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THE RELATIONSHIP BETWEEN NUMBER OF TOYS, INFANT DISTRACTIBILITY, AND  
MOTHERS' TEACHING UTTERANCES

by

LAP VAN NGUYEN

B.S. InterAmericana University, 2006

A thesis submitted in partial fulfillment of the requirements  
for the degree of Master of Science  
in Department of Child, Family and Community Sciences  
in the College of Education  
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## ABSTRACT

The purpose of this study is to investigate the relationship among the number of toys in an infant's play environment, infant's distractibility, and how often a mother teaches her infant during a play session. This study takes samples from videotapes of 12-month old children playing with their mothers during a 5 minute free-play situation. Twenty-two mother and infant pairs were selected for this study based on their previous participation in a language study. The measures used in this study were: (1) the number of maternal teaching utterances to her infant; (2) the total number of utterances that mother used during the play session with the child; (3) the number of toys that were visible in the room; (4) the factors that distracted the infant during the play session; and (5) the type of toy the infant chooses to engage with.

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## INTRODUCTION

Vygotsky saw the nature and nurture theories of development not as opposing forces in a child's development, but as complimentary forces. As a socioculturalist Vygotsky focused on the "nurture" in ways that maximized a child's "nature" of his cognitive capacity. He described the learning environment of a child as one that includes a social partner interacting with the child in the child's zone of proximal development. Within the zone, the more advanced social partner sets up a framework, termed "scaffolding" in which the social partner works with materials and language to maximize the child's learning (Miller, 2011).

Each step of learning is ideally a step to have the child learn complex information, such as language production for an infant. Vygotsky believed skilled people supported the child in their accomplishments. Those people would construct their interactions and mold their level of support based upon how much assistance the child would need. He pointed out that it was important to understand that the child's behavior actively affects the adult's behavior as much as the adult's behavior affects the child. The child gets pushed into assembling new knowledge and abilities with the help of those adults around them.

Vygotsky also stated that play interactions created the zone of proximal development (Miller, 2011). In the zone of proximal development the child will, with the help of a more advanced partner (parent) work on learning information. For example, the child may play pretend with a broom stick, and treat it like a horse as the adult reacts and builds the child's fantasy play. The child learns to replace one object's meaning for another and thereby separate the object's meaning from the object itself (Miller, 2011). In the zone of proximal development, play creates the zone for the child so that he can function at a higher level than it is possible without the play setting the child would then separate the meaning of the object. Playing with

toys with an adult creates the zone for the child to learn to his capacity. Today, researchers who focus on Vygotskian theory see the environment as playing a highly critical role in a child's learning. Another theorist with a focus on environmental influences is Urie Bronfenbrenner.

Bronfenbrenner developed the Ecological System Theory, which also aligns itself with the environment making a significant impact on a child's development (Miller, 2011). His sociocultural beliefs are *contextual* approaches, which are closely associated with Vygotsky. Bronfenbrenner viewed his theory as Russian wooden dolls; he stated that each doll would represent a different level of context that influences a child's life that would range from; immediate face-to-face contact with other people which would be the smallest doll inside all the bigger dolls to a general cultural belief system which would be the level furthest away from the center doll and would be the biggest doll out of the entire set. Bronfenbrenner included aspects of sociology, anthropology, economics, and even political science in his theory (Miller, 2011).

Bronfenbrenner broke his *bioecological theory* into 4 stages:

1. *Microsystem* is "a pattern of activities, roles, and interpersonal relations experienced by the developing person in a given face-to-face setting." The setting includes (a) particular physical and material features and (b) other people with particular temperaments, personalities, and microsystems (Miller, 2011).
2. *Mesosystem* includes "the linkages and processes taking place between two or more settings containing the developing person." An example that Miller (2011) states set would be when a peer group in a school setting were to support or reject the parents' value system (Miller, 2011).
3. *Exosystem* "encompasses the linkage and processes taking place between two or more settings, at least one of which does not ordinarily contain the developing person." An

example would be the relationship of a parent's work place and home. A parent being stressed on the job can increase the parents' irritability at home, which could even lead to child abuse(Miller, 2011).

4. *Macrosystem*“consist of the overreaching pattern of micro-, meso-, and exosystems characteristics of a given culture, subculture, or other broader social context.” Also “belief systems, resources, hazards, life styles, opportunity structures, life course options, and patterns of social interchange that are embedded in each of these systems”(Miller, 2011). According to Miller (2011) the macrosystem is a general cultural “blueprint” that helps design the social structures and activities occurring at lower, more concrete levels. The “blueprint” acts as a guide for how parents, teachers, and other significant people in the child's life “consciously or unconsciously define the goals, risk, and ways of raising the next generation” (Miller, 2011, p. 205)

This study's theatrical framework emphasizes the *microsystem* of Bronfenbrenner's *secological-system theory* because of the age of the children. At 12 months, they are heavily dependent on their parents and face-to-face interactions, consists of the majority of the child's learning. The other 3 stages in Bronfenbrenner's *secological-system theory* will be important in the child's life but that won't be until in their later years of life.

#### Toys and Attention during Play

Moyer and Glimer (1955) defined attention span as the time during which a child continues with an activity without another person or thing distracting the child. In their study of 80 children of 2 and 4 years old, they have found that the interest span of the child with a play object was 1-½ minutes to 2 ½ minutes. The children in that study were given as much as 1 hour of free-play with toys laid out for them on the floor. The toys choices the children got to choose



were a truck, top, acorns, Tinker Toy, box, and a book during the play session. Researchers found that there was an enormous amount of shifting from one toy to the next with the children in what the researchers called a “distraction type of situation” (Moyer & Gilmer, 1955,p. 187).

Other research has shown that attention span increases with the child’s age. In a study by Van Alstyne (1932), 112 preschool children were given 25 play materials to play with during a free-play situation. He found that the average attention span for eight of the most popular toys averaged 7 minutes for two-year-old, 8.9 minutes for three-year-olds, 12.3 minutes for four-year-olds, and 13.6 minutes for five-year-old children.

In a study by Bertrand (1925), children who were 3, 4, and 5 years of age had an opportunity to play with a board game and the researchers timed how long the children played with the board game. Some of the children were told which board game to play and other children were allowed to choose a board game. They played with the board games as long as they wanted. The researchers found that children who chose their board game spent the most time playing compared to the children who were told which board game to play. The three-year-olds’ group spent an average of 10 minutes; the four-year-olds averaged 16 minutes, and the average of the five-year-olds’ group was 25 minutes on the game that they chose.

#### Attention versus Distraction in Young Children during Play

Ruff and Rothbart (1996) formulated a hypothesis that there are two attention systems (1) the earlier one which is highly influenced by the newness of objects and events around the infant (2) the later one in which self-generated and goal-oriented schemes and task are a major incentive for their sustained focused attention. According to Ruff and Capozzoli (2003) there is an important aspect of transition that occurs around the 12-month range as children begin to become accustomed to their new objects and events, which makes the newness a less determining

factor of their attention. The infant's second attention system may not be a strong factor until preschool years and should increase along with cognitive system and the infant should improve its self-regulatory skills (Ruff & Capozzoli, 2003). This literature is important to this study because it involves the population of 12-month old infants and gives an in-depth understanding of what factors are involved in the attention of the infant.

Research by Richards (1987) found that the speed in which infants turned away from a central target towards any external stimulus increased from 2 to 6 months of age. Distractors that combine both auditory and visual components are more likely to be more noticeable to infants than distractors like a simple sound or a simple sight that are auditory or visual themselves (Tellinghuisen & Oakes, 1997).

In the research of attention and distractibility Ruff and Capozzoli (2003) found that when they studied how children play with toys, they could be categorized into three levels: (1) casual, (2) settled, and (3) focused. *Casual attention* was defined as looking at toys with little evidence of interest or looking rapidly while moving through the toys. For older children casual attention will normally be shown when the child is looking around through the toys and putting them back down again. *Settled attention* is defined as a pause in a child's casual attention to look at and manipulate a particular toy. In this level of attention the child would not look at the toy very intensely and there might be some talking involved. *Focused attention* is defined as a concentrated attention that involved an intense thought process and minimal external body movement. In some cases the toy or object is brought closer to the child by the child.

## Attention Networks – Current Studies

In literature pertaining to attention networks, Brown, Weatherholt, and Burns (2010) have found recent advances in cognitive neuroscience and identified the three functionally independent attention networks that correspond to different anatomical parts of the brain:

1. Orienting—This network is responsible for the shifts in attention, controlling when the person engages and disengages out of attention.
2. Alerting – This network is for the ability to achieve and maintain attentiveness of the task.
3. Executive – This manages goal-directed behavior, target detection, conflict resolution, task switching, the inhibition of automatic responses, and the allocation of attention resources of the brain.

Brown, Weatherholt, and Burns (2010) state that the orienting and alerting networks generally begin to develop in infancy and the executive network begins to develop around the age of 2 years old. At around the ages of 4 – 7 years old there is significant development growth for all three networks.

## Distraction Studies

There have been numerous studies that have stated that a chaotic home environment distracts children from normal developmental learning. For example, Brown, Weatherholt, and Burns (2010) found that a home that is overcrowded, has inconsistent daily schedules, and has high noise levels is not conducive to learning. These kinds of distractions in a home environment have been shown to be especially influential to children from low-income households because the children are vulnerable to developing lower attention abilities (Dumas, Nissley, Nordstrom, Smith, Prinz, & Levine, 2005; Evans, 2004; Mezzacappa, 2004; Wachs, 1979). In homes with high levels of environmental distractions it has been shown that parents have high reports of

impulsivity, low attention focusing, low persistence and have low verbal responsiveness to their children. This low level of verbal responsiveness in particular relates negatively to the child's attention developing skills (Brown, Weatherholt, & Burns, 2010). It is also suggested that children living in chaotic homes may learn to filter out high levels of stimulation some of which may be beneficial to their development.

Maternal teaching or parental talk as referred to by Korat (2009) has been widely researched. In joint reading activities with their infants, parents may use different types of talk to facilitate the book's language and ideas in efforts to expand the child's knowledge. An example may be when a mother tries to help an infant comprehend the meaning of a book by making connections between the text and the images from the book, or even by rephrasing the text. As the infant grows, parents expand their strategies by talking about issues that go beyond the limits of the book's text, using what is called "non-immediate" (De Temple & Snow, 1996), "decontextualized" (Snow, 1983), or higher "distancing" talk (Sigel, 1982). This kind of teaching is illustrated by creating a connection between the text meaning and the children's own experiences, by making suggestions from the text meaning to other issues, or by discussing the print or the act of reading itself (Bus, Leseman, & Keultjes, 2000).

### Hypotheses

The hypotheses are: 1) the higher the toy count the more often the infant is distracted; 2) the higher the toy count, the lower the number of mother teaching utterances; and 3) the higher the number of times an infant is distracted the lower the number of maternal utterances.

## METHODOLOGY

### Participants

This study includes 22 mothers and their 12-months-old infants selected from a larger Parent Education/Home Visitation study. The mother/infants are part of a previous language study (Culp, Saathoff-Wells, 2004). The mean of the years of education completed by the mothers ranged from 8 years of education to 18 years. There were 36.6% of the mothers that completed 12 years of school, 22.7% completed 14 years, 13.6% completed 11 years, and 4.5% completed 8, 10, 13, 14.5, 17, and 18 years of schooling.

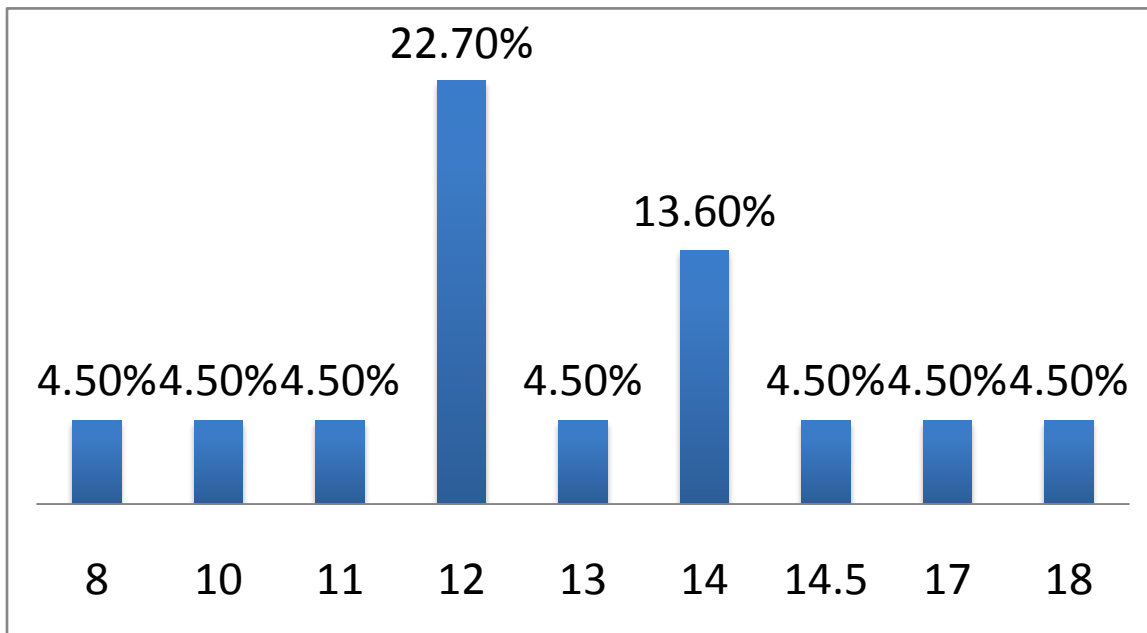


Figure 1: Mothers years of education completed

Furthermore, 81.8% of the mothers received a high school diploma or GED while the other 18.2% did not.

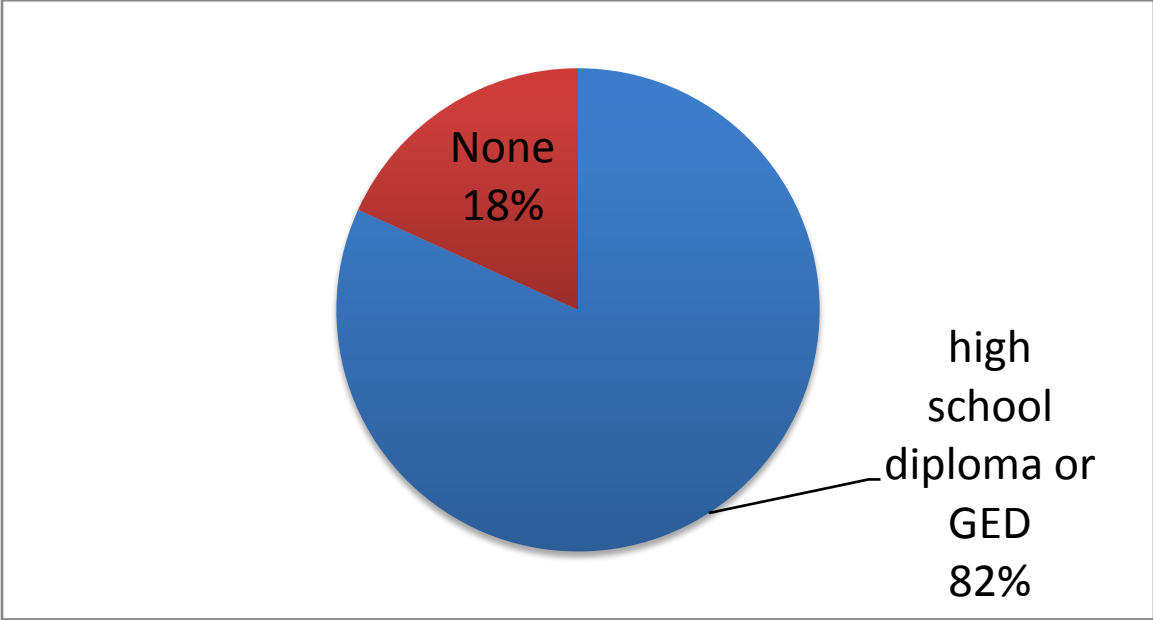


Figure 2: Mothers who received a high school diploma or GED

The mothers were 51.1% Caucasian, 22.7% Native American/ Alaskan Native, and 9.1% African-American or Other. Additionally the ethnic background of the mothers in this study accurately reflects the population of the people living in Oklahoma during that time period.

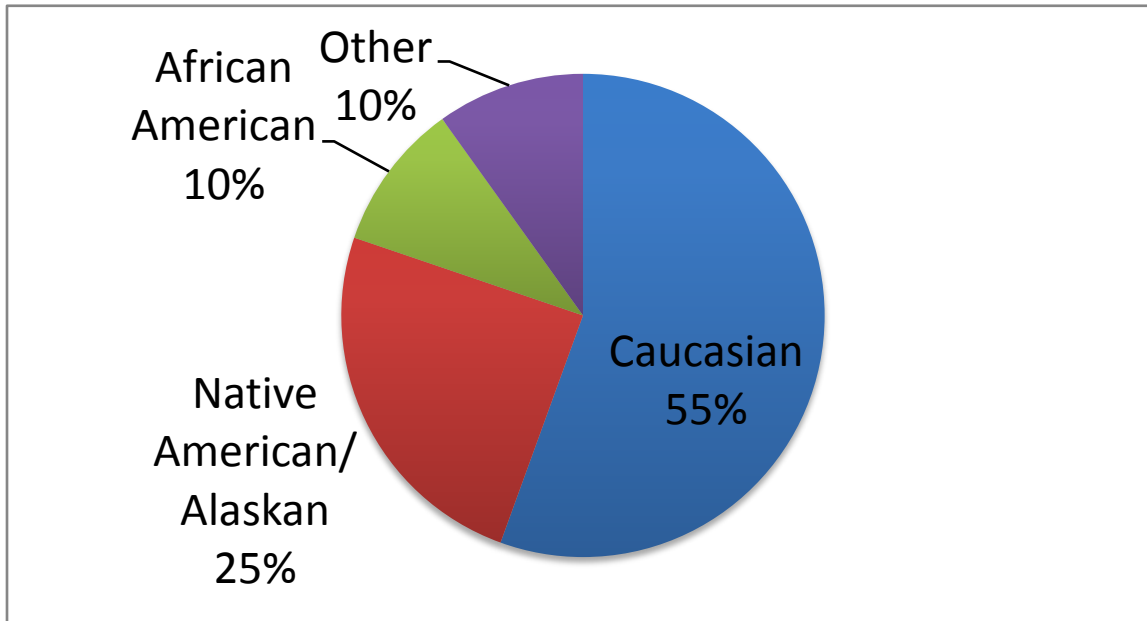


Figure 3: Ethnic background of mothers

Mother's income ranged from less or equal to \$3,000 a year to over \$40,000 a year. In this study 27.3% of the mothers made \$20,001-\$30,000, 18% were in the bracket of \$9,001-\$12,000, \$15,001-\$20,000, and over \$40,000 total house income. While 4.5% of the mothers in the study were in the less or equal to \$3,000, \$3,001-\$6,000, \$12,001-\$15,000, and \$30,001-\$40,000 total

household income bracket.

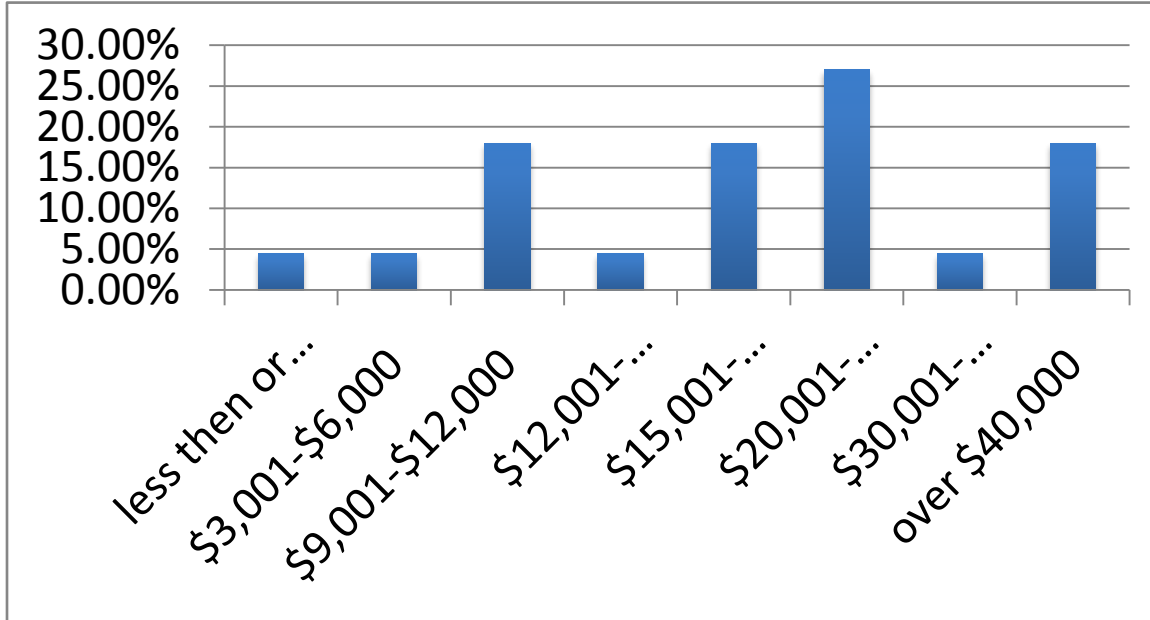


Figure 4: Total household income of mothers

Of the 22 infants in the study 63.6% of them were males and 36.4% were females.

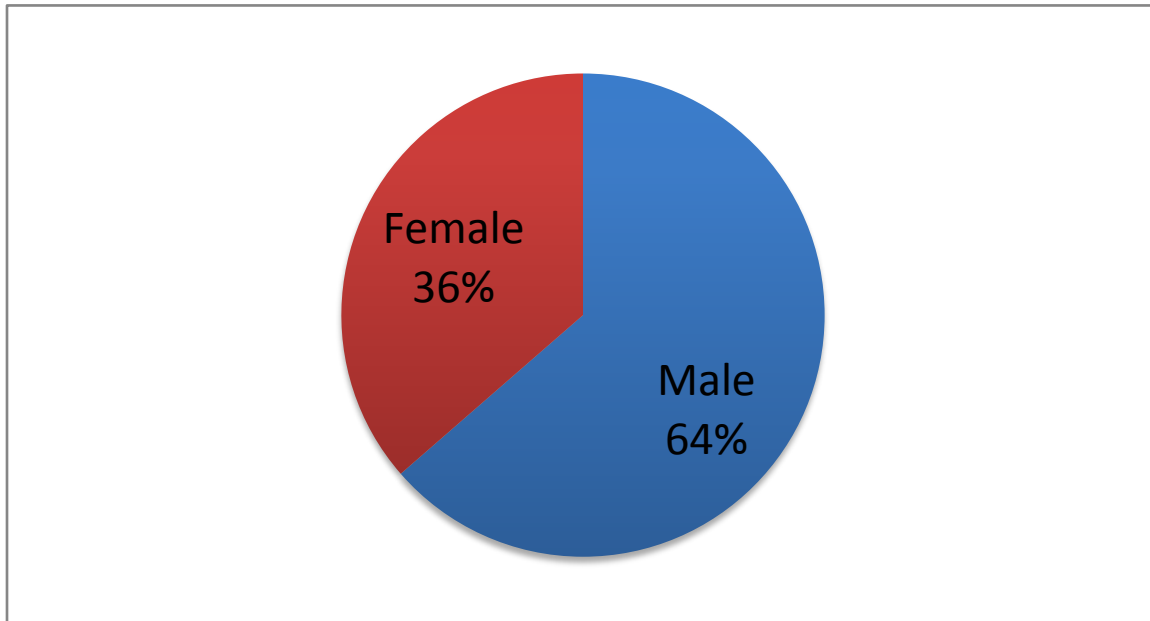


Figure 5: Gender of infant



## Procedures

The mothers and infants were filmed during a 5-minute play session; which included a standard set number of toys. The set of toys included a children's book, a stackable train set with building blocks, a yellow barn with fitted barn animals, and a yellow bucket. The mothers were asked to play with their infants as they normally did. No other specific instructions were given to the mothers.

Transcripts of what the mother and infant said during 5 minutes of free play were completed by three researchers in this study. The transcripts were typed by one researcher and verified by the other two researchers. Two coders were trained and assigned for each mother/infant video in the study. A hard copy of the transcript was provided to a set of researchers for this current study. Researchers were trained on four codes:

- 1) Mother teaching utterances (see Appendix A) – Coders were trained on recognizing mother teaching utterances under joint attention and D1, D2, and D3 codes were provided to code descriptive/teaching, command, or teaching/asking a question.
- 2) Mother utterances (see Appendix B) – Coders counted the total number of maternal utterances during the 5-minute play session, including the teaching utterances.
- 3) Number of toys (see Appendix C) – Coders counted the number of toys in a room during the 5-minute play session filmed. In addition the category of toy was coded: C1 - Active play – soft lightweight balls, tunnels, and low climbing structures, C2 – Manipulative play – sand and water play toys, stacking toys, toys with screw action and blocks, C3 – Make-believe play – trains, dolls,

puppets, stuff toys, telephones and mirrors, C4 – Creative play – large crayons and musical instruments, and C5 – Learning play – books.

- 4) Infant distraction (See appendix D) – Coders were trained on I1, I2, and I3 codes which would indicate which factor distracted the child. Distractions are broken down into three categories I1- mother is the distractor, I2 child is self-distracted, and I3 third party is the distractor which can include a dog, the camera, or the researcher.

All coders were trained to a reliability of 85% or greater prior to collecting the data across all five coding scales.

## RESULTS

The data collected were analyzed utilizing SPSS. The mothers' education level, income, and ethnicity were processed as descriptive data along with the child's gender. The independent variables (number of maternal teaching utterances and total number of maternal utterances) and dependent variables (number of toys and infant distractibility) were analyzed utilizing the Pearson Product Movement Correlation.

The first hypothesis that was tested was 1) the higher the toy count the more often the infant is distracted. Pearson Correlation (1-tailed) suggested that there was a positive correlation between total toy count and infant distraction of ( $r = .508$ ,  $n=22$ ,  $p < 0.01$ ). The second hypothesis tested 2) the higher the toy count, the lower the number of mother teaching utterances suggested that there was no relationship between toy count and mother teaching utterances ( $r = .093$ ,  $n = 22$ ,  $p < 0.01$ ). The final hypothesis that was tested 3) the higher the number of times an infant is distracted the lower the number of maternal utterances; suggested that the hypothesis as stated was not true and in fact was positive correlation between total mother utterances and the amount times an infant is distracted ( $r = .629$ ,  $n = 22$ ,  $p < 0.01$ ) and even a greater correlation between total number of mother utterances and maternal teaching utterances ( $r = .919$ ,  $n = 22$ ,  $p < 0.01$ ).

Means, Standard Deviations, and Range scores are reported for each variable. Reliability percentages of all the codes collected were calculated and reported.

- Number of maternal teaching utterances: mean 37.4, SD = 19.4, range 3 – 71, and reliability was 94.4%
  - D1 Descriptive - mean = 21, SD = 13.5, and range 1 – 45
  - D2 Command - mean = 10.4, SD = 6.6, and range 1 – 29

- D3 Question - mean = 6, SD = 4.9, and range 0 – 17

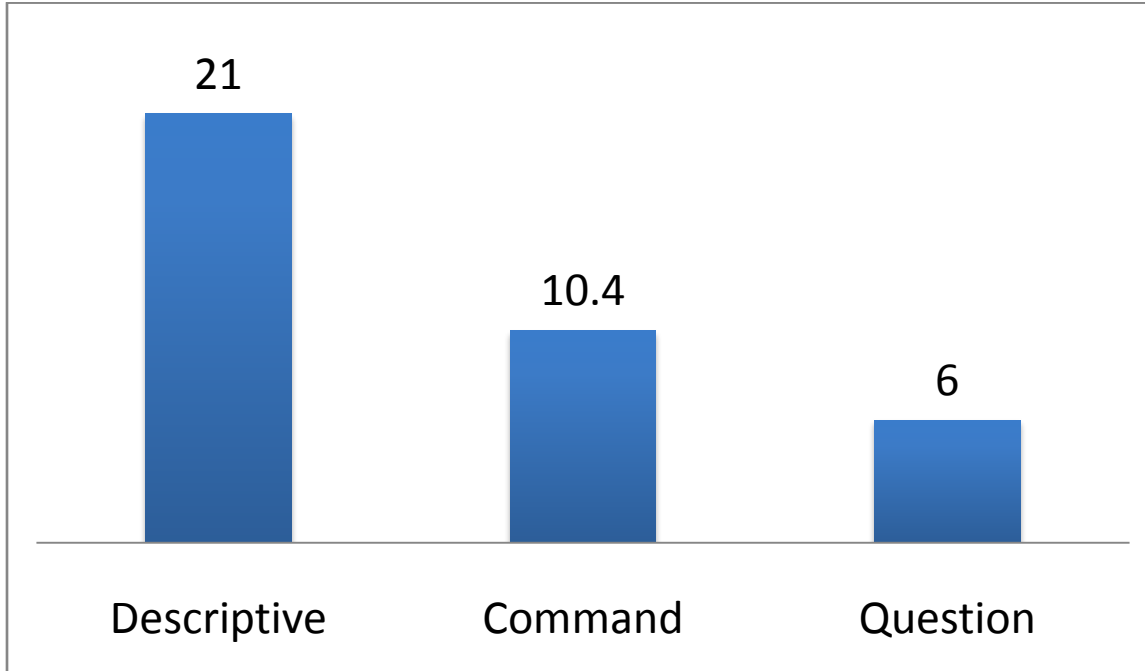


Figure 6: Mean of Maternal Teaching Utterances

- Total number of all maternal utterances: mean = 27.9, SD = 19.4, range 9 – 119, and reliability was 98.9%
- Toy count: mean = 4.8, SD = 4.4, range 0 – 14, and reliability 85.7%.
  - Toy Category (C-Code): mean = 9.3, SD = 3.8, range 4 – 14, and reliability 84.5%.
    - C1 Active play – mean = .05, SD = .2, and range 0 – 1
    - C2 Manipulative play – mean = 4.6, SD = 2.5, and range 0 – 9
    - C3 Make-Believe play – mean = 3.2, SD = 2.3, and range 0 – 7
    - C4 Creative play – mean = .05, SD = .2, and range 0 – 1
    - C5 Learning play – mean = 1.4, SD = 1.8, and range 0 – 6

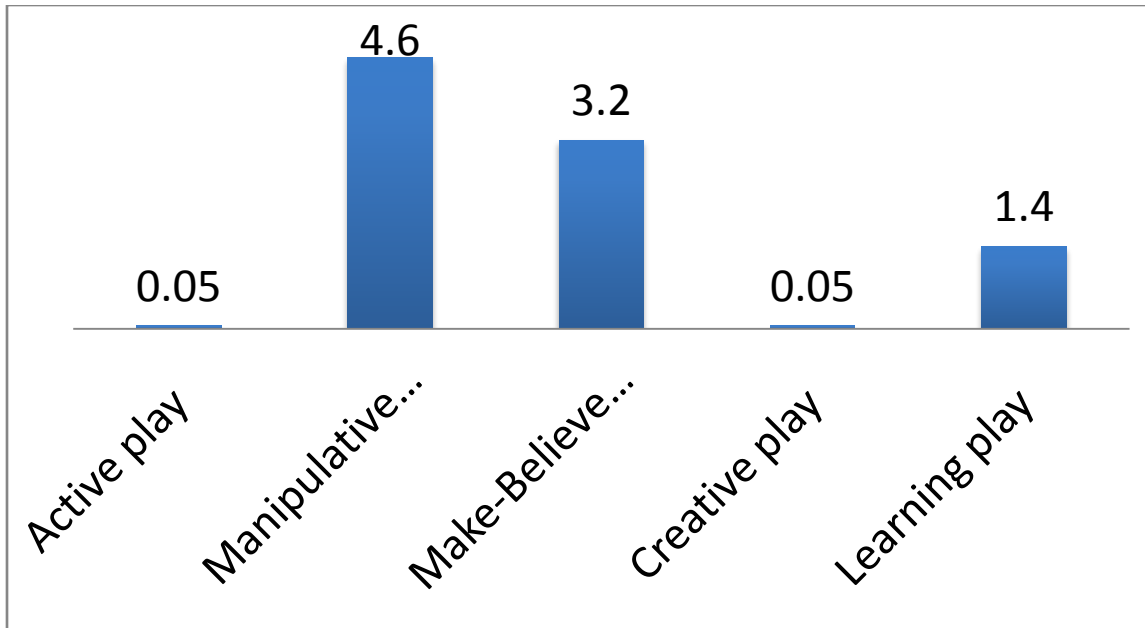


Figure 7: Mean of Toy Category

- Infant Distraction (I-Code): mean = 8.7, SD = 3.5, range 3 – 13, and reliability 85.5%.
  - I1 Mother is distractor – mean = 5 – 10, SD = 2.4, and range 1
    - Physical distraction: mean = 1.1, SD = 1.3, and range 0 – 5
    - New object distraction: mean = 3.9, SD = 2.3, and range 0 – 8
    - Audio/ Verbal distraction: mean = 1.8, SD = 1.5, and range 0 – 5
  - I2 Child is self-distracted – mean = .5, SD = .9, and range 0 – 3
  - I3 Third party is distractor – mean = 3.3, SD = 1.9, and range 1 – 7

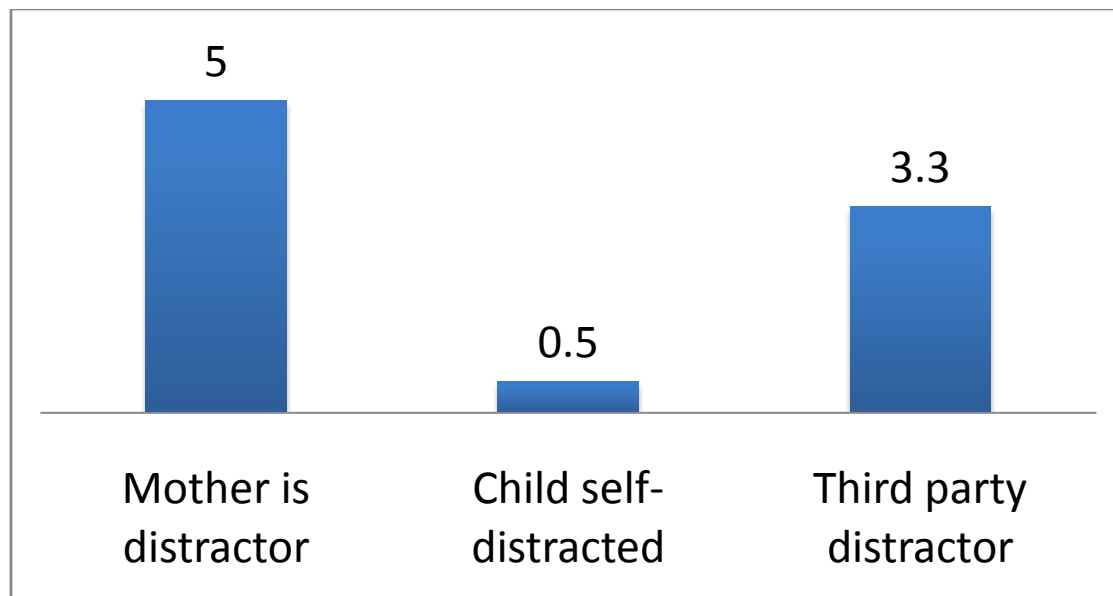


Figure 8: Mean of Infant Distraction

### Discussion

This study tested 3 hypotheses. The first hypothesis that was tested was the higher the toy count the more often the infant was distracted. The data collected showed that there was a positive relationship between total toy count and infant distraction. During the study researchers found that the mother was the largest source of distraction for the child as compared to other toy, or other adult. It was also found during the study that the more toys in a room would give the mothers more options to present to the infant during the play session. In the study by Moyer and Gilmer (1955) found that the infant 2 to 4 years of age stayed focused on a play object for an average 1½ - 2 minutes. In this study infants in this study stayed focused on a play object was significantly less what Moyer and Gilmer (1955) found. Infants in this study were being distracted 8.7 times across a 5-minute play session, and in this most extreme case the maximum range was 13 distractions. This seems to show less attention to a toy object than the 1955 study by Moyer and Gilmer which makes sense because the children in this study were younger than the children in the Moyer and Gilmer study.

The second hypothesis was: the higher the toy count, the lower the number of maternal mother teaching utterances. Data from this study showed that there was no relationship between toy count and mother teaching utterances. With these findings, it is possible that the mother did not care how many toys were in the room; she was still going to do some teaching. The mother was not distracted by the toys, and she worked with the infant during the infant's attentive time to teach the infant. So the number of toys in the room did not distract the mother, she was able to get the infant to pay attention to her during teachable moments. This is a confirmation of the Vygotskian notion that the more skilled partner challenges the less skilled partner, and gets learning accomplished despite some possible distractions.

The final hypotheses was: the higher the number of times an infant is distracted the lower the number of total maternal utterances. Researchers found that the hypothesis was not true and data showed there was a positive rather than a negative relationship between the number of times an infant is distracted and the number of times the mother talked to her infant, whether it was teaching time or not. This finding seems to state that mothers were talking to their infants and at the same time distracting them. Many of the utterances were not teaching utterances (from previous analysis there was not relationship between teaching utterances and distractions). This finding seems to confirm that the mother was the major distractor and she did the distraction by talking to the baby.

### Limitations of the Study

One of the major limitations during the study was the small sample size used. For a more in-depth study a larger sample sized with a more diverse population that would represent each ethnic group equally. An added limitation in the study was the 5-minute play period. In order to gather adequate data researchers believed that multiple filmed play session of the same mother

and infant would facilitate ruling out random variables like “the infant wasn’t feeling well because he needed a nap” or “mother had a bad day”. Finally this study only counted the toys that were visible in the 5-minute time frame of the recorded play session. A future more comprehensive study could document the total amount of play objects kept in the entire house that wouldn’t be constrained to the 5-minute time frame of the current study.

### Conclusion

The study’s purpose was to evaluate if the environment of the infant had an effect on the infant’s distractibility and the mother’s teaching utterances. It is the goal of the researchers to understand the factors that relate to infant learning. When infants are distracted they are not paying attention, not in the zone of proximal development. If the environment is constantly distractible, this may have an adverse affect on the infant’s learning. It is also the goal of researchers to identify the environmental factors would best foster the more optimal learning environment for the infant. In general data from the study showed that there is a relationship between an infant’s environment and their distractibility levels. In addition, there is also a relationship between maternal utterances with teaching and distraction aspects of the infant. It is recommended that parents are given a chance to learn about their importance in their child’s learning environment. The parents need to know the proper tools to teach the infants as defined in the notion of “scaffolding”, in which a skilled social partner (in this case the parents) works with materials and language to maximize the infant’s learning.



## APPENDIX A—MATERNAL TEACHING TO ONE-YEAR-OLDS

Coding mothers teaching utterances during mother-child joint attention. Teaching utterances were coded as three separate tier.

- a. D1 – descriptive/teaching - describing in concrete terms what the child is looking at or doing (can be in a form of a question).
  - i. Mother picks up a truck and child looks at the truck. Mother says “truck” or “is this a truck”.
- b. D2 – Command for action to the child/Teaching – parent directs child attention or gives a child a command to do something with an object.
  - i. Mother says “Push the truck to the doll”.
- c. D3 – Teaching/Asking questions to the child to preform an action or manipulate the child’s thought– under joint attention parents uses a question to direct the child’s actions to preform an action with an object or manipulate the child’s thought in order to challenge the child to think.
  - i. Mother asks “Can bring the truck over here?”
  - ii. Mother asks, “Where’s daddy?” (Which causes to think about where the father is when the father is not visible to the child)

## APPENDIX B – MOTHER UTTERANCES

Counting mother utterances: Coder will count the total number of utterances that originates from mother. Other utterances that will be counted:

- Mother makes a noise: M% choochoo, M% vrummyvrummy
- Mother laughs: (ML)
- Mother says something that coder could not understand: M = Can you give me that XX John? Or M= This is a XXX car!

APPENDIXC – TOY COUNT FOR ONE-YEAR-OLD-PLAY

Counting toys – the toys were counted in the 5-minute time span of the video. Toys seen outside the time frame either before or after were not counted in the study. There were guidelines set for the coders during the coding sessions.

- a. Same toy but difference scene – if a toy is counted and the camera pans or changes views and the same toy is observed, do not count the same toy twice.
- b. Same types of toys – if a blue and a red car is observed in the video, then it will be counted as 2 toys.
- iii. Child's toys vs. Adult items – adult items are not counted but the child toys are.

- 1. Adult items

- a. Baby strollers
- b. Coffee table
- c. Chair

- 2. Child's toys

- a. Toys stroller for dolls
- b. Table station for children
- c. Child size chair

- iv. Groups of toys – if there is a container (box or basket) or a pile of toys and the exact number of toys cannot be determined then the set number for that group will be 5.

- 1. Toys with multiple parts (Lego set, Jigsaw puzzle) will be counted as 1 toy.

Toys will be coded in one of the 5 categories. Coding of the toys will be done under the following conditions:

- Child engages with the toy or looks at a toy for more than 3 seconds
- Child is presented a new toy and engages with the new toy for more than 3 seconds
- Child re-engages with a previous toy (for 3 seconds or more)
- Child gets distracted (for more than 3 seconds) by anything and re-engages with the toy
- Child switches between toys or multiple toys, coder will not code every time the child moves between the toys unless the child engages for 3 seconds or longer – if the child does not then it is assumed that the child is not concentrated on the toy
- Camera / researcher are not counted as toys
- If coder cannot see what type of toy the child is playing with then do not code
  - 1) Active play – soft lightweight balls, tunnels, low climbing structures,
  - 2) Manipulative play – sand and water play toys, stacking toys, toys with screw action, blocks
  - 3) Make-believe play – trains, dolls, puppets, stuff toys, telephones, mirrors,
  - 4) Creative play – large crayons, musical instruments
  - 5) Learning play - books

APPENDIXD-DISTRACTION OF ONE-YEAR-OLD PLAY



- 1) Distractions are when a child's attention is shifted from their current play.
  - a. I1 – mother is the distractor – mother and child are sitting and playing with a book, mother redirects child attention to another toy such as a car.
    - i. Joint play – when a child and mother are playing with the same toy, or when the child is playing with a toy and the mother assist the child in playing with the same toy
      1. I1 sub categories
        - a. Physical distraction – under I1 distraction mother physically does something with the child i.e. Takes the child's hands and start clapping them together, or physically picks the child and moves the child from their current play area.
        - b. New object presented – under I1 distraction mother distracts the child by presenting the child a new toy or new object. Example: Child is playing with a book and mother hands the child blocks and the child engages with the blocks instead and disregards the book.
        - c. Audio distraction – under I1 distraction mother verbally distracts or redirects child's attention to something other than what the child is currently doing by using a sound or sounds. Example: child is playing with the blocks and mother asks, "Where's daddy?" and the child pauses from current play and engages with the

mother. Mother plays “peekaboo” with child. Mother squeaks a toy and the sound causes the child to turn her way.

- b. I2 – child is self distracted – child is playing with a car, stops for more than 3 seconds, moves from the current play area and starts playing with a doll that is across the room. Or child plays with a toy and just gets up and walks away aimlessly from the play session.
  - i. Note: if child fluidly moves from one toy to the next toy in less than 3 seconds and remains in the general play area its considered “continuous play”. However if the child clearly gets up, goes out of their way and walks across the room to another group of toys then it will be coded as I2.
  - ii. “Continuous distraction” – if a person or object distracts the child the mother will try to redirect, if the child does not engage in the redirection the child will be considered continuously distracted.
- c. I3- third party distraction – mother and child are playing and child looks at the camera or walks towards it, dog barking, or someone walking in the front door.
  - i. Note: if child stops for more than 3 seconds then code as distraction, if child stops for less than 3 seconds then don’t code.

APPENDIX E – IRB



University of Central Florida Institutional Review Board  
Office of Research & Commercialization  
12201 Research Parkway, Suite 501  
Orlando, Florida 32826-3246  
Telephone: 407-823-2901 or 407-882-2276  
[www.research.ucf.edu/compliance/irb.html](http://www.research.ucf.edu/compliance/irb.html)

## Approval of Human Research

From: **UCF Institutional Review Board #1**  
**FWA00000351, IRB00001138**

To: **Anne Culp, Rex Culp**  
Date: **June 20, 2011**

Dear Researcher:

On June 20, 2011, the IRB approved the following human participant research until 6/19/2012 inclusive:

Type of Review: UCF Initial Review Submission Form  
Expedited Review Category #5  
Project Title: Parental distraction in parent-infant dyads:  
Tuning in and tuning out  
Investigator: Anne McDonald Culp  
IRB Number: SBE-11-07588  
Funding Agency: None

The Continuing Review Application must be submitted 30 days prior to the expiration date for studies that were previously expedited, and 60 days prior to the expiration date for research that was previously reviewed at a convened meeting. Do not make changes to the study (i.e., protocol, methodology, consent form, personnel, site, etc.) before obtaining IRB approval. A Modification Form **cannot** be used to extend the approval period of a study. All forms may be completed and submitted online at <https://iris.research.ucf.edu>.

If continuing review approval is not granted before the expiration date of 6/19/2012, approval of this research expires on that date. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Kendra Dimond Campbell, MA, JD, UCF IRB Interim Chair, this letter is signed by:

Signature applied by Janice Turchin on 06/20/2011 12:21:02 PM EDT

A handwritten signature in black ink that reads 'Janice Turchin'.

IRB Coordinator

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