Examining play among young children in single-age and multi-age preschool classroom settings

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EXAMINING PLAY AMONG YOUNG CHILDREN IN SINGLE-AGE AND MULTI-AGE PRESCHOOL CLASSROOM SETTINGS

by

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A dissertation submitted in partial fulfillment of the requirements for the

Doctor of Philosophy Degree in Special Education
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ABSTRACT

Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings

by

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Advocates for multi-age classrooms claim multi-age groupings benefit children (Brynes, Shuster, & Jones, 1994). Currently, there is a lack of research examining play among students in multi-age classrooms. If indeed there is a positive benefit of play among children, research is needed to examine these behaviors among and between young children in single-age and multi-age classrooms. The purpose of this study was to determine if young children benefit from increased play opportunities.

This qualitative study utilized observations, interviews, and questionnaires to gather data from teachers, parents, and children regarding play interactions in both single-age and multi-age classrooms. The intent of this study was to provide a rationale for why multi-age programs should be developed or continued. Participants in this study included teachers and parents who completed questionnaires and children who participated in video taped observations and interviews. This study took place in a fully inclusive early childhood center. Observations of the play engagements of children were video taped in
both the indoor and outdoor sandbox settings. During the five weeks of video taping, 281 play segments were recorded resulting in 1549 occurrences of play.

Based on the play observations, it appeared that young children in multi-age classrooms engaged in more than one type of play more frequently than young children in single-age classrooms. Further, young children in multi-age classrooms initiated play more frequently. However, typically developing young children in multi-age classrooms did not initiate play with young children with disabilities more frequently than typically developing young children in single-age classrooms. The interviews with children indicated that young children were aware of their own play interactions. Based on the data collected from the questionnaires of teachers and parents, it appeared these two groups had similar views of the value of play and believed it to be developmentally appropriate and a critical learning process.

Professionals in the field of early childhood education should consider the results of this study when designing, developing, and implementing single and multi-age programs for young children with and without disabilities. Moreover, professionals should consider the impact of play on the development of young children when designing curricula.
TABLE OF CONTENTS

ABSTRACT .................................................................................................................. iii

LIST OF TABLES ........................................................................................................ vii

ACKNOWLEDGEMENTS ........................................................................................... viii

CHAPTER 1 INTRODUCTION ...................................................................................... 1
  Purpose of the Study ............................................................................................... 6
  Significance of the Study ....................................................................................... 7
  Research Questions ............................................................................................... 8
  Definition of Terms ............................................................................................... 8
  Summary ............................................................................................................... 12

CHAPTER 2 REVIEW OF LITERATURE ...................................................................... 14
  Introduction ........................................................................................................ 14
  Literature Review Procedures ............................................................................ 15
  Selection Criteria ................................................................................................. 15
  Review and Analysis of Literature Related to Multi-age Classrooms ............... 16
  Summary of Research Related to Multi-age Classrooms ................................. 28
  Review and Analysis of Literature Related to Children in Inclusive Settings ... 29
  Summary of Research Related to Children in Inclusive Settings .................... 38
  Review and Analysis of Literature Related to the Importance of Play ............ 39
  Summary of Research Related to Children to the Importance of Play ............. 48
  Summary ............................................................................................................... 49

CHAPTER 3 METHODOLOGY ..................................................................................... 51
  Overview ............................................................................................................. 51
  Research Questions ............................................................................................. 52
  Participants ......................................................................................................... 53
  Setting ................................................................................................................. 63
  Materials and Equipment .................................................................................... 71
  Instrumentation .................................................................................................. 72
  Design ................................................................................................................ 72
  Procedures ......................................................................................................... 73
  Data Collection and Analyses ........................................................................... 79
  Treatment of Data .............................................................................................. 81
  Summary ............................................................................................................ 81
CHAPTER 4 RESULTS

Overview .................................................................................. 83
Demographics ............................................................................ 84
Interobserver Reliability ............................................................. 85
Play Observations ..................................................................... 86
Interviews of Children ................................................................. 125
Teacher Questionnaires (Surveys) .............................................. 129
Parent Questionnaires (Surveys) ................................................ 132
Summary .................................................................................. 136

CHAPTER 5 DISCUSSION

Introduction .............................................................................. 138
Discussion of Results ................................................................. 139
Limitations of the Study ............................................................. 155
Recommendations for Future Research .................................... 158
Conclusions .............................................................................. 160

APPENDIX A INFORMED CONSENT, PARTICIPANT INFORMED CONSENT .................................................. 162

APPENDIX B QUALITATIVE STUDY DESIGN .......................................................... 175

APPENDIX C SCHEDULE FOR OBSERVATION SITE .................................................. 177

APPENDIX D KNOWLEDGE, ATTITUDES, AND PERCEPTIONS: TEACHER SURVEY .................................................. 179

APPENDIX E KNOWLEDGE, ATTITUDES, AND PERCEPTIONS: PARENT SURVEY .................................................. 182

APPENDIX F TRAINING FORMS AND CODING CHART .................................................. 185

APPENDIX G FORM: CHILD(REN) INTERVIEWS .................................................. 189

APPENDIX H VERBATIM RESPONSES OF CHILDREN INTERVIEWS .................................................. 191

APPENDIX I VERBATIM RESPONSES OF TEACHER SURVEY QUESTIONS [T] .................................................. 220

APPENDIX J VERBATIM RESPONSES OF PARENT SURVEY QUESTIONS [P] .................................................. 229

REFERENCES .............................................................................. 252

VITA ...................................................................................... 259
LIST OF TABLES

Table 1  Profile of Teacher Demographics .................................................. 55
Table 2  Profile of Children Participants ..................................................... 58
Table 3  Profile of Parent Demographics .................................................... 62
Table 4  Coded Child(ren) Interviews .......................................................... 77
Table 5  Comparison of Play Observation Frequency Counts ............................ 88
Table 6  Play Observation Frequency Counts- BB Classroom .......................... 89
Table 7  Play Observation Frequency Counts- RB Classroom .......................... 95
Table 8  Play Observation Frequency Counts- ST Classroom .......................... 102
Table 9  Play Observation Frequency Counts- Outdoor Sandbox (SA 1 & 2) ....... 109
Table 10 Play Observation Frequency Counts- Outdoor Sandbox (SA & MA) ....... 113
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CHAPTER 1

INTRODUCTION

The multi-age classroom was first introduced in the sixteenth century when students of all ages and abilities were placed in one-room school houses (Goodland & Anderson, 1987). School was frequently held in buildings such as churches and students of all ages worked together with each student concentrating on his or her own studies (Goodland & Anderson). According to Goodland and Anderson (1987), due to economic constraints, students were taught in one-room classrooms and both teachers and students found it very convenient to be housed in one room. Moreover, schools in the United States were not always graded. In 1848, the multi-age Quincy Grammar School opened its door to students with sporadic attendance and no principals, no supervisors, no courses of study, and no grades. To this day, many regard the Quincy Grammar School as a milestone in the evolutionary process which marked the emergence of the full-fledged graded school (Goodland & Anderson).

The emergence of graded structure began in the early eighteenth century as Selectmen of Boston developed separate reading and writing schools. The first public normal school of the United States opened in 1838 in Massachusetts and became a powerful instrument for unifying educational practices and the ordering of instruction. The opening of the first graded school led to the spread of graded structures across the country during the last half of the nineteenth century. Teachers were no longer required to administer one
classroom with children made up of different age groups and ranges of achievement. Instead, they sorted children into grades of achievement and gave them grades of either a pass or fail (Goodland & Anderson, 1987). Toward the end of the nineteenth century and beginning of the twentieth century, educators started to question the graded structure. Experiments and research were conducted to break down the established patterns of the organization of graded structures. In the twentieth century, the emergence of philosophical and psychological thought played a significant role in examining alternative structures (Goodland & Anderson, 1959).

In the United States, 70% of the schools in 1918 were one-room schools and in 1980 less than 1% of schools were one-room schools (Daniel & Terry, 1995). According to Goodland and Anderson (1959), today's nongraded schools came into existence after 1950. As time progressed and the need for mass education increased, the need to educate all students efficiently led to the organization of single-age classrooms. Historically, single-age classrooms grouped students together who were of the same age and thought to be developmentally similar. The current assumption that single-age classrooms group students who are developmentally similar seldom is true according to research (Ong, Allison, & Haladyna, 2000). Research indicates that multi-age classrooms are aligned with children's natural groupings and their learning tendencies more than single-age classrooms (Ong et al.). Students in single-age classrooms have a large variance in achievement and abilities (Ong et al.).

Today multi-age classrooms are not created purely for convenience; they are created because this type of educational setting targets each individual child and their unique learning needs (Daniel & Terry, 1995). The philosophy behind the use of multi-age
classrooms is to promote developmentally appropriate practices to meet individual children's needs. Multi-age classrooms allow children of various ages and abilities to work and learn in an environment where they can be successful at their own developmental levels. Unlike single-age classrooms, multi-age classrooms give students time to develop, to grow, and to learn (Daniel & Terry).

Different patterns exist in school organization such as horizontal and vertical patterns. The vertical pattern of school organization is known as nongrading. Unlike the horizontal pattern, the vertical pattern creates an opportunity for students to move upward from the time they enter school to the time they leave school (Goodland & Anderson, 1959).

Multi-age classrooms serve different functions for each individual child, thereby supporting the concept of developmentally appropriate practice for young children. Through observation and interaction with older children, younger children can learn a variety of new social and intellectual skills (Theilheimer, 1993). In order for a multi-age classroom setting to be successfully implemented, the curriculum must focus on broad concepts that are easy to integrate, and must be both holistic and constructive (Surbeck, 1992). The goal for meeting the individual developmental and personal needs and interests of each student is accomplished through cooperative learning, inquiry, and authentic educational experiences (Surbeck).

Research from informal observation indicates that children in mixed-age classrooms learn about cooperative play in school, much as they would in their home environment. Thereby, indicating that mixed-age grouping reflects children's lives at home (Theilheimer, 1993). Not only does mixed-age grouping encourage cooperation and
social behaviors, but it helps children’s relationships with their own siblings. Benefit of mixed-age grouping includes seeking opportunities for alternative ways of being with both younger and older children. As children interact with children of other ages who approach problems differently than they do, they are forced to deal with this conflict by finding avenues to solve the problem, which in turn stimulates their growth (Theilheimer).

Mixed-age grouping not only benefits young children, but benefits both teachers and parents. Nongraded classrooms (multiple grade levels within one classroom) provide different rates of progress for students, recognizes and plans for a wide range of abilities, and enables teachers to individualize emotional and social needs (Lodish, 1992). The multi-age grouping enables teachers to plan learning experiences for the next year by using the knowledge gained during the first year (Elkind, 1987).

Another factor leading to the success of multi-age programs is parent support (Brynes, Shuster, & Jones, 1994). Without the support of parents, multi-age classrooms could not be implemented successfully in today’s society. Parents, students, teachers, and other school personnel play a key role in evaluating a program. Further, parents can come to an understanding about how their children learn and grow as they observe children of different ages and developmental stages learning and working together in a multi-age classroom setting (Theilheimer, 1993).

There is a dearth of research that assesses and describes how children are initiated into the social and learning worlds of the multi-age classroom (Theilheimer, 1993). One research project examined how younger children became members of a classroom community that is a multi-age setting. Results of the study indicate that multi-age classrooms are a valuable and viable vehicle for teaching young children. These create a
learning environment in which individuals learn to interact with others who possess different intellectual and social skills (Theilheimer).

Research findings indicate that older children are models for younger children when it comes to: (a) what to do, (b) when to do it, and (c) how to do it. Not only did the older children help the younger children become part of the setting, but the older children, in turn, became confident learners and took on leadership roles. The multi-age classroom setting provides an opportunity for older children to take on ownership as well as leadership of their class. The benefits for younger children in this type of multi-age setting is that they are given the time, space, and opportunities to be themselves, to get to know others, to work together, to observe, to learn, to explore, and to find out the rules of the learning community (Fu et al., 1999).

The overall goal of the research project was to help children develop concepts and skills for life-long learning. The researchers empowered the children to learn and develop by including children of all abilities and ages in the decision-making process, and to model respect for emerging skills and abilities. The children were encouraged to seek help and to give help to their peers (Adams et al., 1997). The benefits of this project resulted in empowering children to learn as both individuals and with their peers. The multi-age classroom environment encouraged participation of families, hands-on and cooperative learning among children, and peer tutoring. Multi-age classrooms allow teachers to present opportunities for children with diverse characteristics to engage in meaningful learning (Adams et al.).

Multi-age groupings should not be confused with combination classes. Combination classes are created out of necessity to place two or more age groups for administrative
reasons such as overcrowded conditions (Lodish, 1992). However, multi-age classrooms are created for perceived benefits to everyone who is involved, students, teachers, and parents. Lodish provides a rationale for multi-age classrooms in that this type of classroom represents a child's society outside of school. He further claims that children are accustomed to associating with groups covering a wide age range; therefore they should be comfortable in multi-age classroom settings.

Advocates for children who believe that there are better ways to begin the school years are concerned that society is causing young children to experience a variety of negative outcomes in their lives due to school failure (Connell, 1987). With the continuation of graded schooling, there is a higher rate of school failure causing young children to experience lower self-esteem, damaged motivation, loss of friends, and parental concerns (Connell). Connell suggests that one solution to this problem is to change the lock-step system of schooling that society currently practices.

Purpose of Study

Historically, the National Association for the Education for Young Children (NAEYC) has supported the concept of a child-centered environment in which developmentally appropriate practice is organized in multi-age classrooms (Bredekamp, 1997). Advocates for multi-age classrooms claim that this type of grouping benefits children academically, socially, and emotionally (Brynes et al., 1994). Currently, there is a lack of research examining play among students in multi-age classrooms. If indeed there is a positive benefit for social skills among children, research is needed to examine
play behaviors among and between young children in single-age and multi-age classrooms.

Significance of Study

There is limited research looking at play in both multi-age and single-age classrooms in the inclusive preschool setting (Ong et al., 2000). Much of the literature discussing multi-age and single-age classrooms refers to research that has been conducted concerning individual types of classrooms, but not comparing different types of classroom settings (Ong et al.). There are very few studies supporting multi-age classrooms in lieu of single-age classrooms and there is a need for more empirical evidence to support multi-age classrooms and to explore potential differences in achievement or development that occur in different educational settings (Ong et al.).

Multi-age classrooms need to be carefully implemented and research findings need to be reported to support program integrity. Without research supporting multi-age classroom settings that are both conceptualized well and adequately instituted, those who question the success and benefits of multi-age classrooms will continue to ask if they indeed are educationally appropriate (Surbeck, 1992).

There is a lack of current research addressing the concerns and attitudes of both parents and children who are transitioning from graded classrooms to multi-age classrooms (Brynes et al., 1994). It is important to explore the attitudes of both parents and children in multi-age classrooms.

Peers play a critical role in the growth and development of young children. By examining the peer culture of young children through play, one can understand childrens’
interactions and relationships (Erwin, Alimaras, & Price, 1999). In order to address these concerns, the following research questions were asked:

1. Do young children in multi-age classrooms engage in one type of play more frequently than young children in single-age classrooms (i.e. solitary, onlooker, parallel, associative, and cooperative play)?

2. Do young children in multi-age classrooms initiate play with other children more frequently than young children in single-age classrooms?

3. Do typically developing young children in multi-age classrooms initiate play with young children with disabilities more frequently than typically developing young children in single-age classrooms?

4. What are young children's thoughts about their play experiences?

5. What are teachers' perceptions of play among young children in single-age and multi-age classrooms?

6. What are parents' perceptions of play among young children in single-age and multi-age classrooms?

Definition of Terms

A *multi-age classroom* (Ong et al., 2000) was defined as a classroom which housed students at all ages and developmental levels. Multi-age settings place children in the same classroom who are at least a year apart in chronological age and development. For the purpose of this study, mixed age grouping was used to describe multi-age classrooms. For this study, preschool children with and without disabilities from 36 months through 58 months of age were in the multi-age classroom setting.
A single-age classroom (Ong et al., 2000) was defined as dominant classroom organizations in the United States that contain students of mostly the same chronological age and who may vary greatly in their academic achievement. An assumption of the single-age classrooms is that students who are the same age are also developmentally similar. For the purpose of this study, preschool children with and without disabilities from 47 months to 58 months of age were in the single-age classroom setting.

Children with developmental delays were defined as children who need special education and related services because of mental retardation, hearing impairment, speech or language impairment, serious emotional disturbance, orthopedic impairment, autism, traumatic brain injury, other health impairment, or specific learning disabilities (Morrison, 2008). Part C of the 1997 reauthorized special education law PL 105-7 of the Individuals with Disabilities Education Act (IDEA) identifies infants and toddlers (birth to age three) who may have biological problems or who are subject to poverty, abuse, and intercity violence (Lerner, Lowenthal, & Egan, 2003). Part B of the 1997 reauthorized special education law PL 105-7 of the IDEA identifies preschoolers (ages three to six) who may need early identification, assessment, and intervention to increase their chances to become healthy and productive members of society (Lerner et al., 2003). In 2004, the reauthorized IDEA was signed into law, and extended the age limit of developmental delay up to age 9 at the discretion of each state (US Department of Education, 2004).

Children without disabilities were defined as children who do not qualify for special services and related services under the Individuals with Disability Education Act (IDEA) under one or more of the thirteen disabilities (Friend, 2005).
Inclusive settings were defined as a place where the belief that students with disabilities are full members of their classroom and school learning communities in where there is a strong preference for students with disabilities to be educated with their peers without disabilities (Friends & Bursuck, 2006).

Play was defined as a vehicle of learning, growing, and developing knowledge. Play contributes to all aspects of child development, both affectively and cognitively. Play is considered child initiated and child directed, while work is adult initiated and adult directed (Cooney, 2004). Play is an active behavior that is personally motivated, is often nonliteral, has no extrinsic goals or rules, and for which the individual supplies the meaning (Brewer, 2007, p. 142).

Solitary play was defined as play in which children play without regard for what other children around them are doing. A child may be constructing a tower with blocks and be completely oblivious to what other children in the room are doing (Brewer, 2007, p. 144).

Onlooker play was defined as play in which the child who is playing individually is simultaneously observing those playing in the same area. The child may be talking to peers. Children who watch other children play may alter their own play behavior after watching. Children engaged in onlooker play may seem to be sitting passively while children around them are playing, but they are very alert to the action around them (Brewer, 2007, p.144).

Parallel play was defined as play in which several children are playing with the same materials, but each is playing independently. What one child does is not dependent on what others do. Children working puzzles are usually engaged in parallel play. They
usually talk to one another, but if one leaves the table, the others continue playing (Brewer, 2007, p.144).

*Associative play* was defined as a form of play in which each child is engaged in a separate activity but there is a considerable amount of cooperation and communication (Hughes, 1999). It is a form of true social interaction in which children engage in separate activities, but continue to interact by commenting on one another’s behavior and by exchanging toys (Berk, 2008). Associative play is play in which several children play together but in a loosely organized fashion. Several children might decide to play monsters, and run around the playground chasing each other. There are no definite roles and if one child does not run and chase, the others can continue to play (Brewer, 2007, p. 142).

*Cooperative play* was defined as an activity in which there is a differentiation of roles and complementing actions. It is a form of play that occurs when two or more children are engaged in a play activity with a common goal (Hughes, 1999). Cooperative play occurs when each child accepts a designated role and is dependent on others for achieving the goals of the play. When children want to play store, one child must accept the role of store clerk and others must be shoppers. If a child refuses to play unless she can be the storekeeper, the play episode will end (Brewer, 2007, p. 142).

*Preschool* was defined as a program for three to five year old children before they enter kindergarten (Morrison, 2008).

*Preschool age children* were defined as children three to five years old with and without identified or developmental delays who become increasingly able to understand
and use language, solve problems, and engage in reciprocal social interactions with both adults and peers (Peterson, 1987).

Summary

Research examining cooperative and associative play among multi-age and single-age inclusive preschool settings is needed. The question of whether multi-age programs are educationally appropriate is being questioned, especially in the early childhood setting. Research indicates that when comparing graded and nongraded schooling using standardized achievement tests, nongraded environments are favored (Webb, 1992). By attending nongraded schools, children are more likely to experience positive attitudes toward school and have a higher chance for good mental health. For early childhood education, multi-age classroom settings provide young children with opportunities for learning from each other and for developing secure relationships with both their peers and teachers (Webb, 1992).

Multi-age grouping in early childhood settings increases the heterogeneity of the group by incorporating the differences in the experience, knowledge, and abilities of the children (Katz, 1992). Further, some states (e.g., Kentucky, Mississippi, and Oregon) are now mandating multi-age group settings. Several other states are considering similar legislation (e.g., Alaska, California, Florida, Georgia, New York, Pennsylvania, Tennessee, and Texas). These states are supportive to the developmental approach to education that multi-age grouping serves (Surbeck, 1992).

The intent of this study was to provide a rationale for the continuation of multi-age programs. Specifically, the benefits of increased play among young children with and
without disabilities enrolled in multi-age classrooms versus single-age classrooms were examined.

As children play, enrichment and growth naturally evolve. Through play, children learn about themselves as well as their surroundings. For children to develop healthy relationships, they must understand the feelings of their peers and develop empathy (Klein, Wirth, & Linas, 2003).

Play provides a vehicle through which children can make important discoveries about themselves including their own likes and dislikes (Klein et al., 2003). With the push for inclusive classrooms, careful study of play experiences and peer experiences is needed, especially looking at children of diverse ages and with diverse disabilities (Brown & Bergen, 2002). The inclusive preschool setting must promote practices that allow children of all ages and abilities to have social interactions, play with peer models, and develop language within peer play and social interactions (Brown & Bergen).
CHAPTER 2

REVIEW OF RELATED LITERATURE

Introduction

This chapter serves three purposes. First, to analyze and summarize the literature related to single and multi-age classrooms. Second, to analyze and summarize the literature related to children in inclusive settings. Third, to analyze and summarize the literature related to the importance of play, with an emphasis on cooperative and associative play.

This chapter begins with the review of literature procedures, selection criteria, and the criteria used to exclude studies for the review. Next, the analysis and review of literature are presented related to single-age classroom settings, multi-age classroom settings, inclusive preschool settings, and play. Finally, the summary of the research is discussed.

Multi-age classrooms benefit children academically, socially, and emotionally (Brynes et al., 1994). The focus of education is not the curriculum, but the learner. For the learner, learning in the classroom is built on both individual and social processes. With no set grade level curriculum, each child’s learning needs are met along a continuum of progress at their own developmental rate (Wassermann, 2007).
Literature Review Procedures

A systematic search through six computerized databases was completed (e.g., Academic Search Premier, Educational Resources Information Center, Primary Search, Professional Development Collection, PsycINFO, and PsycArticles). The following descriptors were used: associative play; benefits of multi-age classrooms; cooperative play; differences between single-age and multi-age classrooms; family groupings; inclusive preschool classrooms; initiating play among each other; multi-age classrooms; multi-age grouping; mixed-age grouping; observational checklists; play-based curriculum; play checklists; and single-age classrooms.

Next, a manual search through the journals (from 1970 – to the present) that emerged from the computerized search was completed. The journals that were searched manually were the same journal titles as those accumulated from the computerized search (e.g., American Educational Research Journal, Early Childhood Development and Care, Early Childhood Education Journal, Exceptional Children, International Journal of Disability, Development and Education, Journal of Research in Childhood Education, National Education Association Today, Play Rights Magazine, Phi Delta Kappan, Principal, Review of Educational Research, Teaching PreK-8, The Elementary School Journal, Topics in Special Education, and Young Children). Finally, the search process involved reviewing the reference lists from the various articles obtained.

Selection Criteria

Studies were included in the review if: (a) the study included multi-age classrooms (preschool and elementary aged-children), (b) the study included single-age classrooms
(preschool and elementary aged-children), (c) the study included inclusive preschool classroom settings, (d) the study included play in both the preschool and inclusive settings; or, (e) the study included cooperative and/or associative play within the preschool setting. Studies were excluded in the review if: (a) the studies were outside of the age parameters, (b) the focus was not on multi-age classrooms, (c) the focus was not play, (d) the study took place in a segregated special education setting.

Review and Analysis of Literature Related to Multi-age Classrooms

There is a dearth of information to support the use of multi-age programs and to determine whether they should be implemented in today’s early education programs. Moreover, play has not been thoroughly compared and examined in both multi-age and single-age classrooms in the inclusive preschool setting. It is important to not only measure the learning that takes place in these types of settings, but it is crucial to examine how children interact with each other during cooperative and associative play. With the Individuals with Disabilities Education Act (IDEA) mandating natural settings, it is important that an examination of how children interact with peers of their same and different chronological ages and with different abilities within one classroom setting not be ignored (Friend, 2008). Further, it is important to evaluate comparative studies across both multi-age and single-age classrooms looking specifically at cooperative and associative play.

Initially, the American education system began with the practice of grouping children of mixed-age children for instruction. Historically, in the 1700s and 1800s, multi-age classrooms were common across the United States. In rural areas with small populations
of children, multi-age groupings continued into the early 1900s. One-room schoolhouses were nongraded, with children of various ages and abilities receiving differentiated instruction in the same classroom from the same teacher (Lolli, 1996). Many Western schools in the mid 1970s set up multi-grade, mixed-age, and multi-age classrooms due to the loss of teachers resulting from financial cuts and declining student enrollments (Veenman, 1995). The administrative approach was to combine students from two or more consecutive grades to form a classroom with one teacher. This practice was an example of forced multi-age classrooms.

Currently, the United States has fewer than 1,000 one-room schools. In the late 1918s, there were close to 200,000 one-room schools, which represented 71% of all public schools in the United States (Veenman, 1995). Growing public school enrollment and consolidation of school districts lead to the single-age structure (Way, 1979).

Multi-age settings are not typical in American public education settings today. Most schools and school systems traditionally separate students according to their chronological ages under the assumption that age alone determines their intellectual, social, and motor readiness (Webb, 1992). Webb questions the separation of students based solely on chronological age when they enter the schools. He states that it is against the law to segregate children by sex, race, ethnic, or socioeconomic differences, and thus questions the rationale for segregating children by age.

Webb (1992) goes on to further support the concept of multi-age classrooms in early childhood education by providing evidence that multi-age grouping provides young children with opportunities for learning from each other and in developing relationships with their teachers. Multi-age settings also provide involvement in extended
conversation with peers which in turn enhances the development of children’s communication skills. Social development plays a crucial role in early childhood education and children’s achievement is reflected in the current trends toward cooperative learning, peer tutoring, and most importantly, multi-age settings (Webb, 1992).

Mixed-age grouping benefits not only young children, but the benefits extend to teachers and parents as they observe children working collaboratively with one another. In a mixed-age classroom, different functions are served for each individual child and teachers must learn to value the differences and individualize the curriculum accordingly. The idea of mixed-age grouping is also supported by developmentally appropriate practice because this type of classroom environment generally meets the individual needs of each child. The development and learning of young children occur in and are influenced by multiple social and cultural contexts (Bredekamp, 1997). Through observation and interaction with older children, younger children can learn a variety of new social and intellectual skills (Theilheimer, 1993). Through mixed-age grouping, both teachers and parents can come to an understanding about how children at different ages and stages learn and grow together (Theilheimer, 1993).

Mixed-age grouping serves the needs of teachers by providing opportunities for personal growth. As teachers implement mixed-age group learning, they learn more about child development as they observe the range of ages, abilities, and interests from individual children (Theilheimer, 1993). As teachers learn about their students individually, they can plan accordingly when developing the curriculum. The benefit of mixed-age grouping also allows teachers to communicate their program to parents.
Parents too will learn more about their own children and the value that mixed-age grouping has on their child’s early educational experience (Theilheimer, 1993).

In a mixed-age setting, children at different ages are placed in the same classroom group. Research from informal observations indicates that children in mixed-age classrooms are able to learn about cooperative play in school much as they would at their home environment. Therefore indicating that mixed-age grouping reflects children’s lives at home (Theilheimer, 1993). Not only does mixed-age grouping encourage cooperation and other social behaviors, but it helps children’s relationships with their own siblings.

Benefits of mixed-age grouping include seeking opportunities for alternative ways of interacting with older and younger children. As children socialize and interact with children of differing ages who approach problems differently than they do, they are forced to deal with naturally occurring conflict by finding avenues to solve the problems, which in turn stimulates their growth (Wassermann, 2007). Older children look out for the younger children, caring for them and helping them both socially and educationally. It becomes a natural process for children to work with their same age peers, as well as with younger and older children (Wassermann, 2007).

Simply creating mixed-age groupings does not guarantee that children will benefit. Teachers must set up activities in which children make their own choices and take responsibility for their work as members of a group (Theilheimer, 1993). Activities must be set up that appeal to different children in different ways that fit within the curriculum. Teachers must create an environment in which all children in the group have an opportunity to learn to work with those whose abilities and disabilities are different from
their own. They must create a democratic society that includes people who are different in many ways, not just age, but also including children with and without special needs (Theilheimer, 1993).

In Iowa City, administrators at Irving B. Weber Elementary believed the key element in any multi-age school was to meet each child’s individual needs (Elliot, 1997). At Weber Elementary, they believed that one approach to learning was multi-age instruction whereby individual needs were met. Concomitantly, the belief was held that flexibility in the classrooms supported students learning in the multi-age environment. Weber Elementary built their entire curriculum around big ideas and broad concepts that provided multiple entry points for students. They provided children materials that were plentiful, age appropriate, and current. A school that is child centered such as Weber Elementary is on a constant quest to provide children with hands-on materials, technology, and materials that appeal to students’ different reading and learning styles. The curriculum should be developed not only to educate children, but to teach children themselves how to manage their own education (Elliot, 1997).

To ensure that a mixed-age classroom is indeed beneficial for all children, teachers must create opportunities for children who are different from one another to work together. Simply grouping children does not guarantee interaction across age groups or individual abilities. If set correctly, the benefits of mixed-age groups will not just benefit children, but it will benefit both teachers and parents. The National Education Association Professional Library (1997) published tips for teaching in multi-age classrooms to help educators create and maintain a successful multi-age classroom setting. The NEA provided the following five tips for teaching in multi-age classrooms: (a)
obtain research on multi-age grouping, (b) build a strong network of teachers who want to share ideas by visiting other multi-age programs and asking for teacher's experiences, (c) question your own curriculum to see if it accommodates to all abilities, (d) during the planning process, never forget to involve the parents and make sure to invite them to observe and be volunteers in the classroom; and (e) collaborate with colleagues who support your effort and share the workload (NEA, 1997).

The National Association for the Education of Young Children (NAEYC) recommends one way to move toward child-centered, developmentally appropriate practice is by implementing multi-age classrooms (Bredekamp, 1997). Advocates for multi-age classrooms believe that children benefit academically, emotionally, and socially (Byrnes et al., 1994). Currently, there is little research to assist both administrators and teachers to successfully create and maintain multi-age classrooms (Byrnes et al.).

**Multi-age Classrooms**

Through the 1970s, Kindergarten was originally designed as a year of informal education designed to form a bridge from the home environment to a more formal schooling environment (Charlesworth, 1989). In contrast, a current concern is that more children are at risk for kindergarten failure. Critics suspect that the expectations for children have increased and became unrealistic for the lower grade levels, dooming large numbers of young children to fail at the kindergarten level of schooling. Children come to school with a diverse range of interests, aptitudes, and background experiences. Teachers cannot expect children to adapt to a uniform curriculum (Shepard & Smith, 1986). The solution to this problem would be to match the curriculum and setting to the
children, however the current trend is to fit the children to the curriculum (Bredekamp, 1997). To early childhood educators, this remains an issue that must be resolved. Currently, kindergarten classrooms often have a large number of students, necessitating an increase in administrative paperwork. Further, there is a lack of teacher training, but moreover, teachers are finding it difficult to reach out to individual children and their needs.

As one solution, Charlesworth (1989) offers multi-age grouping to eliminate kindergarten failure. By going to a continuous-progress plan, such as multi-age grouping, children progress at their own rates through a nongraded environment. The continuous progress of multi-age grouping approaches allows children the opportunity to enter school with their peers and proceed at their own developmental rate. By having this opportunity, children will not be separated from their friends or suffer from the humiliation of repeating a grade (Charlesworth).

Byrnes et al. (1994) studied the attitudes of 168 students and their parents in the first year of implementing a multi-age classroom of children six to eight years of age. The purpose of the study was to examine relationships that existed between the attitudes of parents and their children. Both parents and children were surveyed in the fall and spring to determine their views on multi-age classrooms versus single-age classrooms.

Byrnes et al. (1994) emphasized the importance of gaining full parental understanding to support multi-age classrooms. A powerful prerequisite to a successful implementation of multi-age classrooms is parent support. Parental feedback can be used to improve programs. Not only is it important to learn the attitudes of parents, but it is equally important to receive feedback from students themselves. Administrators and educators
often forget the most important people in the education process: the students. Little
attention has been given to students’ concerns and attitudes about multi-age classrooms.

In the Brynes et al. study (1994), the subjects participated in six multi-age classrooms
with a total of 168 students ages six through eight years of age. Students who
participated in this study came from three surrounding school districts and were from
predominately white, middle-class professional families. In the fall and spring of the first
year of the multi-age classroom, parents of the 168 students were sent an eighteen item
survey to complete. In turn, the students completed a seven item survey on their views
about the multi-age classroom in the fall and spring of the first year.

Brynes et al. (1994) concluded that the majority of parents felt positively about their
children’s academic and social progress. The majority of students supported multi-age
classrooms and at least two-thirds of the students would select the multi-age classroom
over the single-age classrooms if given a choice. Brynes et al. conducted a Chi-square
where the effect of age and gender of all items on the student survey was examined.
Interviews with the 24 children indicated that children were supportive of the multi-age
classrooms. Children believed learning was more fun and that they were able to play
with kids of different ages. Children also believed that older children helped them with
their classroom work as well. Results indicated that children who liked the multi-age
classroom tended to have parents who rated it positively as well. On the other hand,
children who preferred same-age classrooms tended to have parents who rated the multi-
age classroom less positively (Brynes et al.).

Brynes et al. (1994) concluded that the satisfaction level of multi-age classrooms of
both the parents and the children was positive. A small percentage of both parents and
children reported dissatisfaction with the structure of the multi-age classroom. Children commented that they felt the older children were constantly helping younger children who inhibited their own learning time and academically, the curriculum was not challenging enough for the older children in the classroom (Brynes et al., 1994). A crucial component to the success of the multi-age program was determined to be the provision of information to parents about the multi-age classrooms.

Today, educators are seeing positive reasons for using multi-age grouping in their classrooms. Advocates of multi-age classrooms believe teachers provide students an environment where students can make the choice to interact with whomever they choose (Way, 1979). Once students are provided a multi-age environment, it is assumed that they will interact across age groups. Advocates also assume student-teacher interactions are not linked to the age of the children (Way, 1979).

**Multi-age Interactions**

Way (1979) examined the verbal interactions of children in multi-age classrooms. Specifically, Way investigated whether children of a particular age group in a multi-age classroom interacted with other children across age groups, and also investigate the types of interactions each age group displayed. Furthermore, the investigation of student-to-teacher interaction was conducted to learn whether interactions initiated by children were distributed across age groups.

In this study, the subjects consisted of children ages three through eleven years of age in two suburban multi-age school settings. The first school setting was a laboratory school on a college campus, while the second school setting was in a suburban school district. The purpose of this study was to examine the interactions of children in the
multi-age grouping arrangement. With this in mind, this study addressed the following: (a) the interactions initiated by children of different age groups to other children, (b) difference in the amount of interaction initiated by children of different age groups to the teacher, (c) whether children of each age group interact with children across age groups, (d) whether it is possible to classify the interactions of children into definable types, and (e) whether there is a difference in the proportions of the types of interactions initiated by students in the multi-age classroom (Way, 1979).

The results of Way’s (1979) study concluded that when children of two ages were grouped together in the multi-age classroom, very few differences were found between the observed and the expected number of interactions initiated by children of various ages to other children. The purpose of this study was to examine whether children of one age dominate the classroom in multi-age classrooms. Findings did not result in a consistent pattern to support this hypothesis. However, when three different age groups were grouped together in the multi-age classroom, the older children initiated more interactions with the other children (Way).

Play in Multi-age Classrooms

Mounts and Roopnarine (1987) conducted a study comparing the cognitive level of play behaviors in two classrooms of three and four year olds, and two mixed-age classrooms of three and four year olds. In their study, the authors documented another advantage of multi-age grouping by suggesting that younger children do benefit from mixed-age socialization. The researchers examined children’s social-cognitive modes of play and peer responses. Observations were conducted during indoor free-play for duration of ten 5-minute sessions.
There have been many studies examining same-age peer interactions of early peer relationships. However, the domain of cross-age peer relationships still receives less attention and is being overlooked in the field of early childhood education. Mounts and Roopnarine (1987) argue that the lack of interest is unfortunate for the field for two major reasons. First, with cross-age peer relationships, children may derive advantages through mixed-age socialization. Second, age and sex segregation in educational settings could lead to alienation, indifference, lower overall intelligence, spatial ability, and lower creativity (Mounts & Roopnarine). Currently, only one study has attempted to compare the interactions of children in age-graded and mixed-age classrooms.

The main purpose for the Mounts and Roopnarine (1987) study was to focus on the social-cognitive modes of play of preschool-age children and the responses of their peers in both the same-age and mixed-age preschool classrooms. In addition, the authors examined patterns of interaction within the mixed-age classroom to determine if interactions between preschool children were dispersed evenly by age and gender.

Participants included two classrooms of three year olds and two mixed-age classrooms of three and four year olds. Classrooms selected consisted of at least 40% boys and 40% girls to assure equal opportunities for same-sex and cross-sex activities. Students who participated in this study came from middle-income backgrounds. Students' enrollment in both classrooms was of equal length of time prior to observations.

Observations were conducted during indoor free play periods during a two month period. Each child was observed for ten 5-minute sessions. During each session, twenty 15-second observations were conducted. Observations were randomly selected by age and sex of the target child. A checklist was used to record the play activities of the target
child as well as the responses of their peers to interactive modes of play. The interactive modes of play recorded were (a) interactive-manipulative, (b) interactive-constructive, and (c) interactive-dramatic. The three responses recorded from peers were (a) reject, (b) cooperate, and (c) ignore.

Interobserver agreement was computed for 10% of the total observations over a two month period and reached $r=.80$. Independent $t$ tests were used for assessing both age and classroom differences. When examining the distribution of play initiations within the mixed-age classrooms, data were individually analyzed. The $z$ scores were used to observe percentages for the three play categories.

Results from this study indicated there were no significant differences between play initiations of three year olds and four year olds in mixed-age classrooms. However, in the mixed-age classrooms, three year olds were more likely to engage in constructive play than their counterparts in the same-age classrooms. There was no evidence of age or sex segregation in playmate selection for three and four year old boys and girls. Results from these data indicate random initiation of play across age and sex groups of children which directly support the notion of integrated settings in mixed-age classroom settings.

Mounts and Roopnarine (1987) concluded that mixed-age classrooms may have a positive effect on the play patterns of three year olds. Their study indicated that young children do benefit from mixed-age socialization, which closely resembles their home lives. The crucial question behind mixed-age classroom settings is how age grouping affects the achievement of early educational goals. Considering that school organization started from mixed-age groupings, the early experiences with peers in multi-age preschool settings may indeed be beneficial.
Summary of Research Related to Multi-age Classrooms

Multi-age settings are not a new educational concept and date back to the beginning of public school in the United States. Historically, children across age groups were placed in one-room schoolhouses. However, multi-age classrooms are now being strongly recommended as a new schooling structure for the education of young children (Lolli, 1996). Multi-age settings enable children to work as a whole organization in a supportive learning environment where individualized instruction is provided to each child.

Multi-age classrooms provide ample opportunities for young children to engage in spontaneous play and for teachers to develop systematic instruction for individual children (NAEYC, 1990). Multi-age classrooms run on a continuous progressive curriculum that allows young children to gain better mastery and depth of knowledge at their own pace (Nye, 1993). The chronological age of young children is an indicator of what and how children learn and the multi-age setting is intended to take advantage of the diverse mix of children’s experiences, knowledge, and skills. Not only do young children learn from one another by developing various skills and attributes, but they are encouraged to take on personal responsibility for their learning in this type of environment (Nye).

Today, more young children are at risk for kindergarten failure (Charlesworth, 1989). Currently, up to 50 percent of elementary-age children are affected by the issue of retention. With the growing number of retention rates in kindergarten classrooms, multi-age settings can be beneficial when examining both retention and social promotion of
young children, in that they provide opportunities for accountability in ways that many single-age classrooms cannot demonstrate (Nye, 1993).

Multi-age settings are based on pedagogical and didactic motives, and advocates of multi-age settings claim that young children gain cognitive and noncognitive benefits (Veenman, 1995). Advantages of multi-age groupings include but are not limited to: (a) young children have a chance to form a wider variety of relationships with children of different ages, (b) young children receive individualized instruction, (c) teacher-student relationships are more secure, (d) greater interaction between younger and older children, (e) increased levels of cooperation and prosocial behaviors, (f) younger students can observe, emulate, and imitate a wide range of behaviors, and; (g) older students assume responsibility for younger students (Veenman).

Review and Analysis of Literature Related to Children in Inclusive Settings

Preschool programs across the country are embracing the philosophy of inclusion, and are now integrating children with disabilities and their typically developing peers. Inclusive settings promote a stronger support system for children with disabilities by providing them with language development, peer models of play, and social interaction. Research indicates that social interaction rates for children with a variety of disabilities were higher in settings where there were typically developing children (Brown & Bergen, 2002). The presence of typically developing children made for greater involvement for all children in sustained cooperative play. Moreover, typical peers took on more of a leadership role in initiating these events.
In 2002, Brown and Bergen conducted a study that examined nine preschool children with disabilities in an inclusive program with typical peers and the types of play and social interactions in which they engaged in their chosen learning/activity centers. Findings from the study indicated differences among the children in the amount of time they spent in various centers, the number of different types of play in which they engaged, and the amount of time spent in play of various types. The authors present case studies of different patterns of play from children with various types of disabilities (Brown & Bergen).

In inclusive preschool settings, there is an assumption that learning/activity centers are both socially and academically beneficial for all students, including students with disabilities. However, studies reveal that the type of materials and the presence of adults and peers influence the types of play and the duration of sustained play (Brown & Bergen, 2002). With this in mind, Brown and Bergen addressed the following: (a) types and amounts of play engaged by children with disabilities in the learning/activity centers of an inclusive preschool, (b) social interaction patterns engaged in by children with disabilities, (c) learning/activity centers that foster play and social interactions between children with disabilities and their peers without disabilities, and (d) contributions of the adults to the play and social interaction of the children in inclusive preschool settings (Brown & Bergen).

The setting for this study was in a rural area in the Midwestern United States. This area held a strong philosophy of inclusion, which is crucial to the purpose of their study. Educators fostered the play and social integration of children with disabilities through learning and activity centers during a one-hour period during free-choice play.
In this study, the subjects consisted of nine children with disabilities and 18 typical peers in the program and consisted of nine learning/activity centers. The centers consisted of art, creative expression, writing, housekeeping/dress-up, water play, computer, wood-working, Lego table, and science. Data were collected during the five free-choice sessions through the use of video tape. Each center was video taped for ten minutes on three occasions. There was no attempt made to bring children with disabilities and their typically developing peers into the various centers. Children were free to follow their interests and go to the centers that interested them the most. Everyone involved in the study was encouraged to maintain their regular routines during the videotaping.

Brown and Bergen (2002) conducted a mixed method study that included both quantitative and qualitative methods of research. For each video taped segment, the play events were coded using an event sampling technique. The codes used to identify each play event were based on the cognitive types of play identified by Piaget (Crain, 2000) and the social play categories of Parten (Brown & Bergen). Piaget’s cognitive types of play included practice, pretend, and games with rules. Parten’s social play categories consisted of unoccupied, onlooking, solitary, parallel, associative, and cooperative play.

Brown and Bergen (2002) found that the types of social interactions most often observed with peers were associative or brief cooperative play episodes. The centers where most associative or cooperative play with peers occurred were water, computer, and house/dress up. Teachers were often present at these centers. Findings from this research supports previous studies showing that centers in which teachers are present are the ones to which many children with disabilities are drawn. In this study, adults were
responsive to the needs of all children; however, they did not facilitate the social interaction of children with disabilities and their typical peers. Out of the nine learning centers, not one center activity facilitated social interactions between children with and without disabilities without adult intervention. It is evident through previous research and this study in particular that inclusive preschool settings are effective for children with disabilities. The authors conclude the article with recommendations for future studies of the actual play experiences and peer interactions occurring in inclusive classroom settings.

In 1992, Hundert and Houghton conducted a study that examined four integrated preschool classes of 14 children with disabilities between the ages of three and five years. The purpose of their study was to examine the effectiveness of the classwide social skills program (CSSP). The authors wanted to know if CSSP promoted social interaction of children with disabilities within the regular preschools. Findings from the study indicated that CSSP increased the positive play of children with disabilities to levels comparable to their typically developing peers.

The movement for inclusion is based on the rationale of its social benefits for both children with and without disabilities (Hundert & Houghton, 1992). However, few empirical studies have been completed on effective procedures for the implementation of successful inclusive classrooms. For integrated classrooms to be successful there are two strategies that are widely used to promote social interaction: teacher mediated and peer mediated approach. With the teacher mediated approach, the teacher interacts with children with disabilities in ways designed to increase positive behaviors, while in the peer mediated approach, selected typically developing peers are trained to facilitate social interaction of children with disabilities (Hundert & Houghton).
Hundert and Houghton (1992) used the CSSP approach in order to promote social interaction of all the children in the classroom. By introducing a social interaction program for the entire preschool class, a number of positive features come to light: (a) minimal stigmatizing of children with disabilities due to the intervention focusing on the group as a whole, (b) teachers acquire programming skills across a number of situations, and (c) enhanced generalization of effects of the natural group of children (Hundert & Houghton).

In this study, the subjects consisted of 14 children with disabilities (12 boys and 2 girls) ages three years and four months to five years and four months. Students who participated in this study attended one of the four integrated preschool classes in the Niagara Region of Canada. Students were divided into four groups. Group one consisted of four children with disabilities with 11 peers without disabilities, ranging from three years to three years and five months of age. Group two contained two children with disabilities and 18 typically developing peers ranging in age from three years and five months to four years. Group three contained four children with disabilities with 17 typically developing peers ranging in age from three years to three years and six months. The last group, group four consisted of four children with disabilities with 14 typically developing peers ranging from four years and one month to five years and seven months (Hundert & Houghton, 1992). The CSSP was administered by three trained female therapists who worked collaboratively with the teachers in the class. The CSSP was introduced during daily play time for each of the four preschool classes. Positive play of children with disabilities and the reinforcement provided by the teacher were measured during the daily training and generalization sessions. Positive play was defined as
elicited verbal or nonverbal behavior from the child toward another child which involved cooperative play (Hundert & Houghton).

Hundert and Houghton (1992) conducted a multiple-baseline design across groups of children with disabilities to measure changes in their social interactions during each of the three experimental phases. The means for each group of children with disabilities were calculated for each session of the positive play and teacher reinforcement phase. With positive play there was no clear increase from baseline to program phase during both the generalization and training sessions for positive play of children with disabilities. Regarding teacher reinforcement, with the exception of group one, there was a clear increase during the training session. Hundert and Houghton concluded that during the training phase, the rate of positive social interaction of children with disabilities increased comparable to their typically developing peers.

Hundert and Houghton (1992) attempted to use CSSP to alter the natural environment by eliciting and supporting positive social interaction among all children. Instead of placing the children with disabilities in a new social environment, the researchers kept the children in their own natural environment. The researchers used CSSP differently than others to increase social interaction among students with and without disabilities in an integrated classroom setting.

One of the first meaningful social interactions for young children is peer encounters (Erwin et al., 1999). Friendships and peer encounters play a critical role in the growth and development of young children. It has been suggested that in order to understand the importance of children's interactions and relationships, peer culture of young children must be examined. Currently, there is a dearth of research conducted on the subject of
peer culture and membership in early childhood settings for both children with and without disabilities (Erwin et al.).

The purpose of the Erwin et al. (1999) pilot study was to examine the social interactions among young children in early childhood settings that included a child who had severe visual impairment and medical challenges. This study was implemented for the duration of one academic school year within a variety of natural environments. The subject identified for this pilot study included Ryan, a three year old with disabilities, and 13 normally developing preschool-age children within a community-based private school. Students who participated in this study came from a middle class suburban community, 60 miles from New York City. Classes observed were of mixed-age and heterogeneously grouped.

For this investigation, qualitative methods were used in an effort to provide rich data with events, experiences, and differing perspectives. Another form of data collection involved personal interviews. The observer conducted four personal interviews with the classroom teacher as well as the teacher assistant, and both Ryan's mother and father. Each private interview was carried out for the duration of one hour.

Qualitative studies are often ongoing and as a qualitative research study, data were coded as specific themes that emerged as the data were analyzed. Through data analysis, triangulation occurred. In order to verify the accuracy of data, member checks were obtained. Erwin et al. (1999) found that children did not always seek out another peer and young children often engaged in either solitary or parallel play. The researchers found that Ryan interacted more with girls than boys during play. Through their investigation, the researchers concluded that regardless of whether one of the playmates
had a disability or not, social interactions were short, simple, and often nonverbal. Data also supported the idea that communication breakdowns occur between sighted peers as well as non-sighted peers during play. Researchers found that when young children tried to gain the attention of another playmate and were unsuccessful, they eventually gave up.

Within the past two decades, the push for inclusive settings has grown in intensity. Within the field of special education, the focus on real and potential effects of integrating children with and without disabilities has been the main focus among many professionals within the field (Cole, Mills, Dale, & Jenkins, 1991).

The purpose of this study was to investigate the effects of both an integrated and segregated special education preschool program for preschool-age children with mild to moderate disabilities. The researchers wanted to determine the degree to which initial level of development influenced the academic gains. Children's performance in the areas of language, cognitive, and academic development was assessed using a pretest and posttest assessment. The researchers hypothesized that integration alone would have a pronounced effect on the young children. Cole et al. (1991) hypothesized that the higher functioning preschool-age children would gain more in the integrated setting, while the lower functioning preschool-age children would gain more in the segregated setting.

A total of 124 preschool-age children, ages three to six years of age participated in the study. The participants included a total of 71 boys and 29 girls and 24 typically developing young children. Out of the 124 preschool-age children, 100 young children were identified as having mild to moderate disabilities. In the integrated classroom setting, 15 boys and 9 girls, a total of 24 typically developing young children were present (Cole et al., 1991).
This study took place at a Pacific Northwest University laboratory for young children with disabilities over a four year period. Preschool classes met for half-days, five days a week, for the standard 180 school days. Two of the preschool classes were integrated and two were segregated classrooms. Preschool-age children with disabilities were randomly assigned to integrated and segregated classrooms. Typically developing preschool-age children were randomly assigned to specific integrated classrooms. Each classroom included one head teacher and an assistant teacher who taught either an integrated or segregated classroom in the morning, and an opposite model in the afternoon.

For this investigation, the following measures were used as pretest and posttest assessments with a six month gap between the pretest and posttest: *McCarthy Scales of Children's Abilities, Peabody Picture Vocabulary Test-Revised, Test of Early Language Development, and Test of Early Reading Ability* (Cole et al., 1991). One-way analyses of variance (ANOVAs) were performed to determine whether the groups were comparable after randomly assigning children to groups. Results indicated no significant differences between young children in integrated and young children segregated classes for the pretest or the posttest.

Results from the multiple regression analysis design revealed a pattern of Aptitude by Treatment interactions in that young children who were lower functioning made greater gains in the segregated settings, while young children who were higher functioning made significant gains in the integrated settings. Cole et al. (1991) suggest that young children's performance can be influenced within integrated and segregated settings, even though the effects of integration may be complex. The researchers of this study suggest
that early childhood special educators in integrated settings carefully monitor both instructional and social environments, along with the performance of young children to ensure that those who are functioning at lower levels receive appropriate stimulation (Cole et al.).

**Summary of Research Related to Children in Inclusive Settings**

In the United States, more than 5.3 million students with disabilities spend some part of their day in classes with nondisabled students (Kluth & Straut, 2001). For decades, students with disabilities have been segregated from their typically developing peers during educational instruction from self-contained classrooms to resource rooms (Whiten & Rodriguez-Campos, 2003). Federal mandates require schools to include students with disabilities with their nondisabled peers and to the maximum extent possible (Whiten & Rodriguez-Campos).

The reasoning behind integrating children with and without disabilities in inclusive settings relies on the rationale that children without disabilities can positively affect the learning of their fellow peers (Wolery, 1991). Research implies that exposure to language and social interaction from more highly skilled children can influence development in children with delays in those specific areas (Cole et al., 1991). Lipsky and Gartner (1998) emphasizes that all children, including those with special needs, deserve an education of high quality. Inclusive classrooms prepare young children to participate as full and contributing members of an inclusive society.
Review and Analysis of Literature Related to the Importance of Play

In early childhood education, play is considered to be child-initiated and child-directed (Cooney, 2004). According to Cooney (2004), the constructivist theories of Piaget and Vygotsky are prevalent in the literature of play and focus on learning through play. Advocates for play in early childhood settings view play as a vehicle through which the young child can grow and develop the foundational skills necessary for academic and social success (Cooney).

In early childhood, the importance of play and its role has shifted as new directions in curriculum and educational outcomes have made influential marks in the perception of teachers' roles in early childhood education and in the field itself (Veale, 2001). Veale promotes the idea that there needs to be a shift from learning through play to teaching through play. This shift focuses on children as the center of the learning process and ensures that play produces particular kinds of learning to children. In her study, Veale seeks to examine the traditional place of play in contemporary early childhood programs, especially with the new direction in early childhood curriculum. Veale discusses current curriculum developments, but also revisits developmental and psychoanalytic theory.

Psychoanalytic theory stresses the importance of play and defines it as immeasurable, but crucial to the area of children's subjectivity (Veale, 2001). The psychoanalytic theory that was influential in the 1930s was the idea that freedom from rules in play allowed children to express themselves, which gave insights to the child. Teachers' roles were to intervene as little as possible and to provide materials, and observe children. Therefore, teachers were allowing children to express themselves with as little intervention as possible (Veale).
In the 1950s, Piaget’s theories emerged and the focus turned to cognitive development and compensatory programs. Instead of playing with imaginative materials during play, children were given concrete materials. Veale (2001) points out that recently, psychoanalytic theory has returned with an interest in emotional intelligence. A recent research study concluded that the development of emotion regulation was significant among preschool children who engaged in pretend play. The researchers concluded that pretend play provided the setting in which children’s emotional experiences created the circumstances for socio-affective development (Veale).

In South Australia, the curriculum has moved to more of an outcome based education and in 2001, the Department of Education Training and Employment launched the South Australian Curriculum, Standards and Accountability Framework Birth to year 12 (Veale, 2001). This centralized curriculum enables the government to bring early childhood development under the rubric of education. The aim of this centralized curriculum is for it to be inclusive, while allowing play to be an active part in ensuring that all children develop in ways that will enable them to understand the world (Veale).

Early childhood education continues to stress the importance of cooperative play and learning to enhance children’s overall development. Among children, cooperation involves children in the active exchanges of ideas (Tudge & Caruso, 1988). When children are provided opportunities for free play such as construction or building, they are presented opportunities for cooperative problem solving because they are already involved in pursuing objectives that are intrinsically interesting to them. The works and theories of Piaget are commonly referenced by researchers when it comes to examining children’s performance on various tasks when working both in pairs and individually.
Researchers found that when children who were paired with a more advanced child, they were able to solve conservation tasks at higher levels, whereas children who worked individually did not improve on various tasks (Tudge & Caruso).

Social interactions of young children, especially in the context of play are present in inclusive preschool settings. During play among same-age peers of young children, peer social interactions are present. Through the peer mediated approach to social learning, children with higher levels of social skills participate in social interactions with both younger children with and without disabilities. Children are taught to assist, display affection, request to share, and compliment other children (Lau, Higgins, Gelfer, Hong, & Miller, 2005).

Few studies have been conducted that examine preschool-age children’s cognitive consequences of social interactions during play, especially those examining the dynamic processes of peer interaction during play (Sluss & Stremmel, 2004). Sluss and Stremmel conducted a study designed to examine the effects of interactions on peers within the context of constructive play with blocks. The purpose of this study was to examine if four year old children played differently with their fellow peers who displayed varying levels of play behaviors during block play. Sluss and Stremmel hypothesized that the four year old children who displayed more complex play behaviors would adjust their play to meet the level of their peers who displayed less complex play behaviors.

The subjects consisted of 100 four-year old children, ages ranging from 48 to 60 months, with a mean age of four years and seven months. Students who participated in this study came from five licensed child care centers located in the southern state of a
rural university town. In order to assess play complexity, the *Play Observation Scale (POS)* was used for this study on play (Sluss & Stremmel, 2004).

During free play, children were observed on two separate days for a period of eight minutes. For each child, a total of 16 minutes of play was conducted. Prior to data collection, interobserver reliability at $k=.92$ was established. A total of 48 children participated in this study. Children who scored higher than 217 or lower than 92 on the *POS* were selected. Research suggests that boys and girls play in different ways; therefore, gender was used as a control factor (Sluss & Stremmel, 2004).

All observations took place during the winter break in a university child development laboratory classroom. This setting was chosen because it maintained a typical preschool classroom, equipped with video cameras and a one-way mirror. Children were invited to play in the block area, and all other areas in the classroom were closed to discourage play. During block play, the investigator observed the child the entire time, while the parents waited for the children outside the room. Procedures for observations were conducted for 10 minutes, and after the 10 minutes elapsed, children’s play was recorded on video tape. After 15 minutes, the investigator took Polaroid pictures of the block structures that children had created. The investigator took two Polaroid photos; one photo given to the child to take home, and the second kept by the investigator for their records. Children were encouraged to talk about their pictures with the investigator.

Video tapes were coded according to three different behaviors: block play, communication, and peer collaboration. Sluss and Stremmel (2004) used a multivariate analysis of variance (MANOVA) to analyze their data. The independent variable was identified as play level as determined by observations in the classroom, while the
dependent variable was defined as block play, communication, and peer collaboration. Main effects at an alpha level of .05 were examined and when an interaction was found significant, simple effects were computed.

The results of Sluss and Stremmel (2004) revealed significant gender differences, group differences, and group by gender interaction. Results indicated that boys were unaffected by social interactions from other peers, while girls were affected by the play level of their peers during play. Sluss and Stremmel supported Vygotsky’s assumption that knowledge is transmitted during play for girls, but not for boys during social interactions. Through observation, the researchers noted that regardless of the level of play, girls spent time interacting socially with unfamiliar peers before playing, whereas boys went straight to the block area. Limitations of Sluss and Stremmel’s study include the type of assessment used, the POS, and the fact that only two children were playing together in one room. Cooperative play may be difficult to observe, however, in this study, cooperative play did occur among some of the children.

Sluss and Stremmel (2004) validated the zone of proximal development for girls, but not boys. If play indeed creates a zone of proximal development, then it can be assumed that play provides cognitive growth and development in young children. These findings provide direct support for the benefits of multi-age groups for girls. With this in mind, opportunities that encourage collaborative play among boys and girls must be encouraged.

In early childhood programs, young children become active learners through play experiences that enable them to develop and accumulate knowledge (Saracho, 2001). Play provides opportunities for children to understand the world, express and control emotions, interact with others, practice skills, develop symbolic capabilities, solve
problems, and attempt challenging tasks. Play also contributes to the development of movement, posture, and self-sufficiency for children (Hanline, 1999). Play provides a setting in which all children can learn, grow, and develop. In this type of natural environment, the play setting may be an effective learning environment for young children with disabilities (Hanline). It is key that the environment must be carefully planned to encourage children’s active participation.

An indication of the success of a play-based curriculum is the implementation of an inclusive service delivery model. Inclusive practices refer to the philosophical belief that students with disabilities are full members of their school and classroom learning communities. It is important as educators to provide modifications and accommodations that include all children in play activities. Adapting materials, simplifying activities, and providing special adapted equipment are just some ways to help accommodate and modify activities for children with disabilities (Hanline, 1999).

The foundation for a play-based curriculum is based on its physical environment, and it is best implemented in an environment arranged both in indoor and outdoor activity centers (Hanline, 1999). Appropriate play behaviors and social interactions depend on the arrangement of the physical environment, in which chronological and developmental levels of children should be considered at all times. Indoor and outdoor activity centers allow children to participate in the following three types of play: construction, symbolic, and sensorimotor.

For young children, the outdoor environment is part of their learning environment and this is where children make sense of their world, most often engaging in pretend play with their playmates. Perry (2003) presents observations of her own students and the
importance of outdoor play. She focuses mainly on the independent outdoor pretend play of preschool children and why it's significant for young children's learning.

The child study center environment consisted of 70% of outdoor learning. Her preschool children were free to go outdoors rain or shine and the doors to the yard stayed open in her classroom. Children's pretend play follows a general pattern: initiating play, negotiating what the game is going to be about, and then lastly, acting out the game.

Perry (2003) is an advocate for outdoor play and provides ways to advocate for outdoor play in classrooms. One way is to map out the yard, just like learning centers in the classrooms would be mapped out. After mapping out the yard, each area should be defined and examined to determine if it is big enough for at least four children to play. The next step is to use the observation records of the children's past histories to set up the areas as needed. The key is assessing the children's use of the outdoor learning centers through regular observations. Once these observations are obtained, they can be used in staff meetings to follow each child's development and share with families.

As an educator, Perry (2003) outlines on how to record nonjudgmental observations through the following five steps: (a) have paper and pencils handy, (b) pick one child to follow, including his or her playmates, (c) record only what the child is doing, (d) respond to children's questions about what you're doing, and; (e) complete your observation in five to seven minutes. By using these guidelines, teachers can observe play more accurately and effectively to benefit the children.

Social interaction and learning through play takes on a crucial role as children move on to the preschool years (Tannock, 2008). In Parten's (1932) study, social participation of forty nursery school children was examined. Social participation was classified under
the play categories of unoccupied; solitary play; onlooker; parallel group activity; associative group play, and organized supplementary or cooperative group play (Parten). Results indicated that social participation was highly dependent upon the age of the children. For the younger children, results indicated that they played alone or in parallel groups, while the older children played in more highly organized group play (Parten).

Observational Checklists and Scales

There is a vacuum of literature available that relates to early childhood environment rating scales and observational checklists. There are various scales and checklists available for assessment, however because there is no universal definition of play, one assessment cannot be the sole basis to measure play (Klein et al., 2003).

*The Early Childhood Environment Rating Scale (ECERS)* is a scale consisting of 37 items organized into seven subscales which were developed for use in all types of early childhood programs, including day care, Head Start, nursery school, and kindergarten (Harms & Clifford, 1983). The seven subscales are: (a) personal care routines (e.g. greeting/departing, personal grooming), (b) furnishings and display for children (e.g. room arrangement, child related display), (c) language-reasoning experiences (e.g. understanding, using, and informal use of language), (d) fine and gross motor activities (perceptual/fine motor, fine motor and gross motor supervision), (e) creative activities (e.g. art, music), (f) social development (e.g. free play, cultural awareness), and (g) adult needs (e.g. adult personal area, meeting area) (Harms & Clifford, 1983).

The ECERS is a training tool which was designed to give an overall picture of the surroundings for children and adults in early childhood programs. The ECERS provides
information about the use of space, activities, and materials to enhance children’s development, daily schedule, and supervision of adults (Harms & Clifford, 1983).

Rubin, Watson, and Jambor (1978) comparatively examined the free-play behaviors of both preschool-age and kindergarten-age children by looking at the age differences in the social and cognitive play of children. Participants in this study included 12 female and 15 male preschool-age children, and 14 female and 14 male kindergarten-age children. The participants attended a half-day program at a small teacher’s college in New York State and were predominately from lower to middle class homes. The child to teacher ratio was 10:1 in both classroom settings.

The study was conducted by observing all play behavior in one large classroom. During free play, each child was observed during a one minute span on 30 consecutive school days. Results from this study indicated that through observation and the Parten’s Play Scale, researchers were able to reveal that preschool-age children engaged significantly more in solitary-functional and parallel-functional play than their kindergarten counterparts. The scale also revealed that preschool-age children engaged in less parallel-constructive, parallel-dramatic, and group dramatic play than their kindergarten counterparts (Rubin et al., 1978).

Rubin et al. (1978) point out that one of the limitations of their study was a weakness in Parten’s play scale of child’s play. The play scale did not distinguish definitions for observers to properly score children’s play and their findings support the use for play scales in future studies of children’s play.
Summary of Research Related to the Importance of Play

Advocates of play believe that the central role in young children’s learning and development is through play (Klein et al., 2003). Even though there isn’t a universal definition of play, there are certain agreed upon behavioral characteristics of play that include: (a) active engagement, (b) attention to process, not product, (c) intrinsic motivation, and; (d) freedom from external rules (Klein et al.). Play is a significant part of early childhood education programs and through play, children are able to explore and deal with their emotions and understand their physical and social environment (Saracho & Spodek, 1995). Young children also make important discoveries about themselves and build a realistic sense of self (Klein et al.).

As children play, they learn naturally about themselves and their surrounding environment (Klein et al., 2003). Play is a source of dialogue between children and their surroundings during indoor and outdoor play, pretend and exploration play, using verbal and nonverbal language, and being alone or engaging with others (Klein et al.).

Summary

In the field of Early Childhood and Early Childhood Special Education, there is a lack of research examining play among children in multi-age classrooms. Research is needed to examine play behaviors among and between young children in single-age and multi-age classrooms, especially in the preschool classroom setting. At the preschool age, enjoyment and learning serves not only as a source for peer interactions, but for learning (Tannock, 2008). Through play in the preschool classroom setting, the social interaction
and learning of children plays a vital role. Through playing with their peers, children are able to learn about their world and the social expectations (Tannock).

Research indicates that children’s play interactions increase in amount depending on the age of the child (Hestenes & Carroll, 2000). Children ages three to five years of age show major gains in the amount of peer interaction in the preschool classroom setting. The environment can influence peer interactions among children with and without disabilities (Hestenes & Carroll). Not only does the individual child influence the type and level of play that occurs among children, but the environment also plays a crucial role. In any type of given environmental setting, there must be different types and variety of activities that are developmentally appropriate for all children. By providing variety, this provides opportunities for play through manipulation of the environment with the given materials and equipment (Hestenes & Carroll). Within inclusive settings, it is key to examine both the individual child and the environment because this joint function may predict and explain the developmental outcomes of play interactions, especially between children with and without disabilities (Hestenes & Carroll). A primary rationale for integrating children with and without disabilities in an inclusive setting is that children without disabilities can positively affect the learning of their peers (Wolery, 1991).

By placing children in an multi-age classroom setting, where children range in age by three years or more in one class, instructional practices such as developmentally appropriate practices, cooperative learning, and integrated instruction are being implemented (Gaustad, 1995). An important factor to remember is that the key to a successful multi-age classroom setting isn’t by simply mixing ages. It is the method of instruction and the interactions among the children that make the difference (Gaustad).
Based on the review of literature, it was determined that further study is needed related to examining play among young children in single-age and multi-age classroom settings. This study supports the existing research that encourages multi-age classroom settings to continue as well as the importance of play interactions of young children. Also, this study encourages further investigation into assessing and describing how children are initiated into the social and learning worlds of the multi-age classroom (Theilheimer, 1993).
CHAPTER 3

METHODOLOGY

Overview

The goal of multi-age grouping is to benefit interaction and cooperation among children by using teaching practices that maximize these two attributes (Nye, 1993). Teachers who use multi-age grouping recognize and plan for a wide range of abilities for young children with and without disabilities. This type of setting is conducive to different rates of learning and progress and can be adjusted to each individual’s academic, emotional and social needs (Lodish, 1992). In multi-age groupings, children vary in ability, experience, chronological age, and maturity (Nye).

A component crucial to the development of young children is the importance of play (Hanline, 1999). An inclusive and natural environment for young children, provides opportunities for exploration, discovery, and enjoyment (Klein et al., 2003). The elements of play provide a central role in the learning and development of young children in that they can discover the workings of the world and their surroundings. Through play, young children discover ways to negotiate through their surroundings, and learn about cultural norms and expectations (Klein et al.).

This study was conducted to determine if children benefit from increased play opportunities in multi-age classrooms versus single-age classrooms. Through
observations, questionnaires (surveys), and children interviews, a qualitative study were conducted.

Research Questions

The purpose of the study was threefold. First, the study was designed to investigate whether children in multi-age classrooms engage in play, and if so, the type of play in which they engage. Second, the study was designed to examine whether children in the multi-age classroom engage in play across age groups. Third, the study was designed to examine whether children in the multi-age classroom engage in play with children with disabilities. Research questions were:

1. Do young children in multi-age classrooms engage in one type of play more frequently than young children in single-age classrooms (i.e. solitary, onlooker, parallel, associative, and cooperative play)?
2. Do young children in multi-age classrooms initiate play with other children more frequently than young children in single-age classrooms?
3. Do typically developing young children in multi-age classrooms initiate play with young children with disabilities more frequently than typically developing young children in single-age classrooms?
4. What are young children’s thoughts about their play experiences?
5. What are teachers’ perceptions of play among young children in single-age and multi-age classrooms?
6. What are parents’ perceptions of play among young children in single-age and multi-age classrooms?
Participants

Child, teacher, and parent participants in this study were from the University of Nevada Las Vegas (UNLV)/Lynn Bennett Early Childhood Education Center (LBECEC) located in Las Vegas, Nevada. The LBECEC preschool is a fully inclusive program with one full-time multi-age classroom and ten single-age classrooms. The LBECEC is a National Association for the Education of Young Children (NAEYC) accredited program.

Two single-age preschool classrooms and one multi-age preschool classroom were identified for the purposes of this study. The two identified single-age classrooms were the Bumble Bees and Rainbows classrooms. The multi-age classroom was the Sea Turtles. Children 47 months through 52 months of age were present in the Bumble Bees classroom. Children 53 months through 58 months of age were present in the Rainbows classroom. Children from 36 months through 58 months of age were present in the Sea Turtles classroom. Participants in this study included teachers across all classrooms at the LBECEC (n=7), parent participants across all LBECEC classrooms (n=34), the children assigned to each of the aforementioned classrooms who had parental informed consent to participate in the video taped portion of the study (n=53), and the children assigned to each classroom who had parental informed consent to participate in both the video taped and interview portions of the study (n=50).

Teacher Participants

All teachers who interacted with children at the UNLV LBECEC were asked to participate. An informed consent form, instructional letter, and teacher survey on their knowledge, attitudes, and perceptions of play among single-age and multi-age settings were provided to all teachers of the LBECEC during August 2008 (see Appendix A).
Surveys were distributed and placed inside the mail boxes of each individual teacher at the LBECEC. A week before the deadline for return of completed consent forms, reminders were sent to all teachers by placing a friendly note in each teacher's mail box. Teacher participants completed a survey regarding their knowledge, attitudes, and perceptions of play among children in single-age and multi-age settings (see Appendix D). The survey asked teacher participants to answer questions about demographics, a series of statements regarding single-age and multi-age classrooms, and open ended questions about play. Questions were targeted to address their knowledge, attitudes, and beliefs about young children in general, which is inclusive of their own children in their classrooms.

*Teacher Demographics and Education Background.*

Seven of the 17 LBECEC teachers returned the survey. Six of the seven were female. Additional demographic information from the survey (Appendix D) revealed that teacher participants’ education background varied (see Table 1).
### Table 1.

**Demographics of Teachers**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Valid Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
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<tr>
<td>Female</td>
<td>6</td>
</tr>
<tr>
<td>Male</td>
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</tr>
<tr>
<td>Years of Teaching Experience</td>
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</tr>
<tr>
<td>Less than 5 years</td>
<td>3</td>
</tr>
<tr>
<td>5 - 10 years</td>
<td>2</td>
</tr>
<tr>
<td>10 - 15 years</td>
<td>1</td>
</tr>
<tr>
<td>More than 15 years</td>
<td>1</td>
</tr>
<tr>
<td>Education</td>
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</tr>
<tr>
<td>High school diploma</td>
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</tr>
<tr>
<td>Community College Degree</td>
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</tr>
<tr>
<td>University Degree</td>
<td>3</td>
</tr>
<tr>
<td>Some University Studies</td>
<td>3</td>
</tr>
<tr>
<td>Graduate Studies</td>
<td>2</td>
</tr>
<tr>
<td>Child Development Credential (CDA)</td>
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<tr>
<td>Type of classroom I teach in</td>
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<tr>
<td>Single-age classroom</td>
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</tr>
<tr>
<td>Multi-age classroom</td>
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</tr>
<tr>
<td>Age range in months of children in my classroom</td>
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</tr>
<tr>
<td>B - 6 months</td>
<td>1</td>
</tr>
<tr>
<td>6 - 12 months</td>
<td>2</td>
</tr>
<tr>
<td>12 - 18 months</td>
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</tr>
<tr>
<td>18 - 24 months</td>
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</tr>
<tr>
<td>24 - 36 months</td>
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<tr>
<td>Age Group</td>
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<tr>
<td>------------------</td>
<td>--------------------</td>
</tr>
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<td>36 – 48 months</td>
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</tr>
<tr>
<td>48 – 60 months</td>
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<td>Number of children in the group</td>
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</tr>
<tr>
<td></td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>15</td>
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<tr>
<td></td>
<td>19</td>
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<tr>
<td></td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>27</td>
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<tr>
<td>Child-teacher ratio in my classroom</td>
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<tr>
<td></td>
<td>3.5 to 1</td>
</tr>
<tr>
<td></td>
<td>4 to 1</td>
</tr>
<tr>
<td></td>
<td>5 to 1</td>
</tr>
<tr>
<td></td>
<td>No answer</td>
</tr>
</tbody>
</table>

N = 7
Child Participants

An informed consent form and instructional letter were sent home for parents of children in the three targeted classrooms: Bumble Bees, Rainbows, and Sea Turtles at the LBECEC (see Appendix A for forms). Forms were distributed and placed inside the cubbies of each individual child across the LBECEC classrooms. A week before the deadline for return of completed consent forms, reminders were sent to all families by placing a friendly note in each individual child’s cubby across the LBECEC classrooms. The Director of the center sent a letter to all families in late October requesting them the return of the consent forms in order for the research project to begin. The informed consent form had two parts. Parent signatures on the first part of the form indicated that parents allowed their child to be video taped for the purpose of this research study. Parent signatures on the second part of the consent form indicated that parents allowed their child to participate in the child interviewing process in the research study. The demographics of children participants are in Table 2.
Table 2.

Profile of Children Participants

<table>
<thead>
<tr>
<th>Participant</th>
<th>Gender</th>
<th>Age</th>
<th>Type of Classroom</th>
<th>Student with Special Needs</th>
<th>Observation</th>
<th>Interview</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB</td>
<td>G1</td>
<td>55 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>G2</td>
<td>57 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>G3</td>
<td>55 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>G4</td>
<td>55 mo</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>G5</td>
<td>54 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>G6</td>
<td>53 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>BB</td>
<td>G7</td>
<td>57 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>G8</td>
<td>56 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>G9</td>
<td>56 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
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</tr>
<tr>
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<td>G10</td>
<td>57 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>B1</td>
<td>54 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>B2</td>
<td>55 mo</td>
<td>SA 1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB</td>
<td>B3</td>
<td>53 mo</td>
<td>SA 1</td>
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<tr>
<td>BB</td>
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<tr>
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<td>54 mo</td>
<td>SA 1</td>
<td></td>
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</tr>
<tr>
<td>BB</td>
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<td>54 mo</td>
<td>SA 1</td>
<td></td>
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<tr>
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<tr>
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<tr>
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<tr>
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<td>53 mo</td>
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<tr>
<td>RB</td>
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<tr>
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</tr>
<tr>
<td>RB</td>
<td>G5</td>
<td>70 mo</td>
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<tr>
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<tr>
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<td>SA 2</td>
<td>x</td>
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<tr>
<td>RB</td>
<td>B8</td>
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<td>Group</td>
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<td>Type</td>
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<td>x</td>
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<td>MA</td>
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<td></td>
</tr>
<tr>
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<td>60</td>
<td>MA</td>
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<td>x</td>
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<tr>
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<td>B6</td>
<td>60</td>
<td>MA</td>
<td>x</td>
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</table>

N = 53

*Note.* BB = Bumble Bees Classroom; RB = Rainbows Classroom; ST = Sea Turtles classroom; SA = Single-age Classroom; MA = Multi-age Classroom.
**Parent Participants**

All parents who had a child(ren) enrolled at LBECEC were asked to participate in this study. A total of 224 families who enrolled their child(ren) for the fall of 2008 at the LBECEC were asked to participate in this study (see Appendix A). Surveys were distributed and placed inside the cubbies of each individual child across the LBECEC classrooms. A week before the deadline for return of completed consent forms, reminders were sent to all families by placing a friendly note in each individual child’s cubby across the LBECEC classrooms. The Director of the center also sent a letter to all of the families in late October requesting they return the consent form in order for the research project to begin. Of the 224 families of the LBECEC, 34 families completed and returned the surveys. It must be noted that two of the 34 parents marked themselves as males; however, when asked about their role, they indicated they were mothers to their child. Parent participants completed a survey regarding knowledge, attitudes, and perceptions of play among single-age and multi-age settings (see Appendix E). The survey asked parent participants to answer questions about demographics, a series of statements regarding single-age and multi-age classrooms, and open ended questions about play. Questions were targeted to address their knowledge, attitudes, and beliefs about young children in general, which is inclusive of their own children. Table 3 provides an overview of the demographics of parent participants.
Table 3.

*Profile of Parent Demographics*

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<tr>
<th>Characteristics</th>
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<th>Male</th>
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<tr>
<td>Girl</td>
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<td>Some University Studies</td>
<td>3</td>
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<td>Graduate Studies</td>
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<td>Child Development Credential (CDA)</td>
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<tr>
<td>Gender of Child(ren)</td>
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<td></td>
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<tr>
<td>Girl</td>
<td>23</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>19</td>
<td></td>
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<tr>
<td>Child(ren) age</td>
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<td>6 - 12 months</td>
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<tr>
<td>72 - 84 months</td>
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</table>
84 months – older 5
Type of classroom Single-age 22
Multi-age 9
Both 2
No response 1
Relationship with child Mother 29
Father 5
N = 34

Setting

This study was conducted in three early childhood preschool classrooms at LBECEC located in Las Vegas, Nevada on a university campus. The preschool adhered to the philosophy of an inclusive early childhood program that served children six weeks to five years of age. The selected preschool met state licensure standards and was accredited by NAEYC. This preschool recognized the diverse needs, abilities, interests, and cultures in a setting where each child is valued and respected as a unique individual.

Each classroom was staffed with a head preschool teacher and teacher assistants. The LBECEC had 11 general education teachers, three of whom had their masters in Early Childhood Special Education (ECSE), two had a Bachelor Degree (BA) in Early Childhood Education (ECE), three with a BA in Elementary Education, and three who were currently enrolled in the ECE BA program. There were a total of 11 general education teachers, 125 teacher assistants, and six CCSD staff working with children at
the LBECEC. There were two head CCSD teachers, two CCSD aids, and two speech therapists.

The LBECEC preschool followed the UNLV academic calendar; therefore the first day of preschool for children was on August 25, 2008. Due to the high retention rates of the LBECEC, many of the children were returning students to the preschool. Both families and children were familiar with the preschool setting and the staff.

To enter the LBECEC, registered hand prints were needed to gain access. Parents checked children into the preschool by electronically entering their own personal security computer code which is provided to them upon registration. Additionally, parents were requested to sign in and out when dropping off and picking up children at their respective classrooms.

**Single-age Classroom #1- Bumble Bees**

Teachers and children enrolled in the Bumble Bees classroom participated in this study. Each classroom was staffed with one head teacher, and an average of three teacher assistants. The Bumble Bees classroom had a ratio of four or five children to one adult. At the beginning of the fall session, 29 children ages 47 months through 52 months were enrolled in the Bumble Bees classroom. During mid-semester, two more children enrolled into the Bumble Bees classroom, totaling 31 children. Approximately, 16 were full time students, 14 were part time students. From the original 29 children enrolled in the Bumble Bees classroom, only 20 participated in this study. Of the 20 children, 11 were full time and 9 were part time students.

The Bumble Bees classroom was located within close proximity to the playground. The classroom was square shaped and had its own garden which was accessible from
both the outside and the inside of the classroom. Upon entering the main building to the left was the Bumble Bees classroom. Before entering the room, there were cubbies for children and a table where families signed in and signed out their children. There was a calendar of events posted on the wall and information for families to read and be updated on. Upon entering the classroom, there was a dry erase board with the daily lesson plan listed and the weekly theme. On this board, the daily activities within the different centers were posted for families to read as well as the child-teacher ratio that was updated frequently throughout the course of the day.

The Bumble Bees classroom was well lit with plenty of sunshine from classroom windows. The classroom had a roll up window similar to a garage door that acted both as a large sized window and entrance to the garden which was fully accessible to all staff and students. On nice days and days that weren’t too hot, the window was open where both teachers and children had full access to the outdoor garden, but within the boundaries of their classroom. The garden was blocked off with concrete blocks, but still allowed full view of the outdoor playground and the other classrooms.

Following its name, pictures and colors of bumble bees were present throughout the classroom. The layout of the classroom consisted of several areas well divided by bookshelves and tables for the different centers provided. In the circle area, a circular carpet for children to sit on during circle time was present. The location of the bathroom was in the back of the room, with sinks and individual stalls for children. In the bathroom area, the blue cots for nap time were stacked in two to three rows on the corner. The kitchen area was located in the far left corner with a metal gate approximately 3 ½ to 4 ½ feet tall. Families had access to the kitchen so they could store lunch boxes and bags
for their children. The first aid kit along with snacks, and necessities for the classroom were stored in cabinets which were locked with a key.

The Bumble Bees daily routine included circle time led by the head teacher. This included stories, finger plays, music, and movement. After circle time, children transitioned to centers. The learning centers were used as observation sites for the purpose of this study. In the learning centers, children worked in the area they selected during circle time. Teachers encouraged children to complete their selected activities. Once the selected tasks were completed, children cleaned up and chose another center to go to. There was a balance of teacher directed and child directed activities. Once transitioning to the outdoors, children chose to play on the equipment or an outdoor activity of their choice. A variety of centers were provided such as the water table, painting center, swings, balls, sandbox, and tricycles.

Once the learning center was over, closing circle began to close the morning learning centers. Teachers led circle time and children were encouraged to share their experiences before closing circle and transitioning to outside time.

*Single-age Classroom #2- Rainbows*

Teachers and children enrolled in the Rainbows classroom participated in this study. Each classroom was staffed with one head teacher, and an average of three teacher assistants. The Rainbows classroom had a ratio of four to five children to one adult. At the beginning of the fall session, 27 children ages 53 months through 58 months were enrolled in the Rainbows classroom. Approximately, 17 were full time students, 10 were part time students. From the original 27 children enrolled in the Rainbows classroom,
only 22 participated in this study. Of the 22 children, 14 were full time and 8 were part
time students.

The Rainbows classroom was located within a close proximity to the playground. The classroom was square shaped and had its own garden which was accessible from both the outside and the inside of the classroom. Upon entering the main building to the right was the Rainbows classroom. Before entering the room, there were cubbies for children and a table where families signed in and signed out their children. There was a calendar of events posted on the wall and information for families to read and be updated on. Upon entering the classroom, there was a dry erase board with the daily lesson plan listed and the weekly theme. On this board, the daily activities within the different centers were posted for families to read as well as the child-teacher ratio which was updated frequently throughout the course of the day.

The Rainbows classroom was well lit with plenty of sunshine from classroom windows. The classroom had a roll up window similar to a garage door that acted both as a large sized window and entrance to the garden which was fully accessible to all staff and students. On nice days and days that weren’t too hot, the window was open where both teachers and children had full access to the outdoor garden, but within the boundaries of their classroom. The garden was blocked off with concrete blocks, but still allowed full view of the outdoor playground and the other classrooms.

The layout of the Rainbows classroom consisted of several areas well divided by bookshelves and tables for the different centers provided. The circle area was carpeted for children to sit on during circle time. The location of the bathroom was in the back of the room, with sinks and individual stalls for children. In the bathroom area, the blue
cots for nap time were stacked in two to three rows on the corner. The kitchen area was located in the far left corner with a metal gate approximately 3 1/2 to 4 1/2 feet tall. Families had access to the kitchen so they could store lunch boxes and bags for their children. The first aid kit along with snacks, and necessities for the classroom were stored in cabinets which were locked with a key.

The Rainbows classroom routine included teacher led circle time. The learning centers were used as observation sites for the purpose of this study. This included stories, finger plays, music and movement. After circle time, children transitioned to centers. In the learning centers, children worked in the area they selected during circle time. Teachers encouraged children to complete their selected activities. Once the selected tasks were completed, children cleaned up and chose another center to go to. There was a balance of teacher directed and child directed activities. Once transitioning to the outdoors, children chose to play on the equipment, or an outdoor activity of their choice. A variety of centers were provided such as the water table, painting center, swings, balls, sandbox, and tricycles.

Once the learning center was over, closing circle began to close the morning learning centers. Teachers led circle time and children were encouraged to share their experiences before closing circle and transitioning to outside time.

**Multi-age Classroom- Sea Turtles**

Teachers and children enrolled in the Sea Turtles classroom participated in this study. Each classroom was staffed with one head teacher, and an average of three teacher assistants. At the beginning of the fall session, 11 children ages 36 months to 58 months of age were enrolled in the Sea Turtles classroom. Of the 11 children, 8 were full time
and 3 were part time students. All children in the Sea Turtles classroom participated in this study. Families were not able to independently register for the multi-age classroom. Children were chosen to be in the multi-aged classroom by the administration and families were asked to enroll in this room specifically.

The Sea Turtles classroom was located within a close proximity to the playground. The Sea Turtles classroom was housed in its own building next to the playground. Upon entering the main building, there were two different rooms on the right and left hand side. In the middle of the two classrooms housed the RAVO room which was the LBECEC research room. This research room was equipped with the latest high tech materials that allowed a researcher to fully observe the Sea Turtles classroom without being seen. The classrooms were square shaped and majority of the daily activities were held on the right room. Unlike the two single-age classrooms, the Sea Turtles classroom was a bit smaller in size. The Sea Turtles classroom did not have large windows like the other classrooms; therefore lighting was not as bright as the other two single-age classrooms.

The layout of the Sea Turtles classroom consisted of several areas well divided by bookshelves and tables for the different centers provided. The location of the bathroom was in the back of the room, with sinks and individual stalls for children. In the bathroom area, the blue cots for nap time were stacked in two to three rows on the corner.

The Sea Turtles classroom routine included teacher led circle time. This included stories, finger plays, music, and movement. After circle time, children transitioned to centers. The learning centers were used as observation sites for the purpose of this study. In the learning centers, children worked in the area they selected during circle time. Teachers encouraged children to complete their selected activities. Once the selected
tasks were completed, children cleaned up and chose another center to go to. There was a balance of teacher directed and child directed activities. Once transitioning to the outdoors, children chose to play on the equipment, outdoor activity of their choice. A variety of centers were provided such as the water table, painting center, swings, balls, sandbox, and tricycles.

Once the learning center was over, closing circle began to close the morning learning centers. Teachers led circle time and children were encouraged to share their experiences before closing circle and transitioning to outside time.

*Outside Playground*

The outside playground area at the LBECEC was located in the center of five buildings. It was located in the middle of the LBECEC with three covered areas. The blue canopies provided protection from the sun for the children and staff of the LBECEC during the summer months. The three areas that were covered included the (a) the sandbox area, (b) the jungle gym area, and (c) the open space area. The jungle gym had slides and areas for children to play with blocks. The open area had plastic tables for art and a water table. Equipment such as balls, chalk, books, paper, and blocks were provided for children to play with during outside time.

The sandbox area was used as one observation site for the purposes of this study. The sandbox area was shaped in a circle in the middle of the grass. Children were provided tools to build their sand castles such as buckets, spoons, shapes, rakes, and shovels. The sandbox area had three trees that surround the circle where children can sit under the shade. The one uncovered area was the swing area that included four swings.
In each area, a teacher assistant was present to look after the children and the surroundings. After the playground was closed for the day, the staff cleaned the playground area and placed all the equipment in the storage room. Every morning before the children came to school, the staff took out the equipment and placed it in the appropriate playground area.

Materials and Equipment

Materials included in this study were teacher and parent surveys to gain insight into each teachers’ and parents’ knowledge, attitudes, and perceptions of play within single-age and multi-age settings (see Appendix D & E); definitions of solitary, onlooker, parallel, associative, and cooperative play for the Interobserver (IO) (see Appendix F); IO observation chart (see Appendix F); children interview questions (see Appendix G); Sony VAIO laptop computer; iMAC computer; Apple iMovie player; firewire cable; Olympus WS-210 S WMA digital voice stereo recorder, tripod for the camcorder; Canon ZR 950 digital video camcorder; mini digital video cassettes (DVC) 60 minute; extension cords; blank CD/DVDs; CD/DVD burner; stop watch; notepads; and, markers, pencils and pens.

The researcher had access to the specially designed research classroom located in the Sea Turtles, multi-age classroom. This research classroom was equipped with laptop stations, one-way mirrors, cameras, and microphones. This research room was called the RAVO room and this room was used to video tape the Sea Turtles Classroom. Materials included were the two-way mirror, video encoder system, editing station (MAC computers), control station, two microphones, four stationed cameras placed across the Sea Turtles classroom, and iMovie HD. The camcorder and tripod were used to record
each learning center and sandbox observation session for both indoor and outdoor play. The audio tape recorder was used to record children’s responses during the interview session.

Instrumentation

Teacher Surveys

The teacher survey contained two sections. The first section included seven demographic questions (i.e. gender, years of teaching experience, education, type of classroom, age of children, number of children, and child-teacher ratio). The second section of the survey included seven open-ended questions about children’s play.

Parent Surveys

The parent survey contained two sections. The first section included six demographic questions (i.e. gender of parent, education, gender of child, age of child(ren), type of classroom, and relationship with the child). The second section of the survey included seven open-ended questions about children’s play.

Design

A qualitative design was used in this study. Qualitative data were collected from teacher and parent surveys, children interviews, and field observations. The surveys on the knowledge, attitudes, and perceptions about play served as the methods for gathering information from teachers and parents on play among young children in single-age and multi-age preschool classroom settings (see Appendix B).
Procedures

*Play Observations*

The observation portion of this study was conducted by examining both indoor and outdoor play of young children. Videotaping took place over a period of five weeks. Videotaping in week five consisted of missed days from the four week sessions. When examining indoor play, the areas of focus were on five learning centers. The five centers examined were: (a) art, (b) blocks, (c) dramatic play (d) writing/journal, and; (e) manipulatives/games. Each area was present in all classrooms. Videotaping took place over a period of no longer than 30 minutes during learning centers indoors. Each center was video taped for no less than a two minute segment with a total of five centers being video taped within the 30 minute span. When examining outdoor play, the selected area of focus was in the sandbox area. Videotaping took place over a period of no longer than 30 minutes during outdoor play with the focus on the sandbox area. Each video taped segment was no less than two minutes and no longer than five minutes.

A total of 53 children had permission to be video taped. From the 53 children, 20 Bumble Bees (single-age classroom 1), 22 Rainbows (single-age classroom 2), and 11 Sea Turtles (multi-age classroom) children were video taped. It must be noted that one child from the Rainbows classroom was excluded from being video taped, even though his parents consented to being video taped. This child’s parents allowed their child to be video taped under the condition that they could watch the video taped segments at anytime. However, to protect the privacy of the other children and parents, the researcher in consultation with the center director, and in agreement with IRB protocol, excluded this child from being video taped.
Live interaction of young children’s play behavior was video taped over a period of a two minute span to examine young children’s choices of learning centers and to observe their play interactions. When young children explore, they devote their attention to the object of exploration. Play is seen as a joyful and highly positive way of exploration for young children. The attention span of young children is about 40 to 60 seconds per task. During play, the attention span of young children is roughly two to five minutes (Brewer, 2007). Due to the given time span of the attention for young children, the two minute span was chosen for this study.

Based on Brewer’s (2007) categories of play, analyses of the video taped segments identified the type of play in which the children engaged. The different types of play children engaged in include: (a) solitary play, (b) parallel play, (c) cooperative play, (d) associative play, and; (e) onlooker play. Interobserver observations of play video recordings were used to establish reliability.

Interobserver Training

The interobserver (IO) was trained to be able to identify the different types of play and code accordingly. Both the researcher and IO watched a practice video taped segment and coded the segment together to ensure reliability. The researcher trained the IO prior to going into the field. The IO was trained by the primary researcher to code child play behaviors based on video taped segments, not the live interaction. The IO was presented a list of play definitions and examples to help the IO code each video taped segment appropriately. The IO was trained to tape live interactions of young children in case the primary researcher was not able to be present at the observation site. However,
for this study, the IO did not tape any live interactions of young children at the observation site. The IO transcribed video taped observations.

After training, the researcher and IO practiced observing training situations to identify different types of play. Data were checked for reliability between the researcher and the IO until an agreement of at least 85% was met during observation training. Agreement was defined as \((\text{agreements} / (\text{agreement} + \text{disagreements})) \times 100 = \text{percent of agreement})\).

**Children Interviews**

The last form of data collection was conducted through interviews with children. Children interviews were conducted the week immediately following the last week of video taped observations. Research indicated that there is a strong relationship between student attitudes and learning (Brynes et al., 1994). However, little attention had been devoted to investigating students' concerns and attitudes about multi-age settings (Brynes et al.).

After the observation data were collected, children whose parents had given informed consent were interviewed. A total of 50 children received permission to be interviewed. From the Bumble Bees classroom, 19 children received permission to be interviewed. In the Rainbows classroom, a total of 19 received permission to be interviewed. From the Sea Turtles classroom, all 11 children received permission to be interviewed. Of the 50 children, a total of 27 children from all three classrooms were interviewed. From the Bumble Bees classroom, 7 girls and 2 boys participated in the interview portion. In the Rainbows classroom, a total of 8 girls and 3 boys were interviewed. From the Sea Turtles classroom, 3 girls and 5 boys participated in the interview. All of the children
who received permission were not interviewed either because the child was not video
taped, not present at school on the day of the interview, or the child simply refused to be
interviewed.

During the interview, each child viewed a short video taped segment (30 – 60
seconds) that showed the child engaged in play from a previous occasion. Children were
asked a series of non-biased and non-directional questions about their play interactions
(Appendix G). The interview questions were developed by the researcher and were
designed to elicit the thoughts of children about their play interactions.

Children’s responses were audio taped for later transcription. In addition to the audio
recording, the researcher took field notes during the interview session using the child(ren)
interview forms (see Appendix G). Each interview of the children began with the
researcher saying the following: “I’m going to show you a movie now. After we watch
the move, I’m going to ask you some questions. Are you ready to watch?” At the
beginning of each child interview, the researcher explained the purpose of using a tape
recorder and explained why it was being used. The researcher assured the young children
that the purpose for using a tape recorder was so that the researcher would not forget
what was being said during the interview process. Young children were encouraged to
speak into the microphone of the tape recorder during the interview. Based on verbatim
responses of children, data from the observations were triangulated with children’s audio
responses, and the researcher’s observations and field notes. Table 4 provides an
example of what a child might have said and how the responses were coded.
Table 4.

*Coded Child(ren) Interviews*

<table>
<thead>
<tr>
<th>Questions from the Researcher:</th>
<th>Child(ren) Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Tell me what you see happening in this video.</td>
<td>1. I see me!</td>
</tr>
<tr>
<td>2. Can you tell me what you are doing?</td>
<td>2. I'm playing blocks.</td>
</tr>
<tr>
<td>3. Can you tell me what you are playing?</td>
<td>3. I'm building a castle!</td>
</tr>
</tbody>
</table>

*Coding System*

The types of play among children were based on Parten's definitions and were determined based on observation of the video taped segments (Brewer, 2007). According to Marshall and Rossman (1999), within qualitative data the fundamental operation of analysis is discovering significant classes and properties to characterize things, persons, and events. One way to analyze qualitative data is through a coding system. A formal representation of analytic thinking involves coding data (Marshall & Rossman, 1999). Codes take on several forms from abbreviation of key words, to colored dots, and by using numbers. The decision on what code to use is up to the researcher conducting the study.

Categories of codes emerge from both field observations and child interviews that were or were not based on each other. Coding is an evolving process (Glesne, 2006) and in this study coding resulted from play types, variables such as gender, and other variables discovered from the video taped segments.
To differentiate the surveys from groups of participants, a color coding system was implemented. For the teacher surveys, purple paper was used to identify this group. Along with the teacher survey, a white sticker was placed on the envelopes to identify this group. For the parent surveys, blue paper along with a blue sticker placed on the envelope was used to identify this group.

To differentiate the permission forms from each classroom: Bumble Bees, Rainbows, and Sea Turtles, a color coding system was implemented. For the Bumble Bees, yellow paper was used, while the color pink was used to identify the Rainbows classroom permission forms, and lastly, the color green was used to identify the Sea Turtles classroom permission forms.

All colored forms had an attached white envelope labeled with a colored sticker that corresponded to the color of the paper to identify the individual groups. Teachers and parents were asked to drop off their forms to the drop box that was located in the front receptionist desk at the LBECEC. Every day the office assistant collected any forms and placed them in a locked drawer for the researcher.

**Participant Identification Coding System**

For this study, coding was utilized to identify each individual participant. To identify individual participants, a coding system was organized by assigning a letter to each participant role, individual classrooms, genders, and individual participants. The participant roles were identified as $T$ for teachers, $P$ for parents, $BB$ for children enrolled in the Bumble Bees classroom, $RB$ for children enrolled in the Rainbows classroom, and $ST$ for children enrolled in the Sea Turtles classroom. In addition, the gender of the child
was identified through the use of $G$ for girls and $B$ for boys. Teacher, parent, and children participants were identified numerically.

To protect the privacy of all participants, the coding system allowed the researcher to track the origin of thoughts of individual participants. For example, the sixth teacher or the sixth participating parent to respond to the survey was coded as T:6 and P:6. Similarly, a participating female child from the Bumble Bees Classroom was identified as BB:1G.

Data Collection and Analyses

Video tapes were made during field observations of children’s play daily for five consecutive days during both indoor and outdoor activity periods in the morning and afternoon. Morning observation took place indoors from 9:45 a.m. to 10:45 a.m. in the Bumble Bees and Rainbows classroom and from 10:00 a.m. to 11:20 a.m. in the Sea Turtles classroom. Outdoor observation took place from 1:00 p.m. to 1:30 p.m. daily. Afternoon observation took place indoors from 2:15 p.m. to 3:15 p.m. in both the Bumble Bees and Rainbows classroom and from 2:30 p.m. to 3:15 p.m. in the Sea Turtles classroom. The two single-age classroom and one multi-age classroom were observed three times for five consecutive days. Due to the population of children in each classroom, observation days and times were alternated to determine if there were differences in the way children engaged in play, based on time of day and based on the children present in the classroom at the time of the observation and videotaping took place.
The Bumble Bees classroom was observed on Monday and Thursday afternoons and Tuesday mornings. The Rainbows classroom was observed on Wednesday and Fridays in the morning and Tuesday afternoons. The Sea Turtles classroom was observed on Monday and Thursday mornings and Wednesday afternoons (see Appendix C).

**Procedures**

Field observation data of children’s play were collected through video taping the targeted areas during both indoor and outdoor play. Data were collected by the researcher when children went to their respective learning centers during indoor play and to the sandbox during outdoor play.

During indoor play, data were collected during the 30 minutes at each of the five centers. The duration of data collection was based on two minute segments. Once children went into the centers they chose, the record button was pressed. After the two minutes, if the child(ren) were still engaging in play, video taping continued until the child selected another center. If children were not present at the targeted centers, the researcher went to those centers where children were present. A stop watch was used to indicate the duration of minutes observed for each segment. If the child(ren) did not engage in play for at least a two minute segment, the recorded play observation was coded, but not reported in the results.

The researcher attached the camcorder to the tripod and used field observation notes to identify the date, time, location of the center activity, the targeted children, as well as any additional comments using a Sony VAIO laptop computer both during observations and interviews. Within the field observation notes, comments made by the children also were included. The researcher viewed all video taped segments of both the indoor and
outdoor play on a daily basis and collected data on play among young children and the type of play in which they engaged. The IO viewed all video taped segments of both the indoor and outdoor play on a weekly basis.

*Children Interviews*

The interviews of the young children were conducted on an individual basis and occurred in the supply room during learning centers. The supply room was located as a connecting room with two classrooms. The interview process was conducted on the last week when no observations were being conducted of the targeted children. The young children not participating in the interviews were in their main classroom playing in various learning centers of their choice.

*Treatment of Data*

*Coding Transcripts*

Transcripts from the observations and interviews were coded according to the type of play interaction, age, gender, and abilities. Transcripts were coded by both the researcher and the IO to ensure reliability (see Appendix G) for a description and sample of the coding form. Data were checked for reliability between the researcher and the IO until an agreement of at least 85% was met. The observers achieved 96.9 % accuracy agreement ($\left[ \frac{1549}{1549 + 50} \right] \times 100 = \text{percent of agreement}$).

*Summary*

This qualitative study utilized observational, interview, and survey questionnaires to gather data on the thoughts of teachers, parents, and children on play interactions that
occur in both single-age and multi-age preschool classrooms. The process of observing play interactions within both the indoor and outdoor settings served as a method of gathering data to determine if young children in multi-age classrooms engage in one type of play more frequently than young children in single-age classrooms as well as looking at the initiation of play between young children with disabilities and typically developing children. The interviews served to gather the thoughts of young children’s own play experiences. The teacher and parent surveys served to gather the knowledge, attitudes, and perceptions of play within the preschool classroom setting.
CHAPTER 4

RESULTS

The purpose of this chapter is to describe the results of the data analyses. This chapter consists of a summary of the data collected through the observation of the children at play both indoor and outdoor (sandbox), interviews of children, and survey questions of teachers and parents. Excerpts from transcripts are included to illustrate how children observed themselves during their play interactions both in the classroom and outside in the sandbox.

The purpose of this study was to determine if children benefit from increased play opportunities in multi-age classrooms versus single-age classrooms. To examine the benefits, play observations, and children interviews were conducted, and questionnaires (surveys) were distributed. The questionnaire was administered to 17 teachers and completed by seven at LBECEC and to 224 families and completed by 34 of the LBECEC. In addition to the questionnaire, both teachers and parents completed a demographic survey that was attached to the questionnaire. Play observations in the preschool classrooms were conducted over a five-week period (Monday through Friday) both indoor and outside in the sandbox area. Children interviews were administered to 27 students from the Bumble Bees, Rainbows, and Sea Turtles classrooms. Children were asked a series of non-biased and non-directional questions that were designed to elicit the thoughts of children on their play interactions.
This chapter consists of the summary of the data collected through the questionnaires, observations of the children at play both indoors and outdoors, and interviews of children. Excerpts from transcripts are included to illustrate teachers and parents views on play both in the school and the home environment. Also included are transcript excerpts from the interviews of the individual children when asked about their play behaviors. Through questionnaires, play observations, and children interviews, data were analyzed using qualitative analysis.

Demographics

Teacher Demographics

All head teachers and CCSD staff at the UNLV LBECEC were asked to participate in the survey portion of this study. The questionnaire was administered to 17 teachers and seven (n=7) of the teachers participated. Of the seven participating teachers, one was male. Three of the seven teachers have taught in the field for more than five years, two of the seven had a total of five to 10 years of teaching experience, one teacher has been in the field for 10 to 15 years, and one teacher has been in the field for more than 15 years. The educational background of the teachers ranged from some university study to current graduate studies. Of the seven, five teachers taught in the single-age classroom and two taught in the multi-age classroom (for more information, see Table 1 in Chapter 3).

Child Demographics

All of the children from the three targeted classrooms: Bumble Bees, Rainbows, and Sea Turtles of the UNLV LBECEC were asked to participate in the play observation and interview portion of this study. A total of 53 students from all three targeted classrooms
were given permission to be video taped and a total of 50 children were given consent to be interviewed. Of the 50 children, 27 children from all three classrooms were interviewed (for more information, see Table 2 in Chapter 3).

Parent Demographics

All of the parents and families of the UNLV LBECEC were asked to participate in the survey portion of this study. The questionnaire was administered to 224 families and 34 (n=34) of the parents participated. Of the 34 participating parents, 27 females and 7 males responded. There were 29 mothers and 5 fathers who completed the questionnaire. Of the 34 parents, 13 graduated with a university degree, 3 graduated with some university studies, and 18 has graduated or is currently enrolled in a graduate studies program. Of the 34 parents, 23 of their children were female and 19 were identified male. A total of 22 children were enrolled in single-age classrooms, 9 were enrolled in multi-age classrooms, 2 were enrolled in both single-age and multi-age classrooms, and 1 parent did not respond to the question (for more information, see Table 3 in Chapter 3).

Interobserver Reliability

Play observations both indoors and outdoors were video taped during the five week period and reviewed by both the researcher and the IO in order to check for scoring accuracy. Observer A was the researcher for this study and observer B was recruited as an IO to check for data reliability across 100% of the play observation segments. Both observers performed frequency counts using the observation coding chart (see Appendix G) to count the total number of frequency occurrences observed for each type of play within one segment. Observer A was responsible for videotaping each segment. Sessions
were viewed and independently scored by observer A and observer B. Data were checked for reliability between the researcher (observer A) and the IO (observer B) until an agreement of at least 85% was met. The interobserver agreement was found by taking the total number of agreements, 1549 and dividing it by the number of agreements (1549) plus the number of disagreements (50) to reach an interobserver agreement of 96.9%.

Play Observations

To determine if preschool children in multi-age classrooms engaged in different types of play than preschool children in single-age classrooms, the following question was asked:

Research Question 1: Do young children in multi-age classrooms engage in one type of play more frequently than young children in single-age classrooms (i.e. solitary, onlooker, parallel, associative, and cooperative play)?

Results from the study indicate that children in multi-age classrooms engaged in all types of play more frequently than young children in single-age classrooms during indoor play (see Tables 5 – 10 in Chapter 4). When observing play in the classroom, the number of occurrences for solitary play for the Sea Turtles classroom was 107 while the Bumble Bees resulted in 74 occurrences and Rainbows resulted in 95 solitary play interactions. The number of frequency counts for onlooker play in the Sea Turtles totaled 68 counts, which was greater than both the Bumble Bees and Rainbows classroom. The Bumble Bees classroom had 43 and the Rainbows classroom had 51 onlooker play interactions. The number of interactions for parallel play in the Sea Turtles totaled 99 occurrences.
The Bumble Bees classroom had a frequency of 28 and the Rainbows had a total of 70 parallel interactions. For associative play, the Bumble Bees had a total count of 28, the Rainbows had a count of 27, and Sea Turtles had 54 associative play interactions. For cooperative play, the Bumble Bees had 25 occurrences, while the Rainbows had a count of 62, and the Sea Turtles had a total of 63, which did not indicate a large difference.

Results from the study indicate that children in multi-age classrooms engaged in all types of play more frequently than young children in single-age classrooms during outdoor play (see Table 5). On the days where both single-age and multi-age classrooms were out playing, the number of frequency occurrences for solitary play were 110, 54 for onlooker play, 172 for parallel play, 52 for associative play, and 50 for cooperative. On the days when just the two single-age classrooms were out playing in the sandbox, the number of frequency occurrences for solitary play was 46, 20 for onlooker play, 59 for parallel play, 16 for associative play, and 12 for cooperative play. When examining outside play with only the two single-age classrooms, the total number of play engagement frequency occurrences were 153 over 33 total numbers of counted segments. However, when the multi-age classroom joined the two single-age classrooms outside in the sandbox, the results of the total number of play engagement frequency occurrences increased to 438 engagements over 56 total numbers of counted segments.
### Table 5.

**Comparison of Play Observation Frequency Counts**

<table>
<thead>
<tr>
<th>Classroom</th>
<th>Type</th>
<th>Solitary Play</th>
<th>Onlooker Play</th>
<th>Parallel Play</th>
<th>Associative Play</th>
<th>Cooperative Play</th>
<th>Total number of play engagements / total number of counted segments</th>
<th>Initiated play with children with special needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB (Indoor)</td>
<td>SA 1</td>
<td>74</td>
<td>43</td>
<td>92</td>
<td>28</td>
<td>25</td>
<td>262 / 58</td>
<td>29</td>
</tr>
<tr>
<td>RB (Indoor)</td>
<td>SA 2</td>
<td>95</td>
<td>51</td>
<td>70</td>
<td>27</td>
<td>62</td>
<td>305 / 69</td>
<td>50</td>
</tr>
<tr>
<td>ST (Indoor)</td>
<td>MA</td>
<td>107</td>
<td>68</td>
<td>99</td>
<td>54</td>
<td>63</td>
<td>391 / 65</td>
<td>21</td>
</tr>
<tr>
<td>BB/RB</td>
<td>SA 1</td>
<td>46</td>
<td>20</td>
<td>59</td>
<td>16</td>
<td>12</td>
<td>153 / 33</td>
<td>17</td>
</tr>
<tr>
<td>(Outdoor)</td>
<td>SA 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB/RB/ST</td>
<td>SA 1</td>
<td>110</td>
<td>54</td>
<td>172</td>
<td>52</td>
<td>50</td>
<td>438 / 56</td>
<td>26</td>
</tr>
<tr>
<td>(Outdoor)</td>
<td>SA 2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>MA</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>
### Table 6.

**Play Observation Frequency Counts - Bumble Bees Classroom (Single-age 1)**

<table>
<thead>
<tr>
<th>Participant and Date</th>
<th>Gender</th>
<th>Solitary</th>
<th>Onlooker</th>
<th>Parallel</th>
<th>Associative</th>
<th>Cooperative</th>
<th>Initiated play with child(ren) with special needs</th>
</tr>
</thead>
<tbody>
<tr>
<td>BB [day 1]</td>
<td>BB</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB [day 1]</td>
<td>GBB</td>
<td></td>
<td>x</td>
<td>xxxx</td>
<td>xxx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB [day 1]</td>
<td>GB</td>
<td>xx</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB [day 4]</td>
<td>GBBBB</td>
<td>xx</td>
<td></td>
<td></td>
<td>xx</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB [day 4]</td>
<td>GB</td>
<td>x</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant and Date</td>
<td>Gender</td>
<td>Solitary</td>
<td>Onlooker</td>
<td>Parallel</td>
<td>Associative</td>
<td>Cooperative</td>
<td>Initiated play with child(ren) with special needs</td>
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<td>----------</td>
<td>-------------</td>
<td>-------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>BB [day 4]</td>
<td>GGBBBB</td>
<td>x</td>
<td>xxx</td>
<td></td>
<td>xx</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>BB [day 6]</td>
<td>BB</td>
<td>xx</td>
<td></td>
<td>xx</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 6]</td>
<td>GBB</td>
<td>x</td>
<td>xx</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 6]</td>
<td>BBB</td>
<td>xx</td>
<td>x</td>
<td>xx</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 7]</td>
<td>BB</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 7]</td>
<td>GBB</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 7]</td>
<td>GB</td>
<td>xx</td>
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<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 7]</td>
<td>GGG</td>
<td>xxx</td>
<td>xxx</td>
<td></td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>BB [day 7]</td>
<td>GG</td>
<td>xxx</td>
<td>xx</td>
<td></td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 7]</td>
<td>GGB</td>
<td>x</td>
<td>x</td>
<td></td>
<td>xx</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 7]</td>
<td>GG</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 9]</td>
<td>GGBBBB</td>
<td>x</td>
<td>xxxxxxxx</td>
<td>xx</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Participant and Date</td>
<td>Gender</td>
<td>Solitary</td>
<td>Onlooker</td>
<td>Parallel</td>
<td>Associative</td>
<td>Cooperative</td>
<td>Initiated play with child(ren) with special needs</td>
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<td>------------------------------------------------</td>
</tr>
<tr>
<td>BB [day 9]</td>
<td>GGB</td>
<td>x</td>
<td>x</td>
<td>xx</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 9]</td>
<td>BBB</td>
<td>xxx</td>
<td>x</td>
<td>xxxxx</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 9]</td>
<td>G</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 9]</td>
<td>GB</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td>x</td>
</tr>
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<td>BB [day 9]</td>
<td>GBB</td>
<td>xx</td>
<td>x</td>
<td>xx</td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 9]</td>
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<td>x</td>
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<td></td>
<td></td>
<td></td>
<td>x</td>
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<tr>
<td>BB [day 11]</td>
<td>GB</td>
<td>xxx</td>
<td></td>
<td>xxxxx</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB [day 11]</td>
<td>GBB</td>
<td>xx</td>
<td></td>
<td>xx</td>
<td>xx</td>
<td></td>
<td>xxx</td>
</tr>
<tr>
<td>BB [day 11]</td>
<td>GGBB</td>
<td>x</td>
<td></td>
<td>xx</td>
<td>xx</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>BB [day 11]</td>
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<td></td>
<td>xx</td>
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<td>x</td>
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<td>BB [day 11]</td>
<td>BB</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>BB [day 14]</td>
<td>GG</td>
<td>xxx</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>xxxx</td>
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<tr>
<td>Participant and Date</td>
<td>Gender</td>
<td>Solitary</td>
<td>Onlooker</td>
<td>Parallel</td>
<td>Associative</td>
<td>Cooperative</td>
<td>Initiated play with child(ren) with special needs</td>
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<td>-------------------------------------------------</td>
</tr>
<tr>
<td>BB [day 14]</td>
<td>GB</td>
<td></td>
<td></td>
<td>x</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BB [day 16]</td>
<td>GGGG</td>
<td>xx</td>
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N = 74  N = 43  N = 92  N = 28  N = 25  N = 29

*Note.* Any segment less than a 2 minute span was not included.
Table 7.

Play Observation Frequency Counts - Rainbows Classroom (Single-age 2)

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N = 95  N = 51  N = 70  N = 27  N = 62  N = 50

*Note.* Any segment less than a 2 minute span was not included.
Table 8.

*Play Observation Frequency Counts- Sea Turtles Classroom (Multi-age)*

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<th>Gender</th>
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*Note.* Any segment less than a 2 minute span was not included
Table 9.

*Play Observation Frequency Counts - Outdoor Sandbox (Single-age 1 & 2 classrooms/BB & RB)*

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N = 46  N = 20  N = 59  N = 16  N = 12  N = 16

*Note.* Any segment less than a 2 minute span was not included.
Table 10.

*Play Observation Frequency Counts- Outdoor Sandbox (Single-age & Multi-age classrooms/BB & RB & ST)*

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*Note.* Any segment less than a 2 minute span was not included.
To determine if preschool children in multi-age classrooms engaged in different types of play than preschool children in single-age classrooms, the following question was asked:

Research Question 2: Do young children in multi-age classrooms initiate play with other children more frequently than young children in single-age classrooms?

Results from the study indicate that young children in multi-age classrooms initiate play with other children more frequently than young children in single-age classrooms through associative play more than any other types of play when observed indoors. During indoor play, children in the multi-age classroom (Sea Turtles) engaged in 54 acts of associative play, while the children in the single-age classrooms such as Bumble Bees resulted in 28 acts of associative play and the children in the Rainbows totaled 27 acts of associative play. The children in the Sea Turtles classroom initiated cooperative play 63 times during observation, which was greater than either of the two single-age classrooms. The children in the Bumble Bees initiated cooperative play 25 times, while the Rainbow children initiated cooperative play 62 times. Even though there wasn’t a great difference between the Sea Turtles and the Rainbows, there was a great difference between the Sea Turtles and the Bumble Bees classroom.

Results from the study indicate that young children in multi-age classrooms initiate play with other children more frequently than young children in single-age classrooms through associative play and cooperative play when observed in outdoor play in the sandbox area. With the multi-age classroom present in the sandbox area, children initiated associative play 52 times, while children initiated cooperative play 50 times.
Without the multi-age classroom present in the sandbox area, associative play was initiated 16 times and children initiated cooperative play 12 times (see Tables 5 – 10).

To determine if preschool children in multi-age classrooms initiate play with young children with disabilities more frequently than typically developing children in single-age classrooms, the following question was asked:

Research Question 3: Do typically developing young children in multi-age classrooms initiate play with young children with disabilities more frequently than typically developing young children in single-age classrooms?

Results from the study indicate that typically developing young children in multi-age classrooms do not initiate with young children with disabilities more frequently than typically developing young children in single-age classrooms. Results indicate that both the single-age classrooms had higher numbers of children without disabilities who initiated play with children with disabilities. In the Bumble Bees classroom, children initiated play 29 times, while the Rainbow children initiated play 50 times, and the children in the multi-age classroom initiated play only 21 times (see Table 2 in Chapter 3).

Interviews of Children

To examine young children’s thoughts and views about their own play experiences, the following question was asked:

Research Question 4: What are young children’s thoughts about their play experiences?
Prior to the interview process, observations of play behaviors of the participating children were conducted by the researcher. Only those children whose parents had given informed consent to be interviewed were interviewed. During the interview, each child was shown a short video segment of their engagement in play from a previous video taped occasion. Children were asked a series of non-biased and non-directional questions about their play interactions. The topic of the interview was focused on eliciting the thoughts of children about their play interactions.

The participating children were asked what they thought about their play interactions. The questions were open-ended to encourage descriptive responses from young children. Verbatim responses of children in all classrooms are included in Appendix H. Every child who was interviewed was asked three questions:

1. Tell me what you see.
2. Can you tell me what you are doing?
3. Can you tell me what you are playing?

A total of 27 children were interviewed. From the Bumble Bees classroom (single-age Classroom #1), a total of seven girls and two boys participated in the interview. In the Rainbows classroom (single-age classroom #2), a total of eight girls and three boys participated. From the Sea Turtles classroom (multi-age classroom), a total of three girls and five boys participated in the interview process.

**Bumble Bees- Single-age Classroom #1**

A total of seven girls and two boys participated in the interview from the Bumble Bees classroom. Two of the seven girls responded to the questions with nonverbal cues such as nodding of the head, smiling, and pointing. When the other students were asked,
"Tell me what you see", the comments of the children included, "I see me and G" (BB:3G), "Hey, that’s me! With J. my friend! He’s right there, and that’s me, right by the shopping cart" (BB:5G). Two children responded that they saw themselves in the third person. For example, “Yeah, I see K.” (BB:6G), and “C.” (BB:2B). The notation (BB:2B) refers to a child in the Bumble Bees classroom. The 2B refers to child number two who is male. To protect the privacy of the child, each child participant was given a corresponding number and gender identification along with the classroom label. The coding system is described in Chapter 3.

Each participating child was then asked if they could describe what they saw themselves doing from the video clip. Seven of the nine children acknowledged that they saw themselves, or themselves playing with comments such as, “I was doing something” (BB:3G), or I’m playing” (BB:7G). Two of the nine children nonverbally pointed at the screen and when asked if they saw themselves, they nodded in agreement.

The last question posed to the children asked each participating child if they could describe what they were playing. Responses included, “Yes” (BB:2B), and “Yeah” (BB:6G). However, for further responses, prompts were provided to elicit responses. There were some children who did not respond to the question and those who made statements such as, “My friend, just walked by. Today’s crazy hair week. I have crazy hair” (BB:5G).

Rainbows- Single-age Classroom #2

A total of eight girls and three boys participated in the interview from the Rainbows classroom. When asked if they could describe what they saw, 11 children responded that
they saw themselves or their friends. Responses included, “I see me” (RB:1G), “That’s me reading a Pinkalicious book” (RB:2G), “It’s cool! That’s me!” (RB:7G).

Each participating child was then asked if they could describe what they saw themselves doing from the video clip. One student did not respond, however, the other 10 responded by saying, “I’m doing art” (RB:1G), and “I’m playing with sand” (RB:6G).

The last question posed to the children asked each participating child if they could describe what they were playing. Two of the 11 children did not respond, however, after prompts were provided to elicit responses, the remaining children responded to things they viewed and remember from the video clip. Responses included, “Look it! Look it! There’s J.” (RB:1G), “1-2-3-4, there’s 4 girls at art. I can count to 10, you want to hear? 1-2-3-4-5-6-7-8-9-10” (RB:4G).

The children from the Rainbows classroom initiated and contributed conversation on their own without any prompts more frequently than the Bumble Bees and the Sea Turtles classroom. They were more willing to share their thoughts and views on what they saw from the video clips shown.

Sea Turtles- Multi-age Classroom

A total of three girls and five boys participated in the interview from the Sea Turtles classroom. When asked if they could describe what they saw from the video clip, all eight children responded that they saw themselves, their friends, or materials that they were playing with. Responses included, “I see me” (ST:1G), “I see, I see, umm..I see, I see H.” (ST:1B), and “I see puzzles” (ST:2B).

Each participating child was then asked if they could describe what they saw themselves doing from the video clip. All of the children identified with responses that
included, "I’m playing" (ST:1B), "Umm..squishy bags" (ST:3B), and "Yes" (ST:5B). The final question posed to the children asked each participating child if they could describe what they were playing. One of the eight students did not respond. However, when prompted with the question, "Are you playing in the sand?" The student answered, "Yes" (ST:5B). For the children who responded to the questions, the following comments were made, "I am..I’m playing with that puzzle with B. there. That’s me with that shirt right there" (ST:4B), and "Animals" (ST:1B). Two students responded with their friends name when asked to describe what they were playing.

Teacher Questionnaires (Surveys)

To determine teachers’ perceptions of play among children in multi-age and single-age classrooms, the following question was asked:

Research Question 5: What are teachers’ perceptions of play among young children in single-age and multi-age classrooms?

Results from the study indicate teachers’ perceptions of play among young children in single-age and multi-age classrooms as positive learning experiences. Teachers believed that play was part of everyday learning and that play was essential to a child’s development in ways of both social and academic skills.

A total of 17 head teachers and CCSD staff were given a survey of open ended questions in regards to teachers’ knowledge, attitudes, and perceptions of play among single-age and multi-age settings. Seven of the 17 head teachers and CCSD staff participated in the survey portion of this study. Verbatim responses for all items from all
teacher participants can be found in Appendix I. The data from the questionnaire were analyzed to answer the following seven questions regarding their knowledge, attitudes, and perceptions of play:

Teacher Survey Question 1: I describe play as:

For teacher question one, the teachers responses were coded into categories and five of seven teachers described play using the key words exploration, discovery, learning, and/or interaction. Two of the seven teachers used key words such as manipulating, and/or important. For example, one teacher stated, “The way children explore themselves, their friends, and their environment. Play as a form of exploration and learning of the necessary skills needed to succeed in life” (T:7). The notation (T:7) refers to teacher number seven who participated in the survey portion of the study. The questionnaire was anonymous; therefore to identify each teacher participant, a corresponding number was issued. The coding system is described in Chapter 3.

Teacher Survey Question 2: I see children in my classroom play in the following ways:

For teacher question two, the teachers responses were coded into categories and four of seven teachers described seeing children in their classroom play using the key words solitary, cooperative, parallel, onlooker, associate play, and/or small groups. Three of the seven teachers used key words such as exploration, role playing, running, jumping, and/or toys. For example, one teacher stated, “Running, jumping, building, knocking over, talking, reading, singing, and laughing” (T:4).
Teacher Survey Question 3: How do you describe the value of play to a parent(s)?

For teacher question three, the teachers responses were coded into categories and one of seven teachers responded when asked how they would describe the value of play to a parent(s), by stating that, “It’s essential to a child’s development” (T:4). Four of the seven teachers used key words such as growth, experiences, self-discovery, exploration, and/or outcomes to describe the value of play to a parent(s). Two of the seven teachers used key words such as academic skills and/or lessons.

Teacher Survey Question 4: When do you observe children engaging in play?

For teacher question four, the teachers’ responses were coded into categories and six of seven teachers used key words to describe when they observed children engaging in play such as all day, and everyday. One of the seven used key words such as during school, outside, home, and work as descriptors. For example, one teacher stated, “All day, everyday! In the classroom, on the playground, when they are transitioning, during snack, in the bathroom. Every moment with them is an adventure to be concurred” (T:5).

Teacher Survey Question 5: Is indoor play different than outdoor play?

For teacher question 5, the teachers responses were coded into categories and five of seven teachers stated that there was a difference by using descriptors such as yes, and absolutely. As stated by one teacher, “Absolutely. Children get more sensory experience (in my opinion) outdoors. There are many different smells, textures, etc. indoors and outdoors” (T:3). Two of the seven teachers indicated that there was no difference between indoor and outdoor play.
Teacher Survey Question 6: What concerns you about children’s play?

For teacher question six, when asked what concerns teachers about children’s play, the teachers responses were coded into categories and five of the seven teachers responded with descriptors such as aggressive, rough play, and safety. Teachers made statements such as, “If their play is too aggressive or not” (T:2) and “Getting too rough” (T:4). Two of the seven used key words such as adult assistance, importance of play. One of the seven stated, “When groups become cliquish” (T:7).

Teacher Survey Question 7: Given the current media focus on academics for young children in Pre-K programs, has this influenced your perception of play among young children?

The teachers responses were coded into categories and of the seven, three teachers responded that the media has influenced their perception of play among young children. One teacher stated, “It has made me more aware of the need to allow children to explore their world on their own with adult assistance when needed. A child must be able to understand themselves (strengths, weaknesses, needs, wants) before they can understand all others” (T:7). Four of the seven teachers disagreed that the media influenced their perception of play among young children. As stated by one teacher, “I have always thought children learn most from play and other experiences. Academics is important, but I still believe play can impact children more” (T:3).

Parent Questionnaires (Surveys)

To determine parents’ perceptions of play among children in multi-age and single-age classrooms, the following question was asked:
Research Question 6: What are parents' perceptions of play among young children in single-age and multi-age classrooms?

Results from the study indicate parents' perceptions of play among young children in single-age and multi-age classrooms as positive interactions where children use their imagination to explore and grow while having fun. Many parents believed play was a way children learn and understand the world. Results indicated that parents believed that play held a value which was extremely important to the growth of children.

A total of 224 families of the LBECEC were given a survey of open ended questions in regards to teachers' knowledge, attitudes, and perceptions of play among single-age and multi-age settings. Of the 224 families, 34 families participated in the survey portion of this study. Verbatim responses for all items from all parent participants can be found in Appendix J. The data from the questionnaire were analyzed to answer the following seven questions regarding their knowledge, attitudes, and perceptions of play:

Parent Survey Question 1: I describe play as:

For parent question one, the parents responses were coded into categories and 32 of the 34 parents responded using key words such as having fun, interaction, using imagination, and exploration to describe play. One parent commented play as, “Using imagination, interacting with others and exploring” (P:4). A second parent stated, “An opportunity for children to explore social roles, solve problems, and interact with environment” (P:34). Two of the 34 parents described play as “unstructured or little structured activity” (P:26). The notation (P:26) refers to parent number 26 who participated in the survey portion of the study. The questionnaire was anonymous;
therefore to identify each parent participant, a corresponding number was issued. The coding system is described in Chapter 3.

Parent Survey Question 2: At home, I see my child(ren) play in the following ways:

For parent question two, the parents' responses were coded into categories and all of the participating parents provided examples of how they viewed children playing. Many parents used key words such as role playing, pretend play, climbing, running, building, jumping, and playing with siblings and friends. The descriptors ranged from "wrestling, climbing, running, building, reading, jumping" (P:1) "to dressing up, talking to dolls, singing, using imagination" (P:5).

Parent Survey Question 3: How do you describe the value of play to a teacher(s)?

For parent question three, the parents responses were coded into categories and 30 of the 34 parents stated that they would describe the value of play to a teacher(s) by using the key words: extremely, important, high-importance, and valuable. As stated by one parent, "Play is necessary for children to express what they experience in everyday life, helping them work through social issues, complexities, etc." (P:20). Another parent stated, "Play is the work of children and vital to their development. Play for children is just as, if not more important than academic instruction" (P:34). Two of the 34 parents responded using the key word semi-important, while two of the 34 parents did not respond to the question.

Parent Survey Question 4: When do you observe children engaging in play?

For parent question four, the parents' responses were coded into categories and 10 of the 34 parents responded using key words such as: all the time, daily, and everyday to describe when they observed children engaging in play. For example, one parent stated,
Any time they are not sleeping” (P:32). A total of 23 parents from the 34 responded using key words: home, work, outside, social settings, and playgrounds. For example, one parent stated, “At home, at preschool-limited” (P:9). A second parent stated, “At home, at school, at the park” (P:4). One of the 34 parents did not quite understand the question. This parent stated, “When they play- various times. I don’t understand this question” (P:18).

Parent Survey Question 5: Is indoor play different than outdoor play?

For parent question five, the parents’ responses were coded into categories and 21 of 34 parents agreed that there was a definite difference between indoor and outdoor play. These parents made statements such as, “Of course, different environment and toys” (P:7) and “Yes! It doesn’t have to be, but generally outdoor play is more intense and more physical active” (P:22). Of the 34 parents, 11 responded with key words such as: no, not really, somewhat. For example, one parent stated, “Not really, it may involve different activities, but play is play” (P:1). Another parent stated, “Not really, the material to play with can be different” (P:16). Three of the 34 parents responded with yes/no, maybe, sometimes, and not quite sure. One parent state, “Yes and no- more energy is exhausted in outdoor- but both are requiring children to use their imagination” (P:23).

Parent Survey Question 6: What concerns you about children’s play?

For parent question six, the parents responses were coded into categories and 27 of 34 parents responded with key words such as: roughness, bullying, safety, supervision, taking control, and too dangerous to describe what concerned them about children’s play. These parents made statements such as, “If it gets too rough” (P:1), “Safety concerns- and for older children concerns about bullying” (P:26), and “Just making sure it is not
aggressive and that they have time to just be kids” (P:31). Five of the 34 parents stated that there was nothing or not too much that concerned them about their children’s play. Two of the 34 parents did not respond to the question or did not understand the question.

Parent Survey Question 7: Given the current media focus on academics for young children in Pre-K programs, has this influenced your perception of play among young children?

For parent question seven, the parents’ responses were coded into categories and six of the 34 parents agreed that the current media focus influenced their perception of play among young children, while 20 parents disagreed. For example, one parent stated, “No, play is necessary for children of this age to learn” (P:30). Of the 34, 8 parents responded by stating that they were not aware of the current media and others responded by sharing their own personal beliefs and values. One parent stated, “I think academics are, of course important; however, I feel they are overvalued. I think play is undervalued. Play is an essential aspect of children’s development” (P:28).

Summary

In this qualitative study, the data gathered during both indoor and outdoor play observations demonstrated that young children in multi-age classrooms engage in more than one type of play more frequently than young children in single-age classrooms. The study also demonstrated that young children in multi-age classrooms initiate play more frequently with other children than young children in single-age classrooms. However, typically developing young children in multi-age classrooms did not initiate play with young children with disabilities more frequently than typically developing young children
in single-age classrooms. It was in the single-age classrooms that typically developing young children initiated play more frequently with young children with disabilities.

The qualitative results gathered during the children interviews demonstrated that young children were aware of their own play interactions and were eager to express their viewpoints. Many children were eager to be interviewed and verbally communicated their thoughts about their play interactions throughout the interview process. The qualitative results from both the teacher and parents’ surveys demonstrated that both teachers and parents believe the value of play as essential to a child’s development and learning process. The implications of the results from this study will be discussed in Chapter 5.
CHAPTER 5

DISCUSSION

Introduction

The focus of this study was on the examination of play among young children in single-age and multi-age classrooms. Young children three to five years of age in inclusive single-age and multi-age classrooms were observed to examine the types of play behaviors they exhibited. The thoughts of teachers and parents were also gathered in an effort to further understand the importance of play for young children. Perhaps most importantly, children were interviewed to gather young children’s thoughts about their own play experiences.

The results of the study, detailed in Chapter 4, will be discussed in this chapter. This discussion seeks to respond to research questions for this study which were designed to determine if children benefit from increased play opportunities in multi-age versus single-age classrooms. The specific questions for this study were:

1. Do young children in multi-age classrooms engage in one type of play more frequently than young children in single-age classrooms (i.e. solitary, onlooker, parallel, associative, and cooperative play)?

2. Do young children in multi-age classrooms initiate play with other children more frequently than young children in single-age classrooms?
3. Do typically developing young children in multi-age classrooms initiate play with young children with disabilities more frequently than typically developing young children in single-age classrooms?

4. What are young children’s thoughts about their play experiences?

5. What are teachers’ perceptions of play among young children in single-age and multi-age classrooms?

6. What are parents’ perceptions of play among young children in single-age and multi-age classrooms?

Discussion of Results

The participants from the LBECEC included children, teachers, and parents. Two single-age preschool classrooms and one multi-age preschool classroom were identified for the purposes of this study. The two identified single-age classrooms were the Bumble Bees and Rainbows classrooms, and the multi-age classroom was the Sea Turtles classroom. Participants in this study included teachers across all classrooms at the LBECEC (n=7), parent participants across all LBECEC classrooms (n=34), the children assigned to each of the aforementioned classrooms who had parental informed consent to participate in the video taped portion of the study (n=53), and the children assigned to each classroom who had parental informed consent to participate in both the video taped and interview portions of the study (n=50). Of the 50 children who had permission to be interviewed, 27 children were interviewed from the three targeted classrooms. The conclusions drawn from the data collected are summarized in accordance with the
research questions. The six research questions from the study form the organizational structure for summarizing the results of the data collected during this study.

Teacher Demographics

A survey questionnaire was distributed to 17 head teachers and CCSD staff at the LBECEC. Among the 17 teachers, only seven participated. Teachers provided demographic information in conjunction with the survey. Based on the collected information, it appears there were more female teachers at this center compared to male teachers. There were a total of six female teachers and one male teacher who participated in the questionnaire. These results reflect the current female to male ratio in regards to the gender of teachers in the field of early childhood education.

The majority of teachers indicated they had an average of five years of teaching experience. The teachers from the LBECEC were relatively young in age which might explain the limited number of years of teaching experiences.

Child Demographics

A total of 53 children ages three to five years of age from the Bumble Bees, Rainbows, and Sea Turtles classroom at LBECEC participated in the play observation portion of this study. Children 47 months through 52 months of age were present in the Bumble Bees classroom. Children 53 months through 58 months of age were present in the Rainbows classroom. Children from 36 months through 58 months of age were present in the Sea Turtles classroom.

Among the children, 20 Bumble Bees (single-age classroom 1), 22 Rainbows (single-age classroom 2), and 11 Sea Turtles (multi-age classroom) children were video taped. One student from the Rainbows classroom was excluded from being video taped, even
though a signed consent form was received. The child's parents stipulated that they
would only allow their child to be video taped under the condition that they could watch
all of the video taped segments. However, to protect the privacy of the other children and
families, the researcher in consultation with the center director, and in agreement with
IRB protocol, excluded this child from the study.

Of the 53 children participating in the video taped observations, 50 children were
given consent to be interviewed. However, only 27 children from all three classrooms
were interviewed on the last week of data collection. A total of nine children were
interviewed from the Bumble Bees, 11 from the Rainbows, and eight children from the
Sea Turtles classroom. The reasons that not all children were interviewed included (a)
apprehension related to participation in the interview, (b) being uncomfortable with the
researcher, (c) absence on the day of interviews, and (d) unwillingness to stop their
current play engagements.

Parent Demographics

The parent questionnaire on play was administered to 224 families at the LBECEC.
Of the 224 families, 34 parents completed the questionnaire and participated in the study.
Along with the survey, parents were asked to submit demographic information. Among
the 34 family participants, 27 participants who completed the survey were female and 7
participants were men. When asked to mark their gender, seven of the 34 parents marked
themselves as males. However, when asked what their relationship was with the child,
two of the males indicated they were mothers to the child. It was assumed that the parent
misread or misunderstood the question.
Based on the information provided, when asked the educational background of families, a total of 37 participants indicated completion of a university degree or higher. It should be noted that some parents marked off more than one category for education. For example, if they completed a high school diploma, university degree, and graduate degree instead of marking off only the highest degree category, they marked all three categories. When this occurred, the highest degree marked was coded. The LBECEC was located on the UNLV campus and therefore, many parents were faculty, staff, and students of UNLV. Perhaps it is due to this reason that 19 of the 34 parents had a university degree, three had some university background, and 18 had graduate degrees. This is probably not typical of most parents who have young children in private early childhood settings.

**Play Observations**

Play interactions of young children were observed and video taped both indoors and outdoors. When examining indoor play, the areas of focus were on five learning centers. The five centers examined were: (a) art, (b) blocks, (c) dramatic play (d) writing/journal, and; (e) manipulatives/games. When examining outdoor play, the selected area of focus was the sandbox area. Each video taped play observation segment was no less than two minutes and no longer than five minutes. Observations of the play engagements of children were video taped in both the indoor and outdoor sandbox settings. During the five weeks of video taping, 281 play segments were recorded resulting in 1549 occurrences of play.

For research question one, based on the data collected, it appears that in the multi-age classroom, there was a higher occurrence of play engagements of all types of play than
the two single-age classrooms. Thus, the answer to research question one was yes for all categories of play. This may be due to a smaller number of children in the multi-age classroom, smaller sized classroom, and that being a multi-age classroom, the age range was from 38 months to 72 months. It is probable that the older children initiated more interactions with the younger children than in a classroom where the children are closer in age. The 11 children in the classroom also had a chance to interact with each other more than children in the other classrooms merely because they have limited number of friends the preschools term for classmates. The individual developmental and personal needs and interests of each student appeared to be met through cooperative learning, and experiences as well as through play interactions as suggested by Surbeck (1992).

The children in the multi-age classroom were observed engaging in 68 counts of onlooker play, which was a higher occurrence than either single-age classrooms. Further, in all classrooms older children proved to be models for younger children when it came to: (a) what to do, (b) when to do it, and (c) how to do it as suggested by Fu et al. (1999). This was supported during the play interaction observations. For example, younger children from the multi-age classroom would often participate in onlooker play before, during, and after interacting in other types of play. At times, children would observe how others played and mimic exactly what they watched, then ask if they could play, or sit next to their friends in parallel play.

From the video taped observations during outside play, it appeared that when the children from the multi-age classroom were present in the sandbox, there were higher occurrences of play engagements of all types of play than when the children from the two single-age classrooms were playing alone in the sandbox area. Nearly all of the
frequency of play interactions doubled when the children from the multi-age classroom were out playing in the sandbox. This occurred when the children from the multi-age classroom played alone in the sandbox and when the children from the multi-age classroom children played with either or both of the single-age classrooms. This may be due to larger number of children out in the sandbox area. The observations of the outdoor setting showed that the children from the multi-age classroom enjoyed and played in the sandbox area more than children from the two single-age classrooms. Interestingly, without the encouragement of the teachers or assistants, the children from the multi-age classroom went to the sandbox to play during outdoor play more than any other area.

Another interesting observation was that with almost no variation, the same children from the Bumble Bees and Rainbows classroom would play in the sandbox area each time they were outside. Moreover, when there were no children present at the sandbox area, the playground supervisor would ask children to come play in the sand, but the children from the Bumble Bees and Rainbow classrooms who were not typical sandbox players were either not receptive, or they came in and left within seconds. It is also important to note that some of the students who were excluded from the study because they didn’t have parental consent often played in the sandbox area, but were not video taped and their play occurrences were not recorded because they did not have the permission consent signed by their families.

Another interesting result from this study was that there was higher frequency occurrences in solitary (110) and parallel play (172) that occurred when children from all three classrooms were outside at the same time. The results from the play observations in
this study provide an indication that simply grouping children from different ages, groups, and types of classroom into one setting such as sandbox, does not result in higher frequency occurrences of play interactions. In contrast to what was believed when this research study was being developed, the direct opposite was found from this study. Even though children were placed in a common area, such as the sandbox, it appeared that children played with friends from their own classrooms. The observations from the sandbox setting indicated that children from different classrooms did not intermix very often. For example, children from the Bumble Bees played either by themselves or with their friends from the Bumble Bees classroom. This pattern was repeated by the children in the Rainbows and Sea Turtles classroom. Based on these observations, it appears that young children chose to play with friends with whom they are most comfortable from their own classrooms. Simply stated, children are much like adults. They will interact with who they want to, regardless of the setting or who they are placed with.

For research question two, young children in multi-age classrooms initiated play with other children more frequently than young children in single-age classrooms for both associative and cooperative play during indoor play. In the multi-age classroom, there were a total of 54 counts for associative play while in the Bumble Bees classroom there were 28 counts and 27 counts in the Rainbows classroom across the same number of observations. The total occurrences of associative play in the multi-age classroom indicated that, in part, the lower enrollment of children in the of the multi-age classroom and the mixed age ranges provided for more opportunities for different types of play interactions to occur.
In addition, the 11 children from the multi-age classroom were present in the classroom Monday through Friday. The times that they arrived and left during the course of the day were different, however, for the majority of the day, all children were together in the classroom. In both the Bumble Bees and Rainbows classrooms, more children were enrolled, however, not all of the students were together on the same days and during the same times of the week. Therefore, it is probable that there were fewer opportunities for interactions between individual children. It is also possible that on the days of observation, children who usually played together may have been absent or on a different schedule for those days.

Another factor to consider is that in both single-age classrooms, there were more children who were excluded from the study. For this reason, if a child who was excluded from the study was engaging in play with others who were not excluded from the study, the researcher was not able to video tape the targeted children or the center. In the multi-age classroom, there were no restrictions, all children had consent to participate. Therefore, more complete play interactions were observed and recorded.

The video taped observations during outside play also show that young children in the multi-age classroom initiated play with other children more frequently than young children in single-age classrooms for both associative play and cooperative play. It is intriguing that all children regardless of classroom were observed engaging in double the number of associative play and cooperative play interactions when all three classrooms were present at the same time. This may be due to more opportunity for interaction between the children in the multi-age classroom and those in the single-age classrooms or
perhaps because there were more children playing together in the sandbox, there was more opportunity for children to interact with each other.

In research question three, results from the study indicated that typically developing young children in multi-age classrooms did not initiate with young children with disabilities more frequently than typically developing young children in single-age classrooms. The data collected within this study reflect that the children from the Rainbows classroom, which was a single-age classroom, had a higher number of occurrences in which children with and without disabilities engaged in play together. This may be due to several factors. The first is that through viewing the play observations in the Rainbows room, it became apparent that a CCSD Special Education Teacher was present in the Rainbows classroom more frequently than in either of the other two observed classrooms. This teacher encouraged students with special needs to join in activities and to interact with typically developing children, rather than playing alone. Likewise, the head teacher in the Rainbows room encouraged all students to engage and interact together and encouraged children to try different types of centers and to not always choose the same friends with whom to play. In contrast to the Rainbows classroom, in the multi-age classroom, the play observations indicated that children with special needs were more often engaged in solitary and parallel play more than were their typically developing peers. It is also necessary to comment that children without disabilities in the multi-age classroom were less likely to initiate play with children with disabilities than were children in the single-age classrooms.
Children Interviews

Current literature does not provide keen insight into the thoughts of children on their own play experiences. Many researchers examined that the benefits of multi-age classrooms by interviewing both teachers and parents. However, little attention has been given to the children who are enrolled in the multi-age classrooms (Brynes et al., 1994). There was a lack of a literature related to studying the viewpoints of young children in the preschool setting. Research question four examined young children's thoughts about their own play. This study included an interview process which gathered young children's thoughts about their own play experiences from both the single-age and multi-age classroom settings.

Of the 50 children who received permission to be interviewed, only 27 children participated. The reason only 54% of the children were interviewed is because many of the children were not present on the day of the interview process or did not want to be interviewed. When asked to be interviewed, many children were excited and waited for their turn to be interviewed. The Sea Turtles children were most excited about participating. Perhaps this is due to the fact that they were accustomed to having researchers in the classroom and also families with being asked questions. It might also be that the head teacher helped assist the researcher by asking the children if they would like to see themselves in a movie. The children from the Rainbows classroom were eager to watch themselves and asked if they could bring a friend along. However, the children from the Bumble Bees were a bit apprehensive about watching the movie video tape. Perhaps the reason for this was because they were not comfortable with the researcher or because they did not want to stop what they were doing to be interviewed.
When the children were asked to describe what they saw, what they were doing, and what they were playing, they were eager to talk about their play experiences. What fascinated the children the most was watching themselves and their friends on the computer screen. One child expressed, “I’m on TV!” (RB:3B). If any of the children did not feel comfortable coming alone to view the video, they often brought a friend along. This seemed to ease any discomfort they might have had. Some of the children refused to watch the video clip and were not interviewed and others were simply not interested or completely non-responsive. The children from the multi-age classroom were quite excited about watching the video clips and they actually waited in line to be interviewed.

The children who were nonverbal during the interviews responded with nonverbal cues such as nodding of the head and pointing to the screen. They also responded with facial expression such as smiling and laughing. Sometimes, children would talk about their friends that they viewed on the video taped segments, or go off subject and talk about something that had nothing to do with the shown segment. One child expressed the following: “I want to go to Hawai‘i again” (RB:1G). When asked what they saw, many children answered that they saw themselves, but in the third person. For example, one child responded, “I see K” (BB:4G) when referring to her own name.

Six of the 27 children who were interviewed had special needs. All of the 6 children responded to the questions both verbally and nonverbally. For example, when asked if they could explain what they saw on the screen, one child commented, “Yeah” (ST:2G) while she nodded. This response was the same as or similar to responses given by children without special needs.
Summary of Play Observations

The video taped play observations of both the indoor and outdoor settings indicated, that comparatively, the children in the multi-age classroom engaged in play more frequently than the children in the single-age classrooms. Based on the data collected from this study, the multi-age classroom resulted in 391 total play engagements throughout 65 observed segments. These totals indicate that there was a higher of frequency occurrences of play in multi-age classroom settings. The multi-age classroom provided more opportunities for children to initiate play, regardless of whether they were playing by themselves or with others.

The setting and population of this study limits the generalizability of the results to other populations. The results from this research are reflective of the specific sample included in this study. However, the results might indicate trends outside the specific population included in this study. The results from this study should not be generalized to other populations and settings.

Teacher Questionnaires (Surveys)

Research question five asked about teacher perceptions of play. A total of seven teachers of the 17 head teachers and CCSD staff participated in the survey of open-ended questions in regards to their knowledge, attitudes, and perceptions of play among single-age and multi-age classrooms. The teachers were asked their thoughts and viewpoints on play. Several codes emerged and the teachers reported that play was a fun experience, a way children explore themselves, and an opportunity for children to learn. It is probable that their answers were influenced by the core values the LBECEC which focus on with the importance of play. The teacher viewpoints and that of LBECEC were supported by
Cooney (2004) who noted that play in early childhood is a vehicle through which young children can grow and develop the foundational skills necessary for academic and social success.

When asked how children in their own classrooms played, teachers identified seeing children in their classrooms play in different types of play interactions such as solitary, onlooker, parallel, associative, and cooperative play. At the same time, several teachers consistently expressed that they saw their children playing through exploration, role playing, jumping, and playing in dramatic and pretend play.

When asked how teachers would describe the value of play to a parent, teachers identified that it was essential to the child’s development and linked play to academic skills and lessons. Teachers also were asked when they observed children engaging in play. This study found that the teachers observed children engaging in play all day everyday. The views on when they observed children playing seem to match their responses their descriptions of play. Teachers also emphasized that children were learning through play.

The teachers were asked about their views on the differences between indoor and outdoor play. Coding of responses indicated that the majority of teachers believed there was a difference between indoor and outdoor play. However, two of the seven teachers indicated that there wasn’t a difference and that merely the setting was different. The differences of opinion may be due to the activities that occur during indoor and outdoor play. It is probable that teachers might believe indoor play requires indoor voices, less gross motor activity, and more fine motor activity, while outdoor play is where children can let out their energy, yell, jump, and run through gross motor activities.
Teachers were asked what concerned them about children's play and the majority of responses indicated that teachers were concerned about rough play, aggressiveness, and the safety of their children. Interestingly, although this study focused on early childhood, one teacher expressed concerns about groups becoming too cliquish. It is likely that the teachers have children who exhibit these types of behaviors (rough play, aggression, cliques) or they have seen this occur in the different classrooms with children other than their own.

When asked if current media concerning on academic focus for young children influenced their perception of play, responses from three of the seven teachers indicated that the media had influenced their perception of play. This may be due to the importance of play and the shift as new directions in early childhood curriculum have been influential to the field (Veale, 2001). The push for educational outcomes has made influential marks in the perception not only to teachers, but the field of early childhood education itself (Veale). One teacher commented, "It has made me more aware of the need to allow children to explore their world on their own with adult assistance when needed. A child must be able to understand themselves (strengths, weaknesses, needs, wants) before they can understand each other" (T:7). Of the seven teachers, four disagreed and responded that media has not influenced their perception. One teacher commented, "No. I feel children learn through play. Therefore, the drill techniques that the media is focusing on would not work for every child" (T:2). These comments are consistent with learning and play theory in early childhood.
Parent Questionnaires (Surveys)

A total of 34 of the 224 families participated in a survey of open ended questions regarding their knowledge, attitudes, and perceptions of play among single-age and multi-age classrooms. Of the 34 families, 22 families from the single-age classroom, nine from the multi-age classroom, and two from both the single-age and multi-age classroom participated in the survey. There was one survey returned without a response. These results from these surveys were used to answer research question six regarding parents’ thoughts and viewpoints on play. In general, parents commented that play was fun, interactive, imaginative, and explorative. Almost 100% of the parents (32 out of 34) responded using the key words: having fun, interaction, using imagination, and exploration. Two parents commented that play was unstructured, but did not elaborate further. Based on the responses from the majority of the parents, it may be assumed that parents understand the value of play in early childhood education and believe the importance of play for their children.

When parents were asked how children played at home, parents responded using key words such as active, pretend play, role play, with siblings, toys, and exploring. One parent commented, “My children enjoy many types of play from pretending with costumes and cardboard boxes, cooking with mom and dad, manipulating their toys and singing songs” (P:10). When parents were asked how they would describe the value of play to teachers, parents responded by indicating that play was extremely important, valuable, and of utmost importance to the development and growth of children. This may be due in part to the play-based curriculum and philosophy at the LBECEC. Parents also
strenuously believed that the importance of play made it valuable to the learning of their children.

According to the parents who participated, they had observed their children and others engaging in play throughout various parts of the day, both at home and at school. Ten of the 34 parents reported that children engaged in play all the time, daily, and everyday. Twenty-three parents reported that children played either at home; at work, outside, in social settings, or on the playground. One parent did not appear to understand the question and commented, “When they play- various times” (P:18). The different types of response might be due to the varied viewpoints in parents’ definitions of play. Some parents believed play was highly important to their child’s life and generally believed that play occurs all the time, while other parents who weren’t sure or that believed play was important seemed to believe that play only occurred at specific times or in specific settings.

When parents were asked if there was a difference between indoor and outdoor play, the majority of parents responded that there was a difference. Twenty parents indicated that there was a difference and gave examples such as: “Of course, different environment and toys” (P:9) while 10 indicated there was no difference, and three responded with answers such as: not sure, maybe, and sometimes. Similar to the teacher responses, the differences of opinion may be due to the activities that occur during indoor and outdoor play. From the parent responses, those who reported that there were differences mentioned that outdoor play was more physical, while indoor play tended to be more reserved and calm. Both teacher and parent responses focused on the type of activity and materials, not the importance of play and how it might differ.
Parents were asked what concerns they had about children's play and the majority of parents responded with key words such as roughness, bullying, safety, and supervision. It should be noted that five responded that there was nothing that concerned them while two parents did not respond at all. Based on the responses from the survey, it is clear that both teachers and parents have the same concern about children's play. This may be due to past experiences, concerns about their child's everyday experiences, and how the media portrays children at play and how children do play in today's society.

When asked if current media on academic focus for young children influenced their perception of play among young children, responses from six of the 34 parents indicated that the media had influenced their perception of play among young children. They believed academics, not play should be the focus of early childhood. Twenty parents however, stated that the media had not influenced their perception of play which was somewhat different than how the teachers responded. This may be due to limitation of additional resources, based from their own personal experiences as educators or parents, and simply not caring what the media has said about education, but instead asking the teachers about the importance of play and how it can be integrated into their child's daily curriculum.

Limitations of the Study

A fully inclusive preschool, the UNLV LBECEC, located on the University of Nevada Las Vegas campus served children six weeks to five years of age. Due to its location, many families of the children were UNLV faculty, staff, and students. Many of the children were also returning students to the preschool and both families and children
were familiar with the preschool setting, staff, and curriculum. As a fully inclusive early childhood program, this can be both a benefit, but also as a limitation of this study. The results of this study should not be generalized to non-inclusive, private, segregated, and non-campus preschool settings.

The UNLV LBECEC was staffed with 11 general education teachers, 125 teacher assistants, and six CCSD staff working with the children of the LBECEC. At the LBECEC, the child to teacher ratio was an ideal number that many schools would like to have but in general do not. In each classroom, the child to teacher ratio was an average of four to five children to one adult. Each classroom was staffed with one head teacher, and an average of three teacher assistants. Due to its location, students from UNLV were able to work as teacher assistants at LBECEC and provide assistants to both the head teacher and the children. This can be seen as a limitation as the staffing is not consistent with most early childhood programs.

The limited number of children enrolled in the multi-age classroom was a limitation of this study. Because there were more than double the number of children in each of the single-age classrooms, it is difficult to generalize the results from this study to a typical setting of mixed ages or single ages and varied developmental abilities.

Settings

One of the limitations of video taping in the multi-age classroom was that the room had low lighting and had limited space. Therefore, the centers in the multi-age classroom were close together in proximity. Due to this proximity, it was difficult for the researcher to tape individual centers without having other children in different centers being video
taped. The researcher and IO had made an agreement to focus only on the children in the targeted center.

When taping the multi-age classroom, the RAVO room and its equipment were used. One limitation to this system was that the two microphones that were placed in the room picked up every sound in the room. It was quite difficult to make out who was speaking and to target a specific center and the conversations held with the targeted group of children.

Another limitation to this system was that in certain areas of the room, it was quite difficult to video tape targeted areas. The researcher had to manually move the built in video cameras using the controller joystick. However, in certain angles it was difficult to tape the children’s facial expressions and depending on the time of the day, the sunlight created shadows and blinded the researcher from capturing the facial expressions of the children. It was difficult to see the children and their actions and in some cases to make out of they were talking or interacting with other children.

After viewing the first week of video taped segments from the multi-age classroom, the researcher and IO found it difficult to accurately count the number of play interactions. To solve this issue, the researcher manually took the digital video camcorder into the classroom and video taped targeted centers. By doing this, the researcher was able to video tape the selected centers and capture the facial expressions and the conversations held within that targeted center.

After the video segments had been viewed, a limitation of the study was difficulty in accurately counting the types of play interactions from the outdoor setting. The sandbox area was a large space where many children were in and out of the sandbox within
seconds. During outdoor play, it was more difficult to exclude children who did not receive permission to be video taped. Many of these children would come to the sandbox and were then asked to make another choice by a staff member from LBECEC. For this reason, segments of the sandbox had to be video taped in order to capture children in play interaction and exclude those who were lingering around the area.

To capture all of the children in such a large area was quite difficult. By following the targeted children, sometimes the other half of the sandbox could not be video taped, and therefore it was not possible to accurately count all children in the target area. For example, there was one group of children on the far right of the sandbox, and two other children on the far left of the sandbox. To capture such a landscape was quite difficult for the researcher and by following each group, the researcher might have not counted other children coming or leaving the sandbox. Perhaps for future studies, a section of one part of the sandbox can be designated for video taping.

Recommendations for Future Research

For future research, one recommendation is to include both inclusive and segregated settings and to also expand the study to reach out to the public population such as early childhood special education and Head Start programs. Another recommendation would be to have a larger population of individuals from multi-age classroom settings participate in the study.

For this study, any play segment that was less than two minutes was excluded. As this study had demonstrated, within minutes, children were engaging in more than one type of play interaction. This is consistent with the attention span of young children. The
attention span of young children is about 40 to 60 seconds per task according to Brewer (2007). Thus, within minutes, a high occurrence of different play interactions can occur. Based on the data collected from this study, it appears that the time length for videotaping play observation segments should be no less than 2 minutes or less. The observations of the video taped segments were based on five-minute segments. The data collected from the five-minute segments reflected some disagreement between the observation coding from the researcher and IO. Both the researcher and IO discovered the difficulty of accurately counting the occurrences of play interactions when the segment was over two minutes.

An additional area of future research focus should be on the setting. The settings in which this study occurred likely had an influence on the number of initiated play engagements. This study could be replicated to look strictly at the types of settings and how these settings influence the types of play interactions in which children engage. For example, researchers may wish to examine whether children engage in dramatic play more frequently than play in the block center.

Based on the play observations, a recommendation for future research would be to look specifically at onlooker play behaviors of children. Once the child engages in onlooker play, does the child engage in the activity being observed or does the child engage in a different activity? It would be interesting to examine the types of play the child interacts in after exhibiting onlooker play. In addition, it would be beneficial to determine whether the child engages in play in the same setting or whether he or she leaves and goes to another center. Future studies may also be designed to investigate whether the size of the group influences the child’s decision to engage in play.
Conclusions

This study examined the types of play behaviors of young children three to five years of age in inclusive single-age and multi-age classrooms. The study focused on gaining an understanding of how teachers, parents, and children view play interactions. This study demonstrated that comparatively, children from the multi-age classroom setting engaged and initiated play more frequently than children in the two single-age classrooms. However, in contrast, typically developing children in single-age classrooms initiated play with young children with disabilities more frequently than typically developing young children in multi-age classroom settings.

The teachers and parents in this study detailed similar thoughts on play interactions. Play was recognized as explorative, fun, and essential to the child’s development. Responses from the participants indicate that both teachers and parents value the importance of play.

The children in this study were eager to participate in the interviews and communicated their thoughts about their play interactions both verbally and nonverbally. It is interesting to note that children without disabilities provided more nonverbal responses while the children with disabilities exhibited both verbal and nonverbal responses while being interviewed. Results of the interviews with children indicated that there was a strong relationship between student attitudes and learning. This study used a new method to explore play in early childhood and examined young children’s thoughts and views about their own play experiences.

The results of this study have implications for understanding of the benefits of increased play among young children in multi-age programs and provided support for the
rationale of why multi-age programs should be continued. The findings emphasize that young children in multi-age classrooms engage in more than one type of play more frequently than young children in single-age classrooms. The findings also indicate that young children in multi-age classrooms initiate play with other children more frequently than young children in single-age classrooms. However, the results from this study did not support the benefits of increased play among young children with and without disabilities who were enrolled in the multi-age classroom. In contrast to previous studies, the data collected during this study reflected that typically developing young children in single-age classrooms initiated play with young children with disabilities more frequently than typically developing children in multi-age classrooms.
APPENDIX A

INFORMED CONSENT, PARTICIPANT INFORMED CONSENT
Social/Behavioral IRB – Full Board Review
Approval Notice

NOTICE TO ALL RESEARCHERS:
Please be aware that a protocol violation (e.g., failure to submit a modification for any change) of an IRB approved protocol may result in mandatory remedial education, additional audits, re-consenting subjects, researcher probation suspension of any research protocol at issue, suspension of additional existing research protocols, invalidation of all research conducted under the research protocol at issue, and further appropriate consequences as determined by the IRB and the Institutional Officer.

DATE: September 5, 2008
TO: Dr. Nancy Sileo, Special Education
FROM: Office for the Protection of Research Subjects
RE: Notification of IRB Action
Protocol Title: Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings
Protocol #: 0806-2787

This memorandum is notification that the project referenced above has been reviewed by the UNLV Social/Behavioral Institutional Review Board (IRB) as indicated in Federal regulatory statutes 45CFR46. The protocol has been reviewed and approved.

The protocol is approved for a period of one year from the date of IRB approval. The expiration date of this protocol is August 6, 2009. Work on the project may begin as soon as you receive written notification from the Office for the Protection of Research Subjects (OPRS).

PLEASE NOTE:
Attached to this approval notice is the official Informed Consent/Assent (IC/IA) Form for this study. The IC/IA contains an official approval stamp. Only copies of this official IC/IA form may be used when obtaining consent. Please keep the original for your records.

Should there be any change to the protocol, it will be necessary to submit a Modification Form through OPRS. No changes may be made to the existing protocol until modifications have been approved by the IRB.

Should the use of human subjects described in this protocol continue beyond August 6, 2009, it would be necessary to submit a Continuing Review Request Form 60 days before the expiration date.

If you have questions or require any assistance, please contact the Office for the Protection of Research Subjects at OPRSHumanSubjects@unlv.edu or call 895-2794.

Office for the Protection of Research Subjects
4505 Maryland Parkway • Box 451047 • Las Vegas, Nevada 89154-0647
August 1, 2008

To: All Teachers of the UNLV LBECEC

You are invited to participate in a research study. You are being asked to participate in the study because you are a teacher of an infant or toddler or preschool-age child at the UNLV LBECEC.

The purpose of this study is to examine play behaviors among and between young children in single-age and multi-age preschool classroom settings. Specifically, this study will examine whether there are increased play opportunities among young children with and without disabilities who are enrolled in multi-age classrooms. The intent of this study is to provide a rationale for the continued use of inclusive multi-age programs.

If you volunteer to participate in this study, you will be asked to do the following: complete a survey regarding your knowledge, attitudes, and perceptions of play among children in single-age and multi-age settings. This survey will ask you to answer questions about demographics and open ended questions about play.

If you would like to participate, please read, and sign the informed consent. By returning the consent form, you are agreeing to complete the teacher survey. Please return all forms to your preschool center. At your preschool center, there will be a box located in the front receptionist desk where you can turn in your informed consent and survey forms. If you have any questions or concerns about the study, you may contact Dr. Nancy Sileo, the Principal Investigator or Mia Youhne, the Student Investigator at (702) 895-3205.

Thank you for your participation.

Nancy M. Sileo, Ed.D
Mia S. Youhne, M.Ed.
INFORMED CONSENT
Teacher Consent
Department of Special Education

TITLE OF STUDY: Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings

INVESTIGATOR(S): Nancy M. Sileo, Ed.D. and Mia S. Youhne, M.Ed.

CONTACT PHONE NUMBER: (702) 895-3205

Purpose of the Study
You are invited to participate in a research study. The purpose of this study is to examine play behaviors among and between young children in single-age and multi-age preschool classroom settings. Specifically, this study will examine whether there are increased play opportunities among young children with and without disabilities who are enrolled in multi-age classrooms. The intent of this study is to provide a rationale for the continued use of inclusive multi-age programs.

Participants
You are being asked to participate in the study because you are a teacher of an infant or toddler or preschool-age child at the UNLV LBECEC.

Procedures
If you volunteer to participate in this study, you will be asked to do the following: complete a survey regarding your knowledge, attitudes, and perceptions of play among children in single-age and multi-age settings. This survey will ask you to answer questions about demographics and open ended questions about play.

Benefits of Participation
There may not be direct benefits to you as a participant in this study. However, we hope to learn that when teachers create opportunities for children by creating and maintaining a successful multi-age classroom setting, children will benefit academically, socially, and emotionally. Other benefits may include increasing your awareness of activities in which children make their own choices and take responsibility for their work; you may be provided opportunities for personal growth by learning more about child development; develop a more comprehensive and meaningful curriculum that targets each individual child; and, you may have an increase in parent participation and communication about your program.

Participant Initials _____

1 of 2
Risks of Participation
There are risks involved in all research studies. This study may include only minimal risks. Some of
the risks include time to complete the informed consent and teacher survey on your knowledge,
attitudes, and perceptions about single-age and multi-age classrooms; and, you might become
uncomfortable when answering some questions on the survey.

Cost/Compensation
There will not be financial cost to you to participate in this study. The study will take approximately 5
to 10 minutes of your time. You will not be compensated for your time.

Contact Information
If you have any questions or concerns about the study, you may contact Dr. Nancy Sileo or Mia
Youhne at (702) 895-3205. For questions regarding the rights of research subjects, any complaints or
comments regarding the manner in which the study is being conducted you may contact the UNLV
Office for the Protection of Research Subjects at 702-895-2794.

Voluntary Participation
Your participation in this study is voluntary. You may refuse to participate in this study or in any part
of this study. You may withdraw at any time without prejudice to your relations with the university.
You are encouraged to ask questions about this study at the beginning or any time during the research
study.

Confidentiality
All information gathered in this study will be kept completely confidential. No reference will be made
in written or oral materials that could link you to this study. All records will be stored in a locked
facility at UNLV for 3 years after completion of the study. After the storage time the information
gathered will be shredded, broken, and destroyed.

Participant Consent:
I have read the above information and agree to participate in this study. I am at least 18 years of age.
A copy of this form has been given to me.

__________________________________________  ______________
Signature of Participant                    Date

__________________________________________
Participant Name (Please Print)

Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.
TITLE OF STUDY: Examining Play Among Young Children in Single-age and Multi-age
Preschool Classroom Settings
INVESTIGATOR(S): Nancy M. Sileo, Ed.D. and Mia S. Youhne, M.Ed.
CONTACT PHONE NUMBER: (702) 895-3205

August 1, 2008

To: All Parents of children enrolled in either the Bumble Bees, or the Rainbows, or the Sea
Turtles classroom at the UNLV LBECEC

Your child is invited to participate in a research study. Your child is being asked to participate in
the study because your child is a preschool-age child enrolled in either the Bumble Bees, or the
Rainbows, or the Sea Turtles classroom at the UNLV LBECEC.

The purpose of this study is to examine play behaviors among and between young children in
single-age and multi-age preschool classroom settings. Specifically, this study will examine
whether there are increased play opportunities among young children with and without
disabilities who are enrolled in multi-age classrooms. The intent of this study is to provide a
rationale for the continued use of inclusive multi-age programs.

If you allow your child to volunteer to participate in this study, your child will be asked to do the
following:

Part I: Your child will be asked to participate in preschool activities such as participation in
classroom centers and outdoor play that typically take place in their classroom on a daily basis.
By signing this permission form, you are allowing your child’s play behaviors both indoor and
outdoor to be observed, video taped, and coded by the Primary Researcher and the Research
Assistant (Interobserver).

Part II: Your child will be asked to participate in an interview with the Primary Researcher and
will be asked about the play behaviors they see on a video. The video will show one sample of
your child’s play in the outdoor sandbox setting that was video taped as part of the field
observation portion of this study. This video tape was made based on your prior permission for
your child to participate in the field observation.
If you would like your child to participate, please read, and sign the informed permission form. By signing and returning the Part I portion of the permission form, you are allowing your child’s play behaviors both indoor and outdoor to be observed, video taped, and coded (Part I). By signing and returning the Part II portion of the permission form, you are allowing a.) your child’s play behaviors both indoor and outdoor to be observed, video taped, and coded (Part I); and, (b.) your child to participate in an audio taped interview with the Primary Researcher where they will be asked about their play behaviors. Your child will be shown a video tape of her/himself that was made based on your permission for your child to participate in the field observation (Part I).

Please return all forms to your preschool center. At your preschool center, there will be a box located in the front receptionist desk where you can turn in your informed permission and survey forms.

If you have any questions or concerns about the study, you may contact Dr. Nancy Sileo, the Principal Investigator or Mia Youhne, the Student Investigator at (702) 895-3205.

Thank you for your participation.

Nancy M. Sileo, Ed.D.

Mia S. Youhne, M.Ed.
TITLE OF STUDY: Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings

INVESTIGATOR(S): Nancy M. Sileo, Ed.D. and Mia S. Youhne, M.Ed.

CONTACT PHONE NUMBER: (702) 895-3205

Purpose of the Study
Your child is invited to participate in a research study. The purpose of this study is to examine play behaviors among and between young children in single-age and multi-age preschool classroom settings. Specifically, this study will examine whether there are increased play opportunities among young children with and without disabilities who are enrolled in multi-age classrooms. The intent of this study is to provide a rationale for the continued use of inclusive multi-age programs.

Participants
Your child is being asked to participate in the study because your child is a preschool-age child enrolled in either the Bumble Bees, or the Rainbows, or the Sea Turtles classroom at the UNLV LBECEC.

Procedures
If you allow your child to volunteer to participate in this study, your child will be asked to do the following:

Part I: Your child will be asked to participate in preschool activities such as participation in classroom centers and outdoor play that typically take place in their classroom on a daily basis. By signing this permission form, you are allowing your child’s play behaviors both indoor and outdoor to be observed, video taped, and coded by the Primary Researcher and the Research Assistant (Interobserver).

Part II: Your child will be asked to participate in an interview with the Primary Researcher and will be asked about the play behaviors they see on a video. The video will show one sample of your child’s play in the outdoor sandbox setting that was video taped as part of the field observation portion of this study. This video tape was made based on your prior permission for your child to participate in the field observation.

Benefits of Participation
There may not be direct benefits to your child as a participant in this study. However, we hope to learn that when teachers create opportunities for children by creating and maintaining a successful multi-age classroom setting, children will benefit academically, socially, and emotionally. Through this research study, your child may receive additional benefits including and not limited to a wide variety of

Participant Initials ____________________________

1 of 3
activities in which children make their own choices and take responsibility for their work; a more comprehensive and meaningful curriculum that targets each individual child; and, you may have an increase in participation and communication about your child's program.

Risks of Participation
There are risks involved in all research studies. This study may include only minimal risks.

Part I: Your child might feel UNCOMFORTABLE being video taped during play behavior observations.

Part II: Your child might feel uncomfortable being interviewed about their play behaviors, and your child may lose some time going to their learning centers during the interview process.

Cost /Compensation
There will not be financial cost to you to participate in this study.

Part I: The video taping will take place over a three to four week period for approximately 60 minutes in each day your child is in school. Your child will not be compensated for their time.

Part II: The interview portion of this study will take place over a three to five day period when your child is typically in school. The actual interview with your child will take approximately 5 to 10 minutes on one of the days your child is in school. Your child will not be compensated for their time.

Contact Information
If you or your child have any questions or concerns about the study, you may contact Dr. Nancy Sileo or Mia Youhne at (702) 895-3205. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office for the Protection of Research Subjects at 702-895-2794.

Voluntary Participation
Your child's participation in this study is voluntary. Your child may refuse to participate in this study or in any part of this study. Your child may withdraw at any time without prejudice to your relations with the university. You or your child are encouraged to ask questions about this study at the beginning or any time during the research study.

Confidentiality
All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link your child to this study. All records will be stored in a locked facility at UNLV for 3 years after completion of the study. After the storage time the information gathered will be shredded, broken, and destroyed.

Participant Initials ___ 

2 of 3
TITLE OF STUDY: Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings
INVESTIGATOR(S): Nancy M. Sileo, Ed.D. and Mia S. Youhne, M.Ed.
CONTACT PHONE NUMBER: (702) 895-3205

Participant Permission:

**Part I:**
I have read the above information and by signing this portion of the form, I am allowing my child's play behaviors both indoor and outdoor to be observed, video taped, and coded (Part I). I am at least 18 years of age. A copy of this form has been given to me.

Signature of Parent ____________________________ Child's Name (Please print) ____________________________

Parent Name (Please Print) ____________________________ Date ____________________________

**Part II:**
I have read the above information and by signing this portion of the form, I am allowing (a.) my child's play behaviors both indoor and outdoor to be observed, video taped, and coded (Part I); and, (b.) my child to participate in an audio taped interview with the Primary Researcher where they will be asked about their play behaviors. Your child will be shown a video tape of her/himself that was made based on your permission for your child to participate in the field observation (Part I). I am at least 18 years of age. A copy of this form has been given to me.

Signature of Parent ____________________________ Child's Name (Please print) ____________________________

Parent Name (Please Print) ____________________________ Date ____________________________

*Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.*
LETTER OF CONTACT
Parent Consent
Department of Special Education

TITLE OF STUDY: Examining Play Among Young Children in Single-age and Multi-age
Preschool Classroom Settings
INVESTIGATOR(S): Nancy M. Sileo, Ed.D. and Mia S. Youhne, M.Ed.
CONTACT PHONE NUMBER: (702) 895-3205

August 1, 2008

To: All Parents of the UNLV LBECEC

You are invited to participate in a research study. You are being asked to participate in the study
because you are a parent of an infant or toddler or preschool-age child at the UNLV LBECEC.

The purpose of this study is to examine play behaviors among and between young children in
single-age and multi-age preschool classroom settings. Specifically, this study will examine
whether there are increased play opportunities among young children with and without
disabilities who are enrolled in multi-age classrooms. The intent of this study is to provide a
rationale for the continued use of inclusive multi-age programs.

If you volunteer to participate in this study, you will be asked to do the following: complete a
survey regarding your knowledge, attitudes, and perceptions of play among children in single-
age and multi-age settings. This survey will ask you to answer questions about demographics
and open ended questions about play.

If you would like to participate, please read, and sign the informed consent. By returning the
consent form, you are agreeing to complete the parent survey. Please return all forms to your
child’s preschool center. At your child’s preschool center, there will be a box located in the front
receptionist desk where you can turn in your informed consent and survey forms. If you have
any questions or concerns about the study, you may contact Dr. Nancy Sileo, the Principal
Investigator or Mia Youhne, the Student Investigator at (702) 895-3205.

Thank you for your participation.

Nancy M. Sileo, Ed.D
Mia S. Youhne, M.Ed.

College of Education
Department of Special Education
Box 453014 • 4505 S. Maryland Parkway
Las Vegas, NV 89154-3014
(702) 895-3205 • Fax (702) 895-0984
TITLE OF STUDY: Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings
INVESTIGATOR(S): Nancy M. Sileo, Ed.D. and Mia S. Youhne, M.Ed.
CONTACT PHONE NUMBER: (702) 895-3205

Purpose of the Study
You are invited to participate in a research study. The purpose of this study is to examine play behaviors among and between young children in single-age and multi-age preschool classroom settings. Specifically, this study will examine whether there are increased play opportunities among young children with and without disabilities who are enrolled in multi-age classrooms. The intent of this study is to provide a rationale for the continued use of inclusive multi-age programs.

Participants
You are being asked to participate in the study because you are a parent of an infant or toddler or preschool-age child at the UNLV LBECEC.

Procedures
If you volunteer to participate in this study, you will be asked to do the following: complete a survey regarding your knowledge, attitudes, and perceptions of play among children in single-age and multi-age settings. This survey will ask you to answer questions about demographics and open ended questions about play.

Benefits of Participation
There may not be direct benefits to you as a participant in this study. However, we hope to learn that when teachers create opportunities for children by creating and maintaining a successful multi-age classroom setting, children will benefit academically, socially, and emotionally. Through this research study, your child may receive additional benefits including and not limited to a wide variety of activities in which children make their own choices and take responsibility for their work; a more comprehensive and meaningful curriculum that targets each individual child; and, you may have an increase in participation and communication about your child’s program.
**Risks of Participation**
There are risks involved in all research studies. This study may include only minimal risks. Some of the risks include time to complete the informed consent and parent survey on your knowledge, attitudes, and perceptions about single-age and multi-age classrooms; and, you might become uncomfortable when answering some questions on the survey.

**Cost /Compensation**
There will not be financial cost to you to participate in this study. The study will take approximately 5 to 10 minutes of your time. You will not be compensated for your time.

**Contact Information**
If you have any questions or concerns about the study, you may contact Dr. Nancy Sileo or Mia Youhne at (702) 895-3205. For questions regarding the rights of research subjects, any complaints or comments regarding the manner in which the study is being conducted you may contact the UNLV Office for the Protection of Research Subjects at 702-895-2794.

**Voluntary Participation**
Your participation in this study is voluntary. You may refuse to participate in this study or in any part of this study. You may withdraw at any time without prejudice to your relations with the university. You are encouraged to ask questions about this study at the beginning or any time during the research study.

**Confidentiality**
All information gathered in this study will be kept completely confidential. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at UNLV for 3 years after completion of the study. After the storage time the information gathered will be shredded, broken, and destroyed.

**Participant Consent:**
I have read the above information and agree to participate in this study. I am at least 18 years of age. A copy of this form has been given to me.

_________________________________________  ________________________
Signature of Participant                          Date

Participant Name (Please Print)

**Participant Note: Please do not sign this document if the Approval Stamp is missing or is expired.**

Participant Initials ___

2 of 2
APPENDIX B

QUALITATIVE STUDY DESIGN
Qualitative Study Design

Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings

**Observation**
(Coding & Video-taping)

- **1 multi-age classroom “Sea Turtles”**
  - Examine “Indoor Play”
    - Variables: Gender, Age, Abilities
  - Examine “Outdoor Play” (Select an area of focus) e.g. swings, sand area
    - Variables: Gender, Age, Abilities

- **1 single-age classroom “Bumble Bees”**
  - Examine “Indoor Play”
    - Variables: Gender, Age, Abilities
  - Examine “Outdoor Play” (Select an area of focus) e.g. swings, sand area
    - Variables: Gender, Age, Abilities

- **1 single-age classroom “Rainbows”**
  - Examine “Indoor Play”
    - Variables: Gender, Age, Abilities
  - Examine “Outdoor Play” (Select an area of focus) e.g. swings, sand area
    - Variables: Gender, Age, Abilities

**Survey & Interviews**

- Teachers Survey [Fall 2008]
- Parents Survey [Fall 2008]
- Children Interviews [December 2008]

**Data Collection (Schedule):**

- **5 days a week** (M-F) am & pm
- **Indoor Play**- Learning Centers (5) [Focus]
- **Outdoor Play**- Sand Box [Focus]

**August & September:** Informed Consent Forms & Surveys were distributed.

**October, November, December:** Observation & Interviews took place.
APPENDIX C

SCHEDULE FOR OBSERVATION SITE
Schedule for Observation Site - Indoor and Outdoor Setting

**Qualitative Study:**
Examining Play Among Young Children in Single-age and Multi-age Preschool Classroom Settings

**Schedule** [5 consecutive days]

<table>
<thead>
<tr>
<th>Day</th>
<th>Morning Activities</th>
<th>Afternoon Activities</th>
<th>Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday</td>
<td>MA Sea Turtles</td>
<td>SA #1 Bumble Bees</td>
<td>Indoor Play</td>
</tr>
<tr>
<td></td>
<td>Indoor BB/RB (9:45-11:30) and Indoor ST (10:00-11:20)</td>
<td>SA #2 Rainbows</td>
<td>[Learning Centers]</td>
</tr>
<tr>
<td>Tuesday</td>
<td>MA Sea Turtles</td>
<td>SA #1 Bumble Bees</td>
<td>Indoor Play</td>
</tr>
<tr>
<td></td>
<td>Indoor BB/RB (2:15-3:15) and Indoor ST (2:30-3:15)</td>
<td>SA #2 Rainbows</td>
<td>[Sand box]</td>
</tr>
<tr>
<td>Wednesday</td>
<td>SA #1 Bumble Bees</td>
<td>MA Sea Turtles</td>
<td>No observations</td>
</tr>
<tr>
<td></td>
<td>Outdoor (1:30-2:00) and Indoor BB/RB (1:30-2:00)</td>
<td>SA #1 Bumble Bees</td>
<td></td>
</tr>
<tr>
<td>Thursday</td>
<td>MA Sea Turtles</td>
<td>SA #1 Bumble Bees</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Indoor BB/RB (2:15-3:15) and Indoor ST (2:30-3:15)</td>
<td>MA Sea Turtles</td>
<td></td>
</tr>
<tr>
<td>Friday</td>
<td>SA #2 Rainbow</td>
<td>MA Sea Turtles</td>
<td></td>
</tr>
</tbody>
</table>

Indoor Play
- [Learning Centers]
- No < than 2 min. segments
- 5 centers for 30 min.
- # of students examining: 53

Outdoor Play
- [Sand box]
- No < than 2 min. segments
- Every 5 minutes for 30 min.
- # of students examining: 53
APPENDIX D

KNOWLEDGE, ATTITUDES, AND PERCEPTIONS: TEACHER SURVEY
Survey of Teachers’ Knowledge, Attitudes, and Perceptions of Play Among Single-age and Multi-age Settings

The purpose of this study is to examine play among young children in single-age and multi-age classroom settings. You are being asked to participate in the study because you are a preschool teacher of children at the UNLV LBEC EC. Please answer the following questions that best describe your knowledge, attitudes, and perceptions of play among single-age and multi-age settings. Your assistance is greatly appreciated.

Section I. Demographics: Please answer the following questions by checking the appropriate response.

1. Gender  Female   Male

2. Years of teaching experience
   ___Less than 5 years   ___5-10 years   ___10-15 years   ___more than 15 years

3. Education:
   ___High school diploma   ___Community College Degree   ___University Degree
   ___Some University Studies   ___Graduate Studies   ___CDA

4. Type of classroom I teach in:  ___Single-age classroom   ___Multi-age classroom

5. Age range in months of children in my classroom: __________________________

6. Number of children in the group: _________________________________

7. Child-Teacher ratio in my classroom: ____________________

Section II. Open-Ended Questions: Please answer the following questions in the space provided below.

1. I describe play as: _____________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

2. I see children in my classroom play in the following ways: ______________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

3. How do you describe the value of play to a parent(s)? __________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________

4. When do you observe children engaging in play? ________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
   ____________________________________________________________________________
5. Is indoor play different than outdoor play? 

6. What concerns you about children’s play? 

7. Given the current media focus on academics for young children in Pre-K programs, has this influenced your perception of play among young children?
APPENDIX E

KNOWLEDGE, ATTITUDES, AND PERCEPTIONS: PARENT SURVEY
The purpose of this study is to examine play among young children in single-age and multi-age classroom settings. You are being asked to participate in the study because your child(ren) attend preschool at the UNLV LBECEC. Please answer the following questions that best describe your knowledge, attitudes, and perceptions of play among single-age and multi-age settings. Your assistance is greatly appreciated.

Section I. Demographics: Please answer the following questions by checking the appropriate response.

1. Gender ___Female ___Male

2. Education:
   ___High school diploma   ___Community College Degree   ___University Degree
   ___Some University Studies ___Graduate Studies  ___CDA

3. My child(ren) are: ___Female ___Male

4. My child(ren) ages are: _____ _____ _____ _____

5. Type of classroom my child(ren) are in: ___Single-age classroom   ___Multi-age classroom   ___Both

6. What is your relationship with this child? (e.g. Mother, Father, Guardian)

Section II. Open-Ended Questions: Please answer the following questions in the space provided below.

1. I describe play as: _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

2. At home, I see my child(ren) play in the following ways:
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

3. How do you describe the value of play to a teacher(s)?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

4. When do you observe children engaging in play?
   _____________________________________________________________
   _____________________________________________________________
   _____________________________________________________________

183
5. Is indoor play different than outdoor play?

6. What concerns you about children’s play?

7. Given the current media focus on academics for young children in Pre-K programs, has this influenced your perception of play among young children?
APPENDIX F

TRAINING FORMS AND CODING CHART
Observation Coding Chart

Please mark your role with an (x):
Researcher: _____  Interobserver (IO): _____

Classroom Name: __________________________
Date/Time: ________________________________

Observation/Segment (e.g. 1 of 1, 1 of 2, 1 of 3, etc.) #: ______ Duration of observations: ______

Setting (e.g. blocks, water, sandbox): ________________________________

Total Number (#) of children present in each segment of the videotaped observation: ______

Gender(s): # of Females _____ # of Males _____

Number (#) of identified children with special needs:

Instructions: Please note that each sheet is designated for one segment of each observation. Every time you observe children engaging in different types of play indicated below, mark a G for girl, and B for boy in the frequency observed box. At the end of each segment, indicate the total number of frequency observed for each type of play within one segment.

<table>
<thead>
<tr>
<th>Type of Play Observed</th>
<th>Frequency observed</th>
<th>Total Number (of counts)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Solitary</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play in which children play without regard for what other children around them are doing.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Onlooker</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play in which the child who is playing individually is simultaneously observing those playing in the same area.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parallel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play in which several children are playing with the same materials, but each is playing independently.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Associative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form of play in which each child is engaged in a separate activity but there is a considerable amount of cooperation and communication.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cooperative</td>
<td></td>
<td></td>
</tr>
<tr>
<td>An activity which is organized, where there is a differentiation of roles and complementing actions.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Definitions

*Play* was defined as a vehicle of learning, growing, and developing knowledge. Play contributes to all aspects of child development, both affectively and cognitively. Play is considered child-initiated and child-directed, while work is adult-initiated and adult-directed (Cooney, 2004). Play is an active behavior that is personally motivated, is often nonliteral, has no extrinsic goals or rules, and for which the individual supplies the meaning (Brewer, 2007, p. 142).

*Solitary play* was defined as play in which children play without regard for what other children around them are doing. A child may be constructing a tower with blocks and be completely oblivious to what other children in the room are doing (Brewer, 2007, p. 144).

*Onlooker play* was defined as play in which the child who is playing individually is simultaneously observing those playing in the same area. The child may be talking to peers. Children who watch other children play may alter their own play behavior after watching. Children engaged in onlooker play may seem to be sitting passively while children around them are playing, but they are very alert to the action around them (Brewer, 2007, p.144).

*Parallel play* was defined as play in which several children are playing with the same materials, but each is playing independently. What one child does is not depend on what others do. Children working puzzles are usually engaged in parallel play. They usually talk to one another, but if one leaves the table, the others continue playing (Brewer, 2007, p.144).

*Associative play* was defined as a form of play in which each child is engaged in a separate activity but there is a considerable amount of cooperation and communication
(Hughes, 1999). It is a form of true social interaction in which children engage in separate activities, but continue to interact by commenting on one another’s behavior and by exchanging toys (Berk, 2008). Associative play is play in which several children play together but in a loosely organized fashion. Several children might decide to play “monsters,” for example, and run around the playground, chasing each other. There are no definite roles, and if one child does not run and chase, the others can continue to play (Brewer, 2007, p. 142).

*Cooperative play* was defined as an activity which is organized, where there is a differentiation of roles and complementing actions. It is a form of play that occurs when two or more children are engaged in a play activity with a common goal (Hughes, 1999). Cooperative play is play in which each child accepts a designated role and is dependent on others for achieving the goals of the play. When children want to play “store,” for instance, one child must accept the role of store clerk and others must be shoppers. If a child refuses to play unless she can be the storekeeper, the play episode will end (Brewer, 2007, p. 142).
APPENDIX G

FORM: CHILD(REN) INTERVIEWS
Interview of Children’s Knowledge, Attitudes, and Perceptions of Play Among Single-age and Multi-age Settings

Child(ren) Interview Questions

CHILD PSEUDONYM: __________________ Classroom: ____________________

Date: __________________ Time: __________________

After showing the targeted child the videotaped segment, ask the following questions.

Each interview of the children began with the following:

I’m going to now show you a movie. After we watch the movie, I’m going to ask you some questions. Are you ready to watch?

Child(ren) Interview Questions:

<table>
<thead>
<tr>
<th>Questions from the Researcher:</th>
<th>Child(ren) Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Can you tell me what you see?</td>
<td></td>
</tr>
<tr>
<td>2. Can you tell me what you are doing?</td>
<td></td>
</tr>
<tr>
<td>3. Can you tell me what you are playing?</td>
<td></td>
</tr>
</tbody>
</table>

Prompts were provided if a child was non-responsive to the initial questions.

The prompts for the children included:

1. I see that you were playing at...can you tell me what you are doing?

2. Are you playing with someone?

3. What are you playing with them
APPENDIX H

VERBATIM RESPONSES OF CHILDREN INTERVIEWS
Child Name: BB 1/G & BB 2/G
Classroom: Bumble Bees

*Children Interview Questions:*

R. Can you tell me what you see?
C. No response.

R. Do you see yourselves?
C. Nod [nonverbal]

R. Can you tell what you are doing?
C. No response.

R. Can you tell what you are playing?
C. No response.
Child Name: BB 3/G 
Classroom: Bumble Bees 

Children Interview Questions:

R. Can you tell me what you see?
C. I see me and G.

R. Can you tell me what you are doing?
C. I’m looking at G.
C. I was doing something.
C. I was making a book.

R. Where you making the book by yourself or with G.?
C. I was making it with G.

C. That’s my friend L. He’s not going to be here tomorrow. [On her own]
Child Name: BB 4/G
Classroom: Bumble Bees

Children Interview Questions:

R. Can you tell me what you see?
C. Umm...I see A. grabbing papers. We were grabbing too much papers, but I didn’t. Only A. did.

R. Can you tell me what you are doing?
C. Umm...we are making a book. I wasn’t making a book. I was making this thing with paper.
C. Then we got glitter. Because we wanted our pictures to be pretty.

C. I used, I didn’t know why...but I used purple with stripes. [on her own]

R. Is purple one of your favorite colors?
C. Yes.
Child Name: BB 5/G
Classroom: Bumble Bees

Children Interview Questions:

C. Hey, that’s me! With J., my friend! He’s right there, and that’s me, right by the shopping cart.

R. What are you two playing?
C. Dramatic play.

R. Are you playing together?
C. Yeah.

C. You got stuff in the bucket.
C. My friend, just walked by.
C. Today’s crazy hair week.
C. I have crazy hair.
C. Ooh~ when is it going to be over soon?

R. Is there anything else you want to share with me?
C. Yeah. I uh- I----I have a white stuffed animal and I sleep with him at night.
Child Name: BB 6/G
Classroom: Bumble Bees

Children Interview Questions:

R. Can you tell me what you see?
C. Yeah. I see K.

R. Kylie?
C. Yeah...K.

R. Do you see anyone else?
C. Yeah...C.

R. Can you tell me what you are playing?
C. Yeah. This.

R. What's that?
C. This...we are building puzzles.

R. Are you building puzzles with someone?
C. Yeah.
R. With who?
C. K. and C.

R. Do you like building puzzles?
C. Yeah.

R. Is there anything else you want to share with me?
C. Uhh..K.
C. Uhh...Puzzles.
Child Name: BB 7/G  
Classroom: Bumble Bees  

Children Interview Questions:

C. A movie of me!
R. Do you see yourself?  
C. Yeah! Right here!
R. Can you tell me what you see?  
C. I'm playing...
R. Do you see yourself?  
C. Yeah... at puzzles.
R. Are you playing with anyone?  
Children Interview Questions:

R. Can you tell me what you see?
C. Me and my other friends.

R. Can you tell me what you are doing?
C. Playing with little ??? [LOOK AT CD]

R. Are you playing with someone?
C. I don’t know. Yes.

R. Can tell me what you are playing?
C. No response.

R. Do you want to see more?
C. I want to see another part.
Child Name: BB 2/B
Classroom: Bumble Bees

Children Interview Questions:

R. Can you tell me what you see?
C. C.

R. Can you tell me what you are doing?
C. No response.

R. Can you tell me what you are playing?
C. Yes. C. F. [Making sounds]

R. Are you playing with a friend?
C. Yes. C.F. K.

R. What are you playing with K.?
C. Puzzles.

R. Do you play puzzles often?
C. Yes.

R. Is it neat to see yourself?
C. Yes

R. Do you play puzzles often?
C. Yes.

R. Do you want to see more?
C. Yes.
Verbatim Responses of Children: Rainbows (SA 2) Classroom

Interview of Children’s Knowledge, Attitudes, and Perceptions of Play Among Single-age and Multi-age Settings

Child(ren) Interview Questions

Child Name: RB 1/G
Classroom: Rainbows

Children Interview Questions:

R. Can you tell me what you see?
   C. I see me. [While laughing]

R. Can you tell me what you are doing?
   C. I’m doing art.

R. What kind of art are you doing?
   C. Arial.

R. Can you tell me what you are playing?
   C. No response

R. Can you tell me who you are playing with?
   C. Uh-huh. With M.

R. Is there any other friends?
   C. D. and S. [while laughing].

C. Look! I’m putting some back.
C. Look! Something fell on the floor! [while laughing]
C. Who wants the pink one? Who wants the pick one.
R. Is that what you asked your friends?
C. Yes...heee [laughing]

R. You like the color the pink?
C. Uh-Huh.
R. Is that your favorite color?
C. Uh-Huh.

On her own:
C. See the teacher putting...helping me.

R. There are so many materials at the art table. What do you see?
C. Me.
C. I want to go to Hawaii again!
C. Look it Look it there’s Ja.!
C. Can you show me a picture of me singing?
Child Name: RB 2/G
Classroom: Rainbows
[Came in with RB 1/G]

Children Interview Questions:

On her own:
C. That’s me reading a Pinkalicious book.
Brianna. Purplelicious!
C. I mean Purpleicious. [laughing]

R. Can you tell me what you see?
C. Uh-huh, that’s Al. Al. is reading the book to me.

R. Did you enjoy the book?
C. Yes.

R. Can you tell me what you are doing?
C. No response.

R. Can you tell me what you are playing?
C. No response.

C. That was a spider! [on her own]
Child Name: RB 3/G
Classroom: Rainbows

Children Interview Questions:

R. Can you tell me what you see?
C. Yes.

R. Do you see anyone?
C. Yes.

R. Who do you see?
C. Nobody.

R. You don't see yourself?
C. No, but I see someone riding on the slides.
C. I see someone's shadow.
R. You don't see anything else?
C. Yes, I do.
R. Who?
C. I see something over there.

R. I see that you are playing in sand Ma., can you tell what you are doing?
C. Sandbox.

R. You are playing in sandbox?
C. Yes, sand.

R. Do you like the sandbox?
C. Yeah.

R. Are you building something right now?
C. Yeah.
C. I'm building...my snake.

R. Do you like snakes?
C. Yes.

C. I see someone running over there.
C. I can see...I wanna see something I'm playing with on the swings.
C. That's C.
R. What is that?
C. That? So I can make magic.
R. So you can make magic with sand?
C. Yes.
Child Name: RB 4/G  
Classroom: Rainbows

*Children Interview Questions:*

C. I see M. She’s right there.

R. Do you see anyone else?
C. Ma., me, Ms. Ke.

R. What are you playing with?
C. Art.

R. What are you doing in art? Are you making something?
C. I-I was making a ship.

R. A big ship or small ship?
C. A big ship.

R. Are you playing with anyone?
C. I’m playing with M.
C. M. is drawing.
C. I see Ms. Ke. who I like to chase.
R. You like to chase her?
C. No, she likes to chase us. When she touches us, she flips upside down.

C. 1-2-3-4, there’s 4 girls at art.

C. I can count to 10, you want to hear?
C. 1-2-3-4-5-6-7-8-9-10.
C. Even I can spell food. F-O-O-D.

R. What’s your favorite food?
C. Apples, grapes, strawberries, and oranges.

C. That wasn’t when it was cold.
C. Paintbrushes, paper…
C. 1-2-3-4-5-6-7-8-9-0.
C. I see markers, paper, paper in here. I see glue, caps. Baskets and OOH I see buckets. These are the buckets. And that’s all I see.
Child Name: RB 5/G
Classroom: Rainbows

*Children Interview Questions:*

R. Can you tell me what you see?
C. I see Ali. on the ground. And I picked up the bucket. And I dumped out the sand and I got another bucket. I put the buckets down.

R. Are you playing with buckets in the sand?
C. Yes.

R. Are you playing with anyone else?
C. No. Just myself.

R. Are you making something?
C. Ah- I don't remember.

C. Yeah, it was a long time.

R. Is it neat to see yourself?
C. Yes.

R. Is there anything else you want to share with me?
C. Umm..I see put sand in the box. And I see Da. And I dumped out the sand.

R. Do you like playing in the sand?
C. Yes.

R. Are you playing with anyone right now?
C. Da.

R. What are you doing there?
C. Trying to get wet sand. To build a sandcastle.

R. For who?
C. For my mom and my dad.
Child Name: RB 6/G
Classroom: Rainbows

Children Interview Questions:

R. Can you tell me what you see?
C. I see me and I.

R. Can you tell me what you are playing?
C. I’m playing in the sandbox. I think...I forget what I’m making.

C. I want to hear myself.

R. Can you tell me what you are doing?
C. I’m playing with sand.

R. It was really windy that day.
C. I was really cold.

C. My mommy had a dirty car cause I used to get sand all over her car.

C. Is that R. in there?
R. Yes. It is R.

R. Is there anything else you want to share with me?
C. I saw R.
Child Name: RB 7/G
Classroom: Rainbows
[BB 2/B came in with RB 7/G]

Children Interview Questions:

C. It's cool, that's me!
R. Do you see yourself?  
C. Yes.

R. Al., what are you playing?  
C. I'm reading a book.  
R. You are reading a book?  
C. Yes.

R. Are you playing with anyone?  
C. I'm playing with M. Look!

C. Where's C.?  
C. Can I see Jy.?  

C. M.'s not saying hi to me!  
C. Hi~~~~~~~~~~~~!!!!!!!!!

C. Where's me?  
C. I'm right there.

R. What are you playing with?  
C. I'm not going to walk.

C. I want to watch when I walk.

C. Who's running?
Child Name:  RB 8/G
Classroom:   Rainbows

Children Interview Questions

C. I see B.
C. That’s Ms. Ke.

R. Can you tell me what else you see?
C. Umm….Lil.

R. Do you see anyone else?
C. No. I see paper. That’s me and Lil’s.

R. Who’s that?
C. Lil.

R. Who’s next to Lil.?
C. Me.

R. Can you tell me what you are playing?
C. Painting.

R. Are you painting with someone?
C. Lil. But we both have our own paper.

R. Do you like painting?
C. Yes.

C. Lil. always has two paint brushes.
R. What about you?
C. Only one.

C. B. is on that side somewhere.
Child Name: RB 1/B
Classroom: Rainbows

Children Interview Questions:

C. Is that me?
R. Is that you D.?
C. Yeah, it's me.

R. Can you tell me what you are doing?
C. Well, I'm doing something. I'm, I'm doing something... You just have to tap it, so it makes the sand come out.

R. So I see you're playing at sand, are you playing with someone?
C. No.
R. No?
C. I'm not going to be happy. I'm not happy because Ja. spilled it over.

R. Is it neat to see yourself?
C. Yeah.

C. I'm just putting sand in the bucket.
C. There's a teacher at the sandbox. Right there.
C. This is a long one!

R. What are you doing now?
C. Tried to put sand on the plate.
Child Name: RB 2/B
Classroom: Rainbows

Children Interview Questions:

R. Can you tell me what you see?
C. I see me and D. playing in the sandbox.

R. So you are playing with D.?
C. Yeah.

R. What are you playing with?
The wagon, and I bump it.

R. You bump it?
C. Yeah.

R. Do you like playing in the sand?
C. Uh-huh.

R. What do you building in the sand?
C. Sandcastles.

C. And there's D. again.

R. Where did you go?
C. I'm way over there.

C. I was, I was...since he wasn't really playing with it, I just picked it up. Because he was paddling it with the shovel. He picked it back up and he was looking at me.
Child Name:  RB 3/B
Classroom:   Rainbows

Children Interview Questions

R. Can you tell me what you are doing?
C. Going in the water.

R. Are you playing with anything?
C. Gloves.

C. I’m on TV!
Verbatim Responses of Children: Sea Turtles (MA) Classroom

Interview of Children's Knowledge, Attitudes, and Perceptions of Play Among Single-age and Multi-age Settings

Child(ren) Interview Questions

Child Name: ST 1/G
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?
C. I see me.

R. Can you tell me what you are doing?
C. I'm playing with Jy.

R. Can you tell me what you are playing?
C. I'm playing lions. I'm playing with a mommy lion and a daddy lion.

R. Do you like lions?
C. Yes

R. Do you like to play with lions?
C. Yes

R. Do you want to see more of the movie?
C. Yes
Child Name: ST 2/G
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?
C. Nod [nonverbal]
C. Yeah.

R. Can you tell me what you are doing?
C. I am eating ice cream.

R. Was it yummy?
C. Nod [nonverbal]

R. Do you remember eating that ice cream?
C. Nod [nonverbal]

R. Do you like strawberies?
C. Nod [nonverbal]

R. Can you tell me what you are playing?
C. No response.
Child Name: ST 3/G
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?
C. I see sand and umm...and I am talking to him.

R. Can you tell me what you are playing?
C. We are playing in the sandbox.

R. Are you playing with anyone in the sandbox?
C. I am playing with Br. and uh...Ol.

R. With Br. and??
C. Ol.

R. Are you building something together?
C. I'm playing, well...I'm digging it.

R. Is it neat seeing you?
C. [Nod head]
Child Name: ST 1/B
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?
C. I see, I see...ummm...I see...I see Henry.

R. Do you see yourself?
C. Yeah, I see me.

R. Can you tell me what you are doing?
C. I'm playing.

R. Can you tell me what you are playing?
C. Animals.

R. Are you playing with someone or by yourself?
C. Playing with someone. I'm playing with Md., Ry., Ol., and me.

R. Are you playing animals?
C. Yeah.

R. Did you have fun?
C. Yeah.

C. I look silly. (responded by himself)

R. Are you building something?
C. Yeah.

R. Your building a house?
C. Yeah, a house.

C. Uh-oh!

R. What happened?
C. Md. stepped on it.

R. So, who are you building the house for?
C. Ol.

R. Do you want to see more?
C. I'm finished.
Child Name: ST 2/B
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?
C. I see puzzles.

R. Can you tell me what you are playing?
C. Jy.

R. Are you building something together or helping him out?
C. Nodded to helping him out. [nonverbal]

C. I see H.
C. I can’t see his face.
C. I can’t see my mouth.

R. Do you like building puzzles?
C. Yeah. I tried, but I couldn’t.

R. You want to tell me anything else?
C. I see a ladybug right there.
C. I see Jy.’s shoes.
C. Jy. thinks this isn’t a mirror.
R. What do you think it is?
C. A box

C. I see Mr. Dd. [on his own]
Child Name: ST 3/B
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?
C. Umm... Umm... a monster puzzle. Umm... puzzle pieces and Ays.

R. Can you tell me what you are doing?
C. Umm... squishy bags.

R. Are you sitting on the bag?
C. Yeah.

R. Can you tell me what you are playing?
C. Ea.

R. What are you doing?
C. Ea. is grabbing my hand.

R. Is it neat to see yourself?
C. Yeah.
C. I want to see Mr. Dd. too, he’s my friend.

R. Did Mr. Dd. take your squishy stuff?
C. Yeah.
C. My mommy’s here.
Child Name: ST 4/B  
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?  
C. I see Ms. Kel. and me and Br.

R. Can you tell me what you are doing?  
C. I am doing building a puzzle.

R. Can you tell me what you are playing?  
C. I am..I’m playing with that puzzle with Br. there.  
C. That’s me with that shirt right there.  
R. What shirt is that?  
C. Mine.

R. Do you like puzzles?  
C. Yeah, I like that puzzle the best.

R. Why?  
C. Because, because it’s not hard.

R. What is that drawing on the puzzle?  
C. What? Yeah, its monsters. They are happy monsters and they are good guys.

C. Look it! I see Ms. Kel. [on his own]  
C. Now I’m finished with the puzzle.

R. Is that a new friend that came by?  
C. No, that’s Ry.

C. See? We are almost with the puzzle. [On his own]  
C. Look at my shoe! It was sticking out.
Child Name: ST 5/B
Classroom: Sea Turtles

Children Interview Questions:

R. Can you tell me what you see?
C. Yeah.

R. Do you see yourself?
C. Yeah.

R. Can you tell me what you are doing?
C. Yes.

R. Is that one of your friends?
C. Yes, Jt.

R. Can you tell me what you are playing?
C. No response.

R. Are you playing in the sand?
C. Yes.

R. Are you playing with anyone?
C. No response.

R. I see you shoveling, are you building something?
C. Yes, a fire.

R. Do you want to see more of yourself?
C. Yes.

R. Do you like playing in the sand?
C. Yes.

R. Would you like see more?
C. Yes, see more.

R. Are you playing by yourself here?
C. Yes.

C. There is C. [On his own]
C. That’s K. and that’s Hn.
APPENDIX I

VERBATIM RESPONSES OF TEACHER SURVEY QUESTIONS [T]
Verbatim Responses of Teacher Survey Questions [T]

<table>
<thead>
<tr>
<th>[T] Question #1:</th>
<th>Response:</th>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td>I describe play as:</td>
<td>Key words: exploration, discovery, learning, interaction.</td>
<td>Key words: manipulating, important</td>
<td>Key words: No Response, don't know</td>
</tr>
<tr>
<td>An interaction in which children explore and imitate basic concepts of life. [2]</td>
<td>Manipulating the environment for one’s own amusement in order to learn basic and essential skills. [1]</td>
<td>A very important part of the childhood development. Through play children learn about colors, shapes, cause and effect, and themselves. It is a way for them of communicating joy, fear, sorrow, and anxiety. [6]</td>
<td></td>
</tr>
<tr>
<td>Fun and an experience that every child should experience. Children learn from experience and what better experience is there than play. [3]</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Children discovering and learning through various activities. [4]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>An opportunity for children to explore and learn through experiences that allow for development of social, cognitive, fine/gross motor and language skills. [5]</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The way children explore themselves, their friends, and their environment. Play as a form of exploration and learning of the necessary skills needed to succeed in life. [7]</td>
<td></td>
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</tr>
</tbody>
</table>
**[T] Question #2:**

*I see children in my classroom play in the following ways:*

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> solitary, cooperative, parallel, onlooker, associative play, small groups</td>
<td><strong>Key words:</strong> exploration, role playing, running, jumping, toys</td>
<td><strong>Key words:</strong> No Response, don’t know</td>
</tr>
<tr>
<td>Solitary play, cooperative play and all types of play in between. [1]</td>
<td>Running, jumping, building, knocking over, talking, reading, singing, laughing. [4]</td>
<td></td>
</tr>
<tr>
<td>Associative play, cooperative play, and some onlookers, and solitary play. [2]</td>
<td>Through exploration and manipulation of objects, pretend play or role playing, literature such as books or environmental print, sensory discoveries, trial and error, and engaging with peers or adults. [5]</td>
<td></td>
</tr>
<tr>
<td>Solitary, parallel. We encourage group play as well. [3]</td>
<td>Because I mainly work with very young infants, I see play as a way for them to start working on those large muscle tones like holding their head up to look around and see what toys made that noise, rolling over to get to a toy next to them, beginning to crawl to chase after the ball that rolled over and beginning to walk to explore the whole classroom. [6]</td>
<td></td>
</tr>
<tr>
<td></td>
<td>On their own, with small/large groups, as an addition to others plays, and as an observer. [7]</td>
<td></td>
</tr>
</tbody>
</table>
**[T] Question #3:**
*How do you describe the value of play to a parent(s)?*

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key words: essential</td>
<td>Key words: growth, experiences, self-discovery, exploration, outcomes</td>
<td>Key words: academic skills, lessons</td>
</tr>
<tr>
<td>It’s essential to a child’s development. [4]</td>
<td>With past experiences and in a way that they will understand that play elicits many growth experiences in children (social, motor, cognitive, etc.) [3]</td>
<td>I try to point out the skills focused on in typical or everyday activities. I point out opportunities to work on “Academic skills” within “play” activities. [1]</td>
</tr>
<tr>
<td>Most of the infants learning come through play. Infants are engaged in the vigorous process of self-discovery, learning the world by looking, listening, chewing, smelling, and grasping. They need safe toys that appeal to all of their senses and stimulate their interest and curiosity. [6]</td>
<td></td>
<td>Play is an area that young children learn many lessons and where they are free to be individuals. [2]</td>
</tr>
<tr>
<td>As I described in question 1. I also talk about how every toy, material, book, activity, etc. has a purpose in the child’s play. It is their way at exploring their world. [7]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>By explaining or giving examples to the parents how their child’s play affects the outcome of knowledge of the world around them. They learn how to cope socially, how to prepare for the home and work force responsibilities, how to understand that pictures and words have meaning, and try to communicate by drawing or writing. They also learn perseverance and problem solving strategies. (Hopefully they learn how to spell than I do 😄) [5]</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**[T] Question #4:**
*When do you observe children engaging in play?*

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> All day, everyday</td>
<td><strong>Key words:</strong> During school, outside, home, work</td>
</tr>
<tr>
<td>Throughout the school day. [1]</td>
<td>During free center choice, outside time, even in circle time ☺ [2]</td>
</tr>
</tbody>
</table>

All day. [3]

All day in my class and at home with my kids. [4]

All day, everyday! In the classroom, on the playground, when they are transitioning, during snack, in the bathroom. Every moment with them is an adventure to be concurred. [5]

All day long. ☺ In every center, with every activity. [7]

I have to say all the time. For infants, play happens even when they get their diaper changed, by singing songs, practicing talking and other things. When they are all sitting on a soft mat with all kinds of toys and they are reaching and grasping toys that another child is holding. [6]
### [T] Question #5:
*Is indoor play different than outdoor play?*

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> yes, absolutely, indicates difference</td>
<td><strong>Key words:</strong> No, not really</td>
</tr>
<tr>
<td>Boundaries are placed to help the children be safe.</td>
<td>No, just different settings.</td>
</tr>
<tr>
<td>As a result, indoor play is less active, more quiet. [1]</td>
<td>Children still practice the same fundamentals of play whether indoor or outdoors. [2]</td>
</tr>
</tbody>
</table>

Absolutely. Children get more sensory experience (in my opinion) outdoors. There are many different smells, textures, etc. indoors and outdoors. [3]

Yes. At times. Social engaging and strategies used many differ. Their movements are bigger and voices are usually louder while outside. [5]

Yes, very much so. Outdoor play children can go on nature walks, talk about nature and practice more of those gross motor skills. Indoors is more about sensory, art, snack, etc. [6]

Because it is a consistent group of children that play indoors, play becomes consistent as well as progressive. At outdoor play, the group is constantly varied. [7]
**Question #6:**
*What concerns you about children's play?*

<table>
<thead>
<tr>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> aggressive, rough play, safety, cliquish</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> adult assistance, importance of play</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> cliquish</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>If their play is too aggressive or not. [2]</th>
</tr>
</thead>
</table>

| Adults need to assist children’s growth through scaffolding in play situations. Left on their own children will learn many things. A lot more can be internalized with adult assistance. [1] |

<table>
<thead>
<tr>
<th>When groups become “cliquish.” [7]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Rough play, children that don’t yet know soft touches rather pulling hair, hitting, etc. [3]</th>
</tr>
</thead>
</table>

| That no matter of their age, they don’t get enough of it! Children of all ages need play to learn. “One must have fun in order to learn something!” [6] |

<table>
<thead>
<tr>
<th>Getting too rough. [4]</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Safety first and foremost. Environments need to be structured in a way to promote independence and exploration, but also limit the possibilities of injury. [5]</th>
</tr>
</thead>
</table>
[T] Question #7:
Given the current media focus on academics for young children in Pre-K programs, has this influenced your perception of play among young children?

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> yes</td>
<td><strong>Key words:</strong> no</td>
</tr>
</tbody>
</table>

Yes, it seems that children begin to develop their cognitive skills at a younger and younger age. I would like to teach more academically to their needs and foster their learning skills with technology and literacy rich electronics to keep up with their future demands. Even my own daughters were spelling with lap held devices at 3 and 4. It also promotes fine motor skills, cause and effect, eye-hand coordination and can be visually engaging for a child who might not be able to attend to a task for long periods of time. We as parents/teachers/students are required to use electrical devices in our daily lives and our children see that. When I put a calculator in my classroom every child used it as a cell phone because they recognized that it had numbers. If we teach by example then we should be allowed to teach with the things the children see us using every day. Most families may put the TV on to entertain their children while they go and “play” on the computer. I think that “play” has become ambiguous, while socialization has diminished. Every child needs to have a healthy balance of both. [5]

Yes! As I mentioned above, children and adults learn best when there is play involved, when one has fun with it! [6]

It has made me more aware of the need to allow children to explore their world on their own with adult assistance when needed. A child must be able to understand themselves (strengths, weaknesses, needs, wants) before they can

No. I feel children learn through play. Therefore, the drill techniques that the media is focusing on would not work for every child. [2]

No. [4]
I have always thought children learn most from play and other experiences. Academics is important but I still believe play can impact children more.
APPENDIX J

VERBATIM RESPONSES OF PARENT SURVEY QUESTIONS [P]
**Verbatim Responses of Parent Survey Questions [P]**

<table>
<thead>
<tr>
<th>[P] Question #1: I describe play as:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Response:</strong></td>
<td><strong>Response:</strong></td>
</tr>
<tr>
<td>Key words: having fun, interaction, using imagination, exploration</td>
<td>Key words: unstructured, little structured activity</td>
</tr>
<tr>
<td>Children having fun doing things they like to do. [1]</td>
<td>Unstructured or little-structured activity that my preschooler is getting more and more interested in structured play (duck duck goose, for example) and board games. [16]</td>
</tr>
<tr>
<td>Social interaction between two children. [2]</td>
<td>Unstructured or little structured activity. [26]</td>
</tr>
<tr>
<td>Time to explore new things, time for interaction with others and self, time for exercise and time for fun. [3]</td>
<td></td>
</tr>
<tr>
<td>Using imagination, interacting with others and exploring. [4]</td>
<td></td>
</tr>
<tr>
<td>Pretending, talking and having fun with another child or children. [5]</td>
<td></td>
</tr>
<tr>
<td>Interaction in a social setting. [6]</td>
<td></td>
</tr>
<tr>
<td>Any activity a child engages in that is physical or stimulates imagination. [7]</td>
<td></td>
</tr>
<tr>
<td>Fun experiences for the purpose of exposure and learning. [8]</td>
<td></td>
</tr>
<tr>
<td>Free time to play as they desire. [9]</td>
<td></td>
</tr>
<tr>
<td>Anytime a child engages in an activity that is enjoyable to them. [10]</td>
<td></td>
</tr>
<tr>
<td>Activities that foster creative thinking encourage independence; provide physical and emotional wellness- fun. [11]</td>
<td></td>
</tr>
<tr>
<td>What she does pretty much every moment of the day. The world is a playground to her. Even turning the light off and on is</td>
<td></td>
</tr>
</tbody>
</table>
Children interacting with each other or a child using toys or their imagination. [13]

Having fun, using imagination, being creative, basically anything that is interesting, fun, active. [14]

Active, energetic parrots TV. [15]

Playing with the same toys, exchanging toys or sharing. [17]

Having fun. [18]

Any activity that stimulates the mind but not in a formal classroom environment. [19]

Fun, unstructured, free-form, interactive, and safe. [20]

Activities that engage children in enrichment. [21]

Kids having fun and learning without even realizing it. [22]

Self-motivated to interact with others or self. Using ones imagination. [23]

Away children learn. Play is how children understand their world. Children develop socialization skills by playing with other children; learn to solve problems, strength language development. Play is the opportunity to manipulate objects, work with creative materials- creatively organize games. [24]

Using objects and practicing behaviors (e.g. using a shoe as a phone), and running, playing chase with siblings or friends, touching objects, interacting with others.
Fun, entertaining and many times educative. [27]

Children being given freedom to do whatever they want to do. Children can play individually or with others. Children can use toys, objects, or nothing to engage in play. Often, play includes the use of the child’s imagination. [28]

Interaction between children. [29]

An opportunity for my daughter to explore toys, games, playground equipment where she learns hand eye coordination, social skills, etc. [30]

When you are able to choose your activity and how to use the materials around you with the goal of having fun. [31]

The kids’ jobs at young ages. [32]

An exaggerated imitation of alternative experiences using artifacts, routines, extraordinary situations, interpersonal relationships, etc. [33]

An opportunity for children to explore social roles, solve problems, and interact with environment. [34]
**[P] Question #2:**

*At home, I see my child(ren) play in the following ways:*

<table>
<thead>
<tr>
<th>Response:</th>
<th>Key words: wrestling, toys, siblings, pretend play, dolls, running, climbing, building</th>
<th>Response:</th>
<th>Key words: no response, vague response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wrestling, climbing, running, building, reading, jumping.</td>
<td></td>
<td>See above. [25]</td>
<td></td>
</tr>
</tbody>
</table>

With her brother and by herself- loves to play with her dolls, great imagination- fun to watch. [2]

Outside with toys, inside with books, computer, riding bikes. [3]

Role playing, singing, dancing, reading, coloring, using toys and other objects to explore. [4]

Dressing up, talking to dolls, singing, using imagination. [5]

Usually together and most of the time the younger one is trying to keep up. [6]

They roll play teacher and do a lot of pretend play. Use imagination and enjoy outside play. Swing set, bike riding, and fort play. [7]

Holding/shaking rattles. [8]

Playing with toys, exploring, running around, climbing. [9]

My children enjoy many types of play from pretending with costumes and cardboard boxes, cooking with mom and dad, manipulating their toys and singing songs. [10]

Read books, puzzles, blocks, dolls, running. [11]

Going through tunnels, banging on the piano, playing in her bounce house, snuggling dolls, riding horse, pushing walkers, reading books, playing with puppets, peek-a-boo, dancing and singing. [12]

With her toys, with our dogs. [13]

Outdoors-riding bikes, swinging, sliding, digging in the
sand, running, jumping. Outdoors and building, pretending, doing puzzles, coloring, board games. [14]

Action based, some board games. [15]

Drive cards around, build with blocks, stack and sort items, play pretend, run around/dance, wrestle/tickle. [16]

Climbing, running, riding on vehicles throwing balls pretending with dolls. [17]

Playing with toys or other objects, playing with his parents (chase, etc.), playing with cats, drawing, running, etc. [18]

With toys, babbling with parents or to herself. [19]

Lots of “pretend” play involving princesses or teacher/student scenarios. The 2 year old uses Barbie’s and other dolls. The 4 year old is more interested in creating and acting out her own scenarios. [20]

Role playing, imaginative play with figures, cooking (modeling), reading, dancing. [21]

Make-believe, telling stories, running/jumping/skipping, laughing, with toys, puppets, arts & crafts, sand box, swimming/water play, etc. [22]

With toys, building or dancing to his own beat and playing with his brother. [23]

Legos, dramatic play, art, activities, writing activities, blocks, riding bikes, sand/water play. [24]

Touch and examine objects, play pretend, manipulate and sort objects, wrestle/dance. [26]

They explore with nature in the backyard. They ride bikes, they play with ball. We learn the alphabet and shapes, music is big. [27]

Pretending and using their imagination is a common theme, copying actions or recreating events that have occurred is also common. (Vygotsky’s observations) [28]
With sibling, with toys, with parents. [29]

Independently, dramatic play with role playing, drawing/writing. [30]
Using kitchen toys to pretend play, caring for a baby doll, using action figures to act out scenes, running and play in. [31]

Pretend play- pretending to be mommy/baby or monster/hero. Computer play- problem solving. Coloring/art, building/creating. [32]

Imitating parents' routines, particularly mother's, interests in puzzles and games which challenge thought, treatment of toys as animate, feeling people/pets, role playing, etc. [33]

Chasing, imagining/pretend, dancing, dressing up, running/jumping/tumbling. [34]
**Question #3:**  How do you describe the value of play to a teacher(s)?

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words:</strong> extremely, important, high-importance, valuable.</td>
<td><strong>Key words:</strong> semi-important</td>
<td><strong>Key words:</strong> no response</td>
</tr>
<tr>
<td>Play is important to a child’s growth. [1]</td>
<td>As a medium to facilitate learning. [8]</td>
<td>Same as #1. [11]</td>
</tr>
<tr>
<td>Very high-important for social development. [3]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play is a way to develop motor skills as well as intellectual development. I think it is important for teachers to know how to play to teach children especially young children. [4]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I believe it is extremely important. [5]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very important that they learn to play nicely and respectfully. Sharing is very important. [6]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very valuable. Play shows teachers children social skills as well as imagination and creativity. [7]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Play is critical to child development and learning. [10]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Very valuable. [12]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Playing allows children to interact with each other and apply social skills (sharing, taking turns, communication). Children are also able to use their imagination and role-play. [13]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extremely valuable- it lets kids be kids. Play lets them explore and use their</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
imaginations. [14]

Encourages imagination. [15]

The basis of learning for children. [16]

I think it is invaluable in teaching through mimic and repeating. [17]

It's part of development, exploration, learning. [18]

Play is necessary for children to express what they experience in everyday life, helping them work through social issues, complexities, etc. [20]

It allows teachers to see how children interact with each others, adults, educators, and their environment. [21]

It is great for imagination, sharing, taking turns, recognizing the feelings of others, exercise, and socialization. [22]

It helps provide the teacher the understanding for each kids level of social skills, verbal and nonverbal, and motor skills. [23]

Play is valued in a classroom because children learn through manipulation of materials and hands-on experiences. This may look like senseless play but it is actually play with a purpose. [24]

I haven’t- but if I had to, I think it’s an important learning tool. [25]

Play is how children learn about the world and each other. [26]

To me it motivates children and keeps them interested in specific subjects. [27]
I think all teachers cannot be grouped in the same category as valuing play or not valuing it. I think all teachers fall somewhere on a continuum. I would expect pre-school teachers to value play more than elementary teachers, and I would expect play to be undervalued in general. [28]

It enforces communication and build relationships among children. [29]

The teachers here understand that their students learn through play. [30]

Play should give teachers the opportunity to observe children and give insight into activities the child enjoy as well as monitor social development. [31]

I shouldn’t have to explain to a teacher. I would expect teacher to explain it to me. To a parent, children learn to speak and communicate cultural values and socialize from play. [32]

Play allows a teacher to impart ideas through students’ experience, teaching via individual discovery. It also serves as a tool to personalize lessons, place daily schedules, and support prosocial behaviors. [33]

Play is the work of children and vital to their development. Play for children is just as, if not more important than academic instruction. [34]
**[P] Question #4:**  
*When do you observe children engaging in play?*

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Key words: all the time, daily, everyday</em></td>
<td><em>Key words: home, work, outside, social settings, playground</em></td>
<td><em>Key words: no response, doesn't understand the question</em></td>
</tr>
<tr>
<td>All the time. [3]</td>
<td>At home, at work. [1]</td>
<td>When they play- various times (I don't understand this question). [18]</td>
</tr>
<tr>
<td>All the time! [10]</td>
<td>Play groups, different social settings. [2]</td>
<td></td>
</tr>
<tr>
<td>Again, all the time. [12]</td>
<td>At home at school, at the park. [4]</td>
<td></td>
</tr>
<tr>
<td>Depends upon the environment: daycare play occurs more often and it is more easily observed than play in public community places (grocery stores, schools, in cars, etc.). Often the availability of engaging toys seems to determine observable play (i.e. doctor's office, public gyms, library, parks, etc...). [8]</td>
<td>At home and some play classes they attend. Gymboree, My Gym, etc. [6]</td>
<td></td>
</tr>
<tr>
<td>All the time. [19]</td>
<td>At home and at work. [7]</td>
<td></td>
</tr>
<tr>
<td>Daily- as I am a teacher. At home, at school, and at community events/classes. [22]</td>
<td>At home, at preschool-limited. [9]</td>
<td></td>
</tr>
<tr>
<td>Always, any opportunity for play is taken by a child. [28]</td>
<td>At home- at the park- at school. [11]</td>
<td></td>
</tr>
<tr>
<td>All day. [30]</td>
<td>Alone or in groups. [13]</td>
<td></td>
</tr>
<tr>
<td>Any time they are not sleeping. [32]</td>
<td>Mainly at home or at the park. [14]</td>
<td></td>
</tr>
</tbody>
</table>
At home, in preschool, in the street (occasionally). [16]

At daycare, on the playground. [17]

When they're at home with me, they play almost all the time. Afternoons and evenings are the most active playtimes. [20]

At home. [21]

At home when my boys play together or with their cousins. At the park or on playgrounds. [23]

At my elementary school on the playground, at UNLV preschool, in my house, neighborhood playground. [24]

At home and some times at preschool. [25]

At home with my two little ones and at the playground and at preschool. [26]

When they meet other kids or during playtime with friends and at home they play mostly all day. [27]

During down time at home or on play fields on weekends. [29]

Only at preschool when I come pick her up or if we get together with friends
with young children. [31]

After work, on weekends, in public. [33]

On playgrounds, in the home, at school during all parts of the day. [34]
[P] Question #5:
*Is indoor play different than outdoor play?*

<table>
<thead>
<tr>
<th>Response: Key words: yes, of course</th>
<th>Response: Key words: no, not really, somewhat</th>
<th>Response: Key words: yes/no, maybe, sometimes, not quite sure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes. [2]</td>
<td>Not really, it may involve different activities but play is play. [1]</td>
<td>Yes and no- more energy is exhausted in outdoor- but both are requiring children to use their imagination. [23]</td>
</tr>
<tr>
<td>Indoor play tends to be a little more reserved and calm. Outside play generally involves more running, jumping and physical activity. [4]</td>
<td>No, types are but goals/outcome are the same. [3]</td>
<td>I don’t see a difference other than the things they have access to. When they engage in imaginary play. [20]</td>
</tr>
<tr>
<td>It seems indoor play is more mental development and outdoor more physical. [6]</td>
<td>I don’t think so. [5]</td>
<td>Sometimes. Indoor play is quieter and takes up less space (usually). Outdoor play tends to be more physical and use more space. Of course, there are exceptions. [28]</td>
</tr>
<tr>
<td>Yes- outdoor play is much more physical- more chance to burn off energy. Kids feel more free and open outside. Inside play tends to use more toys, arts, music-need objects- outside they can just run and play with no toys. [7]</td>
<td>Typically outdoor play is more physical but my children are just as physical indoors as out. [10]</td>
<td></td>
</tr>
<tr>
<td>Of course, different environment and toys. [9]</td>
<td>The toys, props, and games differ between indoor and outdoor play but the play routines of children may be the same. [8]</td>
<td></td>
</tr>
<tr>
<td>Yes. Outdoor play is often more physical…fresh air is good. Indoor play can be more cognitive and calming.</td>
<td>No. [13]</td>
<td></td>
</tr>
</tbody>
</table>
Yes, primarily due to the difference between indoor and outdoor toys and settings. [12]

Yes- in terms of what they have at their disposal to play with and the amount of space they have to play in. [14]

Yes when outdoors their surroundings can offer stimulus naming objects picking up and collecting things. [17]

It's indoors; some of the things to play with are different. [18]

It is different in the limitations, but it promotes similar stimulations. [19]

Yes, less explorative. [21]

Yes! It doesn’t have to be, but generally outdoor play is more intense and more physical active. [22]

Yes- indoor play is more space limiting. [25]

The objects are different (or can be different. [26]

Not so much. [15]

Not really- the material to play with can be different. [16]

I think outdoor play is an extension of the indoor curriculum- the same skills are learned- language acquisition, problem solving, social skills, and organization. [24]

Yes, but only because we put more limits on noise and activity level on indoor play. Kids would probably play the same way without adult guidelines. [31]
Depending on the outdoor place. Yes- indoors to me usually means playing with toys- outdoors mostly running, exploring. [27]

Yes. [29]

Different only because of the equipment but they are still engaged in play and are having fun while learning. [30]

It would be the same of I allowed it...I require kids to use inside voices- not climb on furniture, not throw. So indoor play tends to lie less physical. [32]

Outdoors there are rarely limited borders, and when there are they can usually be seen through or ignored. Indoors, play is naturally more structured and reflective of the traits inherent to the space. [33]

Yes, some types of play that typically occur outdoors aren't appropriate in rooms of the house or classroom (e.g., sports, running, etc.). [34]
**[P] Question #6:**
What concerns you about children's play?

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Key words: roughness, bullying, safety, supervision, taking control, too dangerous</strong></td>
<td>Nothing really (maybe enough supervision). [5]</td>
<td>No response. [6]</td>
</tr>
<tr>
<td>If it gets too rough. [1]</td>
<td>Nothing. [10]</td>
<td>I do not understand the question. About my own children, I worry that my autistic son does not play with others and does not engage in pretend play. In general, I worry when I see children engaging in dangerous play (jumping off the roof) or inappropriate play that suggests a child may have been abused. [32]</td>
</tr>
<tr>
<td>She tends to want to take control of situations and can be bossy at times. [2]</td>
<td>Not much. [18]</td>
<td></td>
</tr>
<tr>
<td>Getting along with friends. [3]</td>
<td>Not much, as long as they are participating they are usually having fun. [27]</td>
<td></td>
</tr>
<tr>
<td>Too much exploration- can sometimes lend itself to dangerous or potentially dangerous situations. That is why it is important to have supervision and guidance during play. [4]</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sometimes 1 child will be more aggressive and pushes their “Ideal” of play on others. Aggressive kids become bullies. [7]</td>
<td>Nothing when play is alone. When children play together, I feel, for the most part, that they can handle play on their own without adult interference; of course children need guidance when it comes to hitting and inappropriate behavior (e.g. manners), and these concerns me. [28]</td>
<td></td>
</tr>
</tbody>
</table>
It's becoming less child-directed, open-ended, and imaginative. [8]

Making sure they are supervised. For example, my child was eating chalk one day while playing outside. Having enough staff to supervise the children is the most important concern, especially when playing as a group. [9]

Safety. [11]

Tantrums caused by frustration, they are the only thing that is challenging about play. [12]

Safety. [13]

Getting too rough- making sure there is appropriate supervision to prevent any problems. [14]

Some violent activities. [15]

Just safety concerns- particularly, one child hurting another while playing. [16]

Not being able to share and the melt downs ensure [17]

That being an only child she doesn't get enough socialized playtime. [19]

At school! I prefer play to be supervised to ensure it doesn't become
inappropriate, violent or controlling. [20]

The talk about guns, killing, fighting, etc…[21]

Children of different ages, developmental abilities and sizes playing together- kids too old exposing younger kids to things inappropriate, kids getting hurt form others or equipment and kids not being watched carefully. [22]

I don’t think they get enough play time with adults- we seem to be so busy. [23]

Adults are too involved when children are organizing or having a dispute when playing. These two situations afford children the opportunities to problem solve. Adults need to step back let children work through these situations. [24]

That it is safe there is a variety and allows children to interact with one another. [25]

Safety concerns- and for older children concerns about bullying. [26]

Fighting. [29]

Some children have not been in preschool before and do not know how to
interact/share/play with other children so they get hurt. [30]

Just making sure it is not aggressive and that they have time to just be kids. [31]

Striking a balance between fantasy, and reality, self and society, self-learning and taught learning, structure and freedom. [33]

How well she plays with others (and the role she assumes in a play group/setting). [34]
**Question #7:**
*Given the current media focus on academics for young children in Pre-K programs, has this influenced your perception of play among young children?*

<table>
<thead>
<tr>
<th>Response:</th>
<th>Response:</th>
<th>Response:</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Key words: yes</em></td>
<td><em>Key words: no, not based on media influence</em></td>
<td><em>Key words: not aware, parent(s) own thoughts</em></td>
</tr>
<tr>
<td>Yes, see above response. [8]</td>
<td>No. [1]</td>
<td>I like play that also teaches them skills and values. [6]</td>
</tr>
<tr>
<td>Yes, appreciate the non action based media focus. [15]</td>
<td>No. [2]</td>
<td>I’m not aware of this current focus- I rarely watch TV. [16]</td>
</tr>
<tr>
<td>Yes, I try to make play time a learning experience all the time. [19]</td>
<td>No. [3]</td>
<td>N/A- I’ve not noticed this focus, so it hasn’t influenced my perceptions. [18]</td>
</tr>
<tr>
<td>Yes, I only try and buy educational toys. [21]</td>
<td>My perception of play among young children has changed over the years, but I don’t think it is based solely on the media influence. My own education and involvement in ECE has had a more powerful influence on my perceptions. [4]</td>
<td>In high quality preschools academic learning is playful and exploratory. Children contribute their own ideas, use their own problem solving strategies and pursue their own interests. Skilled teachers are able to weave in academic goals as they build on what children can do and challenge them to try new things. Using play to build success does not mean the curriculum is not academic. [24]</td>
</tr>
<tr>
<td>Yes. [29]</td>
<td>No. [5]</td>
<td>I rarely watch TV, so I’m not familiar with that media focus. [26]</td>
</tr>
<tr>
<td>Yes- play has been overly neglected and children are likely to become less successful in social/emotional and physical aspects of adulthood. More play! [34]</td>
<td>No. [7]</td>
<td>I think academics are, of course important; however, I feel they are overvalued. I think play is undervalued. Play is an essential aspect of children’s development.</td>
</tr>
</tbody>
</table>
No, not at all. What is “the current media focus on academics?” [9]

Not really. We do limit TV, and encourage imagination development. We don’t push her to do anything she doesn’t like just because we’re “supposed” to be doing something. [11]

No, I think at this stage learning and playing go hand in hand. A great portion of their discovery of the world stems from play. [12]

No, playing is one way that children learn. [13]

Not really. [14]

No. [17]

No. Children have many many years to focus on academics. In their early years, permission to simply be a child is essential. [20]

Not really. Students need educational play no matter their age. [22]

No- life is short we should all take a step back from trying to be the president of a company and embrace our best attributes and probably play more. Laughter is essential. [23]
No. [25]

No. [27]

No. Play is necessary for children of this age to learn. [30]
No, because we do not have broadcast television in my home. My perceptions of play come from my own experiences in a large family and as a parent as well as from my children’s teachers. [32]

Not much. I once taught pre-K English to Japanese children. That influenced me much more, mainly showing me how valuable play can be as educational too! [33]
REFERENCES


Connell, D.R. (1987). The first 30 years were the fairest: Notes from the kindergarten and ungraded primary (K-1-2). *Young Children, 42*(5), 30-39.


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