college degree. In the means of Receptive Language Competence Subscale scores, preschoolers whose mothers' educational level was high school or less were slightly higher than the preschoolers whose mothers took some college courses. In

the means of Discourse Ability Scores and Expressive Language Competence Subscale scores, preschoolers whose mothers' educational level was high school or less was slightly less than the preschoolers whose mothers had some college degree.

Table 34

Means and Standard Deviations of the Receptive and Expressive Language Competence Subscale Scores by Educational Levels

Parents' Education Levels		Receptive		Expressive	
	n	*M*	*SD*	*M*	*SD*
High School or Less	40	64.75	23.63	55.50	32.41
Some College	38	61.97	27.97	60.50	29.41
College Degree or Above	25	65.88	25.87	61.52	32.67

Home Languages of Children

Home languages of children were based on the reported by *Parents' Demographic Questionnaires*. Even though some parents spoke Spanish at home, their children used Spanish or both languages (English and Spanish). Three major home languages of children were composed of 60 preschoolers who spoke English at home, 23 preschoolers who spoke Spanish, 22 preschoolers who spoke both languages. The ANOVA results indicated that there are significant differences in preschoolers' Discourse Ability Scores, $F(2, 102) = 7.64$, $p < 0.01$.

Bonferroni post hoc analysis was conducted to do the follow up test. The Bonferroni post hoc analysis revealed that the mean score of discourse competence for

preschoolers who spoke English at home were significantly higher than the preschoolers who spoke Spanish at home ($p < 0.05$), but no significant different between Spanish group and the group of both English and Spanish (p = 0.13) or the group of English and the group both English and Spanish (p = 0.51). Table 35 presents means and standard deviations of the Discourse Ability Scores by home languages. Figure 7 presents line chart of Discourse Ability Scores by home languages.

Table 35

Means and Standard Deviations of the Discourse Ability Scores *by Home Languages*

Home Languages		Discourse Ability Scores	
	n	*M*	*SD*
English	60	70.58	29.31
Both English and Spanish	23	60.55	25.17
Spanish	22	42.70	32.32

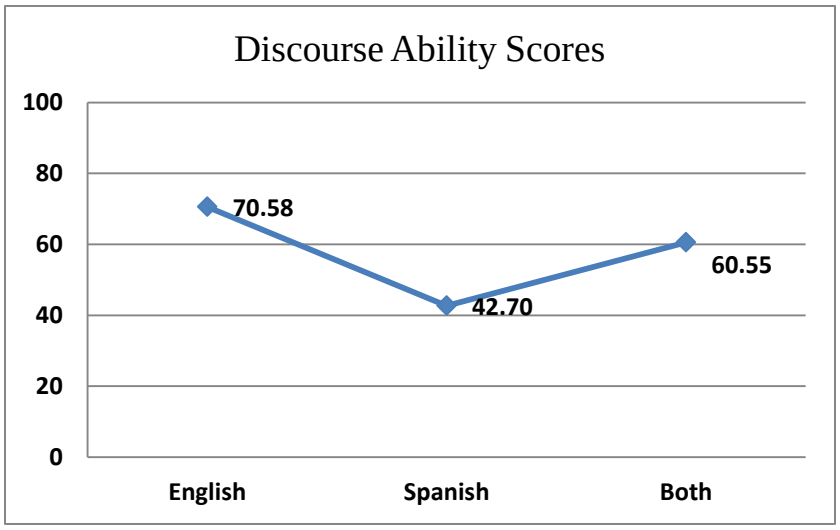

Figure 7. Discourse ability scores by home languages.

MANOVA results revealed significant differences among three home language groups on the average scores of Receptive and Expressive Language Competence Subscale, Wilk's $\Lambda = 0.87$, $F(4, 202) = 3.79$, $p < 0.01$, $\eta 2 = 0.07$. The effect size ($\eta 2$) of 0.07 is considered small to medium (Cohen, 1988). Analysis of variance (ANOVA) was used on each dependent variable, Receptive and Expressive Language Competence Subscale Scores, as a follow-up test to MANOVA. Children's home language was significantly different on Receptive Language Competence Subscale Scores, $F(2, 102) = 3.24$, $p < 0.05$, partial $\eta 2 = 0.06$; it was also significantly different on Expressive Language Competence Subscale Scores, $F(2, 102) = 7.70$, $p < 0.01$, partial $\eta 2 = 0.13$. The effect size ($\eta 2$) of 0.13 is considered medium to large (Cohen, 1988). The Bonferroni post hoc analysis revealed that the group where English was spoken at home had significantly higher scores than the group where Spanish was the primary language used at home in the Receptive Language Competence Subscale Scores, but there were no significant differences between the Spanish-speaking group and the group where both English and Spanish was spoken at home ($p = 0.70$) or the group whose home language was English and the group that spoke both English and Spanish ($p = 0.81$). The Dunnett T3 post hoc analysis revealed that the group who spoke English at home had significantly higher scores than the group who spoke Spanish at home ($p < 0.01$) in the Expressive Language Competence Subscale Scores as well, but there were no significant differences between the group who spoke English at home and the group who spoke both English and Spanish

at home (p = 0.52), and the group who spoke Spanish at home or the group who spoke both English and Spanish at home (p = 0.61).

Table 36

Means and Standard Deviations of the Receptive and Expressive Language Competence Subscale Scores *by Home Languages*

Home Language		Receptive		Expressive	
	n	*M*	*SD*	*M*	*SD*
English	60	69.35	25.05	67.05	29.39
Both English and Spanish	23	60.23	23.82	56.00	23.38
Spanish	22	53.35	25.79	37.83	33.99

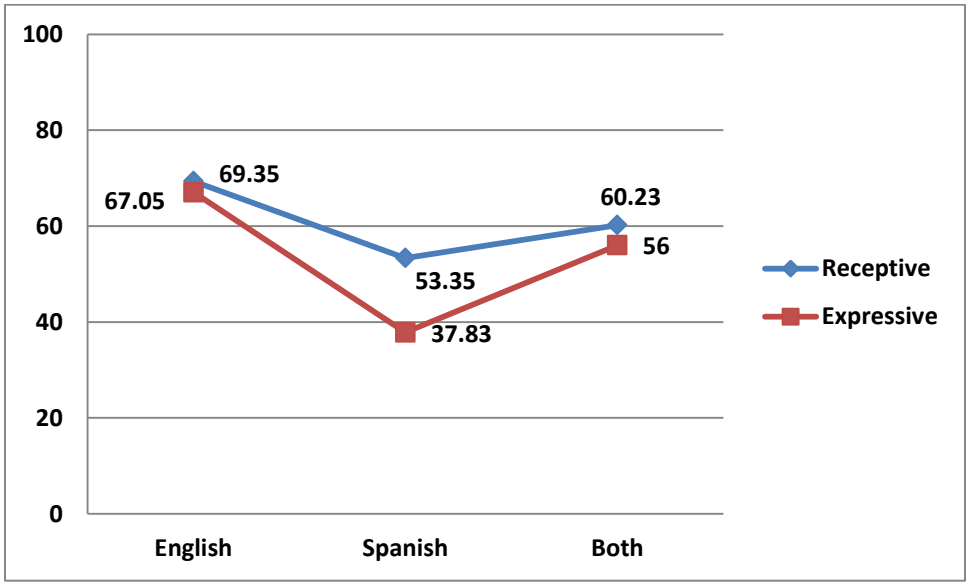

Figure 8. Receptive and expressive language competence subscale scores by home languages.

Research Question Two

Research Question Two: Are there significant differences in teacher ratings of the Child Behavior Scale when compared by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages?

Correlations were calculated for the six subscales of the Child Behavior Scale. The results are displayed in Table 37. The subscale correlations were significant; therefore the subscales were analyzed as a set of variables.

Table 37

Correlations among Six Subscales of the Child Behavior Scale

Subscales	AG	HD	AS	AF	PP	EP
AG	1.00					
HD	0.62 **	1.00				
AS	0.26 **	0.48 **	1.00			
AF	0.39 **	0.53 **	0.67 **	1.00		
PP	-0.32 **	-0.40 **	-0.22 *	-0.25	1.00	
EP	0.55 **	0.53 **	0.47 **	0.46	-0.36 **	1.00

Note. $*p \leq 0.05$, $**p \leq 0.01$

Multivariate analyses of variance (MANOVAs) were utilized to determine whether the set of six subscales mean scores of the Child Behavior Scale (CBS) would be significantly different when comparing by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages.

Child Behavior Scale by Peer Relationship Classifications

A one-way multivariate analysis of variance (MANOVA) was conducted to determine the mean score differences of Aggressive with Peers (AG), Hyperactive Distractible (HD), Asocial with Peers (AS), Anxious-Fearful (AF), Prosocial with Peers (PP), and Excluded by Peers (EP) when compared peer relationship classifications. MANOVA results revealed significant differences among the peer relationship classifications on the average scores of Child Behavior Scale, Pillai's Trace = 0.28, $F(18, 294) = 1.65$, $p < 0.05$, $\eta 2 = 0.09$. Analysis of variance (ANOVA) was used on each dependent variable, AG, HD, AS, AF, PP, and EP, as a follow-up test to MANOVA. The results indicated that peer relationship classifications affect Aggressive with Peers (AG) and Hyperactive Distractible (HD) but not Asocial with Peers (AS), Anxious-Fearful (AF), Prosocial with Peers (PP), and Excluded by Peers (EP). The Dunnett T3 post hoc analysis revealed that the average score of Aggressive with Peers (AG) significantly differs between Rejected and Neglected or Controversial groups; between Neglected or Controversial group and Average group. The average score of Hyperactive Distractible (HD) significantly differs between popular and rejected groups.

Table 38

Means, Standard Deviations, F and p of Child Behavior Scale by Peer Relationship Classifications

Subscale	Popular $n = 33$		Average $n = 33$		Rejected $n = 22$		Neglected or Controversial $n = 17$				
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	η2
AG	1.15	0.29	1.25	0.34	1.42	0.45	1.03	0.06	5.20	0.00 **	0.13
HD	1.21	0.40	1.51	0.60	1.59	0.62	1.37	0.48	2.79	0.04 *	0.08
AS	1.11	0.28	1.19	0.28	1.23	0.38	1.25	0.37	0.96	0.42	0.03
AF	1.13	0.26	1.18	0.31	1.26	0.33	1.31	0.46	1.41	0.25	0.04
PP	2.36	0.55	2.29	0.48	2.05	0.57	2.23	0.65	1.48	0.22	0.04
EP	1.08	0.20	1.12	0.23	1.22	0.34	1.14	0.29	1.30	0.28	0.04

Note. $^{*}p \leq 0.05$, $^{**}p \leq 0.01$

Child Behavior Scale by Genders

MONOVA results revealed significant differences between genders on the average scores of Child Behavior Scale, Pillai's Trace = 0.17, F(6, 98) = 0.17, $p < 0.01$, η2= .17. The results of Analysis of variance (ANOVA) present in the following summary table with mean and standard deviations. Child gender differences were significant for Aggressive with Peers (AG), F(1, 103) = 5.99, $p < 0.05$, partial η2 = .06 and for Hyperactive Distractible (HD), F(1, 103) = 20.77, $p < 0.01$, partial η2 = .17. In the average score of Aggressive with Peers (AG) and Hyperactive Distractible (HD), boys were significant higher than girls. No significant differences in Asocial with Peers (AS), F(1, 103) = 2.98, $p = 0.09$, partial η2 = 0.03, in Anxious-Fearful (AF), F(1, 103) = 3.32, $p = 0.07$, partial η2 = 0.03, in Prosocial with Peers (PP), F(1, 103) = 2.57, $p = 0.11$, partial η2 = .024, in Excluded by Peers (EP), F(1, 103) = 2.49, $p = 0.11$, partial η2 = .024.

Table 39

Means, Standard Deviations, F and p of Child Behavior Scale by Genders

Subscales	Girl *n* = 51		Boy *n* = 54				
	M	*SD*	*M*	*SD*	*F*	*p*	*η2*
AG	1.13	0.28	1.30	0.38	5.99	0.02 *	0.06
HD	1.18	0.35	1.63	0.61	20.77	0.00 **	0.17
AS	1.13	0.28	1.23	0.35	2.98	0.09	0.03
AF	1.14	0.28	1.26	0.37	3.32	0.07	0.03
PP	2.34	0.57	2.17	0.53	2.57	0.11	0.02
EP	1.09	0.24	1.17	0.28	2.49	0.12	0.02

Note. $n = 105$, *$p \leq 0.05$, **$p \leq 0.01$

Child Behavior Scale by Ethnicities

Ethnicities were based on the race of mother. MONOVA results revealed significant differences between ethnicity of mother on the average scores of Child Behavior Scale, Pillai's Trace = 0.29, F(12, 196) = 2.80, $p < 0.01$, η2 = 0.15. The results of Analysis of variance (ANOVA) present in the following summary table with mean and standard deviations. The Dunnett T3 post hoc analysis revealed that the average score of Aggressive with Peers (AG) significantly differs between African American and Caucasian or others ($p < 0.05$), between the group of Caucasian or others and the group of Hispanic ($p < 0.01$). The average score of Hyperactive Distractible (HD) significantly differs between the group of African American and the group of Caucasian or others ($p < 0.05$), between the group of Caucasian or others and the group of Hispanic ($p < 0.01$).

Table 40

Means, Standard Deviations, F and p of Child Behavior Scale by Ethnicities

Subscales	Caucasian or Others n = 12		African American n = 33		Hispanic n = 60				
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*p*	η^2
AG	1.62	0.40	1.24	0.37	1.12	0.26	12.64	0.00 **	0.20
HD	1.98	0.61	1.43	0.58	1.28	0.43	9.58	0.00 **	0.16
AS	1.33	0.37	1.14	0.29	1.18	0.33	1.63	0.20	0.03
AF	1.38	0.43	1.24	0.32	1.15	0.31	2.82	0.07	0.05
PP	1.88	0.46	2.29	0.54	2.31	0.56	3.19	0.05 *	0.06
EP	1.40	0.44	1.13	0.23	1.08	0.19	8.94	0.00 **	0.15

Note. $*p \leq 0.05$, $**p \leq 0.01$

Child Behavior Scale by Parental Educational Levels

Parental education level was reported by mother. MANOVA results revealed no significant differences between the level of parental education on the average scores of Child Behavior Scale, Pillai's Trace = 0.17, F(12, 192) = 1.45, p = 0.15, η2 = .08.

Table 41

Means, Standard Deviations, F and p of Child Behavior Scale by Parental Educational Levels

Subscales	High School or Less n = 40		Some College n = 38		College or Above Degree n = 25				
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*P*	*η2*
AG	1.14	0.26	1.27	0.39	1.28	0.40	1.97	0.15	0.04
HD	1.33	0.48	1.51	0.63	1.38	0.50	1.13	0.33	0.02
AS	1.18	0.30	1.17	0.31	1.20	0.38	0.09	0.92	0.00
AF	1.16	0.30	1.26	0.40	1.20	0.28	0.77	0.47	0.02
PP	2.30	0.56	2.10	0.61	2.39	0.42	2.33	0.10	0.05
EP	1.15	0.29	1.16	0.27	1.08	0.19	0.78	0.46	0.02

Note. $*p \leq 0.05$, $**p \leq 0.01$

Child Behavior Scale by Home Languages

MONOVA results revealed no significant differences among three different home language groups on the average scores of Child Behavior Scale, Pillai's Trace = 0.19, F(12, 196) = 1.72, p = 0.07, η2 = 0.10. However, the follow up test revealed that there were the significant differences in Aggressive scores.

Table 42

Means, Standard Deviations, F and p of Child Behavior Scale by Home Languages

Subscales	English $n = 60$		Both $n = 23$		Spanish $n = 22$				
	M	*SD*	*M*	*SD*	*M*	*SD*	*F*	*P*	*η2*
AG	1.29	0.39	1.20	0.33	1.04	0.13	4.54	0.01*	0.08
HD	1.45	0.57	1.42	0.56	1.28	0.44	0.83	0.44	0.02
AS	1.15	0.26	1.23	0.41	1.22	0.37	0.73	0.48	0.01
AF	1.25	0.34	1.17	0.33	1.12	0.31	1.33	0.27	0.03
PP	2.25	0.55	2.31	0.53	2.22	0.61	0.13	0.88	0.00
EP	1.15	0.27	1.16	0.29	1.07	0.21	0.92	0.40	0.02

Note. $*p \leq 0.05$, $**p \leq 0.01$

Research Question Three

Research Question Three: Which predictor variables of peer relationship classifications, teacher ratings of child behaviors, child genders, and home languages are most influential in predicting preschoolers' language competence?

Stepwise multiple regression was conducted to determine which independent variables of peer relationship classifications, six subscale scores of teacher's rating child behaviors, child genders, and home language were the predictors of preschoolers' language competence. No violations had found in preliminary assumption tests for each variable in multivariate outliers, linearity, normality, and homoscedasticity. In this analysis, peer relationship classification and home language were categorical variables. Three dummy variables were coded as popular, average and rejected when compared to baseline category of neglected group in peer relationship; two dummy variables were coded as English and both languages when compared to the baseline category of Spanish

group. The total number of Independent variables was 12 in this analysis, including Aggressive with Peers (AG), Hyperactive Distractible (HD), Asocial with Peers (AS), Anxious-Fearful (AF), Prosocial with Peers (PP), and Excluded by Peers (EP), gender, popular, average, rejected, English, and both languages, to determine which variables would be the best predictors in the scores of preschoolers' discourse competence using PLAI-2.

Regression results revealed that four predictors in the final overall model, including Popular in peer relationship classifications when compared to neglected, English when compared to Spanish in home language, Anxious-Fearful in Child Behavior Scales, and Average when compared to Neglected in peer relationship classifications significantly predicted preschoolers' Language Discourse Competence, $R^2 = 0.24$, $R^2_{ADJ} = 0.21$, $F(4, 100) = 8.01$, $P < 0.001$. This model accounted for 24.3 % of variance in preschoolers' language competence (table 43).

Table 43

Model Summary Table for Language Discourse Competence Expectation

Step	R	R^2	R^2_{ADJ}	ΔR^2	F_{chg}	p	df_1	df_2
Popular	0.29	0.09	0.08	0.09	9.77	0.000 **	1	103
English Speaking	0.41	0.17	0.15	0.08	10.19	0.001 **	2	102
CBS-Anxious-Fearful	0.46	0.21	0.19	0.04	5.34	0.042 *	3	101
Average	0.49	0.24	0.21	0.03	4.14	0.045 *	4	100

Note. $*p \leq 0.05$, $**p \leq 0.01$

The scores of Discourse Ability Scores represented Language Discourse Competence would be significant increased if students' peer relationship classifications moved from Neglected to Popular, and peer relationship classification moved from Neglected toward Average, if students' home languages moved from Spanish toward English speaking. However, the scores of Discourse Ability Scores would decrease when students' Anxious-Fearful (AF) increased. A summary of the regression model is presented in table 1. In addition, the summary of the coefficient is presented in table 44.

Table 44

Coefficients for Final Model

Model	*B*	*β*	*t*	*Bivariate r*	*Partial r*
Popular VS Neglected	24.89	0.37	3.75 **	0.29	0.35
English VS Spanish	19.38	0.31	3.55 **	0.27	0.33
CBS-Anxious-Fearful	-17.25	- 0.19	- 2.06 *	- 0.20	- 0.20
Average VS Neglected	13.36	0.20	2.04 *	0.05	0.20

Note. $*p \leq 0.05$, $**p \leq 0.01$

Summary

This chapter includes a description of participants collected from preschoolers, parents and preschool teachers. The data were drawn from 105 preschoolers, their parents, and 14 classroom teachers in one of the Head Start Centers in Dallas, Texas. The parental demographic data were collected through *Parental Demographic Questionnaires*. Teachers' data were collected via *Teacher Demographic Questionnaires*. The children's data were assessed individually, utilizing the Preschool Language Assessment Instrument, 2nd Edition [PLAI-2] (Blank, Rose, & Berlin, 2003). This instrument was used to

measure Language Discourse Competence which includes a 70-question instrument with two major subscales of Receptive and Expressive Language Competence. The peer relationship classification reports were based on children's interviews utilizing Sociometric techniques, and the child behaviors were evaluated through teachers' ratings in the Child Behavior Scale with 59 items that measures six subscales, including Aggressive (AG), Hyperactive Distractible (HD), Asocial with Peers (AS), Anxious-Fearful (AF), Prosocial with Peers (PP), and Excluded by Peers (EP) (Ladd, 2010). Various statistical analyses, including ANOVA, MANOVA and Multiple Regression were conducted to answer the three research questions. Preschoolers were categorized into four peer relationship classifications based on the Sociometric technique categories of Popular, Average, Rejected, and Neglected or Controversial.

Statistically significant differences were found among peer relationship classifications, genders, and home languages in preschoolers' language competencies, regardless of ethnicities and parental educational levels. In addition, other statistically significant differences on the effect of social behaviors were also found when grouping the variables of peer relationship classifications, child genders, and ethnicities, regardless of parental education levels and home languages. Finally, certain types of peer relationship classifications, home languages, and Anxious-Fearful (AF) social behaviors account for the predictors of preschoolers' language competencies, regardless of genders and other social behaviors. Discussions of the research findings are presented in Chapter V.

CHAPTER V

DISCUSSION

Introduction

Peer relationships and social interactions have been considered essential components that promote language competence (Sato & Ballinger, 2012; Hoff, 2009). Few studies have revealed the association between language competence and peer relationships (Gulay, 2011b; McCormack, Harrison, McLeod, & McAllister, 2011). Social behaviors can also affect peer relationships and social interactions (Ladd et al., 2006; Gulay, 2011a). Additionally, other variables, like child genders, home languages, parental educational levels, and ethnicities should also be taken into account when examining language competency. Therefore, this current study investigated differences in preschoolers' language competencies and child behaviors when compared by peer relationship classifications, child genders, ethnicities, home languages and parental education levels. Furthermore, the study also explored which of the following variables, including peer relationship classifications, teacher' ratings of child behaviors, child genders, and home languages are predictors of language competency for preschool children. This chapter includes a summary of the study, a discussion of the findings associated with the research questions and some previous studies, conclusions which were based on the research findings, and the research limitations. Finally, the

implications and recommendations are also discussed to support preschool children, teachers, school administrators, as well as future studies.

Summary of Study

The purpose of this study was to explore whether peer relationship classifications, teachers' ratings of child behaviors, child genders, and home languages are predictors of language competency for preschool children. If so, which variables would be the most effective predictors of language competency? Another purpose of this study was to examine whether there were differences on preschoolers' language competencies and child behaviors when compared with peer relationship classifications, child genders, ethnicities, home languages, and parental education levels. Three main developmental theories, Interactionism, Social Behaviorism, and Cognitivism, were integrated as a theoretical framework to guide this study. The data were drawn from 105 preschoolers, and their parents, as well as 14 classroom teachers from one Head Start Center in Dallas, Texas. The children's data were evaluated individually based on the report of the *Preschool Language Assessment Instrument*, 2nd Edition [PLAI-2] (Blank, Rose, & Berlin, 2003), the child interview results utilizing Sociometric techniques, and the reports from teachers' ratings using the *Child Behavior Scale* (Ladd, 2010). The parental data were collected through *Parental Demographic Questionnaires*. Teachers' data were collected via *Teacher Demographic Questionnaires*.

For the analysis section, ANOVA was utilized to determine the differences in the mean of Discourse Ability Scores among the groups of peer relationship classifications,

child genders, ethnicities, and home languages. MANOVA was applied to explore the differences in the mean scores of Receptive and Expressive Language Competence Subscales among the groups of peer relationship classifications, child genders, ethnicities, and home languages. MANOVA also utilized to investigate the differences in the six subscales scores of the *Child Behavior Scale* when compared to groups of peer relationship classifications, child genders, ethnicities, and home languages. Finally, Multiple Regression was conducted to determine which variables would be the best combination of predictors of language competency. The research findings are addressed in the following section.

Discussion of Findings

Research Question One

Are there significant differences in preschoolers' language competencies when compared with peer relationship classifications, genders, ethnicities, parental educational levels, and home languages?

This study found that there were significant differences in preschoolers' language competencies when the mean scores of the Discourse Ability, Receptive and Expressive Language Competence Subscales were compared with peer relationship classifications, genders, and home languages, yet there were no significant differences in ethnicities or parental educational levels. This study found that children who were identified as Rejected or Neglected and Controversial in their peer relationship classifications displayed lower language competency in both Receptive and Expressive Language

Competence Subscales scores. Preschoolers identified as Popular in the peer relationship classifications had more advanced Language Discourse Competencies compared to those identified as Rejected, Neglected or Controversial.

The importance of peer relationships was confirmed by these results. A study conducted by McCormack, Harrison, McLeod, and McAllister (2011) involved 4-5 and 7-9 year-old children in Australia. This longitudinal study reported that children with language impairments were associated with poorer peer relationships and less school satisfaction. Even though the study focused on children with language impairments, McCormack, Harrison, McLeod, and McAllister (2011) confirmed the association between children's language and their interpersonal interactions and relationships with peers. A study by Gulay (2011) reported significant effects of peer relationships on preschool children's language skills in Turkey. The study by Gulay (2011) utilized teachers' rating scales to determine peer relationships based on children's behaviors. However, the study did not include the perspectives of the children.

Gender has been investigated as a significant factor affecting language competence in many studies (Bielen & Malkowska-Zegadlo, 1998; Umek, Fekonja, Kranjc, & Bajc, 2005; 2008). Generally, girls have higher language performance than boys, especially among infants and toddlers. This current study involved children, 3-5 years-old, to investigate preschoolers' receptive and expressive language competencies. Girls had significantly more advanced language performances in Expressive Language Competence Subscale than boys, but there were no significant differences in their

Receptive Language Competence Subscale scores when compared by gender. This study highlights the gender differences in expressive language competencies rather than receptive language capacities. Other studies also revealed similar results that female students have higher scores or higher performances on language assessments (De Lisle, Smith, & Jules, 2005; Marjanovic-Umek et al., 2011). These two studies only compared the total scores of language assessments rather than investigating the receptive and expressive language capacities.

Home languages were also used as grouping variables when comparing language competencies of preschool children. The findings revealed that children whose home language was English had significantly advanced Language Discourse Competencies than children whose home language was Spanish. It should be noted that the language assessment for this study was conducted only in English using the PLAI-2 because a Spanish version of the instrument is not available.

Tabor (2008) demonstrated that the volume of exposure in one language could reveal the level of language proficiency. Thus, English speaking children may have had an advantage due to the use of English both at home and at the Head Start program. A review of the literature by Wallstrum (2009) reported that children with dual or multiple languages demonstrated developed advanced cognitive, social interaction, and verbal competence later on compared to their monolingual peers.

Several studies have revealed that children's language competencies differ by ethnicities and parents' educational levels (Hammer, Farkas, & Maczuga, 2010; Howes et

al., 2008; the U.S. Department of Education, 2007; Ima & Labovitz, 1991; Umek et al., 2005). However, in this study, Language Discourse Competencies did not differ significantly by mothers' ethnicities and parents' educational levels. In the Discourse Ability Scores of PLAI-2, the Caucasian group or Others had higher scores than African American and Hispanic children. When this study further investigated Receptive and Expressive Language Competence Subscale scores, the results showed slight differences among different ethnic groups. In Receptive Language Competence Subscale, Hispanic children had slightly higher scores than African American children in this sample.

Even though there were no significant differences among the mean of the Discourse Ability Scores when compared by parents' educational levels. The mean scores still were slightly higher when mothers had higher educational training. It is interesting to demonstrate the differences among the mean scores of Receptive and Expressive Language Competence Subscales when compared by mothers' educational levels. The mean of the Discourse Ability Scores and Expressive Language Competence Subscales scores followed the pathway that preschoolers whose mothers had higher educational training revealed slightly better scores than those of mothers with less education. However, the mean of Receptive Language Competence Subscale scores displayed slightly opposite results. Preschoolers whose mothers took some college courses showed slightly lower scores than those of mothers with a high school degree or lower.

Research Question Two

Are there significant differences in teachers' ratings of Child Behavior Scale when compared by peer relationship classifications, genders, ethnicities, parental educational levels, and home languages?

This study found significant differences on the set of Child Behavior Scale subscale scores when comparing the groups with peer relationships, genders and ethnicities, but no significant differences were revealed in the groups by parents' education levels or home languages.

Several studies have revealed that peer relationships are affected by children's social behaviors (Gulay, 2011; Ladd, Herald, & Andrews, 2006; White & Kistner, 2011). This study revealed similar findings for specific social behaviors. Preschoolers who were rejected by their peers demonstrated higher Aggressive (AG) and Hyperactive Distractible (HD) scores compared to other groups of preschoolers, based on teachers' ratings. This study included the following different types of social behaviors rather than focusing on negative and aggressive behavior only: Asocial with Peers (AS), Anxious-Fearful (AF), Prosocial with Peers (PP), and Excluded by Peers (EP). These behaviors did not show statistically significant differences in the follow-up analysis when compared with peer classifications. Popular preschoolers demonstrated higher positive social behaviors like Prosocial with Peers and lower Anxious-Fearful scores. Rejected and Neglected preschoolers had higher scores on Asocial with Peers. This result also

corresponded with a study by Dodge (1983) who found that Rejected groups of children, compared to others, presented more aggressive actions and behaviors. Dodge (1983) revealed that Neglected children did not show higher aggression compared to Rejected or Average children. Likewise, this current study found that Neglected or Controversial preschoolers displayed the lowest aggression compared to Rejected and Average preschoolers. Several studies have investigated rejected preschoolers and their social behaviors (Bolger & Patterson, 2001; Coie & Cillessen, 1993; Ladd, 2006); yet little is known about neglected and Controversial preschoolers.

In addition, the findings of this study add to the rich literature regarding gender differences in social behaviors for preschoolers. This current study revealed that girls exhibited higher scores in their Prosocial with Peers. Boys exhibited significantly higher scores in Aggressive with Peers and Hyperactive Distractible compared to girls. This finding reflected similar results from a study constructed by Keane and Calkins (2004). Keane and Calkins (2004) found that boys displayed more aggressive and externalizing-type behavior problems in their play compared to girls according to preschool teachers' rated report. Based on peers' report in Kindergarten in the study explored by Keane and Calkins (2004), boys showed more aggressive, they share less, and display wilder, bossy, and sneaky actions compared to girls. Literature showed that boys displayed a higher percentage of behavior problems compared to girls; therefore, some studies excluded girls and selected only boys as participants. For example, Dodge (1983) recruited 48 second grade boys in six play groups to explore their behaviors and

social status. Dodge's (1983) findings revealed that boys who were well-accepted by their peers participated in more social interaction and cooperative play, but rarely demonstrated aggressive behaviors. Based on previous discussions, the findings of this current study are consistent with prior research studies regarding gender differences in preschoolers' social behaviors.

Many studies have found that ethnicities can be a factor affecting students' learning or language performance (Howes et al., 2008; the U.S. Department of Education, 2007; Ima & Labovitz, 1991; Umek et al., 2005). For instance, Hammer, Farkas, and Maczuga (2010) revealed that ethnicity was identified as one of the predictors for children's reading and vocabulary abilities. However, there were little known about different ethnicities in social behaviors. Howes, Wishard Guerra, Fuligni, Zucker, Lee, Obregon, & Spivak (2011) conducted a study to find the predictors of preschoolers' behaviors with peers from dimensions of classroom variables when preschoolers came from diverse ethnicities and home language backgrounds. Howes et al. (2011) did not find any significant impact in predicting preschoolers' social behaviors when child ethnicity or the racial background of teachers was added in predicting this equation.

This current study displayed different results from a previous study conducted by Howes et al. (2011). A significant overall difference for the set of six subscales for the Child Behavior Scale when compared by ethnicities was found in this current study. In the follow-up tests, the mean scores for the group of Caucasian or Others in the Aggressive with Peers (AG) and Hyperactive Distractible (HD) subscales were higher

than those of children in the Hispanic and African American groups. However, the sample size for each ethnic group of preschoolers were very small; therefore, this finding should be interpreted with caution because the Caucasian or Other group included only 12 children out of the 105 in the sample.

Research Question Three

Which predictor variables of peer relationship classifications, teacher rating of child behaviors, child genders and home languages are most influential in predicting preschoolers' language competency?

This study revealed certain types of peer relationship classifications, home languages, and child behaviors could predict language competencies. Although this study found that girls' Discourse Ability Scores and Expressive Language Competence Subscale scores were higher than those of boys, a child's gender was not a strong predictor of language competence.

Children identified as Popular and Average in their peer relationship classifications had higher Discourse Ability Scores when compared to Neglected preschoolers. The group of children who spoke English at home had higher Discourse Ability Scores when compared to the Spanish-speaking group.

The Anxious-Fearful (AF) subscale of the Child Behavior Scale significantly predicted Discourse Ability Scores. The scores increased when the ratings of preschoolers' Anxious-Fearful (AF) behavior declined. However, Aggressive with Peers (AG), Hyperactive Distractible (HD), Asocial with Peers (AS), Prosocial with Peers (PP), and

Excluded by Peers (EP) behaviors were not significant predictors of Discourse Ability Scores.

With regards to the social behavior session, another similar study by Gulay (2011 b) in Turkey had the same findings that aggression was not a significant predictor of language skills. However, in this study, Gulay (2011 b) found that Prosocial Behavior, Asocial Behavior, Exclusion, Fearfulness/Anxiety, Hyperactivity/Distractibility, and Victimization variables were significant predictors of the language skills for preschoolers from 5-6 years-old. In this current study, Anxious-Fearful (AF) behavior was a significant predictor of language competency, other social behaviors were not predictors. The possible reason of these different findings could be the different language assessment tools that were utilized in the two studies. In addition, the study investigated by Gulay (2011 b) controlled for the gender variable and had other different variables, like victimization, in the study. There is a need for future studies to investigate whether these social behaviors could be predictors of language competency.

This current study found that home language is a predictor of language competency when comparing English-speaking and Spanish-speaking at home preschoolers. Another study had similar findings that speaking a different language at home other than the dominant school language might influence the results of language or literacy assessments in schools. Chuo (2012) conducted a study exploring parental involvement and the children's early literacy skills for Asian American preschoolers. Chuo (2012) found that English-speaking homes and bilingual- speaking homes (both

Chinese and English) revealed higher Alphabetic Principle levels than the Chinese-speaking homes when the literacy assessment used the English language. Another study by Howes et al. (2008) investigated preschoolers' social competence, ethnicities, and home languages. Howes et al. (2008) found that preschoolers encounter some difficulties in interactions with their peers when their home language is other than the dominant school language. Jalil and Liow (2008) further investigated how the home language affects spelling for Singaporean preschoolers. Jalil and Liow (2008) found that preschoolers' spelling developed by phonological restoration through their own speech-based representations. Even though these studies revealed that home language does impact preschoolers' language or literacy performance when assessments were conducted using the dominant school language, the benefits of using and learning dual languages should also be acknowledged.

Overall, Popular and Average classified preschoolers had higher scores in their Language Discourse Competencies when compared to the scores of Neglected preschoolers in this study. Peer relationship classifications played a certain role in predicting language competency. The research findings reflect the theories from the perspectives of social interactionism and social behaviorism that social interaction plays a critical role in language development (Sato & Ballinger, 2012; Hoff, 2009). Preschoolers can learn different expressions and language usage from their peers when they interacted with their friends. Peer relationships could be considered as a behavioral conditioning and reinforcement on language learning and their social behaviors. Rejected or Neglected

preschoolers may not receive the positive reinforcement and feedback from their social interaction with peers; therefore, they could display lower language competencies than those peers who received more friendships and highly involved in social interactions. Preschoolers who possess close and positive relationships with their peers in their classroom might receive more support in their learning. In addition, these preschoolers who possess higher support from their peers also displayed lower Aggressive with Peers, Hyperactive Distractible, Asocial with Peers, and Excluded by Peers behaviors. The possible reasons based on social learning theory could be those preschoolers who have more support from their peers might have positive role model to mimic and interact with.

Furthermore, Vygotsky (1962) indicated that social interaction with experienced peers can help children to enter a higher cognitive level of thinking. Piaget (1972) also held a similar perspective that interactions with peers can provide a greater possibility to experience disequilibrium or cognitive conflict helping preschoolers advance their thinking. Using the complex symbol language system and performing well, cognitivists believe that language is associated with children's cognitive process. Piaget (1972) indicated that language development follows conscious thought and reflects the thought. Therefore, promoting social interaction could also advance language performance based on the cognitivism perspective. Social interaction and competence were associated with language competence (Sheran, 1999). This research design was constructed by a theoretical framework integrated by Interactionism, Social Behaviorism, and Cognitivism. The findings also correspond with the original theoretical framework.

Conclusion

The results indicated that peer relationship classifications, genders, and home languages had a significant effect on preschoolers' language competencies, regardless of ethnicities and parental educational levels. This study revealed that preschoolers who were classified as Popular in their peer relationship classification demonstrated more advanced language competencies in both receptive and expressive capacities compared to children who were classified as Rejected and Neglected or Controversial. Girls had higher language performances on Language Discourse Ability and Expressive Language Competency compared to boys. In addition, this study showed that the group from English-speaking homes had a higher level of advanced language competencies than the group from Spanish-speaking homes in Language Discourse, Expressive and Receptive Competencies.

Regarding the effect of social behaviors, the findings demonstrated that peer relationships, genders, and ethnicities had a significant effect on child behaviors based on teachers' rating reports, regardless of parental education levels and home languages. Preschoolers who were identified as Neglected or Controversial displayed the lowest aggressive social behaviors with peers compared to other groups in peer relationship classifications. Rejected preschoolers showed higher Hyperactive Distractible in their social behaviors than Popular preschoolers. Boys exhibited higher scores on Aggressive with Peers and Hyperactive Distractible behaviors compared to girls, yet girls exhibited higher scores in their Prosocial behavior with peers. In addition, the Hispanic group in

this study had lower Aggressive with Peers (AG) and Hyperactive Distractible (HD) behaviors when compared to the group of Caucasian and African American groups.

In addition, the four selected variables, including Popular in peer relationship classifications, English-speaking homes, Anxious-Fearful (AF) and Average of peer relationship classifications all together could predict 24% of Language Discourse Ability Scores. This result can be interpreted that certain types of peer relationship classifications, home languages, and Anxious-Fearful (AF) of social behaviors account for the predictors of preschoolers' language competencies, regardless of gender and other social behaviors: Aggressive with peers (AG), Hyperactive Distractible (HD), Asocial with Peers (AS), Prosocial with Peers (PP), and Excluded by Peers (EP). Preschoolers who were classified as Popular and Average had higher Language Discourse Competence than preschoolers who were identified as Neglected. The group from English-speaking homes had higher scores of the Discourse Ability than the group from Spanish-speaking homes. Furthermore, the scores of Discourse Ability Scores increased when the degree of preschoolers' Anxious-Fearful (AF) behavior declined. Although this study found that girls had higher Discourse Ability Scores than boys, gender did not become a significant predictor in this analysis.

Finally, the findings of this study are important for teachers, parents, and teacher education to better understand that peer relationships in classrooms may play an essential role in preschoolers' language competencies. Preschool teachers and administrators might implement enhanced classroom learning environments, curriculum designs, and lesson

plans that would diminish negative social behaviors and provide preschoolers with more coping strategies and positive interaction with peers, especially for those preschoolers who are excluded or isolated by their peers, which might also increase the probability of enriching preschoolers' language competencies. Future studies might use the findings to explore the effect of peer relationships and social behaviors on preschoolers' language competencies using preschoolers' home languages to evaluate language competencies from diverse populations and culture backgrounds.

Limitations

Several limitations of this study are addressed below:

1. Language competence in this study was evaluated by the *Preschool Language Assessment Instrument*, 2nd Edition [PLAI-2] measured in English. The instrument was not available in Spanish.
2. The participants in this study were recruited from eight classrooms in one Head Start Center. Due to low return rates in one classroom, the data was collected in seven classrooms.
3. This sample of participants may not be assumed to be representative all of the populations of children enrolled in other preschools, kindergartens, or Head Start programs.
4. This study focused on the main effects of peer relationships and child behaviors on language competency, but did not explore other effects of parental

involvement, teachers' teaching styles, or classroom and home environments pertaining to language development.

5. The Child Behavior Scales (CBS) were completed by seven classroom lead teachers based on their ratings of the preschool participants. The interpretations of the criteria for each positive or negative behavior may vary due to different teachers' perspectives.
6. Peer relationship classification was measured by the sociometric method eliciting the preschoolers' own perspectives. Friendships and peer relationships have dynamic characteristics and various dimensions due to the situations of participants at the moments when they were interviewed.

Implications

The research findings revealed several implications for parents, preschool teachers, administration, and in-service teacher educators. It is important for parents and teachers to be aware that social interactions and peer relationships in classrooms may play an important role in preschoolers' language competency. As educators, providing more support and guidance in building relationships with peers, especially for some preschoolers who are excluded or isolated by their peers, might also increase the probability of enriching preschoolers' language competency.

To develop preschoolers' peer relationships, teachers and parents should also consider individual children's social behaviors, especially for children with higher Aggressive with Peers (AG) and Hyperactive Distractible (HD) scores. These aggressive

and hyperactive behaviors may hinder their peer relationship development. For children with high Anxious-Fearful (AF) scores, parents and teachers may need to help these children cope with negative emotions in the classroom. In addition, adults may provide them with constructive guidance to facilitate more positive social interactions with peers.

Pre-service teacher educators may apply the findings to implement classroom learning environments, curriculum designs, and lesson plans that would diminish negative social behaviors and provide preschoolers with more positive interaction with peers to nurture the positive peer relationships with others in the classroom. To extend the dimension of early literacy and language emergent practices, peer relationships with other preschoolers and social behaviors in the classroom may also need to build a better understanding on how preschoolers enrich language discourse competence in school settings.

Preschool educators working in multilingual classrooms serving children from diverse families should be made aware that the language gap and language barriers could occur when preschoolers' language is not dominate school language. Although children's home languages were found to be significant predictors of language competency, social interaction with peers may diminish the language gaps and further help preschoolers who speak a language other than English at home to make a better transition from home languages to the languages used at school. Teachers should be aware of the language gap and help students build a bridge between the home language and the school language.

Recommendations

Based on the study findings and conclusions, the following recommendations for preschooler' teachers, administrators, and future researchers are addressed below.

Teachers and Administrators

In addition to an emphasis on emergent literacy and language development, teachers in preschools programs and Head Start Centers can provide a learning environment and activities that would support social skill learning and provide guidance for preschoolers who have lower levels of social competence and peer relationships so they could have more direction in how to attain friendships with peers.

Pre-service and in-service teacher education should embed training with social interaction strategies and offer guidance on diminishing social anxiety to help preschoolers develop peer relationships based on a variety of constructive feedback and strategies, as well as how to cope with worry or distress in preschoolers who face anxiety in social interactions.

Teachers and administrators should be aware of how social interactions with peers in the classroom could benefit the growth of language competency. Therefore, learning how to design the curriculum and activities which support positive peer relationship development would be a new direction to consider for the promotion of language competency.

Future Research

Findings from the current study support preschoolers' viewpoints. Based on the study findings, a follow-up study may focus on the following recommendations for future researchers. It may be worthwhile if a future study considers the followings:

1. This study only focused on preschoolers' perspectives to determine peer relationship classifications. Future research could combine classroom observations or take teachers' perspectives into account when classifying peer relationships.
2. Language assessments and peer relationship interviews could be measured in the preschoolers' home languages. For example, Spanish versions of language competence and interviews conducted by Spanish speakers might provide different results.
3. Future researchers can further explore what types of friendships and peer relationships can facilitate or impact language capacity for young children in a diverse linguistic and cultural surrounding. Similar studies could be conducted in monolingual and multilingual preschools to explore whether peer relationships would also have an effect on preschoolers' language competency when students are in monolingual or multilingual programs.
4. A similar study design can be conducted in other Head Start centers, as well as extending the study to include other at-risk and gifted populations to investigate whether the effect of peer relationships and teacher-rated child behaviors on

language competency and how preschoolers with special needs respond in regular classroom programs and in special education programs. In addition, future researchers can explore social behaviors based on different preschoolers' settings with diverse ethnicities and populations to verify the ethnicity effect on children's social behaviors.

5. Children with special needs may have more difficulty in both language assessments and peer relationship classification interviews. Different categories of children with special needs may be classified by a different peer relationship category. Future researchers could investigate whether various special needs would affect the classification of peer relationships.
6. To extend a better understanding of language development, future studies could explore more variables, such as parental involvement and the curriculum model and their effect on language competency in order to construct a better predicting equation model in language competency.
7. A follow up study may focus on rearrangement of language assessments and peer relationship using different descriptive statistics for the children with and without special needs.
8. It may be worthwhile if a future study considers parents' different cultural backgrounds, philosophical values, and beliefs.
9. Additionally, a study including more children with and without developmental delays may help establishment for an early intervention decision.

Summary

This study investigated the effects of peer relationships, teacher-rated child behaviors, child genders, parental education levels, home languages and ethnicities on preschoolers' language competence at one Head Start center. This chapter summarized the study, as well as the findings related to the three research questions. The chapter is comprised of limitations, implications and recommendations for preschool teachers, administrators, teacher education, as well as future research.

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APPENDIX A

Institutional Review Board (IRB) Approval Letter

TEXAS WOMAN'S UNIVERSITY
DENTON DALLAS HOUSTON

Institutional Review Board
Office of Research and Sponsored Programs
P.O. Box 425619, Denton, TX 76204-5619
940-898-3378 FAX 940-898-4416
e-mail: IRB@twu.edu

February 21, 2013

Ms. Chia Jung Yeh
1201 No. Austin St., Apt. 1
Denton, TX 76201

Dear Ms. Yeh:

Re: Effect of Peer Relationships and Child Behaviors on Preschoolers' Language Competence (Protocol #: 17252)

The above referenced study has been reviewed by the TWU Institutional Review Board (IRB) and appears to meet our requirements for the protection of individuals' rights.

If applicable, agency approval letters must be submitted to the IRB upon receipt PRIOR to any data collection at that agency. A copy of the approved consent form with the IRB approval stamp is enclosed. Please use the consent form with the most recent approval date stamp when obtaining consent from your participants. A copy of the signed consent forms must be submitted with the request to close the study file at the completion of the study.

This approval is valid one year from February 8, 2013. Any modifications to this study must be submitted for review to the IRB using the Modification Request Form. Additionally, the IRB must be notified immediately of any unanticipated incidents. If you have any questions, please contact the TWU IRB.

Sincerely,

Rhonda R. Buckley

Dr. Rhonda Buckley, Chair
Institutional Review Board - Denton

cc. Dr. Karen Petty, Department of Family Sciences
Dr. Lin Moore, Department of Family Sciences
Graduate School

APPENDIX B

Parents' Demographic Questionnaire

Parents' Demographic Questionnaire

1. Gender of respondent	☐ Female ☐ Male
2. What is your relationship to the child?	☐ Father ☐ Mother ☐ Stepmother ☐ Stepfather ☐ Grandmother ☐ Grandfather ☐ Foster parent ☐ Guardian
3. Ages of parents/primary caregivers in your household?	Mother / Father ☐ Under 25 ☐ ☐ 26-35 ☐ ☐ 36-45 ☐ ☐ 6-55 ☐ ☐ Other (describe ☐
4. What is your race/ethnic background?	Mother / Father ☐ Asian American ☐ ☐ Black or African America ☐ ☐ White or ☐

		auc sian	
	☐	Hispanic or Lat no	☐
	☐ ____	Other (describe)	☐ ____
5. What language do you speak at home?	Mother		Father
	☐	English	☐
	☐	Spanish	☐
	☐	Both English and panish	☐
	☐ ____	Other (describe)	☐ ____
6. What language does your child speak at home?	☐ English	☐ Spanish	
	☐ Both English and Spanish	☐ Other _____	
7. What is the highest level of education completed?	Mother		Father
	☐	Elementa y School	☐
	☐	Some high school courses	☐
	☐	High school diploma/GED	☐
	☐	Some college	☐
	☐	Associates degree	☐
	☐	Bachelor's degree	☐

	☐ Some graduate degree courses or credits ☐ ☐ Master or doctoral degree ☐
8. Were you born in the United States?	☐ Yes ☐ No
9. Was your child born in the United States?	☐ Yes ☐ No
10. Have you enrolled in college courses?	☐ Yes ☐ No
11. Have you enrolled in job training?	☐ Yes ☐ No

APPENDIX C

Teachers' Demographic Questionnaire

Questions	Answers
1. Gender of respondent	☐ Female ☐ Male
2. What is your age?	_____ Years
3. What is your race/ethnic background?	☐ Asian American ☐ Black or African American ☐ White or Caucasian ☐ Hispanic or Latino ☐ Biracial (describe) _____ ☐ Other (describe) _____
4. What is your current job title? (ex. Teacher 1 or 2)	_____
5. How many years have you worked for Head Start of Greater Dallas?	_____ Years
6.What is your highest education level?	☐ High school diploma /GED ☐ CDA ☐ Associate's degree ☐ Some college courses ☐ Bachelor's degree ☐ Some graduate degree courses ☐ Master degree and above degree
7.What professional development training have you attended?	_____

APPENDIX D

Script of Peer Relationship Classification Interview

Script of Peer Relationship Classification Interview

Introduction

"Good morning, _____ (child's name), this is Ruby (name of the researcher)". "I would like to invite you to do some activities with me today in order to understand more about you and your friends in your classroom. In these activities, you will be asked a few questions about you and your friends. After you finish these activities, you will get an animal sticker. Would you like to do these activities?"

Positive nominations

"I am going to do the first activity with you now. Here are all of your classmates' pictures. When I put one photograph on the table, could you please tell me the person's name in the photograph?" (Place all classmates' color photographs on the tables line by line). [Researcher or research assistants will ascertain that the child can identify each peer's photo, and then the interviewer will ask the child to select the three peers whom they most liked to play with.]

"Could you please tell me three persons in your classroom you like to play with the most? Who is the first one you like to play with the most? Could you point out the person's photo for me? _____ (Child's name in the photo) is the first person you like to play the most. Who is the next person you like to play with the most?" [The child's responses were recorded, and the interviewer will repeat the question again until the three most preferred playmates has been nominated.][If the child is unable to nominate the three most preferred playmates, he or she will be encouraged to think about it again, but if he

or she still could not nominate the three playmates, the interviewer will not give more pressure or push more.]

Pre-Activity

"_____ (Child's name), we are going to do the other activity. There are three green boxes on the table." (Put the three green boxes on the table.) "This is the box with happy face; this is the box with neutral face, and this is the box with sad or unhappy face. Happy face means that you like it the most or a lot; the neutral face means that you like it sometime or a little bit; the unhappy face mean that you do not like it at all. I have five fruits pictures here. (Place the Banana, Strawberry, Orange, Kiwi, and apple on the table.) Could you tell me what these fruits are? Could you please tell me what fruits you like to eat the most and put them in the box with happy face? Could you please tell me what fruits you dislike at all and put these fruits in the box with the sad face. Could you please tell me what fruits you like it sometimes and a little and put them in the box with the neutral face. Thank you so much for sharing your answers to me."

Rating Scale Activity

"_____ (Child's name), we are going to do the similar activity using the three boxes with happy, neutral, and sad faces, but we will change the fruits pictures to your classmates' photographs."

"Here are all of your classmates' pictures. When I put one photograph on the table, could you please tell me the person's name in the photograph?" (Place all classmates' color photographs on the tables line by line). [After ascertaining that the child can recognize each peer's photo, the interviewer will explain the meaning of the three boxes with

different facial expression levels.] "In this activity, the happy face means that you like to play with the persons in the box the most; the neutral face means that you like to play with the persons in the box sometimes or a little; the sad face means that you do not like to play with the children in the box." [Interviewer will explain to the child that the faces would be used in reference to how much the child likes to play with other children in their classroom.]

"Now, ____ (Child's name) it is your turn to tell me which box means that you like to play with the most. Could you point to me which box means that you do not like to play with? Could you please show me which box I should put the photograph in if I like to play with the person in this photograph sometimes or a little?" [After confirming the understanding the meaning of each box, interviewer will begin the formal interview.]

"Here is a picture of _____ (child's name). How much do you like to play with _____ ? Please put this photograph in one of the three boxes you think it can express how much you like to play with <u>him or her</u>. So you like to play with _____ a lot (Points to happy face), just a little bit (points to neutral face), or _____, is a kid you do not like to play with?" (Point to the sad face). [Using the same procedure and questions, each participant preschooler will be asked to rate their peers by placing their photographs in the three boxes with happy, neutral, and sad faces.] [The photographs in the happy face box will be given a score of +1; those in the neutral face box will receive a score of 0, and those in the sad face box will receive a score of -1 on the record after the child leave the room.][When a child do not know how to place the photograph in which boxes,

interviewer can give the child some time to think or tell the child to choose other child's photograph first and come back to do it later.]

Closing Activity

"Thank you so much for doing these activities with me. I understand more about you and your friends today. Here are some animal stickers. You can pick up one you like the most and keep it as a thank you gift."

APPENDIX

Script of the Preschool Language Assessment

Script of the Preschool Language Assessment

Introduction

"Good morning (afternoon), _____ (child's name), this is Ruby (name of the researcher or trained research assistants). I would like to invite you to do some activities with me. You and I will share some of the stories from this picture book (show the PLAI-2 picture book). After you finish the stories, you will get an animal sticker. Would you like to share and tell me the stories from this book?"

Assessment Example Questions

Example questions would be, "Please point to all of the pictures that are not cups" and "Could you please tell me what will happen to the man if he closes the umbrella?" (Examiner will point to the picture book and ask the question.)

Closing Activity

"Thank you so much for sharing these stories and answers with me (researcher or trained research assistant). I have learned a lot from you today. Here are some animal stickers. You can pick up one you like and keep it as a thank you gift for sharing the stories with me."