8-2003

Early childhood teachers' self-reported beliefs and practices about play

Mi-Hyang Ryu

To the Graduate Council:

I am submitting herewith a thesis written by Mi-Hyang Ryu entitled "Early childhood teachers' self-reported beliefs and practices about play." I have examined the final electronic copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Child and Family Studies.

Deborah W. Tegano, Major Professor

We have read this thesis and recommend its acceptance:

Accepted for the Council:
Dixie L. Thompson

Vice Provost and Dean of the Graduate School

(Original signatures are on file with official student records.)

To the Graduate Council:

I am submitting herewith a thesis written by Mi-Hyang Ryu entitled "Early Childhood Teachers' Self-Reported Beliefs and Practices about Play." I have examined the final paper copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Child and Family Studies.

Deborah W. Tegano

Deborah W. Tegano, Major Professor

We have read this thesis
and recommend its acceptance:

Brian K. Barber

Mary Jane Moran

Mary Jane Moran

Accepted for the Council:

Vice Provost and Dean of Graduate Studies

EARLY CHILDHOOD TEACHERS' SELF-REPORTED BELIEFS AND PRACTICES ABOUT PLAY

A Thesis

Presented for the

Master's Degree

The University of Tennessee

Mi-Hyang Ryu

August, 2003

Acknowledgements

I wish to thank all those who helped me complete my Master's degree in Child and Family Studies. I would like to thank my committee members, Dr. Deborah Tegano, Dr. Mary Jane Moran, and Dr. Brian Barber for their guidance and support. Especially, I would like to thank my major professor, Dr. Tegano for her understanding, continuous support, and full guidance. Also, I would like to give my special thanks to my collaborators, Dr. Matthew Devereaux who helped me to get such a big sample, and Dr. Sookhyun Kang who also helped me to access Korean early childhood teachers and to collect data in Korea, although the Korean data was not used in this research project.

Also, I would like to thank my family. I would like thank my parents and parents-in-laws for their understanding and support. I would like to thank my husband, Dongyun Lee, for his endless support, understanding, and love. I also would like to give my special thank to my dearest princess, Ji-Hoo, for her understanding, love, and helping me to keep studying.

Finally, I give thanks with all my heart to my JU IN GONG for letting me to do all of the works.

Abstract

This study examined early childhood teachers' self-reported beliefs and practices about play. Three instruments were administered to 98 preschool teachers (58 in Study I and 40 in Study II) and 60 parents: *The Preschool Teacher's Beliefs and Practices about Play, The Modified Classroom Practices Inventory (CPI),* and *The Pre-K Survey of Beliefs and Practices*. Study I was a pilot study in which test administration procedures and test construction of *The Preschool Teachers' Beliefs and Practices about Play* were adjusted. In Study II, *The Preschool Teachers' Beliefs and Practices about Play* was found to be reliable (internal consistency of the subscales ranged from .72 to .95) and valid (concurrent validity with *Pre-K Survey of Beliefs and Practices, r* = .87). Scores on the *CPI* were not correlated with the other instruments. Teachers' beliefs and practices about play were highly correlated; parents' beliefs about DAP were not significantly different from teachers' beliefs about DAP. Interestingly, teachers' beliefs about constructive play were significantly more teacher-directed than their beliefs about manipulative and pretend play; but there were no significant differences in their practices in the three categories of play. Teachers did not appear to value play as a way to promote the development of children's thinking skills. These findings were congruent with responses to specific questions on the *CPI* where both parents and teachers indicated a belief in "inappropriate practices" (e.g., the need for planned activities in specific academic content areas). The findings were discussed with regard to best practices in the field of early childhood education about how to balance teacher-directed and non-directed approaches to play-based preschool curricula.

Table of Contents

List of Tables

List of Figures

I. Introduction

Introduction

There are broad understandings that the social contexts in which children live are important predictors for child development and learning (Bronfenbrenner, 1979; Horowitz, 2000;Vygotsky, 1978). According to Vygotsky (1978), patterns and levels of thinking are products of the activities practiced in the social institutions of the culture in which an individual grows up. He emphasized that interpersonal situations are important for guiding children in their development of skills and behaviors considered important in their culture. Rogoff and Morelli (1989) indicated that children's learning and experiences are mediated by cultural experiences such as children's every day experiences that range from interpersonal interactions with family and peers to participation in cultural situations like schools and political systems.

In addition, a broad consideration of both anthropological and psychological research has revealed the importance of psychological aspects as well as physical aspects of the environment for child development and learning (Super & Harkness, 1997). Children's social environments are structured by adult beliefs (Rubin, Fein, & Vandenberg, 1983) and adults' developmental goals for children and the socialization practices that are used to meet those goals (Farver, Kim, & Lee, 1995). In this vein, many scholars have researched psychological aspects of parents and teachers such as their attitudes, expectations and beliefs (e.g., Edwards, Gandini, & Giovaninni, 1996; Hess, Kashiwagi, Azuma, Price, & Dickson, 1980; McGillicuddy-Delisi, 1982; Miller, 1988; Vartuli, 1999).

More recently, many researchers in the field of early childhood education realized the importance of studying teachers' beliefs and they have examined teachers' internal theories represented under various names such as beliefs, belief system, thoughts, theories, orientation, or values with regard to early childhood education, teaching, or child development. These researchers argued that teachers' pedagogical beliefs are important to study because beliefs are a major determinant of behavior as teachers make classroom decisions (Fang, 1996; Isenberg, 1990; Kagan, 1992; Pajares, 1992). They suggested that teachers' implicit beliefs about the nature of knowledge acquisition can affect teacher behavior and, ultimately, children's learning (Fang, 1996).

Many characteristics of schools, classrooms, and teachers have been examined in their relationship with diversity of teacher beliefs and practices. Research showed that outside factors such as school characteristics (e.g., child-teacher-ratio and SES) and the pressures from interested groups have been identified as constraints for teachers' beliefs and practices. Many experts have argued that for better understanding of teacher beliefs and practices, there should be more investigation of the influences of families, the school context, and children's characteristics (Kessler, 1992; Buchanan, Burts, Binder, White, & Charlesworth, 1998).

Adult beliefs, especially the beliefs of parents and teachers, are important because they directly or indirectly (through adult behaviors) influence children's development and socialization, in particular. In order to fully understand teacher beliefs or parent beliefs as influencing sources on child outcomes, they should not be explored separately. Rather, teacher beliefs and parent beliefs should be studied at the same time because, together, they constitute an important "mesosystem" (Bronfenbrenner, 1979) for children.

For examining adult beliefs, widely debated issues in the field of early childhood education were identified, revealing conflicting views about appropriate practices of early childhood education. Some professionals have advocated the formal academic instruction approach for preschool children, arguing that it enables young children to get an early start on school achievement. On the other hand, other professionals decreed the formal academic instruction approach, arguing that it deprives young children of the opportunity for self-motivated learning and creates feelings of tension and anxiety. The latter values play as an important contributor in children's optimal learning because the nature of play allows children to actively explore their environment and to be independent, develop their self-esteem, make choices, exercise control and ownership.

Theoretically, a teacher's interaction style can simply fall into "teacher-directed" or "child-initiated." However, in practice, individual teachers occupy different positions along the continuum of teaching practice (Bredekamp & Copple, 1997; Wien, 1995). Teachers' appropriate or effective interaction style, from which children's optimal learning can be assured, cannot be clearly defined. However, many professionals in the field of early childhood education express concern about interpreting teachers' roles in children's play contexts (Fowell & Lawton, 1993; Kessler, 1991; Kostelnik, 1992; Schickedanz, 1990).

This study examined parents' beliefs, preschool teachers' beliefs and perceived practices, and the interrelationship between teachers' and parents' beliefs as well as possible predictors of beliefs and practices about play.

Hypotheses and Research Questions

Theoretically and observationally, many psychologists and early childhood education scholars have identified the important role of play in childhood. The play of young children has received a significant amount of attention in recent years and is considered an integral part of child development. Many early childhood educators have produced works to provide teachers and caregivers with the knowledge to design child-centered, play-based curricula (e.g., Isenberg & Jalongo, 1997). However, with public attention to the conviction that earlier is better and the associated pressure of academic accountability, early childhood educators find it difficult to maintain child-centered, play-based curricula that show the direct outcomes of child development. Rather, they may choose teacher-directed, structured curricula that can more easily and directly show children's cognitive development (Brown & Freeman, 2001).

Moreover, even advocates of play-based curricula do not share similar ideas about the appropriate practices in play contexts. Without clear definitions of the adults' roles in children's play or an explanation of practical implementation, early childhood teachers may misinterpret or misunderstand the desirable practices of specific play situations. This conflict, referred to as " the early childhood error," is committed when early childhood educators prepare an appropriate, stimulating environment for young children but then stand back and fail to follow up with guidance, scaffolding, or supportive, responsive interactions with the children as they play (Bredekamp & Rosegrant, 1992).

Kontos (1999) observed that Head Start teachers participated in children's play activities most of the time (i.e., did not commit "the early childhood error"), however, their interaction with children did not necessarily assure the quality of the interaction

between teacher and children from which children's high order thinking skills can be developed. The teachers in Kontos' study rarely engaged in talk focused on behavior management or peer relations but their talks primarily focused on the objects in the children's play. Moreover, enough quantity of teacher involvement was not assured in all the activity settings. The teachers more often engaged in children's constructive or manipulative play activities and they spent relatively little time in children's pretend play. Although, early childhood teachers in this study are expected to value play and teacher involvement in play in general, their beliefs or practices might not be the same across children's play contexts.

The purposes of this study were to examine early childhood teachers' beliefs and perceived practices about play and DAP and to compare the teachers' beliefs with parents' beliefs. In particular, the context of this study reflects two current issues in the field of early childhood education: (a) the teacher-directed, formal, and academic-focused approach versus the child-centered, informal, and play-based approach; and (b) the play interaction approach with regard to "the early childhood error" (Bredekamp & Rosegrant, 1992) wherein teachers misunderstand their roles in children's play, fail to follow up with supportive and responsive interactions with children, and fail to promote children's optimal learning through play. Moreover, this study aimed to connect teachers' and parents' beliefs about play interaction approach with the value of play. The research questions of this study were:

1. What is the relationship of the early childhood teachers' beliefs about play with: (a) their awareness about developmentally appropriate practice (DAP) (i.e., how much

their beliefs are similar to DAP guidelines) and (b) their beliefs about the classroom interaction approach?

2. What is the relationship between preschool teachers' beliefs and their practices about (a) DAP, (b) play (i.e., teachers' play interaction approach and play value), and (c) general classroom interaction approach?
3. Are there significant differences between teachers and parents about (a) their DAP awareness and (b) play beliefs (i.e., play interaction approach and play value)?
4. Do demographic characteristics predict preschool teachers' (a) DAP awareness and self-reported practices of DAP; (b) beliefs and perceived practices about play; and (c) beliefs and perceived practices about general classroom interaction approach? Specifically, it is expected to find that the strong predictors of the teachers' self-reported beliefs and practices about DAP, play, and general classroom interaction approach are the teachers' education level, major study areas, and the years of experience.
5. Do demographic characteristics predict preschool parents' DAP awareness and their beliefs about play? For parents' self-reported beliefs and practices about DAP and play, it is expected to find that child's age and the parents' level of education are the strong predictors.

II. Theoretical and Research Background

Play

Various Play Definitions

There have been numerous attempts to define or conceptualize play. A concise definition seems almost impossible because play has been defined in a variety of ways by scholars.

The three approaches of the play definition. Rubin and his colleagues (Rubin, Fein, & Vandenberg, 1983) identified three general approaches to define play: (a) play as a disposition; (b) play as an observable behavior; and (c) play as context. First, play is defined according to a psychological disposition such as motivational source of play or its goal. In addition to Smith and Vollstedt (1985)'s five criteria, they added a dimension in which play is distinguished from exploration: (a) Play is intrinsically motivated (i.e., intrinsic motivation), (b) is characterized by attention to means rather than ends (i.e., means/ends), (c) is distinguished from exploratory behavior, (d) is characterized by nonliterality or pretense (i.e., nonliterality), (e) is free from externally applied rules (i.e., flexibility), and (f) is characterized by active participation (i.e., positive affect). Rubin et al. (1983) discussed the differentiation of play from exploration. They explained that explorative behavior is guided by 'what is the object and what can it do?' while play is guided by 'what can I do with this object?' Exploration refers to a behavior induced from a stimulus to obtain information, therefore, it presumably occurs when unfamiliar objects are present. On the other hand, play behavior occurs when the child is familiar with the object and interacts with it in a playful manner (Rubin et al., 1983).

In the second approach, play is defined according to distinctive types of play that can be observed. For example, Piaget suggested the three types of play (i.e., practice play emerging at the sensorimotor stage, symbolic play at the preoperational stage, and games with rules at the concrete operational stage) and this taxonomy gives special emphasis to what a child can do at each developmental stage (Piaget, 1963). Furthermore, Parten (1932) classified the six types of social play based on the extensity and intensity of social participation of a child. They are unoccupied behavior, onlooker, solitary play, parallel play, associative play, and cooperative or organized supplementary play. Parten found that types of social play are strongly associated with child's age. That is, younger children tend to either play alone (i.e., solitary play) or participate in parallel groups, while older children play in the more highly organized groups.

In the play as context approach, scholars highlighted the importance of sociocultural context in which play occurs. The definition of play relies on the context of the play. The definitions of play reflect culturally held beliefs about play and about the degree to which specific arrangements for play are necessary or desirable. In 1983, there was no strong agreement about the definitional value of this approach, though. Rubin and his colleagues argued that the general definition of play should include descriptions of conditions under which play occurs. With the emergence of Vygotsky's theory and its emphasis on the sociocultural aspects of learning, the cultural approach to defining play has been widely recognized.

The other three approaches of the play definition. Some scholars have defined play according to three categories: the functional approaches, the structural approaches, and the multiple criteria of play (Pellegrini & Boyd, 1993; Smith, Cowie, & Blade, 1998). In

this theological stance, the functional approach is derived from the understanding that the function of a behavior and its definition are inextricably linked (Pellegrini & Boyd, 1993). Pellegrini and Boyd (1993) articulated that the play of preschoolers has proximal consequences such as diverse exploration or searching the environment for stimuli. In addition, play has distal consequences such as perspective thinking or writing. Nevertheless, play also has been viewed in a way that it could be easily suppressed by other motivations such as hunger, fatigue, fear, or curiosity (Smith et al., 1998). Therefore, the behavior may not have clear immediate benefits or an obvious goal.

In the structural approach to defining play, there is an attempt to describe the sorts of behavior that only occur in play through its typical gestures or movements. The main examples of behaviors in this category are play signals from which, for example, rough-and-tumble play can be differentiated from real fighting.

The multiple criteria of play approach encompasses both the previous approaches, where observers identify play or playfulness by a number of different play criteria. Although no single criterion is sufficient, the more criteria that are present, the more agreement there is. Based on this approach, Kranslor and Pepler (1980) proposed a formal model including four criteria of play: (a) flexibility; (b) positive affect; (c) intrinsic motivation; and (d) nonliterality.

An empirical examination of the Kranslor and Pepler model was made by Smith and Vollstedt (1985). They used all of these four criteria and added "means/ends (i.e., children are more interested in the performance of the play behavior than in its outcome)." From this study, they found that "flexibility," "positive affect," and "nonliterality" were associated with playful episodes. The means/ends criterion was also

found to have association with playful behavior, but it did not add anything to the first three criteria. Interestingly, the intrinsic motivation criterion was not found to be correlated with playful episodes. The authors argued that intrinsic motivation might have appeared unrelated because it is a more nebulous behavior to define and observe and thus a more difficult criteria to rate by direct behavior cues than the other three criteria.

Play and work. The difficulty of defining play has also been seen in the conceptualization of play and work. Separating work from play is not easy, because these concepts cannot be identified in an "all-or-none" manner (Spodek, Saracho, & Davis, 1991). Instead, an activity can be identified as more work or more play. In one over-simplification, Schwartzman defined play as "not work" (Schwartzman, 1978, p. 4) because it is not serious and productive. Moreover, Vygotsky noted that play is different from work in because children are unconscious of the motives underlying play (Vygotsky, 1978).

On the other hand, Piaget and Dewey viewed work as an activity that evolves from play. According to Piaget (1962), children's imaginary situations in symbolic play become more and more reflective of reality and develop in the direction of constructive activity or work. Therefore, he explained that constructive play lies in the middle of play and intelligent work (Piaget, 1962). Piaget and Inhelder (1969) articulated that children's play gradually develops from its imbued symbolism to its constitution of genuine adaptations or solutions to problems and intelligent actions. In short, Piaget (1970) argued that "in the course of its own internal development, the play of small children is gradually transformed into adapted constructions requiring an ever-increasing amount of

what is in effect work, to such an extent that in the infant classes of an active school every kind of spontaneous transition may be observed between play and work" (p. 157).

Play, then, has been defined along many structural and theoretical perspectives, with no agreed upon single definition of play, therefore teachers' and parents' understanding of play may be expected to reflect a variety of perspectives.

Historical Views of Play

Classical theories of play. Perspectives on play and on its role in development and early childhood education cover a wide range. Early ideas about play have been classified into four categories (Rubin et al., 1983). First, the surplus energy theory can be traced back to the eighteenth-century philosopher Friedrich von Schiller. He viewed play as the outcome of the surplus energy that remained after primary needs or works were satisfied. Spencer (1878) believed that the higher animals were better able to deal with the immediate necessities of life and had more energy to discharge on non-life-supporting or "superfluous" activities. These latter activities were labeled as play that is carried on without reference to ulterior benefits.

A second classical theory of play was based upon energy deficit rather than energy surplus. The relaxation and recreation theories of play postulated that play allows a release from the reality as arduous works to physically and mentally worn-out humans. A nineteenth-century German philosopher, Moritz Lazarus (1883) suggested that full recuperation of fatigue could be only possible when a person engaged in activities that allowed a release from the reality-based constraints of work and that play could serve a restorative function.

The third category of classical play theory, called practice or pre-exercise theory of play, refers to the practice through which play serves as a way to practice roles of adult activities. Karl Groos (1898; 1901) postulated that play provides exercise and elaboration of skills needed for survival and therefore, he argued, a main reason for childhood was so that play could occur. He highlighted that the length of the play period is different among organisms and the more complex the organism, the longer its period of immaturity. These increasingly longer periods of immaturity were considered necessary for the more complex organisms to practice basic skills (i.e., including play) that were necessary for sustenance during adulthood (Rubin et al., 1983).

Finally, the fourth category of classical play theory, referred to as the recapitulation theory of play, emanated from the writings of G. Stanley Hall and Luther Gulick (Rubin et al., 1983). Hall viewed childhood as a stage evolutionally linked between animal and adult human beings. He thought that play was a means for children to work through primitive atavisms (i.e., appearance in an individual's characteristics found in a remote ancestor but not in nearer ancestors), reflecting our evolutionary past (Smith et al., 1998). This theory explained that the function of play was cathartic in nature (Rubin et al, 1983; Smith et al., 1998) and allowed the playing out of the instincts that characterized earlier human history and acquisition of higher and more complex forms of behavior.

Later views on play. Even though these classical theories of play have been criticized by many scholars, they also have impacted later views on play. Based on these classical theories, psychologists and educators started to elaborate and develop theories of play. However, there were many disagreements about the role and value of play among the pioneer educators such as Susan Isaacs, Maria Montessori, and Friedrich Froebel (Bruce,

1987; Anning, 1991). Both Froebel and Montessori believed that children learn best from self-directed activity that is linked to intrinsic motivation and that adult guidance is essential to learning. One of their differences is that Froebel supported an informally structured approach, whereas Montessori proposed a greater degree of formality (Bruce, 1987). Montessori's provision of a prepared environment was designed to enable children to get closer to reality through a structured personal voyage of discovery. Considering this end, she distrusted imagination and did not value pretend or sociodramatic play. Rather, she put more emphasis on learning about real life through providing constructive materials. In contrast, Froebel strongly believed the importance of spontaneous play and attributed symbolic significance to it (Anning, 1991).

Issacs, on the other hand, argued that significance of play lies in both the imaginative meaning and the cognitive value (Smith, et al., 1998). She believed that both imaginative and manipulative play lead to the child's discovery, reasoning and thought. She conceptualized play as a continuous moving back and forth between fantasy and reality in which children reveal their intellectual and emotional needs (Bennett, Wood, & Rogers, 1997). This perspective accords with psychoanalytic tradition in which symbolic and fantasy play are considered to have a cathartic function that enables children to work through deep emotional problems, inner conflicts and anxieties.

Psychoanalysists, such as Sigmund Freud and his followers, believed that play provided a catharsis to help children deal with negative experiences (Feeney, Christensen, & Moravick, 2001). Freud thought that play provided children with an avenue for wish fulfillment and mastery of traumatic events. Through play, children were able to vent unacceptable impulses too dangerous to express in reality. In addition, play

allowed children to become the active masters of situations through repeating the real life situations.

Vygotsky and Piaget. Later, two other theorists' ideas have had a direct application to how teachers understand and regard children's play in early childhood classrooms. They are Vygotsky and Piaget. After Issacs, another combination of the emotional and cognitive aspects of development occurred in Vygotsky's approach to play (Smith, et al., 1998). Vygotsky viewed play as a leading activity of development in preschool years (Vygotsky, 1978), and one in which the zone of proximal development (ZPD) of a child can be guided. Like psychoanalysists and Susan Isaacs, he believed that children satisfy their unrealizable desires while they are creating imaginary situations in play. Vygotsky noted that play as an activity consisted of an external imaginary situation and internal rules of behavior (i.e., different from external rules of games formulated in advance). Vygotsky's play consisted of two basic ideas: (a) the ability to separate thought (i.e., meaning) from actions and objects and; (b) the capacity to renounce impulsive actions in favor of deliberate and flexible self-regulatory activity (Vygotsky, 1976). Through imaginary play situations, children were thought to be liberated from immediate constraints of the situation (e.g., the actual object) and get into the semantic world (e.g., what that object might become).

Overall, Vygotsky argued that the development of play goes through the three stages. First, a reproduction of the real situation takes place. In other words, a child creates an imaginary situation that initially is very close to the real one. Therefore, Vygotsky stressed that play is more memory in action than a creation of a new imaginary situation. Next, as play develops, the conscious realization of purposes arises. Therefore, this goal

of play (i.e., fulfillment of the purposes) determines the child's affective attitude to play. Finally, at the end of the development of play, purposes and rules emerge.

On the other hand, Piaget focused on the mental development in the roles of play. In particular, Piaget recognized a disequilibrium in which assimilation dominated accommodation (Piaget, 1962). For Piaget, children act out their already established behaviors, or schemata, in play, and adapt reality to fit these. Therefore, children's play behavior resulting from this assimilation orientation reflects their level of development. The functions of play in Piaget's framework are twofold: (a) Play can consolidate existing skills by repeated execution of known schemas and (b) can give a child a sense of ego continuity, that is, confidence and a sense of mastery (Smith et al., 1998).

As with the definitions of play, the theoretical perspectives on play are also diverse. Teachers and parents then, may have differing degrees of awareness and agreement with these various theoretical perspectives on play.

The Role of Adults in Play

Rubin and his colleagues reviewed psychologists' works and identified the five types of factors influencing children's play: (a) child-rearing and parental factors; (b) peer experiences; (c) the presence of particular materials within the physical environment; (d) the schools children attend; and (e) the media. For the purposes of this review, parents and teachers (schools) are the primary focus. Studies showed that parents' early encouragement of play is very important (Smith et al., 1998). For example, Farver and Howes (1993) found that mothers' value of children's play was associated with their interaction style for children's pretend play and general play behaviors. Moreover, they

modified their children's play behavior toward their values that are consistent with cultural patterns of coping with the surrounding environment.

Many scholars also have studied the roles of teachers with regard to children's play. Teachers' roles have been discussed in terms of teachers' styles of interaction with children that can change depending on the children and the nature of their activity (Brown & Freeman, 2001; Kontos, 1999). Teachers' roles have also been discussed in terms of the contribution a teacher intends to make to children's activity (Jones & Reynolds, 1992). Roskos and Newman (1993) categorized teachers' roles at sociodramatic play areas (i.e., literacy-based play centers such as an office, kitchen, and the library) into three types (i.e., onlooker, player, and leader). Furthermore, Jones and Reynolds (1992) classified general roles of teachers into six categories: (a) stage manager; (b) planner; (c) player; (d) mediator; (e) scribe; and (f) assessor/communicator. Overall, their findings indicated that some of the roles tend to be more readily accepted than other roles.

The dilemma of the teacher involvement in play. There is an assumption that when children make their own choices, learning becomes a more powerful activity (Bennett et al., 1997; Lally, 1989). In reality, however, this is dependent on the range of choices available, the amount of interaction with more knowledgeable others, the provision of supportive resources, and the potential for activity to be connected to worthwhile learning. According to Lally (1989), observations of children's self-directed activities often reveal powerful evidence of children effectively directing their own learning, particularly if supported in the process by an adult. This reflects a dilemma in trying to achieve a balance between children's rights to choose and be in control of their own

learning and the teachers' responsibility to ensure that all children experience breadth, balance, and progression.

This dilemma may be discussed with regard to the theories of Piaget and Vygotsky. Piaget's theory of learning has had a dominant influence on classroom practice (Bennett et al., 1997; Elkind, 1990). He argued that play can facilitate learning by encouraging children to assimilate new material into existing cognitive structures (Piaget, 1962). Piaget's constructivist theory is characterized by active learning, first-hand experience, and intrinsic motivation as the spurs to cognitive development; all of which are usually evident in play. He argued that development leads learning where a child's development follows clearly defined stages. Therefore, a teacher's main role may be to respond to children's self-regulated activity while allowing them to construct knowledge for themselves. In practice, this theoretical standpoint has led to curricula based on a substantial degree of self-choice and well-fitted to a child-centered ideology.

On the other hand, Vygotsky noted that learning precedes development and he viewed play as a leading activity. He emphasized interaction with a more knowledgeable other as a significant part of the learning process. He argued that social interaction with peers and adults help children to make sense and create meanings from experience within a shared cultural framework (Vygotsky, 1976). It is specifically the means used within social interaction (i.e., particularly language) that leads learning and development. Furthermore, Vygotsky's theory is associated with the ZPD in which a child can learn with the assistance of a more knowledgeable other. Play creates ZPD because children are motivated to learn and can be enabled to move ahead of their current level of development, particularly if supported by a more skilled or knowledgeable other. Social

constructivist approaches to education are based on complex models of teaching and learning that value both child-initiated and teacher-directed activities. These theories imply a proactive role for the teacher in creating challenging learning environments and providing appropriate assistance in children's activities.

Research supports teacher involvement in play. Various research supports teacher's active involvement in play. In particular, researchers show children's development in various areas when adults are appropriately (i.e., not intrusively) involved in children's sociodramatic play. Smilansky (1968) found that young children needed adult intervention in play. In her classic study, she found that less advanced sociodramatic play was correlated with academic failure for children of disadvantaged educational backgrounds. When teachers intervened to stimulate the sociodramatic play of disadvantaged preschool children in their classrooms, she found that children became more flexible planners, used language more elaborately and expansively, sustained play for longer periods, and improved their use of pretense.

Smilansky's review (1990) on sociodramatic play revealed that children's behavior was influenced by adult's active participation in children's play skills (i.e., not content), adult's suggestions for encouragement of children's participation in sociodramatic play, in play with other peers, and in using nonstructured (i.e., not ready-made) materials. As an effect of adult's intervention in children's sociodramatic play, children were found to have gains in cognitive-creative activities: (a) better verbalizations; (b) richer vocabulary; (c) higher language comprehension; (d) better problem-solving strategies; (e) more curiosity; (f) better abilities to take on the perspective of another; (g) higher intellectual competences; (h) his/her performance on conservation tasks; (i) more innovations; (j)

more imaginativeness; (k) longer attention spans; and (l) greater concentrations. In addition, adult intervention benefited development in children's socioemotional skills such as more playing with peers, better peer cooperation, reduced aggression, and more empathy.

Shefatya (1990) also emphasized that the kinds of interactions used by adults must be both supportive of and responsive to the child's needs and potential. In particular, she argued that intervention should be skill-oriented but not content-oriented. Both Smilansky and Shefatya supported the idea that children sometimes need to learn how to play and that teachers can actively assist this process, thus supporting social constructivist ideas about the appropriate roles of teachers in children's play. Social constructivist theories shift the emphasis toward an interactionist role in which the teacher is actively involved in children's play in ways that are sensitive to meanings and intentions of play, but nevertheless move children forward in their learning.

Although there is some theoretical support for an emphasis on learning by discovery through self-initiated activities (Bennet et al., 1997), there is also criticism of a predominantly passive role of early childhood educators in play (Seifert, 1993). Although the importance of children's play and their social interaction with peers or adults has been supported theoretically, it is not yet clear how teachers can most effectively interact with children to promote their optimal development and learning though play (Kontos, 1999).

The Four Types of Play-Based Curricula

DeVries emphasized the importance of play at the level of classroom practice and she identified the four types of play-based curricula (2001). In each type of classroom, teachers have different understandings of how to incorporate play and work in early

education. The teachers of the first classroom type value learning and academic work over play. They either do not have a well-grounded developmental perspective or they are required by pressures of various interested groups to teach in a behaviorist way, with a focus on drill and practice, reward and punishment. Children in this type of classroom spend most of the day in academic work such as practice worksheets and drill on specific subjects and they can only 'play' as a reward after finishing designated work.

Academic accountability is also emphasized in the second type of classroom. However, in the second type of classrooms, teachers try to achieve their academic goals through indirect approaches. Instead of using worksheets, the teachers of this type of classrooms try to appeal to children's interests in academic activities through colorful materials and work-book content formats. For example, children in these classrooms are required to participate in a math activity in which they put small plastic teddy bears to the bucket of the same color. Alternatively, they need to match paper butterflies with small-case letters and butterflies with upper-case letters. Play in this type of classroom mainly consists of trivial arts and crafts that require little thought.

In the third type of classroom, play is integrated with social and emotional developmental goals and work is deemphasized. Children have more freedom to choose activities and move freely among various centers such as sensory, art, construction, pretend, science, and literacy centers. Play in these classrooms fits the general image of what a developmentally appropriate classroom should look like. Teachers in this type of classroom provide many of the types of activities recommended as developmentally appropriate, but the teachers' roles are limited to the stage manager, observer, or order keeper. In this type of classroom, the criticism is that children "just play."

Finally, the fourth type of classroom is an ideal model in which play and work are integrated with social, emotional, moral, and intellectual development. Teachers value play in its relation to facilitating children's reasoning and conflict resolutions as well as self-regulation and socioemotional well-being. The teachers provide children with materials that can enhance children's internal conflicts therefore promoting problem solving. In addition, they observe and engage actively with children's activities while wondering aloud and posing questions to promote reasoning. In short, this type of classroom goes beyond the third type by adding challenging intellectual and moral goals in both play and work.

Developmentally Appropriate Practice (DAP)

The National Association for the Education of Young Children (NAEYC), the nations' largest professional organization of early childhood educators, published position statements on developmentally appropriate practice (DAP) in 1987 (Bredekamp, 1987) and published the revised version of the statement in 1997 (Bredekamp & Copple, 1997). The primary purposes of this statement were: (a) to provide guidance for the developmentally appropriate activities, materials, and expectations (Bredekamp, 1984) for young children from birth through age eight; and (b) to respond to a growing trend toward more formal, academic instruction of young children (Bredekamp & Copple, 1997). DAP was defined as practice resulted from professional's decision making about children's education and well-being based on the three types of knowledge about: (a) the age-related child development and learning; (b) the individual variations of children; and (c) the social and cultural contexts in which children live.

The NAEYC guidelines identified the two extremes of the developmentally inappropriate practice (DIP) and DAP. On one extreme, DIP was defined as the practice that attempts to pour in knowledge through lecture and other formal, structural activities. On the other extreme, DAP was defined as the practice that emphasizes the development of the whole child (i.e., cognitive, emotional, physical, and social development).

The position statement on DAP stated the value of play for children's development and education (Bredekamp, 1987; Bredekamp & Copple, 1997; Bredekamp & Rosegrant, 1992, 1995). With the acceptance of DAP in early childhood education, the advocacy of play has become more commonplace, however, there are not yet clear descriptions of how teachers appropriately interact with children in specific play contexts. Hence, teachers may not be aware of their appropriate roles for promoting children's learning though play or may misunderstand or misinterpret the value of play.

Beliefs about Child Development and Early Childhood Education

Adults' Beliefs about Child Development and Education

In studying the relationships between adults (i.e., teachers or parents) and children's outcomes, many scholars did not show much interest in adult's cognition or psychology until recently. Rather, many of the early studies explored adult behaviors and their influences on child outcomes. However, adults' beliefs are now considered important because they are embedded in the behaviors evidenced in adults' interactions with children or embedded in the environmental settings where children spend time. In addition to such indirect influences, adults' beliefs are also considered to directly impact child development and socialization.

Since the family environment typically is the first setting in which children develop and socialize, parental beliefs or behaviors have been widely studied in their relation with children's outcomes. A large amount of research has shown the relationship between the ideas held by parents on the child's development and education, and the manner in which they arrange their children's lives, their surroundings, and their daily routines (Goodnow & Collins, 1990; McGillicuddy-DeLisi, 1985). Most of these studies examined parental beliefs about children's developmental timetables and causes of child development, or the importance that they attach to certain aspects of development, or cognition (knowledge) they have about how children should best be socialized.

As child-care outside of the home has become more accepted across the world, professional childcare has attracted much interest. Concerning the issue of effective teaching, many early childhood researchers have studied teachers' behaviors or practices and child outcomes (Clark & Peterson, 1986; Spodek, 1988). They assumed that the competence and effectiveness of a teacher could be determined by what the teacher does (Spodek, 1988). According to Isenberg (1990), research on teaching has predominantly focused on practice, and ignored teachers' thought processes.

More recently, however, scholars have recognized teachers' thought processes as major determinants of behavior in classroom decision making (Clark & Peterson, 1986; Isenberg, 1990; Kagan 1992; Pajares, 1992). Spodek (1988) examined the implicit theories of early childhood teachers and assumed a causal relationship between beliefs and practice. Furthermore, he argued that in order to understand the nature of teaching, we must not only understand the behavior of the teachers observed, but also the teachers'

thought processes regarding teaching and the implicit theoretical systems that drive their processes.

Clark and Peterson (1986) explained the three major categories of the teachers' thought processes: (a) teacher planning; (b) teachers' interactive thoughts and decisions, and; (c) teachers' theories and beliefs. Among these, they argued that research on teachers' implicit theories and beliefs is relatively recent and constitutes only a small amount of the research on teachers' thought processes. Teachers' implicit theories (i.e., beliefs, theories, or values) lie in the center of teachers' thought processes (Munby, 1982). Teachers' implicit theories were described as the ideas about instruction that teachers develop from their personal experience and practical knowledge (Chalesworth, Hart, Burts, Mosley, & Fleege, 1993; Clark & Peterson, 1986; Kagan, 1992; Vartuli, 1999). Moreover, these scholars indicated that these implicit theories differ from the explicit theories that are taught in college courses or the technical ideas of research findings.

Although beliefs are dispositions to action and major determinants of behavior, the dispositions are time and context-specific (Brown & Cooney, 1982). Kontos and Dunn (1993) examined the relationships between caregivers' beliefs and practices and quality and developmental appropriateness of their classrooms. They found that classrooms that were high in the use of free play (i.e., one of the determinants for developmental appropriateness in the study) were more likely to be higher in quality and to be staffed by caregivers who interacted in more developmentally appropriate ways with children (i.e., divergent questioning and elaborating children's activities). The results also revealed that caregiver practices were strongly influenced by the context in which the caregivers were

interacting with children. In fact, caregivers behaved differently in the same context as a function of how they used play in the curriculum.

A study of Head Start teachers' behaviors and talk during free play (Kontos, 1999) revealed that teachers adjusted their roles depending on the activity and that teachers modified their talk depending on their role (i.e., interviewer, stage manager, playmate/play enhancer, safety/behavior monitor role, and uninvolved role) and the activity. This finding suggests that teachers' beliefs about their roles may be differentiated depending on contexts.

Children acquire the foundations of knowledge and the dispositions for learning during the early childhood years. Early childhood experiences acclimate children, provide children with the rules of schooling and serve as the foundation to education (Vartuli, 1999). Regarding this, early childhood teachers and parents do play important roles in child development and learning through the provision of an educational environment and interactions with children. In addition, their beliefs are at the heart of their decision about the educational process and help to set the climate for learning. Thus, it is important to study early childhood teachers' and parents' beliefs about appropriate curricular practices.

Dichotomous Beliefs in Early Childhood Education

There has been a widely debated issue about early childhood education. The two opposing views lie in the heart of this debate. They are an approach valuing academic skill acquisition of young children and an approach valuing play in early childhood education. The first view characterizes the children's cognitive development as rather formed and shaped by the environmental experiences provided by adults and the

proponents of this view argue that children's cognitive development can be ensured by cultivating their skills and talents. On the other hand, the latter view articulates that children's development can be ensured by their active engagement in experimentation and exploration and the proponents of this view argue that play can facilitate children's self-initiated involvement and active exploration.

Teacher-directed, academic skill acquisition emphasis beliefs: Earlier is better. There is one conviction that states "earlier is better." According to this premise, children have sponge-like abilities to learn and the window of opportunity is time-limited. Therefore, its proponents argue that play is extremely wasteful of time and energy that might be put to more important and more long-lived activities. At the same time, they suggest that it is never too early to start children on reading or mathematics, swimming, violin lessons, cooking or karate. In fact, there is an apparent trend toward earlier introductions of basic skills using a teacher-directed approach introduction (Elkind, 1990). The educators supporting this approach emphasize children's readiness through teacher-directed, traditional pencil-and-paper activities.

This approach of early academic emphasis has been firmly rooted in American society with several prevailing ideas and cultural changes (i.e., the civil rights movement and the women's movement) in American society. As individualism, egalitarianism, capitalism, and the frontier mentality have been popular in American society, society's preference of *individual* ability over *group* ability spread (Elkind, 1990). According to this idea, variation of individuals depends on environmental inputs. Elkind (1981; 1990) criticized the contemporary fantasy about individual ability and argued that our beliefs in *effort* are more important property than *talent* reflecting this public mania on the earlier is

better conviction. He points out that many American parents believe that they can make their child gifted and talented by providing "quality" learning.

This prevailing rigid, academic mindset can be further explained by the persistence of two fundamental beliefs that have continued to influence American's thinking. First, this view can be traced back to the Puritan ethic that dichotomized work and play (Brown & Freeman, 2001; Frost, 1992; Rubin et al., 1983). According to puritanical ideology, work is viewed as an extension of God's work and play is considered as the province of the devil, so anything that is fun and not related to work is not valued. Second, there is the conviction that play appears chaotic and undisciplined, undermining the school's primary purpose that is to bring order and control to children's lives (Brown & Freeman, 2001).

In sum, the public's preference of academic skill acquisition in early childhood education has been rooted in American society with its prevailing ideas and cultural changes. On such cultural foundation, many numbers of professionals and parents are considered to highly value early academic experiences of young children.

Child-centered, play-emphasis beliefs. Contrary to public mania on academic accountability, an informal and child-centered play emphasis approach is generally supported by the early childhood professional literature. It is argued that the nature of play allows children to actively explore, experiment, and investigate their environment and to be independent, develop their self-esteem, make choices, exercise control and ownership and, actively learn through play (Bennet, Wood, & Rogers, 1997). Both theoretical and conceptual notions about best practices for young children maintain that optimal early childhood environments are those that allow children to take an active role in constructing their environments (Kontos & Dunn, 1993).

These conceptual notions of best practice are succinctly articulated by the guidelines of NAEYC through its DAP approach (Bredekamp & Copple, 1997). The NAEYC position statements advocating a play-oriented approach have had an enormous influence, especially in communicating the inappropriateness of "teacher-directed instruction in narrowly defined academic skills" (Bredekamp, 1987, p. iv). In the position statement on DAP, play is described as "a vehicle for children's social, emotional, cognitive development" and an "opportunity to understand the world, interact with others in social ways, express and control emotions, and develop their symbolic capabilities" (Bredekamp & Copple, 1997, p.14).

From a DAP perspective, there is strong agreement that in order to promote high quality learning, children need to engage with their environment in an active and exploratory way (Bredekamp & Copple, 1997; Bredekamp & Rosegrant, 1992). Because the nature of play allows children to actively explore, experiment, and investigate their environment and to be independent, develop their self-esteem, make choices, exercise control and ownership, play is thought to contribute to quality learning (Bennet, Wood, & Rogers, 1997).

The United Nations (UN) Convention on the Rights of Children legitimizes play as a right of childhood. The UN's stated intention is to assure the entire world's children benefits from a satisfying play life. Play is currently supported by mainstream professional literature that operationalizes modern child-directed, play-centered constructivist theory (Bredekamp & Copple, 1997; Chaillé & Silvern, 1996; Gestwicki, 1999). Play is the centerpiece of a wide variety of accepted curriculum models (Saracho & Spodek, 1998).

Research about current emphasis on academics in early childhood education. However, even where play is considered to further learning and development, the relationship to pedagogy is not straightforward. Even though the early childhood professional literature advises teachers to provide children extended periods of time for self-selected playful activities, visits to typical early childhood classrooms reveal the effects of the public's hysteria about enhancing children's "readiness" (Brown & Freeman, 2001). In addition, critics argue that current curricular practices are not based on what we know about how young children learn, but on some prescribed standards to which all children should conform (Elkind, 1986; Katz, 1988).

Actually, there is a growing concern over the push for more "inappropriate" academics in many early childhood programs (Elkind, 1986). Brown and Freeman (2001) argue that "academic accountability" has become a powerful buzzword that pressures early childhood educators to focus narrowly on academics rather than maintaining the early childhood field's historical emphasis on the whole child. Furthermore, policymakers' increasing interest in early childhood education is an apparent trend toward an earlier introduction of basic skills using a teacher-directed approach to instruction (Stipek, Feiler, Daniels, & Milburn, 1995).

Research has revealed that some teachers and administrators believe that workbook/worksheet, drill and practice skills based instruction is appropriate for young children (Burts, Hart, Charlesworth, Dewolf, Ray, Manuel, & Fleege, 1993). Besides early childhood professionals, many parents push their children toward early acquisition of reading, writing, and other academic skills and they want the out-of-home programs for their children to be educational (Elkind, 1981; 1990).

In response to this situation, various organizations that are interested in the education and well-being of young children have issued position statements regarding appropriate curricular policies for young children (Zepeda, 1993). Among these, the guidelines for the NAEYC's DAP are the most notable because they provide theoretically and philosophically driven bases for conceptual notions of best practices for young children (Kontos & Dunn, 1993). The DAP guidelines emphasize direct experience, adult warmth, concrete materials, child-initiated activities, and social interactions. Moreover, they emphasize the role of play in early childhood education, primarily in facilitating "children's social, emotional, and cognitive development as well as a reflection of their development" (Bredekamp & Copple, 1997, p. 14).

Based on DAP guidelines, various observation scales and self-rating instruments have been developed in order to examine teachers' developmentally appropriate or inappropriate beliefs and practices. Many scholars in early childhood education have used some of these instruments to distinguish quality care (Essa & Burnham, 2001; Kontos & Dunn, 1993). In addition, some researchers have tried to demonstrate teachers' implicit theories about DAP through making them explicit in terms of developmentally appropriate or inappropriate classroom settings (Charlesworth et al., 1993; Hart et al., 1998; Hyson, Hirsh-Pasek, & Rescorla, 1990; Smith & Shepard, 1988; Stipek et al., 1995; Vartuli, 1999). Teachers' cognitive and pedagogical behaviors or instructions including DAP or DIP (developmentally inappropriate practice) have been identified as significant predictors of children's various outcomes such as motivation, independence, cognitive behaviors, social problem solving skills, emotional health, and play behavior

(e.g., Burts et al., 1993; Frede, Austin, & Lindauer, 1993; Hart et al., 1998; Marcon, 1999; Stipek, 1993; Stipek et al., 1995).

In sum, early childhood teachers have choices. In spite of abundant support for play in the literature and research, the pressures to 'push down' curriculum force early childhood teachers to make decisions about the role of play in their classrooms by judging its contribution to children's readiness rather than its contribution to children's emotional, social and physical well-being (Brown & Freeman, 2001).

Beliefs about Play

Even though play is considered important for young children and embedded in classroom curricula, the nature of caregivers' interactions with children (i.e., interactions that facilitate children's play and learning, and interactions that guide children's social-emotional development) should be developed such that learning though play can be assured. Many researchers have argued that teachers' positive, supportive, and responsive interactions with children are essential for children's maximal learning (Bruner, 1991; Howes & Smith, 1995; Kontos, 1999; Smilansky, 1990; Seifert, 1993; Shefatya, 1990; Sylva, Roy, & Painter, 1980). Based on social constructivist theory, this interpretation asks for teachers to be actively involved in children's play in ways that are sensitive to the meanings and intentions of play, but nevertheless move them forward in their learning (Bennet, Wood, & Rogers, 1997).

Although many early childhood professionals and teachers understand the importance of using play in the early childhood curriculum, they may not understand *how* a teacher needs to interact with children as they play in order to promote children's learning (Kontos, 1999; Trawick-Smith, 2001). In order to enhance children's active involvement

through children's choices and motivation, some teachers may undervalue their roles in play and feel that they should stand back and let the children play and explore the world in their own ways. Teachers may also assume that children know intuitively what they need and naturally meet those needs through play. If teachers consider learning through play as largely incidental activities that lead to unplanned developments, then they may try to minimize the teachers' interruption of children's play. Therefore, they may understand the teacher's role as a passive provider of an appropriate and stimulating environment for young children, not as an active participant and supporter.

In fact, there is growing evidence that teachers are often reluctant to interact with children in an active fashion. These teachers may assume that adult involvement in children's play is intrusive and that a stimulating play environment is sufficient to promote children's learning and development (Farran, Silveri & Culp, 1991). They may also assume that learning through play can be assured when children's active and voluntary exploration is assured. Therefore, they fail to follow up with guidance, scaffolding, or supportive, responsive interactions with children that may maximize the learning opportunities available through play. Rather, they believe that standing back is an appropriate stance for teachers to take when children play because to do otherwise interferes with play's developmental benefits (Miller, Fernie, Kantor, 1992; Pellegrini, Galda, 1993). Bredekamp and Rosegrant (1992) have described teachers' standing back approach as "early childhood error." This is committed when early childhood teachers prepare an appropriate, stimulating environment for young children, but then stand back and fail to support children's learning through play by not providing supportive, responsive interactions with the children.

Teachers' pedagogical beliefs and practices may fall along a continuum that defines roles in terms of by whom and how learning activities should be initiated. This continuum is from child-initiated (i.e., child-centered or child-directed) to teacher-initiated (i.e., didactic or academic-focused) or somewhere in between (i.e., middle-of-the-road or intermediate) (Marcon, 1999; Vartuli, 1999). Thus, teachers' beliefs about their roles in facilitating children's learning generally and through play may not be identical among preschool teachers. Specifically, there may be a dilemma in trying to achieve a balance between children's rights to choose and be in control of their own learning and the teachers' responsibility to plan and direct children's experiences to ensure that all children experience breadth, balance, and progression in learning (Bennett, Wood, & Rogers, 1997).

Various Characteristics and Teacher Beliefs

Individual teachers have diverse sets of implicit theories about teaching (Spodek, 1987; Spodek & Rucinski, 1984). Various research studies have identified characteristics, such as teachers' area of certification (Buchanan et al., 1998; Kang, 1995; Vartuli, 1999), teaching experiences (Buchanan et al., 1998; Vartuli, 1999), perceived relative influences (Buchanan et al., 1998), and classroom size (Buchanan et al., 1998; Roupp, Travers, Glantz, & Coeln, 1979), as predictive of teachers' beliefs and practices about DAP. Specifically, teachers of young children (i.e., from preschoolers to the third graders) who either majored in early childhood education or child development were found to be more likely to believe in or follow DAP guidelines (Bredekamp & Copple, 1997; Haupt & Ostlund, 1997; Kang, 1995; MacMullen, 1999; Smith, 1997; Snider & Fu, 1990). Furthermore, some research has shown that teachers' years of experience predicted

teachers' orientation toward DAP (Buchanan et al., 1998; Vartuli, 1999). That is, more recent graduates had higher DAP scores than the experienced teachers.

Outside factors such as school characteristics (e.g., child-teacher-ratio and SES) and the pressures from interested groups have been identified as constraints for teachers' beliefs and practices. For example, Buchanan and her colleagues (1998) showed that the bigger the classroom size and the higher the number of children on free or reduced lunch in a classroom, the more developmentally inappropriate the practices. Likewise, class size, which is reflected by child-teacher ratio, has been found to affect the types of interactions between teachers and children (Buchanan et al., 1998; Howes & Smith, 1995).

However, there are still conflicting results among several predictors. In particular, classroom size and experiences of teachers have not been consistently evaluated as determinants of the DAP beliefs or practices. Contrary to previous research (Roupp et al, 1979; Whitebook et al., 1989), Kontos and Dunn (1993) found that program quality as measured by structural features of child care settings were unrelated to teachers' beliefs.

Beliefs and attitudes that influence behaviors are themselves influenced by current ideas of the culture (Super & Harkness, 1997). In this vein, Super and Harkness (1997) elaborated a culturally sensitive model named the developmental niche. This model proposes that child and environment actively interact and child development and learning should be considered in relation to the three major subsystems: the physical and social settings, the cultural customs concerning childcare and childrearing, and the psychology of the caretakers (or the mental representations of caregivers concerning child development, socialization, and education).

Teacher Beliefs and Outside Effects

Teachers may also feel pressure from interest groups such as parents, other professionals, the National Curriculum or cultural trends toward early academic foci. Research shows that teachers' perceptions of the power holder in classroom planning and curriculum is related to teachers' developmentally appropriate or inappropriate beliefs and practices (Buchanan et al., 1998). Thus, teachers are faced with a choice in determining where to position themselves along the continua from high to low teacher directiveness and from high to low child initiation.

This dilemma is further complicated by evidence that mothers with higher expectations for formal academic work and adult instruction are more likely to enroll their children in preschool programs that are less developmentally appropriate (Hyson, Hirsh-Pasek, & Rescorla, 1990; Hyson, Hirsh-Pasek, Rescorla, Cone, & Martell-Boinske, 1991; Stipek, 1993; Stipek, Milburn, Galluzzo, & Daniels, 1992). Moreover, research shows that teachers' relative perceived influence (i.e., teachers' perception of who has a power of influence in the curriculum among teacher him/herself, director or principal, or parents) significantly predicts teachers' DAPs or DIPs (Buchanan et al., 1998).

In sum, the literature suggests that parental beliefs and expectations about early childhood education may be related to actual classroom practices of teachers. Nevertheless, these studies did not show if teachers' practices were identical to their beliefs. In other words, it is not yet clear that teachers' beliefs were equal to parents' beliefs or expectations. Choi (1989) suggested that teachers' excessive work, big class size, limited materials and budget, and parents' expectations might prevent the teachers to follow their beliefs.

Summary

Lack of descriptions of practical implementations of best practices in relation to teachers' roles, confusion between play and work, and undervaluing work as the contrasting concept of play might enhance teachers' confusion about appropriate practice. Teachers may misinterpret how general ideas are reflected in practice. Although advocacy of play has become commonplace with the widespread of acceptance of DAP as a definition of the best early education, research on teachers' definitions of play and how they carry out DAP reveals a lack of consensus about its practical implementation (DeVries, 2001).

In fact, play is seen by many critics as aimless or trivial activity that falls short of educational justification and the low-quality-play activities (i.e., activity that does not deserve to be called educational experience) are often observed in many classrooms. This might result, in part, from teachers' misinterpreting play-based curriculum or from misunderstanding their roles in promoting children's learning through play. It appears that we should not disregard the value of play; nor should we limit our programs to only play, per se. Rather, we need to integrate play and work, in order to engage the development of the whole child (i.e., cognitive and creative as well as social and emotional development).

When teachers establish a cooperative relationship with children, create a cooperative sociomoral atmosphere in the classroom culture, and intervene to promote children's reasoning and construction of knowledge through appropriate play and work activities, high-quality early education can be established (DeVries, 2001). Teachers shouldn't just let children play. Rather, they need to provide competence-appropriate materials and

intervention that challenge children's current capability level, then promote new ways of thinking and advanced problem-solving skills. For teachers, we need to provide the clear description of specific practices.

Instruments Used in This Study

In this study, the three types of instruments were formatted into the teacher questionnaire: (a) the modified version of the Classroom Practices Inventory (Hyson et al., 1990) that is based on the DAP guidelines and examines curriculum focus either on academics or play; (b) the Pre-K survey of Beliefs and Practices (Marcon, 1999) that examines teachers' beliefs and self-reported practices in regards to a continuum of teacher-directedness and child-directedness; and (c) Preschool Teachers' Beliefs and Practices about Play that was developed for the study. The first two are reviewed in the following section and the development of the preschool teachers' beliefs and practices about play is discussed in the methods section.

The Original and Modified Measures of Classroom Practice Inventory (CPI)

In this study, the Modified Classroom Practice Inventory (Oekerman, 1997) was used to examine teachers' and parents' beliefs about DAP and teachers' practices of DAP. The original measure of Classroom Practice Inventory (CPI) is an observational instrument comprised of 26 statements written to reflect DAP guidelines (Hyson et al., 1990). Items chosen for inclusion in the original instrument are specific and concrete and closely related to "the ongoing discussion in early childhood education concerning curriculum with 'academic' and 'play' perspectives" (Zepeda, 1993, p.61).

The original CPI consists of two parts. The first part has 20 statements concerning program focus and the second part has six items concerning emotional climate of a

classroom. Half of the items for the first part represent positive and appropriate ideas and the other half of the items represent negative and inappropriate ideas according to the DAP guidelines of NAEYC. The positive and negative items are listed in quasi-random order (Hyson et al., 1990) and each item is rated on a five-point Likert-type scale, from "not at all like this classroom" to "very much like this classroom."

This instrument was found to have internal consistency through using Cronbach's alpha, correlation coefficients, and factor analysis. Cronbach's alpha for the whole scale (26 items) was .96. In addition, the alpha coefficient for the subscales of appropriate program (10 items) was .92, for the subscales of inappropriate program was .93. When negatively worded items were reversed so that a higher score always reflected more developmentally appropriate practices, Cronbach's alpha was .96. All intercorrelations were also highly significant (i.e., appropriate and inappropriate program subscales were strongly negatively correlated at $r = -.82$).

The modified CPI that was used for the current study is the survey format of the CPI (Appendix C). This scale was developed to assess teachers' beliefs about the appropriateness of classroom practices and the actual reported use of those practices in classroom settings. It was also intended to evaluate the curricular emphasis and emotional climate of educational programs for young children. For the study, only the curriculum emphasis part was used as this part of the instrument asks about teachers' beliefs and practices concerning "play" or "academic" emphasis.

To the left of each statement is the scale used to determine the appropriateness of each practice that is interpreted as a statement of a teacher belief. Respondents were asked to circle an "A," if they felt the statement reflected a practice that is appropriate for

use with young children or an "I" if the practice is inappropriate. The scale to the right of each statement asked how often teachers personally use this practice in their classroom. The wording associated with the numbering on the Likert-scale was amended to reflect the fact that the teachers themselves were acting as raters (i.e., from "used not at all in my classroom" to "used very much in my classroom").

The Pre-K Survey of Beliefs and Practices

The Pre-K Survey of Beliefs and Practices (Marcon, 1999) (Appendix C) was used to examine where teachers' and parents' beliefs and reported practices fall along the continuum of teacher-directedness to child-directedness. It was originally designed to identify different preschool models (i.e., Child-Initiated, Middle-of-the-Road, and Academically-Directed) through cluster analysis, based on five theoretical dimensions that Minuchin and Shapiro (1983) described as broad differences between early childhood models (Marcon, 1999). These include: (a) scope of developmental goals; (b) conception of how children learn; (c) amount of autonomy given to the child; (d) conception of teacher's role; (e) provisions of possibilities for learning from peers.

This instrument consists of seven belief items and seven practice items regarding how children learn, role of the teachers in facilitating children's learning, types of activities, material accessibility, developmental goals, learning format, and types of teacher-child interaction. The psychometric properties of this instrument were assessed by Cronbach's alpha and correlation coefficients. First, subscale reliability was assessed by Cronbach's alpha and both of the beliefs scale (.90) and the practice scale (.93) were found to have internal consistency (i.e., total scale is $\alpha = .95$). Moreover,

correlation analysis indicated significant intercorrelations ($p < .001$) with the belief scale correlated .84 with the practice scale and .95 with the whole instrument (Marcon, 1999).

III. Methods

Introduction

The purpose of this study was to examine early childhood teachers' and parents' self-reported beliefs and practices (only teachers) with regard to two current issues in the field of early childhood education that were identified through the literature review. They were (a) current debate about teacher-directed, academic-focused vs. child-centered, play-focused curricula and (b) the "early childhood error" (Bredekamp & Copple, 1992) where early childhood teachers hesitate to engage in children's activities after providing a rich environment and materials. In this study, the modified CPI that was constructed based on DAP guidelines was selected to examine teachers' and parents' beliefs and practices about academic focus and play focus curricula. Pre-K Survey of Beliefs and Practices was chosen to examine teachers' beliefs and practices about interaction approaches with regard to teacher-directed, middle-of-the road, and child-centered approaches. Preschool Teachers' Beliefs and Practices about Play was developed to examine teachers' (parents') beliefs and practices about (a) teachers' interaction approaches in play contexts (i.e., teacher-directed, middle-on-the road, and child-centered) and (b) the value of play.

Specifically, this study was expected to examine: (a) early childhood teachers' beliefs about play and their relationship with DAP awareness (i.e., how much respondent's beliefs are similar to DAP guidelines) and beliefs about the classroom interaction approach; (b) the relationship between teachers' beliefs and practices about DAP, play (i.e., teachers' play interaction approach and the value of play), and the classroom interaction approach; (c) difference between teachers' and parents' DAP awareness and beliefs about play; and (d) demographic predictors of teachers' and parents' beliefs about

DAP awareness, play, and classroom interaction approach (only for teachers). In order to examine demographic predictors, demographic variables of teachers and parents were identified in the initial analysis.

Table 1 shows the three instruments used in this study and the dependent variables that are measured by each instrument. Two of these were instruments reviewed in the earlier section. Preschool Teachers' Beliefs and Practices about Play was developed for this study and the procedures of developing this instrument are described in this section. The coding of the data collected by these instruments is included in this section.

Based on preliminary analysis using the first version of the Preschool Teachers' Beliefs and Practices about Play (Study I), the instrument was modified and additional data was collected (Study II). These procedures for Study I are described in this section and the results are reported in the next section. For Study II, the procedures and results are described in the next section.

Sample I

Overall, 58 early childhood teachers and 60 parents participated in the study. One hundred and five teacher questionnaires and 350 parent questionnaires were distributed in Knoxville, Tennessee. The childcare specialist of the Tennessee Agricultural Extension Service gave the questionnaires to 72 teachers at the four regular trainings for early childhood teachers and directors held between December 2002 and February 2003. These teachers completed the questionnaires at the training and returned them to the childcare specialist who, then, gave them to the researcher. In addition, 29 teacher questionnaires were asked to be distributed to teachers by directors who attended the training. However, these additional teacher questionnaires were not returned to the researcher. Moreover,

Table 1

Instruments and Dependent Variables

Dependent Variables	Instrument	Teachers/Parents
DAP beliefs/practices/awareness	Modified Classroom Practice Inventory	T/P
Play interaction approach beliefs/practices	Preschool Teachers' Beliefs and Practices about Play (# 1 - 4)	T/P
Play value beliefs/practices	Preschool Teachers' Beliefs and Practices about Play (# 5 - 10)	T/P
Classroom interaction approach beliefs/practices	Pre-K Survey of Beliefs and Practices	T

Note: DAP awareness - extent of similarity of respondent's beliefs to DAP guidelines

four teacher questionnaires were distributed to university lab school teachers through the researchers' personal contact. Out of these four teachers, three teachers returned questionnaires and comprised a part of the teacher sample.

Among the 72 direct participants, 13 teachers were dropped from the final analysis because the children in their classrooms were not preschoolers (i.e., older than 5-year-old or younger than 3-year-old) and two teachers who did not answer any questions were also dropped from the study. Two teachers who did not show any discrimination among the questions (i.e., marked the same numbers for every questions) were also dropped.

For parents, each of 30 teachers were asked to distribute 10 parent questionnaires to the parents of the children in their classrooms and 50 parent questionnaires were distributed by the researcher to the parents of the three university lab school classrooms. Eleven out of 30 teachers collected 35 parent questionnaires and returned them to the researcher by mail. At the time of analysis, one of these was dropped because the answers were not completed. In addition, two parents who marked the same numbers for every question also were dropped from the study. In addition, 28 parents out of 50 from the university lab school participated in the study (a 56% return rate). Overall, 60 parents from 16 different classrooms in 12 centers in Knoxville comprised the parent data collection.

Procedures I

Overview of Procedures I

Preschool teachers and the parents from some of the classrooms in the study were asked to fill out a questionnaire. All of the three instruments (i.e., the Modified CPI, Preschool Teachers' Beliefs and Practices about Play, and Pre-K Survey of Beliefs and

Practices) comprised the teacher questionnaire; whereas the parent questionnaire consisted of only two instruments. They were the modified CPI and Preschool Teachers' Beliefs and Practices about Play. Both the teachers and parents also were asked to fill out brief demographics in the questionnaire. The parents and their teachers were identified by assigned subject numbers from which parents' and teachers' anonymity was assured.

Demographic Variables

Based on the literature reviews, various characteristics that were thought to be related to teacher and parent beliefs or practices were identified. The identified characteristics, then, were used to explore the relationships with teachers' beliefs and perceived practices and parents' beliefs about: (a) DAP or DIP; (b) play interaction approach; (c) the value of play; and (d) general classroom interaction approach in relation to the continuum of child-directedness and teacher-directedness (refer to Table 1).

For the teachers' demographic characteristics, teachers were asked to report their age, years of experiences as a preschool teacher, years of experiences as a teacher other than as a preschool teacher, the highest degree earned and their academic major. The question of teachers' highest degree earned, there were eight types: (a) did not complete high school; (b) high school; (c) CDA; (d) 2-year college; (e) 4-year college; (f) some graduate classes; (g) master's degree; and (h) more than master's degree. When analyzing relationships between demographic variables and dependent variables, the eight categories of teachers' degree were aggregated into three (i.e., less than college, 2-year college, and 4-year college or higher).

In addition, information about school characteristics such as the type of school, regular use of commercial programs, and extracurricular activities and the classroom

characteristics such as child-teacher ratio and the age range of children in the classroom were asked. A question about who has the most influence in classroom planning and practices was also asked on the questionnaire.

Parents were asked to fill out the information about their age, education, and gender. In addition to this parental information, child information such as age, gender, and the type of school was included. Finally, parents reported if their child regularly attends any extracurricular activity class. For the parent questionnaire, the five types of degrees were included. They were (a) did not complete highschool; (b) highschool: (c) 2-year college; (d) 4-year college; and (e) master's and more than master's degree. The categories of parent's degrees were also aggregated into the same categories as the teachers.

Development of the Preschool Teachers' Beliefs and Practices about Play

In addition to the two instruments that have been used in research on teachers' self-reported beliefs and practices about DAP, a short instrument, developed by the researcher, was used in

this study. The items in this instrument were developed based on thorough reviews of the literature on play and curriculum. This instrument was designed to examine early childhood teachers' self-reported beliefs and practices about appropriate interaction approaches in play contexts and about the value of play with regard to children's skill development. This instrument consisted of two dimensions: (a) teachers' play interaction approach; and (b) the value of play.

The teacher's play interaction approach. The first dimension of the instrument, teachers' play interaction approach, measured early childhood teachers' (or parents') beliefs or practices about appropriate interaction approaches in specific play contexts.

The specific roles of a teacher during play were identified through literature reviews. Kontos (1999) reviewed the five types of teachers' roles during children's free play. These five roles are stage manager, play enhancer/playmate, interviewer, safety/behavior monitor, and uninvolved. In this instrument, only the stage manager role, the play enhancer/play mate role, and the uninvolved role were selected. The remaining roles were not included in development of the instrument as they were judged to be less relevant to curricular decision-making. The stage manager role involves helping children to get ready to play (i.e., providing materials, giving suggestions for use of materials) and physically helping children use the materials. The play enhancer/play mate role consisted of actually entering children's play and talking with children about their play activity. The uninvolved role, on the contrary, referred to teachers' non-engagement in children's free activity.

Kontos (1999) found that teachers adopt different roles in different play activity settings. In the "teachers' play interaction approach" dimension, therefore, teachers' beliefs and practices about interaction approaches were asked with regard to each of the four types of play contexts. They are (a) general play context (i.e., stage manager role), (b) constructive play (i.e., children's activities to make and create things such as art, play dough, or building blocks), (c) pretend play (i.e., role playing/using props symbolically), and (d) manipulative/functional play (i.e., activities such as puzzles, games, reading, manipulating toys without building something).

The three types of teacher interaction approaches were identified through literature reviews. They are (a) teacher-directed; (b) middle-of-the road; and (c) child-centered approaches (Marcon, 1999; Vartuli, 1999). Overall, the first dimension of Preschool

Teachers' Beliefs and Practices about Play measured which interaction approach among the three types early childhood teachers (or parents) believed appropriate or practiced in general play contexts, constructive play, pretend play, or manipulative/functional play contexts.

The first dimension, teachers' play interaction approach, consisted of four items (i.e., items #1 through #4). Each item asked about an early childhood teachers' appropriate interaction approaches in the specific play contexts with regard to the teachers' play enhancer/play mate role or uninvolved role. The item #1 asked teachers' beliefs about appropriate interaction approach in general play contexts (i.e., stage manager role). The items #2, #3, and #4 measured teachers' beliefs and practices about appropriate interaction approaches in constructive play, pretend play, and manipulative/functional play contexts, respectively. Each item was comprised of a belief and practice part and provided three different statements, each of which referred to the three types of interaction approaches. The A statements represented child-directed beliefs or practices, the B statements demonstrated the middle-of-the-road beliefs or practices, and the C statements indicated teacher-directed beliefs or practices (see Appendix C).

The value of play. The second dimension of the Preschool Teachers' Beliefs and Practices about Play, "the value of play," measured early childhood teachers' (or parents') self-reported beliefs or practices concerning the value of play (i.e., with regard to skill development). Each statement presented two opposing ideas. A statements referred to the undervaluing play ideas where structured activities promote children's skill development, and B statements referred to the valuing of play ideas where play promotes children's skill development.

This dimension consisted of six items. The first two items, the items #5 and #6, only contained the belief part and the other items included both of belief and practice parts. Items #5 and #6 were expected to identify how much teachers and parents valued play as an important property in the early childhood curriculum. On the other hand, the items #7 through #10 were expected to reveal how early childhood teachers (or parents) valued play through asking if they believed children develop their thinking skills (i.e., literacy and math skills) (item #7), social skills (item #8), and physical skills (i.e., large and small motor skills) (item #9 and #10) through play or structured activities.

Coding of the Instruments

Modified CPI. The modified CPI examined the three measures in the study: (a) beliefs about DAP (i.e., beliefs about the statements in the instrument reflecting DAP or DIP; (b) DAP awareness (i.e., how much teachers' and parents' reported beliefs are similar to DAP guidelines); and (c) self-reported practices about DAP. The belief and practice scores were used to explore the relationship between reported beliefs and practices about DAP. The scores of DAP awareness were coded in order to compare these with the beliefs about play and classroom interaction approach.

Belief answers were coded as dummy variables. That is, all the "I" (inappropriate) responses were coded as zero and "A" (appropriate) responses were coded as one, which comprised the total range of 0-26. Each practice answer was a five-point scale and the total range was between 26 and 130. DAP awareness was also coded as dummy variables, but, was coded differently according to the types of items. This instrument consisted of 26 items that were divided into two types: (a) items reflecting DAP; (b) items reflecting DIP. In the DAP items (Table A1 in Appendix A), a DAP belief answer marked as "A"

(appropriate) was coded as one and an answer marked as "I" (inappropriate) was coded as zero. In the DIP items (Table A2 in Appendix A), on the other hand, a DAP belief answer marked as "I" was coded as one and an answer marked as "A" was coded as zero. The possible range of the awareness of DAP is between 0 and 26. The higher the DAP belief score a respondent has the more her/his beliefs were similar to DAP and the lower the DAP belief score the less her/his beliefs were similar to DAP.

The Preschool Teachers' Beliefs and Practices about Play. In order to identify a respondent's beliefs or perceived practices about the play interaction approach, scores of A, B, and C statements of each question from one through four were compared. If the score of an A statement was higher than the score of a C statement, the answer was coded as valuing child-centered approach for the question. If the score of a C statement was higher than the score of an A statement, the answer was coded as valuing teacher-directed approach. If the score of a B statement was higher than the scores of A and C statements, the answer was coded as valuing the middle-of-the road approach.

The difference between two statements on questions 5 to 10 was calculated to determine the extent to which a respondent values play and how much s/he values (undervalues) play. The score of A statement (undervaluing play statement) was subtracted from the score of B statement (valuing play statement). A positive number indicated that a respondent valued play and a negative number indicated that a respondent did not value play (see questionnaire in Appendix A).

The Pre-K Survey of Beliefs and Practices. Each item included two opposing viewpoints with a range of 10 points. Teacher and parent participants were asked to check the point representing their belief or practice along a continuum scored 1 to 10,

where one indicated teacher-directed view-points and 10 indicated child-directed view-points. The range of scales on the beliefs and practices are the same, from 7 to 70. Overall, the higher the score a respondent had, the more child-directed beliefs or practices s/he had.

IV. Results

In this section, the results are presented for two studies, Study I and Study II. Study II was developed based on the findings of Study I. The rationale and methodology for Study II are also presented in this section.

Demographic Characteristics of the Sample I

Demographic Characteristics of Teachers

Table A3 in Appendix A shows total numbers of answers, mean, median, mode, standard deviation, and minimum and maximum values of demographic variables for teachers. School and classroom characteristics, classroom size (i.e., teacher-child ratio), school size (i.e., numbers of classrooms at the center), and average age of children in class are also reported. In general, the teacher participants in Study I did not have much teaching experience. In fact, most of the teachers did not have teaching experiences at all (i.e., medians and modes are zero for years of teaching at preschool and for years of teaching other than as preschool teachers). Almost 90% of the teachers (n = 52) were females and there were six male teachers.

Among the teachers, the types of degrees were aggregated into the three types of degree: (a) less than college; (b) 2-year college; and (c) 4-year college or more than 4-year college. Almost half of the teachers were 4-year college graduates (55.2%) and only 14% did not have college degrees. More than half of the teachers (60.3%) in this study reported that teachers themselves have relatively more power to decide classroom plans and instruction. Next, more than 30% of teachers reported that the directors or principals of the centers have relatively more power than teacher themselves or parents. Only one teacher felt that parents had the greatest influence on her classroom plans or instructions.

Table A4 in Appendix A shows the demographic variables not used in the initial analyses and the reasons for elimination. In particular, "average age of children in class" was eliminated in the further analyses because teachers' reports of age range of children were not clear enough to be transformed into usable data. For example, teachers' answers for the age range of children varied such as three, three-four, four, and four-five.

The relationships among the demographic variables were examined through nonparametric correlation (Table 2). Spearman correlations revealed that teacher age was weakly correlated with the aggregated degree of teachers ($r_s = .37, p = .004$) and was moderately correlated with teachers' years of preschool teaching ($r_s = .57, p < .001$). There were significant negative relationships between school size (i.e., numbers of classrooms in center) and teacher age, $r_s = -.36, p < .01$ and between school size and years of preschool teaching ($r_s = -.40, p = .04$).

Demographic Characteristics of Parents

Demographic predictors for variability of the parental beliefs were parents' age, parents' highest degree earned, parents' gender, child's age, child's gender, and number of extracurricular classes child attends. There were no legal guardians or others in the sample. All of the participants were children's parents and more than 70% of the parents ($n = 47$) were mothers of the children. All but one parent had more than 2-year college degrees and 40% of the parents ($n = 24$) had more than 4-year college degrees. Parents' ages were distributed between 22 and 51 and the mean of the parents' ages was 33.54 ($SD = 5.63$). Almost half of the parents ($n = 26$) were the parents of 4-year-old children; about 32% of the parents ($n = 19$) were the parents of 3-year-old children; and 25% ($n = 15$) were the parents of 5-year-old children.

Table 2

Correlation for Teacher Demographic Variables (Study I)

Correlations

			age	highest degree earned	years of preschool teaching	influence on the instruction	teacher-child ratio	numbers of classrooms
Spearman's rho	age	Correlation Coefficient	1.000	.374**	.572**	-.020	.001	-.363**
		Sig. (2-tailed)	.	.004	.000	.882	.995	.006
		N	58	57	53	56	46	56
	highest degree earned	Correlation Coefficient	.374**	1.000	-.100	.227	.009	-.031
		Sig. (2-tailed)	.004	.	.480	.095	.951	.820
		N	57	57	52	55	46	55
	years of preschool teaching	Correlation Coefficient	.572**	-.100	1.000	-.130	-.132	-.395**
		Sig. (2-tailed)	.000	.480	.	.355	.397	.004
		N	53	52	53	53	43	52
	influence on the instruction	Correlation Coefficient	-.020	.227	-.130	1.000	-.037	.169
		Sig. (2-tailed)	.882	.095	.355	.	.807	.217
		N	56	55	53	56	46	55
	teacher-child ratio	Correlation Coefficient	.001	.009	-.132	-.037	1.000	.035
		Sig. (2-tailed)	.995	.951	.397	.807	.	.815
		N	46	46	43	46	46	46
	numbers of classrooms	Correlation Coefficient	-.363**	-.031	-.395**	.169	.035	1.000
		Sig. (2-tailed)	.006	.820	.004	.217	.815	.
		N	56	55	52	55	46	56

**. Correlation is significant at the 0.01 level (2-tailed).

For the question of how many extracurricular classes a child attends, 70% (n = 42) of the parents answered that their children do not attended any extra curricular classes. About 17% (n = 10) of the parents reported their children attend one class, about 7% (n = 4) of the parents reported two classes, two parents answered three classes and only one parent reported her child attends four extracurricular classes. Among the parents' demographic variables, the number of extracurricular classes a child attends was eliminated in the further analysis because of no variability in numbers. The relationships among the parents' demographic variables were examined using Spearman correlations and there were no significant relationships among the parents' demographic variables.

Normality of Demographic Variables

In order to decide whether to use parametric or nonparametric statistics, normality of demographic continuous variables was calculated. Only teacher-child ratio variable and parent age variable were normally distributed continuous variables (see Table A5 in Appendix A).

Descriptive Statistics of Dependent Variables

Beliefs and Practices about DAP

The frequencies of respondents' DAP beliefs are reported in Table 3. For the three items (10, 18, and 20), many of the respondents reported that their beliefs were different from NAEYC's DAP guidelines (i.e., low DAP awareness). In particular, teachers were found to have more DIP beliefs for these items than the parents. Almost all of the teacher participants in Study I and three quarters of the parents were found to believe that separate times or periods should be set aside to learn materials in specific content areas such as math, science, or social studies (item #18). Eighty-five percent (n = 49) of the

Table 3

Teachers' and Parents' DAP Beliefs (Study I)

CPI item#	Teachers' answers		Parents' answers		A/I
	A (%)	I (%)	A (%)	I (%)	
1	54 (93.1)	1 (1.7)	60 (100.0)	0 (0)	A
2	3 (5.2)	52 (89.7)	12 (20.0)	48 (80.0)	I
3	55 (94.8)	0 (0)	58 (96.7)	2 (3.3)	A
4	11 (19.0)	43 (74.1)	12 (20.0)	48 (80.0)	I
5	53 (91.4)	1 (1.7)	59 (98.3)	1 (1.7)	A
6	49 (84.5)	5 (8.6)	53 (88.3)	7 (11.7)	A
7	7 (12.1)	47 (81.0)	18 (30.0)	42 (70.0)	I
8	53 (91.4)	1 (1.7)	58 (96.7)	2 (3.3)	A
9	3 (5.2)	51 (87.9)	7 (11.7)	53 (88.3)	I
10	49 (84.5)	5 (8.6)	43 (71.7)	17 (28.3)	I
11	49 (84.5)	5 (8.6)	58 (96.7)	2 (3.3)	A
12	9 (15.5)	45 (77.6)	23 (38.3)	37 (61.7)	I
13	54 (93.1)	4 (6.9)	60 (100.0)	0 (0)	A
14	7 (12.1)	47 (81.0)	11 (18.3)	49 (81.7)	I
15	53 (91.4)	1 (1.7)	60 (100.0)	0 (0)	A
16	53 (91.4)	1 (1.7)	60 (100.0)	0 (0)	A
17	5 (8.6)	49 (84.5)	9 (15.0)	51 (85.0)	I
18	53 (91.4)	1 (1.7)	45 (75.0)	15 (25.0)	I
19	29 (50.0)	25 (43.1)	49 (81.7)	11 (18.3)	A
20	49 (84.5)	5 (8.6)	32 (53.3)	28 (46.7)	I
21	50 (86.2)	4 (6.9)	60 (100.0)	0 (0)	A
22	50 (86.2)	4 (6.9)	56 (93.3)	4 (6.7)	A
23	5 (8.6)	49 (84.5)	6 (10.0)	54 (90.0)	I
24	51 (87.9)	3 (5.2)	58 (96.7)	2 (3.3)	A
25	6 (10.3)	48 (82.8)	8 (13.3)	52 (86.7)	I
26	54 (93.1)	0 (0)	59 (98.3)	1 (1.7)	A

teachers reported that reading and writing instruction emphasizes direct letter recognition, reciting alphabet, coloring within the lines, and being instructed in the correct formation of letters (item #10). The same numbers of teachers (n = 49) did not value children's voluntary participation in activities. Rather, they believed that teachers should request children's participation or disapprove of failure to participate and give rewards (item #20). However, only half of the parents believed children need requests or rewards for their participations.

Parents' beliefs about the three items (10, 18, and 20) were found to be similar. Correlations revealed that there are significant relationships between parents' beliefs about items 10 and 18, r = .49, p = .00, between items 10 and 20, r = .52, p = .00, and between items 18 and 20, r = .54, p = .00.

Interestingly, 30% (n = 18) of the parent participants valued teacher-directed activities such as workbooks, ditto sheets, or flash cards (item #7) and 12 out of 60 parents (20%) believed that large group activities are appropriate for young children (item #2). Similar numbers (n = 11, 18%) of the parents also reported that memorization and drill are important to preschool children (item #14). Moreover, almost 40% of the parents (n = 23) indicated that their children should practice pre-writing, reading, or fine-motor skills during planned lessons at the preschool through structured activities such as coloring predrawn forms, tracing letters or pictures (item #12).

The total mean scores on teachers' and parents' DAP awareness were similar (M = .82, SD = .10, M = .84, SD = .10, respectively). Teachers' reports of their DAP practices were not normally distributed (see Figure B1 in appendix). The mean of teachers'

perceived DAP practice scores were clustered in the middle. The mean of the perceived practices was 3.15 (*SD* = .43).

Beliefs and Practices about Play

In Study I, it was hard to interpret the respondents' beliefs (or practices) about play because their answers did not discriminate with regard to the two or three aspects described in each question. First, in the questions 1 to 4 and questions 11 to 14, three aspects (i.e., child-centered, middle-of- the-road, and teacher-directed) were presented for belief and practice questions, respectively. A range of responses was anticipated across these three aspects. However, the respondents marked the same or similar answers. In order to identify how differently a respondent marked the answers along these three different perspective statements, differences between each of the two perspectives were calculated (see Tables A6 and A7 in Appendix A). All of the pairs for the three perspective statements were: (a) child-centered - middle-of-the road; (b) child-centered - teacher-directed; and (c) middle-of-the-road - teacher-directed.

The median and mode scores for 12 pairs of difference for beliefs were all zero. In other words, most of the teachers marked the same response for the three different perspectives that were deliberately designed to discriminate responses. Theoretically, if respondents had answered thoughtfully, there would have been different responses. Thus, it was determined that these items did not discriminate appropriately.

Differences of parents' beliefs about the three perspectives for each question also were calculated (see Tables A8 and A9 in Appendix A). Even though parents' answers were found to have higher discrimination among the different perspectives than the teachers, most of the parents also marked the same numbers for different perspectives

(i.e., modes were zero). Second, in the belief questions from 5 to 10 and practice questions from 15 to 18, two aspects (i.e., nonvaluing play and valuing play) were presented. The same tendency was found for these questions. Respondents' answers did not discriminate between these two aspects. Differences for teachers' and parents' beliefs about play valuing statements and play unvaluing statements are reported in Appendix A (Tables A10 and A11). The modes were all zero for both of the teachers and parents.

Beliefs and Practices about Teachers' Classroom Interaction Approach

Teachers' beliefs and practices about general classroom interaction approach did not have much variability and were found to be predominantly child-centered (see Figure B2 in Appendix B). Only one teacher reported to value teacher-directed approach. Means, medians, and modes for all the belief and practice questions were more than seven (i.e., the higher the score, the more the child- centered beliefs/practices) (see Tables A12 and A13 in Appendix A). Also, respondents were more likely to mark the same answers for belief and practice measures ($r = .96$, $p < .001$).

Analysis by Research Questions

Since respondents' answers on the two instruments (i.e., Preschool Teachers' Beliefs and Practices about Play and Pre-K Survey of Beliefs and Practices) did not discriminate as discussed in the previous section, further analyses were not considered to be necessary. For analyses of Study I, therefore, research question one (i.e., comparison between play instrument and the other two instruments) was not applicable. For the other research questions, only the modified CPI was used.

Research Question Two: What is the relationship between preschool teachers' beliefs and their practices about DAP?

In order to explore the relationship between teachers' beliefs and practices about DAP, Pearson product-moment correlation coefficient was calculated. Teachers' beliefs and perceived practices about DAP were not statistically significant ($r = .13$, ns). T-test revealed that the difference between teachers' beliefs and practices about DAP was statistically significant, $t = 45.65$, $p < .001$ (two-tailed).

Research Question Three: Are there significant differences between teachers' and parents' DAP awareness?

A t-test was used to explore the mean difference between teachers' and parents' DAP awareness. The difference between teachers' and parents' DAP awareness was not significant, $t = -.63$ (ns).

Research Question Four: Do demographic characteristics predict early childhood teachers' beliefs and perceived practices?

As explained earlier, the dependent variables identified by two instruments (i.e., Preschool Teachers' Beliefs and Practices about Play and Pre-K Survey of Beliefs and Practices) did not discriminate along different perspectives, only DAP awareness and practices were used in the analysis for the research question #4. Among the demographic variables for teachers, teachers' age, degree, perception of influences on classroom planning, years of preschool teaching, teacher-child-ratio, and numbers of classroom size had enough variations and were used for this analysis.

In order to explore predictors for DAP awareness and DAP practices, simple linear regression tests were thought to be adequate. Among the identified demographic

variables that had variability or clarity (Table A4), degree and perception of influences were not continuous but categorical variables. If regression tests were run without controlling for group membership (i.e., without controlling for categories) within these variables, they might have led to flawed estimates of slope coefficients for the dependent variables (i.e., DAP awareness and perceived DAP practices), given that there might be differences between category groups in the mean level of the dependent variable. This problem was solved by recoding these two discrete variables as dummy variables. Dummy-variable regression is the statistical method that can be used to incorporate qualitative explanatory variables into a linear model when we have several groups of observations and where a simple linear regression model is thought to be an adequate description.

In this study, degree had three categories (i.e., less than college, 2-year college, and 4-year college and more) and were transformed into two dummy variables. The first dummy variable, agdeg1," took on a value of one, if respondents had less than college degrees and took on a value of zero for the other degrees. The other dummy variable, "agdeg2," took a value of one, if respondents had 2-year college degrees and a value of zero, if respondents had 4-year college or higher degrees. The categories of the variable "perception of influences on classroom planning" were aggregated into three categories (i.e., teachers, directors, and others), in turn, were changed into the two dummy variables such as "influ1" and "influ2." The first variable took a value of one, if respondents had perception that teachers themselves have relatively powerful influences on classroom planning and took a value of zero if respondents had other perceptions. The second variable took a value of one, if respondents had perception that directors had more power

than others in making classroom decisions or planning and a value of zero for other perception categories.

Before running regression tests, relationships between teachers' demographic variables and their DAP awareness and practices were examined. Table 4 shows the results of correlation analyses. Demographic variables that were too weakly correlated with dependent variables were dropped and only four variables such as age, agdeg2, years of preschool teaching, and number of classrooms were used for stepwise regression analyses.

Stepwise regression analyses identified two regression models for teachers' DAP awareness. The first model indicated that teachers with more experiences teaching in preschool had beliefs that are more similar to DAP guidelines, F (1, 48) = 8.73, $p < .01$. The second model identified the two predictors, teachers' degrees and years of preschool teaching, for the teachers' DAP awareness. Teachers with more experience of teaching at preschool and 2-year college degrees were more likely to have beliefs similar to DAP (i.e., high DAP awareness), F (2, 48) = 6.82, $p < .01$. However, there was no identified regression models for teachers' perceived DAP practices.

Research Question Five: Do demographic characteristics predict preschool parents' DAP awareness and perceived DAP practices?

The analysis procedures for the research question five were the same as the research question four. First, the relationships between parents' demographic variables and their mean of DAP awareness were examined through correlation. Only one significant relationship was found between child's age and total mean of parents' DAP awareness, r

Table 4

Correlations Matrix for Teachers' Demographic Variables and DAP Awareness and Practices

		age	AGDEG1	AGDEG2	INFLU1	INFLU2	years of preschool teaching	teacher-child ratio	numbers of classrooms
mean of DAP awareness	Pearson Correlation	.196	-.141	.175	.128	-.191	.384**	-.046	-.237
	Sig. (2-tailed)	.148	.305	.200	.355	.165	.005	.766	.084
	N	56	55	55	54	54	51	44	54
mean of DAP practices	Pearson Correlation	.144	-.007	-.151	.081	-.071	.171	.131	.138
	Sig. (2-tailed)	.281	.957	.261	.553	.605	.220	.384	.310
	N	58	57	57	56	56	53	46	56

**. Notes: **Correlation is significant at the 0.01 level (2-tailed). AGDEG1- less than college degree vs. other degrees; AGDEG2 - 2-year college degree vs. other degrees. INFLU1 - believing teachers' power on classroom planning; INFLU2 - believing directors' power on classroom planning.

= -.30, $p < .05$. In addition to child's age, a weak relationship (r = -.20, ns) was found between child's gender and parents' DAP awareness. Among the parents' demographic variables, only child's age and child's gender were used for regression analyses. Stepwise regression analyses identified one model. Child's age accounted for about 9% of the variance and was a significant predictor of parents' DAP awareness, F (1, 58) = 5.49, $p <$ .05. This regression model indicated that parents with younger children had beliefs that were more similar to DAP guidelines.

Limitations of Study I: Why an Additional Study Was Needed?

Limitations of the study were identified with regard to the respondents' answers on the Preschool Teachers' Beliefs and Practices about Play and Pre-K Survey of Beliefs and Practices that were found not to discriminate. For the play instrument (Preschool Teachers' Beliefs and Practices about Play), in particular, the participants were more likely to mark the same or similar responses for the different aspects of an idea, for which they could not reliably have the same or similar responses. Possible reasons of this limitation were explored. First, lack of discrimination might be due to the flawed format of the play instrument developed for Study I. For example, two (i.e., questions from 5 to 10 and from 15 to 18) or three (i.e., questions from 1 to 4 and from 11 to 14) statements with different perspectives were given and respondents were asked to mark each of two or three for one question according to their extent of agreement. Even though marked answers were expected to show discrimination among the different perspectives, the answers were not found to be discriminating (see Tables from A6 to A11), perhaps because respondents were not forced to choose a single perspective. Second, in the Pre-K Survey of Beliefs and Practices, beliefs and practices were highly correlated (r = .95, $p <$

.01). In the format of the questionnaire, the belief questions and the practice questions were placed one after the other. Therefore, because of the format, respondents could easily mark the same for the practice as what they did for the belief in advance.

As a second possible reason for the lack of discrimination of these items was the sample characteristics. Teacher participants in Study I were more likely to be young and not to have teaching experiences. Many young novices might not understand the questions well (i.e., if they didn't study child development or early childhood education) and they might not have structured their belief system yet about early childhood education or curriculum.

Moreover, possible flaws in methods for collecting data were explored. Teacher participants may not have taken the questionnaire seriously because it was administered without personal attention to the importance and seriousness of the questionnaires. When the extension agent handled the administration, he did so without emphasizing the importance of the research to the participants. In addition, when directors were asked to handle the administration of the questionnaires, there was no return rate.

V. Study II

Introduction

In order to address the identified limitations of Study I and to get more reliable data, an additional study was conducted. In Study II, questionnaires were reformatted to obtain more discriminating data (see questionnaire in Appendix E) and the Extension agent explained the importance of the study for teacher respondents during administration of the questionnaires. Study II only included teacher subjects (n = 40). The sampling procedure was identical to Study I. Teachers' data from Study II allowed for the testing of reliability of the developed play scale. These results are reported in the result section.

Methods – Study II

Introduction

In this method section, changes in Study II are explained (particularly, the changes of questionnaire format). Explanations about the sample of Study II and procedures are described in this section.

Changes of the Instruments

In Study II, the demographic form, the developed play instrument (i.e., the Preschool Teachers' Beliefs and Practices about Play), and the Pre-K Survey of Beliefs and Practices were changed. On the demographic form for teachers, most of the teachers in Study I did not fill out their major study area. Hence, in Study II, a multiple-choice question regarding major study area was given in the questionnaire. The choices were (a) child development, (b) early childhood education, (c) other (see Appendix E).

Modifications of the developed play instrument. In order to get discriminating answers about different perspectives, A, B, and C statements for questions 1 to 4 and 11

to 14 and A and B statements for questions 5 to 10 and 15 to 18 were reformatted into a continuum. In this way, respondents were expected to identify that these statements explain very different perspectives and to be forced to mark one point according to their extent of agreement. Moreover, belief questions and practice questions did not comprise a pair in the revised instrument. The revised play instrument consisted of 18 questions that consist of 10 belief questions (i.e., questions 1 to 10) and eight practice questions (i.e., questions 11 to 18). (see Appendix E.) In order to prevent respondents from marking similar numbers all along the instrument, statements were randomly placed within a continuum (either left or right side of the continuum with reversed scoring).

Modifications of the Pre-K Survey of Beliefs and Practices. In the revised format, belief questions and practice questions were taken apart. Instead of seven questions in the original format, there were 14 questions (i.e., belief questions from 1 to 7 and practice questions from 8 to 14) in the revised one. Practice questions did not follow in the same order that the belief questions were placed. In addition, two different perspectives such as teacher-directed and child-centered were randomly assigned to the ends of each continuum.

Sample and Procedures of Study II

Overview of procedures II. The distribution procedure for the questionnaires in Study II was identical to the first study. Forty-one teacher questionnaires were distributed through Family and Consumer Science Department of the University of Tennessee Agricultural Extension Service. The childcare specialist of the Tennessee Agricultural Extension Service gave the questionnaires to 41 teachers at the two regular trainings for early childhood teachers held in early April 2003. These teachers completed the

questionnaires at the training and returned them to the childcare specialist who, then, gave them to the researcher. However, at this time, the Extension agent explained the importance of the study and asked the teacher participants to take care and to think carefully in answering the questions. One participant was dropped from the study because she taught older children. Therefore, 40 teachers comprised the final analysis.

Coding of the revised Preschool Teachers' Beliefs and Practices about Play. In the questions 4, 6, 9, 11, 13, 15, 17 of the revised play instrument, child-centered statements were placed on the left side of a continuum and teacher-directed statements were placed on the right side of the continuum. The scoring of these questions was reversed, so for every question concerning play interaction approach (i.e., question numbers 1 through 4, and 11 though 14), the higher the score indicated that a respondent valued (or reported for their practices) child-centered approach at play and the lower the score the more teacher-directed approach at play. The revised play instrument was composed of a 10-point scale and the total range for the play interaction approach beliefs or practices was between 4 and 40. For the dimension of play value, the scores of the questions 6 and 9 from the belief questions and the questions 15 and 17 from the practice questions were also reversed. The possible total ranges of the play value beliefs and practices were between 6 and 60 and 4 and 40, respectively. The higher the score of the play value beliefs (practices), the more a respondent was thought to value play or the more often s/he practiced play.

Coding of the revised Pre-K Survey of Beliefs and Practices. The coding procedure for the revised Pre-K Survey of Beliefs and Practices was similar to the play instrument's coding. The scores of the question numbers 2, 4, 10, 11, 12, and 14 were reversed, such

that the lower the score the more teacher-directed beliefs (or practices) and the higher the score the more child-centered beliefs (or practices). The possible total range of the belief or practice questions was between 7 and 70.

Results of Study II

Demographic Characteristics of Sample (Study II)

Teachers' ages were normally distributed between 18 and 30 (n = 40, M = 23.40, SD = 2.71). Most of the teachers in Study II, as in Study I, were young and also did not have extensive teaching experiences. In study II, about 8% of the teachers (n = 3) were less than 20 years old and about 58% of the teachers were less than 24 years old. Medians and modes for years of teaching at preschool and other educational level were all zero. Teacher-child ratios were normally distributed between 4 and 11, with a mean ratio of 8.05 (SD = 2.06). The number of classrooms at each center was another example of normally distributed variable in Study II. Answers of the average age of children at class were not clear (i.e., teachers answered age range as 4, 4 to 5 or 5) and this variable was eliminated for regression tests.

Male teachers comprised more than 20% (n = 9) of the total subjects in Study II. The teachers in Study II were also highly educated. More than 90% of the teachers (n = 37) had at least 2-year college degree that consisted of 10 teachers who had 2-year college degree and 27 teachers who had 4-year college degree or higher. Teachers who majored either in child development or early childhood education comprised about 42% (n = 17) of the total teachers in Study II . Many of the teachers (n = 27, 67.5%) believed that teachers themselves had relative power in their classroom planning and instruction and 30% of the teachers (n = 12) believed in the directors' relative power. The type of school

did not have enough variability and was eliminated when regression tests were run for research question #4. In addition, years of teaching other than preschool did not have variability and was eliminated (see Table A14 in Appendix A).

Descriptive Statistics of Dependent Variables

Beliefs and practices about DAP. Teachers in Study II were found to have beliefs similar to DAP guidelines (M = .87, SD = .08). Table 5 shows teachers' answers about DAP beliefs. In Study II, all but one teacher indicated that they valued setting up separate time for learning specific content areas such as math, science, or social studies (item #18). About 30% of the teachers reported that they did not value children working individually or in child-chosen small groups (item #6) and about 20% of the teachers believed that large group, teacher-directed instruction should be used most of the time at preschool (item #2). Thirty-two percent of the teachers reported that using workbooks, ditto sheets or flashcards in preschool classrooms is appropriate (item #7). Forty percent of the teachers reported that children should learn reading and writing skills through teacher-directed methods such as reciting the alphabet or coloring within the lines (item #10).

Teachers were more likely to mark in the middle value for self-reported DAP practices (see Figure B3 in Appendix B). The scores fell between 2.69 and 4.04 on a scale of 1 to 5 (M = 3.37, SD = .33). Because teachers' reports of DAP practices did not have variability, further analyses were not possible.

All the respondents in Study I and Study II were compared concerning their beliefs about DAP. In particular, several DAP items with low rates of the respondents' DAP

Table 5

Teachers' DAP Beliefs (Study II)

Items	DAP Guidelines (A/I)	Teachers' Answers	
		Appropriate	Inappropriate
1	A	40 (100.0)	0 (0)
2	I	7 (17.5)	33 (82.5)
3	A	40 (100.0)	0 (0)
4	I	4 (10.0)	36 (90.0)
5	A	40 (100.0)	0 (0)
6	A	29 (72.5)	11 (27.5)
7	I	8 (20.0)	32 (80.0)
8	A	37 (92.5)	3 (7.5)
9	I	7 (17.5)	33 (82.5)
10	I	16 (40.0)	24 (60.0)
11	A	40 (100.0)	0 (0)
12	I	0 (0)	40 (100.0)
13	A	40 (100.0)	0 (0)
14	I	0 (0)	40 (100.0)
15	A	40 (100.0)	0 (0)
16	A	36 (90.0)	4 (10.0)
17	I	9 (22.5)	31 (77.5)
18	I	39 (97.5)	1 (2.5)
19	A	28 (70.0)	12 (30.0)
20	I	11 (27.5)	29 (72.5)
21	A	40 (100.0)	0 (0)
22	A	38 (95.0)	2 (5.0)
23	I	5 (12.5)	35 (87.5)
24	A	39 (97.5)	1 (2.5)
25	I	1 (2.5)	39 (97.5)
26	A	40 (100.0)	0 (0)

awareness were identified in Table 6. For the item #18, all of the teacher and parent groups had the highest percentages of low DAP awareness. The second highest percentage of low DAP awareness was found in the item #10. As compared to the teachers from Study I and parents, the teachers of Study II had relatively lower percentage of low DAP awareness for this item. Eighty-five percent of the teachers from Study I and 72% of the parents believed the teacher-directed instruction stated in item #10 was appropriate, on the other hand, 40% of the teachers from Study II represented their beliefs against DAP guidelines.

In addition to item #10, a relatively higher percentage of the parents than the teachers were found to favor teacher-directed instructions stated in item #2, #4, #7, #12, and #14. On the other hand, a relatively higher percentage of teachers (both from Study I and Study II) than parents did not value children's daily access to materials such as pegboards, puzzles, legos, and markers (item #19).

Beliefs and practices about the teachers' play interaction approach. The mean scores of the teachers' beliefs and self-reported practices about play were all normally distributed. The total mean scores of the teachers' beliefs about play in total were placed between 3.70 and 9.00 ($M = 6.26$, $SD = 1.38$) and the total mean scores of the teachers' self-reported practices about play in total were placed between 2.63 and 9.25 ($M = 6.47$, $SD = 1.69$). Overall, the teachers of Study II were found to value a middle-of- the-road approach ($M = 5.90$, $SD = 1.74$) and their reported practices were also likely to be in the middle between teacher-directed and child-centered approaches ($M = 6.16$, $SD = 1.90$).

Interestingly, teachers' self-reported beliefs about play interaction approaches were

Table 6

Items with Low DAP Awareness

CPI questions	DAP guideline	Low awareness of DAP (%)		
		Teachers I	Teachers II	Parents
(2) Large group, teacher directed instruction is used most of the time. Children are doing the same things at the same time.	I	5.2	17.5	20.0
(4) The teacher tells the children exactly what they will do and when. The teacher expects the children to follow her plans.	I	19.0	10.0	20.0
(6) Children work individually or in small, child-chosen groups most of the time. Different children are doing different things.	A	8.6	27.5	11.7
(7) Children use workbooks, ditto sheets, flashcards, and other abstract of two-dimensional learning materials.	I	12.1	20.0	30.0
(10) Reading and writing instruction emphasizes direct teaching of letter cognition, reciting the alphabet, coloring within the lines, and being instructed in the correct formation of letters.	I	84.5	40.0	71.7
(12) Children have planned lessons in writing with pencils, coloring predrawn forms, tracing or correct use of scissors.	I	15.5	0.0	38.3
(14) Teachers expect children to respond correctly with one right answer. Memorization and drill are emphasized.	I	12.1	0.0	18.3
(17) Art projects involve copying in adult-made model, coloring predrawn forms, finishing a project the teacher has started, or following adult instruction.	I	8.6	22.5	15.0
(18) Separate times or periods are set aside to learn materials in specific content areas such as math, science, or social science.	I	91.4	97.5	75.0

Table 6
(Continued)

CPI questions	DAP guideline	Low awareness of DAP (%)		
		Teachers I	Teachers II	Parents
(19) Children have daily opportunities to use pegboard, puzzles, legos, markers, scissors, or other similar materials in ways the children choose.	A	43.1	30.0	18.3
(20) When teachers try to get children involved in activities, they do so by requiring their participation, giving rewards, disapproving of failure to participate, etc.	I	84.5	27.5	53.3

found to be different in specific play contexts. Figure 1 shows the frequencies of teachers' beliefs about the appropriate interaction approach in specific play contexts. Teachers were found to have similar beliefs for pretend play ($M = 6.05$, $SD = 2.11$) and manipulative play ($M = 6.05$, $SD = 1.95$), but not for constructive play ($M = 5.48$, $SD = 2.26$). Many teachers ($n = 19$) believed that their main role during children's constructive play (e.g., art, play dough, or building blocks) is to give clear directions and help the children follow those directions (i.e., teacher-directed approach). However, relatively smaller numbers of the teachers believed that teacher-directed approaches are appropriate during children's pretend play ($n = 11$) and during manipulative play ($n = 10$). T-tests revealed that the teachers' beliefs about interaction approaches in constructive play were different from the beliefs about interaction approaches in pretend play, $t(40) = -2.40$, $p < .05$ (two-tailed); and in manipulative play, $t(40) = -2.23$, $p < .05$ (two-tailed).

Figure 2 shows the frequencies of the teachers' reported practices about interaction approaches in different play contexts. Many teachers ($n = 22$) reported that they mostly observe and watch children's play during pretend play activities (i.e., role playing or using props symbolically). Relatively smaller numbers of teachers reported that they mostly adopt child-directed approaches during children's constructive play ($n = 15$) and manipulative play ($n = 16$).However, t-tests did not show significant differences for teachers' reported practices.

Teachers' beliefs about interaction approach were intercorrelated among the three play contexts. Strong correlations were found for constructive and pretend play ($r = .76$, $p < .001$); for constructive and manipulative play ($r = .71$, $p < .001$); and for pretend and

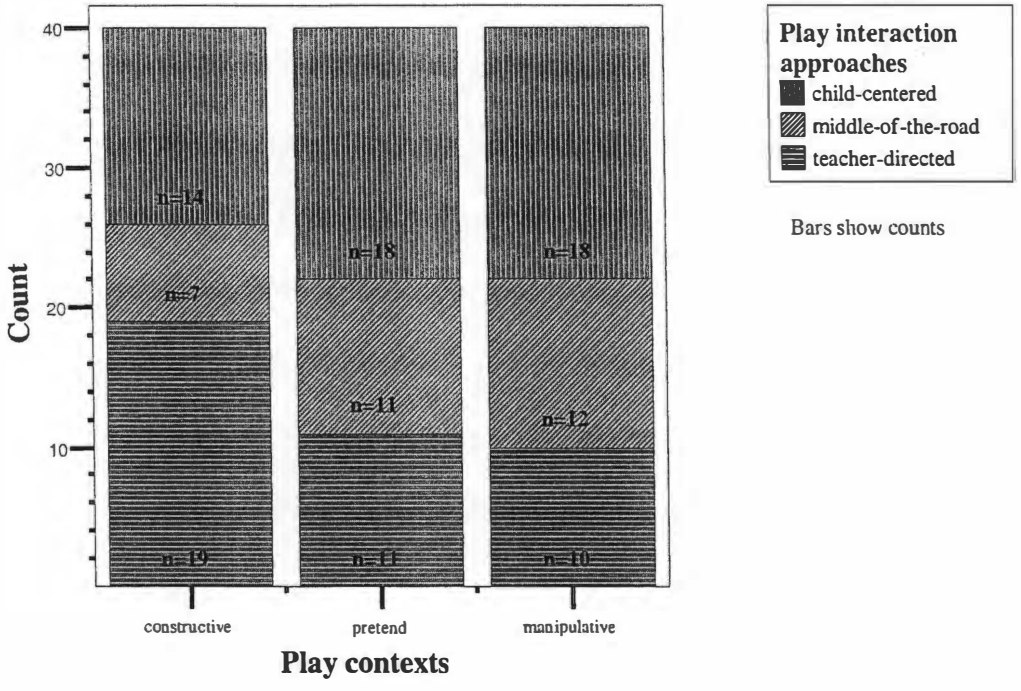


Figure 1.

Teachers' Beliefs about Interaction Approaches in Different Play Contexts

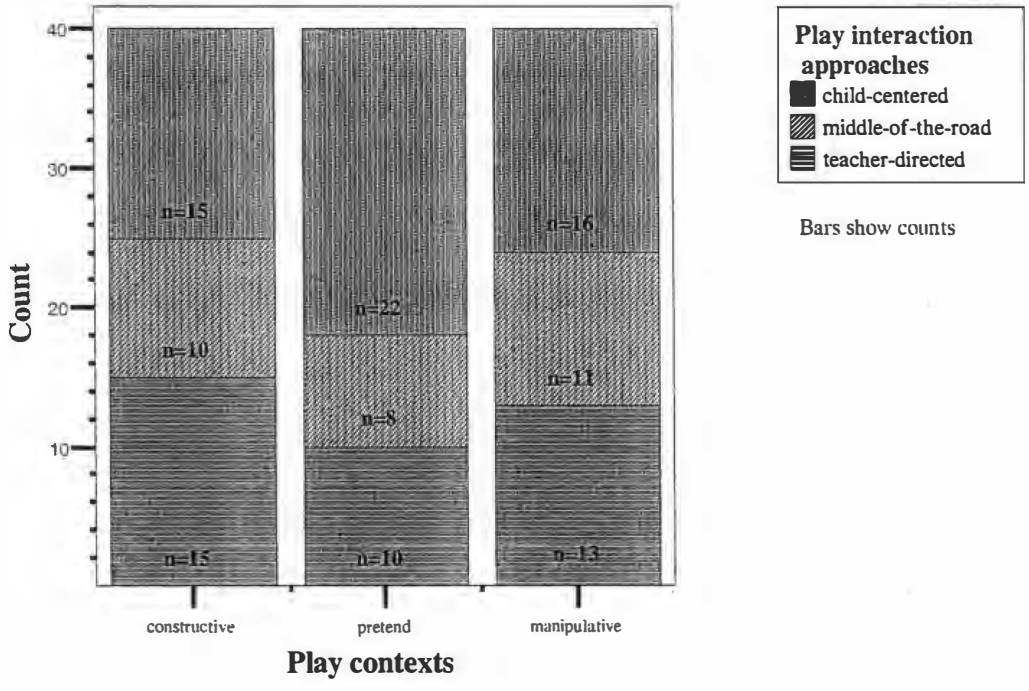


Figure 2.

Teachers' Self-Reported Practices about Interaction Approaches in Different Play Contexts

manipulative play($r = .79, p < .001$). On the other hand, teachers' self-reported practices about their play interaction approach did not show strong interrelationships across the three play contexts. Teachers' practices in constructive play and in manipulative play were highly correlated, $r = .90, p < .001$. Nevertheless, teachers' reported practices in pretend play had relatively weaker relationship with their practices in constructive play ($r = .36, p < .05$) and with their practices in manipulative play ($r = .40, p < .05$).

Beliefs and practices about the value of play. Overall, total mean scores of the teachers' beliefs and practices about the value of play indicated that they moderately valued play ($M = 6.50$, $SD = 1.24$; $M = 6.79$, $SD = 1.58$, respectively), however, their beliefs about the value of play were found to be different with regard to the types of skill development. Mean scores (with standard deviations in parentheses) for the teachers' beliefs about the value of play with regard to thinking skill development, social skill development, and physical skill development were 6.43 (2.06), 6.93 (1.90), and 6.48 (1.83), in order. The mean score for the teachers' beliefs with regard to children's social skill development was slightly higher than the mean for the teachers' beliefs with regard to children's thinking skill and physical skill development. T-tests revealed that the teachers' beliefs about the value of play with regard to children's social skill development were different from their beliefs about the value of play with regard to children's thinking skill development, $t\ (40) = 2.36, p < .05$ (two-tailed) and physical skill development $t\ (40) = 2.68, p < .05$ (two-tailed).

In addition, the teachers of Study II reported their practices differently about the value of play with regard to different type of children's skill development. Mean scores (with

standard deviations in parentheses) for the teachers' self-reported practices about the value of play with regard to thinking skill development, social skill development, and physical skill development were 6.30 (1.67), 7.03 (1.67), and 6.98 (1.63), respectively. T-tests showed that the teachers' reported practices about the value of play with regard to children's thinking skill development were different from their reported practices with regard to children's social skill development, t (40) = -3.97, $p < .001$ (two-tailed) and physical skill development t (40) = -4.81, $p < .001$ (two-tailed).

Beliefs and practices about the classroom interaction approach. The teachers of Study II were found primarily to have child-centered beliefs and practices. The total mean scores of the teachers' beliefs about classroom interaction approach were normally distributed between 3.29 and 9.71 ($M = 6.36$, $SD = 1.65$) and the total mean score of the teachers' self-reported practices was also normally distributed between 3.00 and 9.29 ($M = 6.19$, $SD = 1.63$).

The measures of locations (i.e., mean, median, and mode) and variability (standard deviation) of teachers' responses about classroom interaction approach beliefs and practices were compared between Study I and Study II (see Tables A15 and A16 in Appendix A). Ranges of these measures were bigger for Study II than for Study I. Mean scores of the seven belief questions in Study I ranged from 7.37 and 7.72 and standard deviation scores ranged from 1.26 and 1.64, on the other hand, mean scores for the seven belief questions in Study II ranged from 5.80 and 6.78 with standard deviation scores between 1.82 and 2.48 (Table A15). In addition, mean scores of the seven practice questions in Study I were distributed between 7.32 and 7.81and standard deviation scores were between 1.40 and 1.55; on the other hand, mean scores for seven practice questions

in Study II ranged from 5.30 and 6.93 with standard deviation scores between 1.88 and 2.27.

Psychometric Properties of the Revised Instruments

The Preschool Teachers' Beliefs and Practices about Play. The psychometric properties of the developed play instrument (Preschool Teachers' Beliefs and Practices about Play) were assessed. For beliefs, both the play interaction approach ($\alpha = .83$) and the value of play ($\alpha = .72$) were found to have internal consistency (i.e., total belief scale, $\alpha = .88$). When the belief question # 6 (I believe the role/nature of play in the preschool classroom is) was deleted, the alpha coefficient for the value of play belief measure was .93.

For practices, both the play interaction approach ($\alpha = .85$) and the value of play ($\alpha = .95$) were found to have internal consistency (i.e., total practice scale, $\alpha = .94$). However, the question about play interaction approach in pretend play contexts (question #13) was found to have a relatively weak correlation ($r = .47$, $p < .05$) with the questions about play interaction approach at other play contexts (play context in general, constructive play, and manipulative play). When the practice question for pretend play (#13) was deleted, the alpha coefficient for the play interaction approach practice measure was .91.

Moreover, correlation analyses were run between the two dimensions of the play instrument (i.e., play interaction approach and the value of play). For both the belief and practice measures, the responses of the two dimensions were highly correlated ($r = .84$, $p < .01$ for beliefs and $r = .85$, $p < .01$ for practices). Therefore, the two dimensions of the developed play instrument were found to be internally consistent.

Revised Pre-K Survey of Beliefs and Practices. Cronbach's alphas were calculated for both of the belief and practice measures of the revised Pre-K Survey of Beliefs and Practices. The reliability test revealed that there was internal consistency in the revised version of the instrument. The alpha coefficients were .86 for the belief measure, .89 for the practice measure, and .93 for the total scale. The alpha coefficients were similar to those calculated by the authors of the scale.

Analyses by Research Questions

In Study II, only teacher data were collected, therefore, the research question #3, in which teachers' and parents' beliefs were compared, was eliminated. Also, research question #5, in which parents' demographic variables and their beliefs are examined, was eliminated.

Research Question One: What is the relationship of the early childhood teachers' beliefs about play with their DAP awareness and their beliefs about classroom interaction approach?

The relationships between teachers' beliefs about play with their DAP awareness and beliefs about classroom interaction approach were examined by correlation coefficients. Teachers' mean play beliefs were found to be highly correlated with the mean of beliefs about classroom interaction approach ($r = .87$, $p < .01$), however, there was no significant relationship between mean play beliefs and DAP awareness ($r = -.11$, ns).

Because belief question 6 of the Preschool Teachers' Beliefs and Practices about Play was not highly correlated with total mean beliefs about play (as noted in the previous section), correlation analyses were tested again without the play question #6. However, the elimination of the belief question #6 did not change the result. There was no

significant relationship between teachers' beliefs about play and DAP awareness (r = -.20, ns).

Research Question Two: What is the relationship between preschool teachers' beliefs and their practices?

The relationship between teachers' beliefs and practices was examined by correlation tests. Teachers' mean beliefs and (self-reported) practices were strongly correlated for the teachers' play interaction approach (r = .72, p < .001), the value of play (r = .87, p < .001), play total (r = .86, p < .001), and classroom interaction approach (r = .88, p < .001), but not for DAP (r = -.14, ns).

Correlation tests for the beliefs and practices about the teachers' play interaction approach revealed different strengths across the play contexts (constructive, pretend, and manipulative play contexts). Pearson correlation coefficients for constructive play was .64 (p < .001) and for manipulative play was .80 (p < .001). However, a relatively weaker correlation was found for pretend play (r = .35, p < .05).

For the value of the play dimension, strong correlations between belief and practice scores were found with regard to children's thinking skill development, r = .80, p < .001; to children's social skill development, r = .78, p < .001; and to children's physical skill development, r = .84, p < .001.

Research Question Four: Do demographic characteristics predict preschool teachers' beliefs and practices?

As in the analyses for the first study, only the demographic variables that were thought to have a relationship with the dependent variables were used for regression analyses. In order to identify demographic variables, correlation coefficients were

examined (Table 7). Among the nine demographic variables, only "Agdeg1" had weak relationships with all of the dependent variables and was eliminated. Stepwise regression tests were run for the other variables and teachers' DAP awareness and practices about DAP, teachers' beliefs and practices about play in total, beliefs and practices about play interaction approach and play value, and beliefs and practices about classroom interaction approach.

Stepwise regression tests revealed that school size (i.e., numbers of classrooms at center) was a predictor for teachers' beliefs about play. Teachers at centers with a great numbers of classrooms were more likely to have high scores on belief total ($F = 5.30, p < .05$). Class size (i.e., teacher-child ratio) and school size accounted for 25% of the variance and were significant predictors of teachers' beliefs about play interaction approach, $F = 5.70, p < .01$. Teachers with smaller numbers of children in class and with more numbers of classrooms at the center were more likely to value child-centered approach in play. As school size got bigger, teachers
were more likely to believe that play promotes children's skill development ($F = 5.28, p < .05$).

On the other hand, teachers' practices about play were predicted by teachers' degree and age. The higher the teachers' degrees and the younger the teachers' age, the higher the score of self- reported practices about play in total ($F = 5.43, p < .01$) and the more the child-centered practices ($F = 5.82, p < .01$). In addition, teachers with higher degrees (i.e., 4-year college degree or higher) reported higher scores on play value practices ($F = 4.93, p < .05$).

Table 7

Correlation Matrix for Teachers' Demographic Variables and Dependent Variables

Correlations

		age	gender	AGDEG1	AGDEG2	MAJOR1	MAJOR2	years of preschool teaching	teacher-child ratio	numbers of classrooms
mean of play interaction beliefs	Pearson Correlation	.270	.225	-.004	.174	-.118	-.115	-.062	.360*	-.326*
	Sig. (2-tailed)	.092	.163	.981	.282	.488	.498	.704	.022	.040
	N	40	40	40	40	37	37	40	40	40
mean of play value beliefs	Pearson Correlation	-.184	-.247	-.090	-.243	.138	.138	.069	-.153	.364*
	Sig. (2-tailed)	.257	.124	.581	.131	.416	.417	.674	.347	.021
	N	40	40	40	40	37	37	40	40	40
mean of play beliefs	Pearson Correlation	-.235	-.247	-.046	-.219	.133	.132	.068	-.264	.361*
	Sig. (2-tailed)	.144	.125	.776	.175	.431	.436	.676	.100	.022
	N	40	40	40	40	37	37	40	40	40
mean of play interaction practices	Pearson Correlation	.323*	.098	-.203	.408	-.228	.059	.123	.091	-.202
	Sig. (2-tailed)	.042	.546	.209	.009	.175	.729	.451	.578	.210
	N	40	40	40	40	37	37	40	40	40
mean of play value practices	Pearson Correlation	-.218	-.218	.069	-.357*	.316	-.001	.094	-.032	.322*
	Sig. (2-tailed)	.176	.177	.671	.024	.057	.994	.564	.843	.043
	N	40	40	40	40	37	37	40	40	40
mean of play practices	Pearson Correlation	-.285	-.157	.147	-.398*	.277	-.034	-.026	-.066	.265
	Sig. (2-tailed)	.075	.332	.364	.011	.097	.843	.876	.684	.098
	N	40	40	40	40	37	37	40	40	40
mean of pre-k beliefs	Pearson Correlation	-.124	-.001	-.030	-.381*	.157	.076	.206	-.266	.243
	Sig. (2-tailed)	.445	.993	.855	.015	.354	.653	.202	.097	.131
	N	40	40	40	40	37	37	40	40	40
mean of pre-k practices	Pearson Correlation	-.283	-.098	.094	-.288	.177	.043	.026	-.137	.239
	Sig. (2-tailed)	.077	.549	.565	.072	.293	.802	.871	.398	.138
	N	40	40	40	40	37	37	40	40	40
mean of DAP awareness	Pearson Correlation	-.028	.162	-.070	.057	-.173	.018	-.080	.174	-.239
	Sig. (2-tailed)	.866	.319	.668	.728	.305	.917	.624	.282	.138
	N	40	40	40	40	37	37	40	40	40
mean of DAP practices	Pearson Correlation	-.015	.377*	-.041	.210	-.326*	.205	.057	-.186	-.077
	Sig. (2-tailed)	.925	.016	.801	.194	.049	.224	.726	.252	.637
	N	40	40	40	40	37	37	40	40	40

*. Notes: *. Correlation is significant at the 0.05 level (2-tailed). **. Correlation is significant at the 0.01 level (2-tailed). AGDEG1 -less than college vs others; AGDEG2- 2 year college vs others; MAJOR1- child development vs others; MAJOR2- early childhood education vs others.

Teachers' degree also predicted teachers' beliefs about classroom interaction approach. Teachers with 4-year college or higher degree valued child-centered approach in general more than teachers with 2-year college degree ($F = 6.35, p < .05$). Gender of teachers accounted for 15% of the variance and was a significant predictor of teachers' DAP practices, $F = 6.23, p < .05$. That is, female teachers reported more DAP practices than male teachers (see Table A17 in Appendix A).

VI. Summary and Discussion

Introduction

The numbers of missing data (especially in demographic form) and undiscriminating answers (in the Preschool Teachers' Beliefs and Practices about Play and in the Pre-K Survey of Beliefs and Practices) in Study I prevented the researcher from using a large amount of data. Moreover, the psychometric properties of the developed play instrument could not be examined in Study I.

In Study II, however, questionnaires were reformatted so that more reliable data were acquired. There were no missing data in Study II.

In this section, the modifications of Preschool Teachers' Beliefs and Practices about Play and Pre-K Survey of Beliefs and Practices are discussed by comparing the respondents' answers from the two studies. In addition, the two studies are compared concerning the descriptive statistics of DAP awareness and possible reasons for the differences between the studies are discussed. Furthermore, the major findings of this study are summarized and discussed. Finally, both the limitations and contributions of this study are discussed and implications for future studies and practices are deliberated in this section.

Discussion of the Psychometric Properties of the Instruments

The Preschool Teachers' Beliefs and Practices about Play

Reliability of the Preschool Teachers' Beliefs and Practices about Play. The internal reliability of the instrument was examined by Cronbach's alpha and its internal construct validity was tested by correlation analyses between the two dimensions (i.e., play interaction approach and the value of play). Nunnaly (1978) indicated the alpha value of

.70 to be an acceptable reliability coefficient. The alpha coefficients for all of the measures of the play instrument were above .70 (see Result of Study II section) and therefore the reliability of this instrument was thought to be adequate and to have internal consistency (or stability within the measures of the instrument). Moreover, the alpha coefficients for all but one measure (i.e., the value of play beliefs) were above .80 and indicated good reliability of a scale.

In addition, correlation analyses showed that there are strong interrelationships between the two dimensions of the instrument (play interaction approach dimension and the value of play dimension). Therefore, the developed play instrument, Preschool Teachers' Beliefs and Practices about Play, was found to be a reliable instrument for use in future studies.

The items were identified that were not strongly correlated with the other items and therefore weakened the alpha coefficients. For the belief measure, when the belief question #6 of the play instrument was deleted, the alpha coefficient for the value of play belief measure went up to .93 from .72. In this question, how a respondent believes concerning the nature of play was asked and the two different perspectives were given as choices. They were (a) primarily for children to relax and have fun and also provide time for teachers to plan and prepare academically valuable and necessary activities for children, and (b) a valuable and necessary part of the curriculum that is tied closely to children's learning and development and is a good medium for assessing children's learning and development. The respondents' answers were clustered in the center of the continuum, which indicated that they were more likely to believe in both the statements. This item did not discriminate.

For the practice measure, the question about the play interaction approach in pretend play context (question #13) was found to have a relatively weaker correlation with the other questions within the dimension of play interaction approach. The alpha coefficient for the play interaction practice was strong (a = .85) and, when eliminating the question #13, the alpha coefficient for play interaction approach practices became even stronger (a = .91).

To understand this finding, it is necessary to think about pretend play. Kontos (1999) found that preschool teachers interacted differently in different activity settings (different play contexts) and spent the most time in constructive and manipulative play contexts and relatively little time in pretend play. This study showed the same findings. More teachers in Study II reported that they participated more directedly in constructive play and manipulative play than in pretend play. Many early childhood teachers are not aware of how to appropriately interact with children in varied play contexts (especially in pretend play contexts) (Kontos, 1999; Trawick-Smith, 2001). In particular, teachers might believe that their intervention in children's pretend play might actually discourage children's sustained activity in pretend play (Bennett et al., 1997) and, therefore, that teachers should stand back and hesitate to play the roles as a playmate or play enhancer.

On the other hand, teachers may be more aware of how to participate in children's constructive play from which products (e.g., art works, play dough or blocks) are produced (Kontos, 1999). Or, teachers may think that children need adults' help more often when manipulating materials (e.g., puzzles or pegboards). Both constructive and manipulative plays are more deliberately hands-on than pretend play. In pretend play, much of the activity may be thought to happen in the symbolic realm, where the outcome

of the activity is open (not product-oriented). Teachers may be less sure of the "right" way to interact with children in the open environment of pretend play than they are in the more concrete, hands-on, product-oriented environment of constructive and manipulative plays. Thus, the moderate correlation of the pretend play practices with other items is thought to demonstrate that this scale successfully discriminated teachers' practices for pretend play from their practices for manipulative and constructive play and, therefore item #13 was not excluded from the scale.

This is a particularly interesting finding because the teachers (n = 25) in Study II predominantly identified themselves as child-centered on the question about their role as a "stage manager" (i.e., roles in general play context). It is evident that the responses for "stage manager" practices and their practices in a pretend play context are similar. Interestingly, teachers' reports on their manipulative and constructive play practices are similar to one another but their relationships with pretend play are not strong. Do teachers differentiate their roles with regard to play contexts? These data would affirm that, perhaps, when teachers think of play in general (i.e., "stage manager"), they are thinking of pretend play, whereas, when asked to specifically consider "constructive play" (i.e., activities to make and create things such as art, play dough, or building blocks) or "manipulative play" (i.e., activities such as puzzles, games, reading, or manipulating toys without building something), they revert to more teacher-directed approaches as discussed above. This is congruent with the literature.

In sum, the Preschool Teachers' Beliefs and Practices about Play instrument demonstrated internal reliability. In order to more assure its reliability, however, this instrument should be used overtime with the same teachers (i.e., test-retest).

Validity of the Preschool Teachers' Beliefs and Practices about Play. The Preschool Teachers' Beliefs and Practices about Play was found to have three types of validity. First, the instrument was developed through thorough literature reviews. In addition, knowledgeable teacher educators who are familiar with play in early childhood education advised the development of the play instrument. Therefore, the Preschool Teachers' Beliefs and Practices about Play has its content validity.

Secondly, the high correlation between the teachers' play interaction approach and the value of play dimensions showed that the Preschool Teachers' Beliefs and Practices about Play had internal construct validity.

Finally, the high correlation coefficient between the Preschool Teachers' Beliefs and Practices about Play (measuring play beliefs) and the Pre-K Survey of Beliefs and Practices (measuring classroom interaction approach) indicated that these instruments measured the same concepts (i.e., concurrent or criterion validity). However, the modified CPI was found not to be interrelated with the other two instruments.

The modified CPI and the Pre-K Survey of Beliefs and Practices were chosen for this study to establish construct validity for the Preschool Teachers' Beliefs and Practices about Play because of their apparent similarity with regard to measuring play or academically focused curricular or emphases (Zepeda, 1993). was expected to measure respondent's value either on play or academic emphasis for early childhood curriculum (Zepeda, 1993). Despite this original conceptualization, the modified CPI, in fact, apparently measured broader concepts of early childhood curriculum and education, including only some aspects of academic/play focus. The original author if the CPI indicated to look at ways to measure teachers' understanding of DAP, not just play. In

other words, the two measures of play and interaction approach primarily focused on one aspect of teaching (i.e., teachers' interactions in classroom) not on the broader range of activities measured by DAP through the modified CPI instrument. Thus, for the purposes of this study, the CPI did not provide a sensitive measure with regard to play.

Revised Pre-K Survey of Beliefs and Practices

The responses of the Pre-K Survey of Beliefs and Practices did not discriminate and did not have variability in Study I. Most of the answers were congregated in high values (child-centered beliefs or practices). Because statements with teacher-directed and child-centered ideas were placed in the same locations within a continuum for all of the questions, respondents might easily mark the same or similar answers without paying attention. In addition, the high correlation coefficient for beliefs and practices indicated that respondents were more likely to mark the same answers for beliefs and practices.

In Study II, the format of the instrument was changed. The teachers' responses about classroom interaction approach (measured by Pre-K Survey of Beliefs and Practices) had greater variability in Study II (see Tables A15 and A16 in Appendix A), yet this did not greatly impact the psychometric properties of the instrument. Cronbach's alpha coefficients ranged from .86 to .93 for the revised instrument. The internal consistency, then, was similar to that reported on the original instrument in Study I.

Major Findings

Relationships between Beliefs and Practices

The analyses by research questions revealed that teachers' self-reported beliefs and practices were highly correlated for play total, play interaction approach, the value of play, and classroom interaction approach. In many studies, beliefs and practices have

been found to be relatively congruent for early childhood teachers (Bussis, Chittenden, & Amarel, 1976; Charlesworth et al., 1993). According to Isenberg (1990), Kagan (1992), and Pajares (1992), teachers' beliefs are a major determinant of behavior. The consistency between beliefs and practices in this study can possibly indicate that beliefs precede practices. Although teacher effectiveness may not be defined by such consistency alone, when a teacher's beliefs are reflected in practice, teacher behavior is more congruent (Vartuli, 1999).

However, correlation analyses did not show the relationship between teachers' beliefs about DAP and their self-reported DAP practices. DAP measures (through the modified CPI) had low variability and this might diminish the strength of the relationship between beliefs and practices. On the belief measure of the CPI, teachers were forced to choose between "appropriate" and "inappropriate," without expressing how much they agreed or disagreed with an idea. Therefore, the belief measure did not capture the degree to which teachers actually believe in any stated idea. On the practice measure of the CPI, on the other hand, a five-point scale was provided and teachers tended to mark in the middle of the five-point scale. Without deeper analyses of the teachers' beliefs and practices (through interview or/and observations) and a new format of the modified CPI or using another DAP survey instrument, it would be hard to examine teachers' beliefs and practices about DAP.

One of the most interesting findings was the strength of the relationships between teachers' beliefs and practices about the play interaction approach in specific play contexts. Teachers' beliefs and practices about the play interaction approach were highly correlated in constructive play and in manipulative play ($r = .64$, $r = .80$, respectively),

but relatively lower relationship was found in pretend play (r = .35). The mean scores about interaction approach in pretend play were relatively high for both the teachers' beliefs and practices. Hence, weak correlation between teachers' beliefs and practices in pretend play are discussed in the previous section.

Demographic Predictors and Dependent Variables

Stepwise regression tests revealed that numbers of classrooms at a center (i.e., school size) was a predictor of teachers' beliefs about play. In addition, number of children per teacher in a classroom (teacher-child ratio or class size) with school size predicted the teachers' beliefs about play interaction approaches. In total, school characteristics were found to predict teachers' beliefs about play. With bigger sized schools, teachers were more likely to believe that play would be a valuable medium for children's skill development and that teachers should enhance the possibilities for children's self-motivation and choices of play activities and materials.

The presence of numbers of colleagues and supervisors (directors, principals or other supervisors) might prevent teachers from implementing just teacher-directed instructions or intrusive intervention on children's play. This is based on the assumption that supervisors are informed of the current thinking about the advantage of child-centered/play focused approaches. Alternatively, the more plentiful resource of a bigger size of center might allow the teachers to adopt play-based curricula.

In addition, teachers' self-reported practices about play were predicted by teachers' demographic characteristics of age and degree. Younger teachers with 4-year college degrees were more likely to practice (based on their reports) child-centered approaches in

children's play (interaction approach). Moreover, teachers with 4-year college degrees were predictive of a higher score on practices reflecting their value of play.

For DAP beliefs, no demographic predictors were identified in Study II. In Study I, teachers' preschool teaching experiences (i.e., years of preschool teaching) and degree were found to predict the teachers' beliefs about DAP. Teachers with more years of preschool teaching experiences reported more agreement with the DAP guidelines (provided by the modified CPI) than others with less teaching experiences. Past research has demonstrated the contrary. Vartuli (1999) observed that teachers with less teaching had more DAP practices measured by the original CPI (observation scale). However, Buchanan et al. (1998) found that teachers with more teaching experiences had high scores on DAP beliefs. In the present studies, the data of Study II did not reveal the causal relationship between teachers' teaching experiences and DAP beliefs or practices. This might happen because the sample size was relatively small in Study II ($n = 40$) and years of teaching in the sample was skewed to include mostly teachers with few years of teaching experiences (for example, there was a paucity of subjects with five or more years of teaching experiences).

In Study II, teachers' gender was found to be a predictor of their practices about DAP. The female teachers reported their practice as more similar to DAP guidelines than the male teachers. This might be related to the quality of the male teachers in early childhood education. Because of the shortage of the number of male teachers, unqualified male teachers (i.e., do not have educational or/and vocational experiences in early childhood education or child development) may be more easily hired in the early childhood classrooms.

Regression tests revealed that children's age predicted parents' DAP awareness. Specifically, parents with younger children were found to have beliefs that were more similar to DAP guidelines. This could probably be because, as children get older, parents might naturally expect more direct, teacher-directed instructions or structured activities from which children practice and learn academic skills.

Beliefs about DAP between Study I and Study II

All of the respondent groups represented low DAP awareness in the DAP item #18. They believed that preschool children should learn specific content areas such as science, math, or social studies through pre-planned activities. In addition, many teachers and parents were found to believe that children's literacy skills should be developed through teacher-directed, pre-planned instructions such as reciting the alphabet, direct teaching of letters, and coloring within the lines (item #10).

Both the items #10 and #18 reflected on academic-focused curriculum. All of the respondent groups (i.e., the teachers from Study I and Study II and the parents) in this study were found to value this approach. This might be explained by the national, state, and local attention to academic accountability that pressures teachers to value pre-planned and teacher-directed instructions in the specific content areas (i.e., math, science, social science, and literacy) for young children (Stipek, Feiler, Daniels, & Milburn, 1995).

Interestingly, parents showed their agreements to the various items in the modified CPI that referred to teacher-directed activities. In addition to the items #10 and #18 that referred to the academic-focused beliefs, both the items #7 and #12 were highly ranked among the low DAP awareness items for parents. In these items, 30% of the parents

reported that workbooks, ditto sheets, flashcards, and other abstracts of two-dimensional learning materials should be used for preschool children and almost 40% of the parents believed that children need planned lessons in writing with pencils, coloring predrawn forms, tracing or correct use of scissors.

Many parents in the current study expected that children should learn various skills including writing, letter cognition, and appropriately using materials through planned instructions or teacher-directed activities. These results were similar to the findings of Rescorla, Hyson, Hirsh-Pasek, & Cone (1990) where parents had relatively higher academic expectations than their children's teachers. Also, the parental reports in this study revealed the public mania of enhancing children's readiness (Brown & Freeman, 2001; Elkind, 1986). According to Elkind (1981; 1990), many parents push their children toward early acquisition of reading, writing, and other academic skills and they want the school programs for their children to be "educational." The parental reported beliefs in this study revealed this.

Teachers' Beliefs and Practices about Play

Teachers' beliefs and practices about the teachers' play interaction approach. Teachers' beliefs about the play interaction approach were different in play contexts. Teachers' beliefs about the interaction approach in constructive play ranked the lowest (i.e., teacher-directed) on the belief measure. T-tests showed that differences of teachers' beliefs about the interaction approach in constructive play with pretend play and with manipulative play were significant. That is, many teachers believe that their practices should be more directed in constructive play context. For instance , this might be interpreted as giving clear directions such as what color to use or how to build blocks

than in the other two play contexts. Because the teachers had relatively higher belief scores (i.e., child-centered) for manipulative play and the difference of the beliefs about the interaction approach for manipulative play and for constructive play was significant, teachers appear to think that preschool children need more helps and directions in constructive play (e.g., art, play dough, or building blocks) than in manipulative play (e.g., puzzles or pegboards).

On the other hand, teachers' practices about the play interaction approach were not significantly different in play contexts. The mean score of teachers' self-reported practices for pretend play was slightly higher (child-centered) than the mean scores for the other two play contexts, though, t-tests did not reveal any significant differences between practices in pretend play with practices in constructive play and in manipulative play.

Interestingly, however, strengths of the correlations among the teachers' reported practices for the three play contexts were different. Teachers' reported practices about the interaction approach in constructive play was strongly related with their practices in manipulative play. Nevertheless, teachers' practices about the interaction approach in pretend play had relatively weaker correlations with their practices in constructive play and in manipulative play. Even though this study did not show significant differences of teachers' practices in specific play contexts, it appears that the teachers' interaction approaches (i.e., practices) are differentiated in pretend play from their interaction approaches in constructive play or manipulative play. To affirm this assumption, more studies are needed.

Teachers' beliefs and practices about the value of play. Teachers' self-reported beliefs and practices about the value of play were found to be different with regard to different skill development for children. Interestingly, teachers were found to believe that play promotes children's social skill development more than their thinking skill development and their physical skill development. For practices, teachers reported that they more often practiced play activities to promote children's social skills development or physical skill development than to promote children's thinking skill development. Overall, teachers' reported beliefs and practices indicated that activities other than play might usually be applied for children's thinking skill development (i.e., literacy or math). This finding was identical to the finding in the item #18 from the modified CPI. Teachers and parents believed that preschool children should learn specific content areas such as math, science, or social studies through teachers' preplanned and structured activities.

Summary for teachers' beliefs and practices about play. The early childhood teachers in this study did not seem to believe that play promotes children's thinking skill development. In addition, they did not believe that teachers' participation is important in children's pretend play. These findings may be particularly important for early childhood teacher education because they revealed that the public pressure on children's readiness and accountability impacted the teachers' beliefs. These teachers would easily choose structured activities or direct instructions for young children, from which products (i.e., children's development and learning) can be easily shown. From these findings, several assumptions about early childhood teachers can be made. First, early childhood teachers may not know how to appropriately interact with children to promote children's development (i.e., especially cognitive development) through play (i.e., especially

pretend play). Next, early childhood teachers may have different beliefs or expectations about the outcomes of particular play. Or, teachers may not know how to combine work with play, so they may not provide rich environment from which children are challenged through interaction with materials or with teachers or peers.

Contributions of the Study

One contribution of this study is the development of the Preschool Teachers' Beliefs and Practices about Play. Teachers' beliefs about play have been studied only by qualitative measures in the field of early childhood education. The developed play instrument measures teachers' beliefs concerning the interaction approach in specific play contexts and concerning play with regard to children's specific skill development. The psychometric properties of the test indicated that the instrument was a reliable and valid measure of teachers' beliefs and practices about the appropriate interaction approach in play contexts and valuing play.

This study revealed that teachers predominantly valued child-centered approaches not only in general classroom settings but in play contexts. Moreover, teachers' reports demonstrated that they modify their interaction approaches in different play contexts. In addition, teachers' beliefs about the value of play were found to be different for each skill development. These findings provide valuable information for teacher educators or directors (principals) of centers to begin discussions with early childhood teachers or pre-service teachers about the value and role of play and the appropriate interaction approaches (i.e., teachers' appropriate roles) in specific contexts.

Generally, DAP guidelines have been considered to be comprised of play-based, child-centered practices. However, this study indicated that play is only one component

of DAP. Rather, DAP encompasses broader ideas about early childhood education and curriculum.

Limitations of the Study

Several limitations were identified in both Study I and Study II. The limitations of Study I were: (a) undiscriminated responses in the Preschool Teachers' Beliefs and Practices about Play and the Pre-K Survey of Beliefs and Practices; (b) no variability of responses about practices in the modified CPI; and (c) a large amount of missing demographic data. The researcher had more confidence in the data from Study II (i.e., no missing data and better discriminated data); nevertheless, the relatively small sample size of Study II produced several limitations. First, sample characteristics of Study II had less variability than those of Study I. Specifically, the range of teachers' ages and teaching experience was smaller in Study II than in Study I. Second, the sample included only three teachers who majored in early childhood education. Third, with the small sample size, further analyses such as factor analysis were impossible, in turn, the psychometric statistics that could be used in the current study were limited.

In the current study, the relationship between teachers' and parents' beliefs about early childhood education and curriculum could not be explored. In Study I, the responses of Preschool Teachers' Beliefs and Practices about Play did not discriminate, hence, data was not usable. The teachers' and parents' DAP beliefs were only compared in Study I. Because the subjects of Study II were comprised of only early childhood teachers and not parents, comparison tests between teachers and parents were not used. Thus the study was limited in examining parents' beliefs as possible outside effects on

teachers' beliefs and the relationships of beliefs held by adults from the two important contexts (i.e., home and school) for child development.

In addition, there are several limitations in design. First, the current study is limited in the use of self-reported beliefs and practices. Even though many studies have demonstrated a relative congruence between teachers' beliefs and practices (Charlesworth et al., 1993; Clark & Peterson, 1986; Hart et al., 1998; Kagan & Smith, 1988; Spodek, 1987; Stipek & Byler, 1997), especially for the teachers of young children, the current study was based only on teachers' self-report and might not have provided fully valid data. Another limitation of the proposed study was found in its absence of childcare center directors' or principals' data. Scholars have suggested that various contexts for school characteristics, including directors and teachers, family, and children characteristics, may emerge as predictors of the beliefs and practices of teachers.

Implications

Implications for Future Studies

In the current study, teachers' responses about DAP practices did not have much variability particularly when respondents were forced to choose an option ("appropriate" or "inappropriate"). In this study, where the focus was on comparing beliefs and practices, the modified CPI may not have been the best choice, as it was not constructed for this purpose. In future studies if beliefs and practices are the focus, the modified CPI should be reformatted to reflect beliefs and practices more clearly. For belief questions, a new format of the instrument could provide respondents with a way to express the extent of agreement. In addition, question #6 of Preschool Teachers' Beliefs and Practices about Play should be reexamined to determine why it did not correlate with the other items and

to better reflect teachers' thoughts in agreement with both dichotomous attitudes toward play. In Study II, the teachers' responses were predominantly in the middle, so it was hard to interpret how the teachers truly understood the nature of play.

Many scholars have argued that play is often inhibited because parental or organizational pressures discourage play and push children for readiness and for early achievement of skills (Kagan, 1990) and many teachers are forced to show products of children's progress and development (Brown & Freeman, 2001; Elkind, 1986). In addition, Kontos (1999) found that teachers' participation in children's dramatic play was less salient than their participation in constructive and manipulative play. This study showed that teachers less often participated in children's pretend play (open, non-product-focused play) than in constructive play and manipulative play, from which products are made. In addition, it seemed that teachers interacted with children differently in pretend play, when compared with their interaction approach in the other two play contexts. However, differences of teachers' practices in play contexts were not significant in this study.

Hence, how teachers interact with children in specific play contexts needs to be reexamined in future studies. Moreover, the relationship between teachers' beliefs and practices about their interaction approaches and the children's ages should be reexamined in future studies. Because, younger children need more teacher interventions for successful achievement of play activities than older children. In addition, the popularity of specific play can be different across the children's age groups. These natures, in turn, can affect early childhood teachers' beliefs and/or practices.

Because quantitative data is naturally limited in the depth of respondents' psychological aspects and in the reliability of respondents' reports, future studies need qualitative measures. Both the quantitative and qualitative measures can provide clearer and more reliable pictures of beliefs and practices.

This study was conducted at one point in time and this design may not clearly identify the dynamic nature of teachers' belief structures. Moreover, most of the teachers in the current study were young, had little experience in teaching, and did not major in early childhood education or child development, so they might not have a firm belief structure or knowledge about appropriate practices for young children. Therefore, future studies should be designed in ways that diversity of the sample characteristics can be assured. Moreover, future studies may benefit by including parents and directors and by comparing the interrelationships of the beliefs among teachers, parents, and directors.

Implications for the Field of Early Childhood Education

Early childhood teachers and pre-service teachers need to be educated about the value of play and how to promote children's learning and development through play. Their education needs to be focused not only on theoretical or philosophical ideas about play and appropriate practices for young children, but on practical ideas about what is appropriate practice to promote learning in specific contexts and about how they should interact with children in specific contexts. In particular, the early childhood teachers in this study reported that they participate in children's constructive and manipulative play activities more often than in children's pretend play activities. Therefore, teacher education about appropriate practices should be context-specific.

Past research has shown that teacher's presence and intervention in play activities encourage children's sustained involvement in the activities (Johnson, Christie, & Yawkey, 1987). Teachers should be educated about how to interact with children appropriately in play contexts. However, teacher intervention should be skill-oriented but not content-oriented (Shefatya, 1990). Teacher educators should focus on how teachers should practice or interact with children and what are the appropriate interaction approaches to promote children's learning.

Conclusions

Early childhood teachers' self-reported beliefs and practices were measured by three instruments, one of which was developed for this study. Psychometric properties were tested for the developed Preschool Teachers' Beliefs and Practices about Play and this instrument was found to be a reliable and valid measure of teachers' self-reported beliefs and practices about play. The developed play instrument was correlated with Pre-K Survey of Beliefs and Practices. However, the scores of the modified CPI were not related to the scores of any of these instruments, furthermore, belief and practice scores of the modified CPI were not interrelated. The weak correlations of the modified CPI with the other instrument could probably be because the modified CPI did not simply measure the two concepts (i.e., academic/play focus) that were expected. Rather it actually measured much broader concepts of early childhood education and curriculum; or, this instrument was not constructed to assess the comparison between beliefs and practices (dichotomous belief scores and continuous practice scores were weakly correlated).

Overall, the early childhood teachers in the current study were found to value child-centered approaches at play and to believe play was a valuable curricular medium through which children's skill development could be promoted. However, teachers' reported beliefs were found to be differentiated in specific play contexts. Teachers believed that children more often need teachers' help and intervention for constructive play activities than for pretend play and manipulative play. Moreover, teachers' reported beliefs and practices about the value of play were different for specific skill development of children. That is, teachers' reported beliefs and practices demonstrated that play activities would not promote children's thinking skill development as compared to their enhancement to children's social skill development or to children's physical skill development.

There were no significant differences among the teachers' reported practices about interaction approach across different play contexts. However, the teachers' reported practices in pretend play were not highly correlated with the practices in constructive play or in manipulative play. Therefore, it assumed that teachers might adopt different interaction approaches in pretend play contexts as compared to their interaction approaches in the other two play contexts. To substantiate this assumption, more studies are needed.

The teachers and the parents in this study were found to believe that children would need to learn some of the academic skills including writing and drawing at preschools, through planned instructions or teacher-directed activities. A significant number of the parents believed that two-dimensional learning materials such as ditto sheets, workbooks, or flashcards are appropriate media for young children. Since the current study did not

compare teachers' beliefs and parents' beliefs about play because of the absence of reliable data, a deep understanding of teachers' beliefs and possible outside effects was not possible.

Regression tests revealed several predictors in this study. Numbers of classrooms at a center (i.e., school size) were found to predict teachers' beliefs about play. Teachers at a center with higher numbers of classrooms were more likely to believe the child-centered approach as appropriate in children's play contexts, to value play as an enhancer for children's skill development, and to have high scores on the total play belief scale. Along with school size, teacher-child ratio (numbers of children per child at a classroom) also predicted teachers' beliefs about the play interaction approach and these variables comprised 25% of variance.

Teachers' degrees predicted teachers' (reported) practices about play. Teachers with higher degrees (i.e., 4-year college degrees or higher) had higher scores on the play interaction approach practice, on the value of play practice, and on the total play practice. In addition with teachers' degrees, teachers' age was a predictor of teachers' practices about the play interaction approach (variance was 26%) and of play practices in total (variance was 24%).

Predictors of DAP beliefs and practices were found to be different in the two samples used in the study. In Study I, teachers' years of preschool teaching and degrees were found to predict 23% of the variance in teachers' DAP awareness. Teachers with more teaching experiences at preschools and with 2-year college degrees were found to have high scores on DAP awareness (their reported beliefs were more similar to DAP guidelines). On the other hand, Study II did not identify any predictors for teachers'

beliefs about DAP. The predictor of parents' DAP awareness was their child's age. Parents of younger children had higher scores on DAP awareness. This is probably because parents might have higher expectations for their children, as the children get older, to learn academic skills and gain knowledge through structured activities in preschool.

In sum, the teachers in this study generally viewed play as a valuable curricular medium that would enhance children's development and learning, however, their beliefs and practices also seemed to be influenced by the current public mania on academic accountability and readiness. Teachers believed that children's thinking skill (i.e., literacy and math) development would not be promoted through play activities and children would need structured activities to learn how to read and write and to learn math, science, or social studies. Their reported practices about children's learning in specific content areas were congruent with their reported beliefs. Among the four types of play-based curricula presented by DeVries (2001), the teachers in this study seemed to adopt the third type where children's freedom to choose and play are emphasized but work is deemphasized. Their practices might fit to the general image of developmentally appropriate classrooms. Nevertheless, they seemed to limit their roles as stage manager (i.e., providing materials), observer, or order keeper and failed to promote children's problem solving or reasoning through appropriate interactions with children in play contexts.

These findings were discussed with regard to the current thinking in the field of early childhood education and the conclusions are:

1. Preschool Teachers' Beliefs and Practices about Play was determined to be a reliable and valid instrument for assessing teachers' self-reported beliefs and practices about play.
2. The modified CPI appeared to measure conceptions of DAP/DIP that are broader than play with regard to child-centered and teacher-directed curricular approaches.
3. Overall, there was a strong relationship between beliefs and practices for teachers with regard to the teachers' play interaction approach, the value of play, and general classroom interaction approach.
4. In pretend play, teachers' self-reported beliefs did not always precede their self-reported practices.
5. Teachers adopted a similar interaction approach when they interacted with children in constructive play and in manipulative play.
6. Teachers believed that they should engage in and give clear directions more often in children's constructive play contexts than in pretend play and manipulative play contexts.
7. Teachers did not highly value play as a teaching medium to enhance children's thinking skills and they used play relatively less often for children's thinking skill development (as compared with the other skill development).
8. There were no significant differences between teachers' and parents' beliefs about DAP, though parents of younger children had beliefs that were more similar to DAP guidelines than parents of older children.

REFERENCES

REFERENCES

Bennet, N., Wood, L., & Rogers, S. (1997). *Teaching through play: Teachers' thinking and classroom practice.* Philadelphia, PA: Open University Press.

Berk, E. B. (1985). Relationship of caregiver education to child-oriented attitudes, job satisfaction and behaviors toward children. *Child Care Quarterly, 14*, 103-129.

Bredekamp, S. (1987). *Developmentally appropriate practice in early childhood program serving children from birth through age 8.* Washington, DC: National Association for the Education of Young Children.

Bredekamp, S., & Copple, C. (Eds.). (1997). *Developmentally appropriate practices in early childhood programs.* Washington, DC: NAEYC.

Bredekamp, S., & Rosegrant, T. (1992). *Reaching potentials: Appropriate curriculum and assessment for young children* (vol. 1). Washington, DC: NAEYC.

Bredekamp, S., & Rosegrant, T. (1995). *Reaching potentials: Transforming early childhood curriculum and assessment* (vol. 2). Washington, DC: NAEYC.

Bronfenbrenner, U. (1979). *The ecology of human development: Experiments by nature and design.* Cambridge, MA: Harvard University Press.

Brown, C. A., & Cooney, T. J. (1982). Research on teacher education: A philosophical orientation. *Journal of Research and Development in Education, 15*, 13-18.

Brown, M. H., & Freeman, N. K. (2001). "We don't play that way at preschool": The moral and ethic dimensions of controlling children's play. In S. Kilmer (Series Ed.) & S. Reifel, & M. H. Brown (Vol. Eds.), Advances in early education and day care: Vol. 11. *Early education and care, and reconceptualizing play* (pp. 259-274). New York: JAI.

Bruner, J. (1991). The nature and use of immaturity. In M. Woodhead, R. Carr, & P. Light (Eds.), *Becoming A Person.* London: Routledge/OUP.

Buchanan, T., Burts, D. C., Binder, J., White, V. F., & Charlesworth, R. (1998). Predictors of the developmental appropriateness of the beliefs and practices of first, second, and third grade teachers. *Early Childhood Research Quarterly, 13*, 459-483.

Burts, D. C., Hart, C. H., Charlesworth, R., Dewolf, D. M., Ray, J., Manuel, K., & Fleege, P. O. (1993). Developmental appropriateness of kindergarten programs and academic outcomes in first grade. *Journal of Research in Childhood Education, 8*, 23-31.

Bussis, A., Chittenden, E., & Amarel, M. (1976). *Beyound the surface curriculum.* Boulder, CO: Westview Press.

Chaillé, C., & Silvern, S. B. (1996). Understanding through play. *Childhood Education, 72(5)*, 274-277.

Charlesworth, R., Hart, C., H., Burts, D. C., & Dewolf, M. (1993). The LSU studies: Building a research base for developmentally appropriate practice. In S. Reifel (Ed.), *Advances in early education and day care: Perspectives on developmentally appropriate practices* (pp. 3-28). Greenwich, CT: JAI Press.

Charlesworth, R., Hart, C., H., Burts, D. C., Hernandez, S. (1991). Kindergarten teachers' beliefs and practices. *Early Childhood Development and Care, 70*, 17-35.

Charlesworth, R., Hart, C. H., Burts, D. C., Mosley, J., & Fleege, P. O. (1993). Measuring the developmental appropriateness of kindergarten teachers' beliefs and practices. Early Childhood Research Quarterly, 8, 255-276.

Choi, Y. (1989). [*A study on teachers' educational beliefs and practice in early childhood Education*]. Unpublished master's thesis, Ewha Woman's University, Seoul, Korea.

Clark, C. M., & Peterson, P. L. (1986). Teachers' thought processes. In M. C. Wittrock (Ed.), *Handbook of Research on Teaching* (pp. 255-296). New York: Macmillan.

Coll, C. G., & Magnuson, K. (1999). Cultural influences on child development: Are we ready for a paradigm shift? In A. S. Masten (Ed.), *Cultural Processes in Child Development: The Minnesota Symposia on Child Psychology*, v. 29 (pp. 1-24). Mahwah, NJ: Lawrence Erlbaum Associates.

Curry, N. E., & Arnaud, S. (!994). Play in developmental settings. In T. Yawkey & A. Pellegrini (Eds.), *Child's Play: Developmental and Applied.* Hillsdale, NJ: Erlbaum.

Curtis, A. (1994). Play in different cultures and different childhoods. In J. R. Moyles (Ed.), *The excellence of play* (pp. 27-36). Buckingham, PA: Open University Press.

Dale, P. S. , & Cole, K. N. (1988). Comparison of academic and cognitive programs for young children. *Exceptional Children, 54*, 439-447.

DeVries, R. (2001). Transforming the "Play-oriented curriculum" and work in constructivist early education. In A. Goncu, E. L. Klein (Eds.), *Children in play, story, and school* (pp. 72-106). New York: The Gulford Press.

Edwards, C. P., Gandini, L., & Giovaninni, D. (1996). The contrasting developmental timetables of parents and preschool teachers in two cultural communities. In S. Harkness & C. M. Super (Eds.), Parent's cultural belief systems: Their origins, experiences, & consequences (pp. 270-288). New York: The Guilford Press.

Elkind, D. (1981). *The hurried child: Growing up too fast and too soon.* MS: Addison-Wesley Publishing Company.

Elkind, D. (1986). Formal education and early childhood education: An essential difference. *Phi Delta Kappan, 67*, 631-636.

Elkind, D. (1990). Academic pressures-Too much, too soon: The demise of play. In E. Klugman, & S. Smilansky (Eds.), *Children's play and learning: Perspectives and policy implications* (pp. 3-17). NY: Teachers College, Columbia University.

Essa, E. L., & Burnham, M. M. (2001). Child care quality: A model for examining relevant variables. In S. Kilmer (Series Ed.) & S. Reifel, & M. H. Brown (Vol. Eds.), Advances in early education and day care: Vol. 11. *Early education and care, and reconceptualizing play* (pp. 59-114). New York: JAI.

Fang, Z. (1996). A review of research on teacher beliefs and practices. *Educational Research*, 38, 47-65.

Farran, D., Silveri, B., & Culp, A. (1991). Public school preschools and the disadvantaged. In L. Rescorla, M. Hyson, & Hirsh-Pasek (Eds.), *Academic instruction in early childhood: Challenge or pressure?* (pp. 65-73). San Francisco, CA: Jossey-Bass.

Farver, J., & Howes, C. (1993). Cultural differences in American and Mexican mother-child pretend play. *Merrill-Palmer Quarterly, 39*, 344-358.

Farver, J., Kim, Y. K., & Lee, Y. (1995). Cultural differences in Korean- and Anglo-American preschoolers' social interaction and play behaviors. *Child Development*, 66, 1088-1099.

Farver, J., Kim, Y. K., & Lee-Shin, Y. (2000). Within cultural differences: Examining

individual differences in Korean American and European American preschoolers' social pretend play. *Journal of Cross-Cultural Psychology*, 31, 583-602.

Farver, J., & Lee, Y. S. (1997). Social pretend play in Korean- and Anglo-American preschoolers. *Child Development*, 68, 544-556.

Frost, J. L. (1992). *Play and playscapes.* Albany, NY: Delmar Publishers.

Gardiner, H. W. (1994). Child development. In L. L. Adler, & U. P. Gielen (Eds.), *Cross-Cultural Topics in Psychology* (pp. 61-72). Wesport, CN: Praeger.

Goodnow, J. J., Collins, W. A. (1990). *Development according to parents: The nature, sources and consequences of parents' ideas.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Hart, C. H., Burts, D. C., Durland, M. A., Charlesworth, R., Dewwolf, M., & Fleege, P. O. (1998). Stress behaviors and activity type participation of preschoolers in more and less developmentally appropriate classrooms: SES and sex differences. *Journal of Research in Childhood Education, 12*, 176-196.

Haupt, J. H., & Ostlund, M. F. (1997). Informing parents, administrators, and teachers about developmentally appropriate practices. In C. H. Hart, D. C. Burts, & R. Chalesworth (Eds.), *Integrated curriculum and developmentally appropriate practice: Birth to age eight* (pp. 417-447) Albany, NY: SUNY press.

Ho, D. Y. (1994). Introduction to cross-cultural psychology. In L. L. Adler, & U. P. Gielen (Eds.), *Cross-Cultural Topics in Psychology* (pp. 3-13). Wesport, CN: Praeger.

Horowitz, F. D. (2000). Child development and the PITS: Simple questions, complex answers, and developmental theory. *Child Development, 71*, 1-10.

Howes, C., & Smith, E. W. (1995). Relations among child care quality, teacher behavior, children's play activities, emotional security, and cognitive activity in child care. *Early Childhood Research Quarterly, 10*, 381-404.

Hyson, M. C., Hirsh-Pasek, K., & Rescorla, L. (1990). The classroom practices inventory: An observation instrument based on NAEYC's guidelines for developmentally appropriate practices for 4- and 5-year old children. *Early Childhood Research Quarterly, 5*, 475-494.

Hyson, M. C., Hirsh-Pasek, K., Rescorla, L., Cone, J., & Martell-Boinske. (1991). Ingredients of parental pressure in early childhood. *Journal of Applied Developmental Psychology, 12*, 347-365.

Isenberg, J. (1990). Teachers' thinking and beliefs and classroom practices. *Childhood Education, 66*, 322-327.

Ishigaki, E. H., & Lin, J. (1999). A comparative study of preschool teachers' attitudes: Towards 'children's right to play' in Japan, China, and Korea. *International Journal of Early Childhood,* 29, 44-50.

Johnson, J., Christie, J., & Yawkey, T. (1987). *Play and early childhood development.* Glenview, Il: Scott, Foresman & Co.

Jones, E. & Reynolds, G. (1992). *The play's the thing: Teachers roles in children's play.* New York: Teachers College Press.

Kagan, D. M. (1992). Implications of research on teacher belief. *Educational Psychologist, 27*, 65-90.

Kagan, S. L. (1990). Children's play: The journey from theory to practice. In E. Klugman & S. Smilansky (Eds.), *Children's Play and Learning Perspectives and Policy*

Implications (pp.173-187). New York: Teachers' College Press.

Katz, L. (1988). Engaging children's minds: The implications of research for early childhood education. In C. Warger (Ed.), *A resource guide to public school early childhood programs* (pp. 32-52). Alexandria, VA: Association for Supervision and Curriculum Development.

Kessler, S. A. (1993). The social context of the early childhood curriculum. In S. Kessler & B. B. Swadener Eds.), *Reconceptualizing the early childhood curriculum: Beginning the dialogue.* New York: Teachers College Press.

Kontos, S. (1999). Preschool teachers' talk, roles, and activity settings during free play. *Early Childhood Research Quarterly, 14*, 363-382.

Kontos, S., & Dunn, L. (1993). Caregiver practices and beliefs in child care varying in developmentally appropriateness and quality. In In S. Kilmer (Series Ed.) & S. Reifel (Vol. Ed.), Advances in early education and day care: Vol. 5. *Perspectives on developmentally appropriate practices* (pp. 53-74). Greenwich, CT: JAI Press.

Kransor, L. R., Pepler, D. J. (1980). The study of children's play. In K. H. Rubin (Ed.), *New directions for child development: Children's play* (pp. 85-95). San Francisco: Jossey-Bass.

Marcon, R. A. (1999). Differential impact of preschool models on development and early learning of inner-city children: A three-cohort study. *Developmental Psychology, 35*, 358-375.

McBride, & Grieshaber, (2001). Professional caring as mothering. In S. Kilmer (Series Ed.) & S. Reifel, & M. H. Brown (Vol. Eds.), Advances in early education and day care: Vol. 11. *Early education and care, and reconceptualizing play* (pp. 169-201).

New York: JAI.

McGillicuddy-Delsi, A. V. (1982). Parental beliefs about developmental process. *Human Development, 25*, 192-200.

McGillicuddy-Delsi, A. V. (1985). The relationship between parental beliefs and children's cognitive level. In I. E. Sigel (Ed.), *Parental belief systems: The psychological consequences for children* (pp. 7-24). Hillsdale, NJ: Lawrence Erlbaum Associates.

McMullen, M. B. (2000). *A comparison of U.S., Korean, and Chinese Early Childhood Professionals' Beliefs about practices with young children: A preliminary analysis.* Paper presented at Seoul International Conference for the year 2000, Seoul, Korea.

Miller, A. (1988). Parents' beliefs about children's cognitive development. *Child Development,59*, 259-285.

Miller, S., Fernie, D., & Kantor, R. (1992). Distinctive literacies in different play school contexts. *Play and Culture, 5*, 107-119.

Munby, H. (1982). The place of teachers' beliefs in research on teacher thinking and decision making, and an alternative methodology. *Instructional Science, 11*, 201-225.

Nespor, J. (1987). The role of beliefs in practice of teaching. *Journal of Curriculum Studies, 19*, 317-328.

Nunnaly, J. (1978). *Psychometric theory*. New York: McGraw-Hill.

Oekerman, R. B. (1997). *Developmentally appropriate practice in accredited child care centers: Teachers' understanding and perceived used*. Unpublished doctoral dissertation, Texas Tech University, Lubbock, Texas, U.S.A.

Pajares, M. F. (1992). Teachers' beliefs and educational research: Cleaning up a messy construct. *Review of Educational Research, 62*, 307-332.

Parten, M. B. (1932). Socil participation among pre-school children. *Journal of Abnormal andSocial Psychology, 27*, 243-269.

Pellegrini, A., & Galda, L. (1993). Ten years after: A reexamination of symbolic play and literacy research. *Reading Research Quarterly, 28*, 163-175.

Piaget, J. (1962). *Play, dreams, and imitation in childhood*. New York: Norton.

Piaget, J., & Inhelder, B. (1969). *The psychology of the child*. New York: Basic Books.

Rescorla, L., Hyson, M. C., Hirsh-Pasek, K., & Cone, J. (1990). Academic expectations in mothers of preschool chidlren: A psychometric study of the educational attitude scale. *Early Education and Development, 1*, 165-184.

Rogoff, B., & Morelli, G. (1989). Perspectives on children's development from cultural psychology. *American Psychologist, 44*, 343-348.

Roopnarine, J. L., & Johnson, J. E. (2001). Play and diverse cultures: Implications for early childhood education. In S. Kilmer (Series Ed.) & S. Reifel, & M. H. Brown (Vol. Eds.), Advances in early education and day care: Vol. 11. *Early education and care, and reconceptualizing play* (pp. 295-319). New York: JAI.

Roskos, K., & Newman, S. (1993). Descriptive observations of adults' facilitation of literacy in young children's play. *Early Childhood Research Quarterly, 8*, 77-97.

Rubin, K. H., Fein, G. G., & Vandenberg, B. (1983). Play. In E. M. Hetherington (Ed.), *Carnichael's manual of child psychology: Social development* . New York: Wiley.

Ruopp, R., Travers, J., Glantz, F., & Colelen, C. (1979). *Children at the center: Final report of the National Day Care Study*. Cambridge, MA: ABT Associates.

Schwartzman, H. B. (1978). *Transformations: The anthropology of play*. New York: Plenum.

Seifert, K. L. (1993). Cognitive development and early childhood education. In B. Spodek (Ed.), *Handbook of Research on the Education of Young Children*. New York: Macmillan.

Shefatya,L. (1990). Sociodramatic status and ethnic differences in sociodramatic play: Theoretical and practical implications. In E. Klugman & S. Smilansky (Eds.), *Children's Play and Learning Perspectives and Policy Implications* (pp. 137-155). New York: Teachers' College Press.

Smilansky, S. (1968). *The effects of sociodramatic play on disadvantaged preschool children.* New York: John Wiley & Sons, Inc.

Smilansky, S. (1990). Sociodramatic play: Its relevance to behavior and achievement in school. In E. Klugman & S. Smilansky (Eds.), *Children's Play and Learning Perspectives and Policy Implications* (pp. 18-42). New York: Teachers' College Press.

Smith, K.E. (1997). Student-teachers' beliefs about developmentally appropriate practice: Pattern stability, and the influence of pocus of control. *Early Childhood Research Quarterly*, 12, 221-243.

Smith, M. L., & Shepard, L. A. (1988). Kindergarten readiness and retention: A Qualitative study of teachers' beliefs and practices. *American Educational Research Journal, 25*, 307-333.

Smith, P. K., Vollstedt, R. (1985). On defining play: An empirical study of the relationship between play and various play criteria. *Child Development, 56*, 1042-

1050.

Smith, P. K., Cowie, H., & Blades, M. (1998). *Understanding children's development.* Oxford: Blackwell Publishers.

Snider, M. H., & Fu, V. R. (1990) The effects of specialized education on early childhood teachers' knowledge of Developmentally Appropriate Practice. *Early Childhood Research Quarterly, 5*, 69-78.

Spodek, B. (1987). Thought processes underlying preschool teachers' classroom decisions. *Early Child Care and Development, 28*, 197-208.

Spodek, B. (1988). Implicit theories of early childhood teachers: Foundations for professional behavior. In B. Spodek, O.N. Saracho, & D.L. Peters (Eds.), *Professionalism and the Early Childhood Practitioner* (pp. 161-172). New York: Teachers College Press.

Spodek, B., Saracho, O. N., & Davis, M. D. (1991). *Foundations of early childhood education: Teaching three-, four-, and five-year old children.* New Jersey: Prentice Hall.

Stipek, D. J. (1993). Is child-centered early childhood education really better? In S. Kilmer Series Ed.) & S. Reifel (Vol.Ed.), Advances in early education and day care: Vol. 5. *Perspectives on developmentally appropriate practices* (pp. 29-52). Greenwich, CT: JAI Press.

Stipek, D. J., Daniels, D., Galluzzo, D., & Milburn, S. (1992). Characterizing early childhood education programs for poor and middle-class children. *Early Childhood Research Quarterly, 7*, 1-19.

Stipek, D., Feiler, R., Daniels, D., Milburn, S. (1995). Effects of different instructional

approaches on young children's achievement and motivation. *Child Development, 66*, 209-223.

Super, C. M., & Harkness, S. (1997). The cultural structuring of child development. In Y. H. Poortinga, & J. Pandey (Series Eds.), & J.W. Berry, P.R. Dasen, & T.S. Saraswathi (Vol. Eds.), Handbook of Cross-Cultural Psychology: Vol. 2. *Basic processes and human development* (2nd ed., pp.1-39). Boston: Allyn and Bacon.

Sylva, K., Roy, C., & Painter, M. (1980). *Childwatching at playgroup and Nursery*. London: Grant McIntyre.

Trawick-Smith, J. (2001). Play and the curriculum. In J. L. Frost, S. Worthan, S. Reifel (Eds.), *Play and Child Development* (pp. 294-339). Upper Saddle River, NJ: Merrill/Prentice Hall.

Vartuli, S. (1999). How early childhood teacher beliefs vary across grade level. *Early Childhood Research Quarterly, 14*, 489-514

Vygotsky, L.S. (1966). Play and its role in the mental development of child. *Soviet Psychology, 12*, 62-76.

Vygotsky, L.S. (1976). Play and its role in the mental development of child. In J. S. Bruner, A. Jolly, & K. Sylva (Eds.), *Play: Its role in development and evolution* (pp. 537-554). New York: Basic Books.

Vygotsky, L.S. (1978). *Mind in society*. MA: Harvard University Press.

Zepeda, M. (1993). An exploratory study of demographic characteristics, retention, and Developmentally Appropriate Practice in kindergarten. *Child Study Journal, 23*, 57-78.

APPENDIXES

Appendix A: Tables

Table A1

Developmentally Appropriate Practice (DAP) Items

Item	Developmentally Appropriate Statements
1	Children select their own activities from a variety of learning areas
3	Children are involved in concrete, three-dimensional learning activities with materials closely related to children's daily life experiences
5	Children are physically active in the classroom, choosing from activities the teacher has set up and spontaneously initiating many of their own activities
6	Children work individually or in small, child-chosen groups most of the time. Different children are doing different things
8	Teachers ask questions that encourage children to give more than one answer
11	Teachers use activities such as block building, measuring ingredients for cooking, wood working, and drawing to help children learn concepts in math, science, and social science
13	Children use a variety of art media, including easel and finger painting, and clay, in ways of their choosing
15	When teachers try to get children involved in activities, they do so by stimulating children's natural curiosity and interest
16	The classroom environment encourages children to listen to and read stories, dictate stories, notice print in use in the classroom, engage in dramatic play, experiment with writing by drawing, copying, and inventing their own spelling
19	Children have daily opportunities to use pegboards, puzzles, legos, markers, scissors, or other similar materials in ways the children choose
21	Teachers show affection by smiling, touching, holding, and speaking to children at their eye level throughout the day, but, especially at arrival and departure times

Table A1

(Continued)

Item	Developmentally Appropriate Statements
22	The sound of the environment marked by pleasant conversation, spontaneous laughter, and exclamations of excitement
24	Teachers talk about feelings. They encourage children to put their emotions (positive and negative) and ideas into words
26	Teachers use redirection, positive reinforcement, and encouragement as guidance or discipline techniques

Table A2

Developmentally Inappropriate Practice (DIP) Items

Item Number	Developmentally Inappropriate Statements
2	Large group, teacher directed instruction is used most of the time. Children are doing the same things at the same time
4	The teacher tells the children exactly what they will do and when. The teacher expect the children to follow her plans
7	Children use workbooks, ditto sheets, flashcards, and abstract of two-dimensional learning materials
9	Teachers expect children to sit down, watch, be quiet, listen, or do paper and pencil tasks for major periods of time
10	Reading and writing instruction emphasizes direct teaching of letter recognition, reciting the alphabet, coloring within the lines, and being instructed in the correct formation of letters
12	Children have planed lessons in writing with pencils, predrawn forms, tracing or correct use of scissors
14	Teachers expect children to respond correctly with one right answer. Memorization and drill are emphasized
17	Art projects involve copying in adult-made model, coloring predrawn forms, finishing a project the teacher has started, or following adult instruction
18	Separate times or periods are set aside to learn materials in specific content areas such as math, science, or social studies
20	When teachers try to get children involved in activities, they do so by requiring their participation, giving rewards, disapproving of failure to participate, etc
23	Teachers use competition, comparison, or criticism as guidance or discipline techniques
25	The sound of the environment is characterized by harsh noise or enforced quiet

Table A3

Teachers' Demographic Characteristics (Study I)

	Age	Years of preschool teaching	Years of teaching other than preschool	Teacher-child ratio	Number of classrooms
N	58	53	53	46	56
M	23.97	1.87	.51	6.86	9.16
Mdn	22.00	.00	.00	7.25	10.00
Mode	20	0	0	5.0	10.0
SD	5.79	4.14	1.32	1.78	3.25
Min	18	0	0	3.4	2
Max	44	17	6	10.0	20

Table A4

Demographic Variables Eliminated in the Initial Analyses

Demographic Variables	Reason for elimination
Teachers	
Gender	No variability (Male: 10.3%, Female: 89.7%)
Major	Missing data (n = 40)
Years of teaching at other educational level	No variability (M = .51, SD = 1.32)
Type of school	Inaccurate data
Ave. age of children in class	No clarity of data
Parents	
Child's extracurricular classes	No variability (M = .47, SD = .90)

Table A5

Normality Tests of Continuous Variables

Variables	Shapiro-Wilk Statistics
Teachers	
Teachers' age	.79
Teacher-child ratio	.95*
Number of Classrooms	.85
Parents	
Parents' age	.96*
Children's age	.81

*Notes: Normal distribution.

Table A6

Differences of Teachers' Beliefs between Perspectives (Play Interaction Approach #1-2)

Statistics

		#1 cbelief-mbelief	#1 cbelief-tbelief	#1 mbelief-tbelief	#2 cbelief-mbelief	#2 cbelief-tbelief	#2 mbelief-tbelief
N	Valid	58	58	58	58	57	57
	Missing	0	0	0	0	1	1
Mean		-.40	-.16	.24	-.17	-.09	.09
Median		.00	.00	.00	.00	.00	.00
Mode		0	0	0	0	0	0
Std. Deviation		1.350	1.167	.942	1.142	1.123	1.229
Minimum		-4	-3	-1	-3	-3	-2
Maximum		2	2	3	3	3	5

Notes: cbelief-child-centered beliefs; mbelief-middle-of-the-road beliefs; tbelief - teacher-directed beliefs.

Table A7

Differences of Teachers' Beliefs between Perspectives (Play Interaction Approach #3-4)

Statistics

		#3 cbelief-mbelief	#3 cbelief-tbelief	#3 mbelief-tbelief	#4 cbelief-mbelief	#4 cbelief-tbelief	#4 mbelief-tbelief
N	Valid	58	58	58	58	58	58
	Missing	0	0	0	0	0	0
Mean		-.19	-.34	-.16	-.09	-.03	.05
Median		.00	.00	.00	.00	.00	.00
Mode		0	0	0	0	0	0
Std. Deviation		.982	1.001	1.197	1.144	.878	1.083
Minimum		-3	-3	-2	-3	-2	-2
Maximum		2	2	3	3	2	4

Table A8

Differences of Parents' Beliefs between Perspectives (Play Interaction Approach #1-2)

Statistics

		#1 cbelief-mbelief	#1 cbelief-tbelief	#1 mbelief-tbelief	#2 cbelief-mbelief	#2 cbelief-tbelief	#2 mbelief-tbelief
N	Valid	59	59	59	58	58	58
	Missing	1	1	1	2	2	2
Mean		-.78	.08	.86	-.52	.52	1.03
Median		-1.00	.00	1.00	.00	.00	.00
Mode		0	0	0	0	0	0
Std. Deviation		1.378	1.705	1.502	1.940	2.028	1.825
Minimum		-5	-3	-2	-5	-5	-3
Maximum		3	5	5	3	5	5

Table A9

Differences of Parents' Beliefs between Perspectives (Play Interaction Approach #3-4)

Statistics

		#3 cbelief-mbelief	#3 cbelief-tbelief	#3 mbelief-tbelief	#4 cbelief-mbelief	#4 cbelief-tbelief	#4 mbelief-tbelief
N	Valid	58	56	56	58	58	58
	Missing	2	4	4	2	2	2
Mean		-.12	1.20	1.34	-.67	.00	.67
Median		.00	1.00	1.00	.00	.00	.00
Mode		0	0	0	0	0	0
Std. Deviation		1.511	2.066	1.832	1.605	1.533	1.491
Minimum		-5	-5	-1	-4	-3	-4
Maximum		4	5	5	3	5	4

Table A10

Differences of Teachers' Beliefs between Perspectives (The Value of Play)

Statistics

		difference in valuing play #5	difference in valuing play #6	difference in valuing play #7	difference in valuing play #8	difference in valuing play #9	difference in valuing play #10
N	Valid	58	58	58	58	56	57
	Missing	0	0	0	0	2	1
Mean		.45	.16	.31	.12	.11	.23
Median		.00	.00	.00	.00	.00	.00
Mode		0	0	0	0	0	0
Std. Deviation		1.187	.790	.922	.860	1.021	1.069
Minimum		-1	-2	-3	-2	-2	-1
Maximum		5	3	3	2	3	4

Table A11

Differences of Parents' Beliefs between Perspectives (The Value of Play)

Statistics

		difference in valuing play #5	difference in valuing play #6	difference in valuing play #7	difference in valuing play #8	difference in valuing play #9	difference in valuing play #10
N	Valid	56	57	55	58	59	59
	Missing	4	3	5	2	1	1
Mean		.66	1.02	.75	.91	.69	1.36
Median		.00	.00	.00	1.00	.00	1.00
Mode		0	0	0	0	0	0
Std. Deviation		2.012	1.904	1.590	1.760	1.567	1.720
Minimum		-4	-3	-2	-4	-1	-2
Maximum		5	5	5	5	5	5

Table A12

Teachers' Beliefs about Classroom Interaction Approach

Statistics

		Pre-K belief #1	Pre-K belief #2	Pre-K belief #3	Pre-K belief #4	Pre-K belief #5	Pre-K belief #6	Pre-K belief #7
N	Valid	57	57	57	57	57	57	57
	Missing	1	1	1	1	1	1	1
Mean		7.37	7.44	7.54	7.49	7.40	7.42	7.72
Median		7.00	7.00	8.00	8.00	8.00	8.00	8.00
Mode		7[a]	7	8	7	8	7	8
Std. Deviation		1.263	1.363	1.465	1.638	1.545	1.414	1.509
Minimum		4	3	4	3	3	3	3
Maximum		10	10	10	10	10	10	10

a. Multiple modes exist. The smallest value is shown

Table A13

Teachers' Classroom Interaction Practices

Statistics

		Pre-K practice #1	Pre-K practice #2	Pre-K practice #3	Pre-K practice #4	Pre-K practice #5	Pre-K practice #6	Pre-K practice #7
N	Valid	57	57	57	56	57	57	57
	Missing	1	1	1	2	1	1	1
Mean		7.32	7.56	7.47	7.68	7.60	7.56	7.81
Median		8.00	8.00	8.00	8.00	8.00	8.00	8.00
Mode		8	7[a]	8	8	8	8	8
Std. Deviation		1.478	1.464	1.548	1.491	1.400	1.476	1.481
Minimum		3	3	3	3	3	3	4
Maximum		10	10	10	10	10	10	10

a. Multiple modes exist. The smallest value is shown

Table A14

Descriptive Statistics of Teachers' Demographic Variables (Study II)

	Age	Years of preschool teaching	Years of teaching other than preschool	Teacher-child ratio	Number of classrooms
N	40	40	40	40	40
M	23.40	.70	.38	8.05	8.07
Mdn	23	0	0	8.0	7.0
Mode	22	0	0	10.0	7.0
SD	2.71	1.24	.71	2.06	3.98
Min	18	0	0	4.0	1
Max	30	5	3	11.0	20

Table A15

Means, Medians, Modes, and Standard Deviations of the Teachers' Beliefs about Classroom Interaction Approach (Study I and Study II)

	Study I							Study II						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
M	7.37	7.44	7.54	7.49	7.40	7.42	7.72	6.63	6.10	6.78	6.55	5.80	6.03	6.65
Mdn	7.00	7.00	8.00	8.00	8.00	8.00	8.00	7.00	6.00	7.00	7.00	5.00	6.00	7.00
Mode	7	7	8	7	8	7	8	9	9	4	7	4	6	9
SD	1.26	1.36	1.47	1.64	1.55	1.41	1.51	1.98	2.21	2.27	1.82	2.46	2.48	2.37

Table A16

Means, Medians, Modes, and Standard Deviations of the Teachers' Self-Reported Practices about Classroom Interaction Approach (Study I and Study II)

	Study I							Study II						
	1	2	3	4	5	6	7	1	2	3	4	5	6	7
M	7.32	7.56	7.47	7.68	7.60	7.56	7.81	5.58	6.83	6.45	6.93	5.30	6.03	6.20
Mdn	8.00	8.00	8.00	8.00	8.00	8.00	8.00	5.00	7.00	6.00	8.00	5.00	7.00	7.00
Mode	8	7	8	8	8	8	8	3	9	4	8	3	8	7
SD	1.48	1.47	1.55	1.49	1.40	1.48	1.48	2.10	2.00	2.18	2.21	1.90	2.27	1.88

Table A17

Stepwise Regression Analyses for Teachers (Study II)

Dependent Variables		Predictors	R^2	F	Unstandardized Coefficients	
					Constant	Predictors
Beliefs						
	Play interaction approach	Ratio	.25	5.70**	7.28	-.33
		School size				.15
	Play value	School size	.13	5.28*	5.60	.11
	Play total	School size	.13	5.30*	5.23	.13
	Classroom interaction approach	Agdeg2	.15	6.35*	6.78	-1.49
	DAP awareness	No				
Self-reported Practices						
	Play interaction approach	Agdeg2	.26	5.82**	12.79	-1.89
		Age				-.26
	Play value	Agdeg2	.12	4.93*	7.10	-1.28
	Play total	Agdeg2	.24	5.43**	12.15	-1.65
		Age				-.22
	Classroom interaction approach	No				
	DAP	Gender	.15	6.23*	3.14	.30

Notes: Among the identified models by stepwise regression tests, only one model (more significant model) for each dependent variable is reported. **. $p < .01$. *. $p < .05$. Agdeg2: 0 - 4-year college degree; 1 - 2-year college degree. Gender: 0-males; 1-females.

Appendix B. Figures

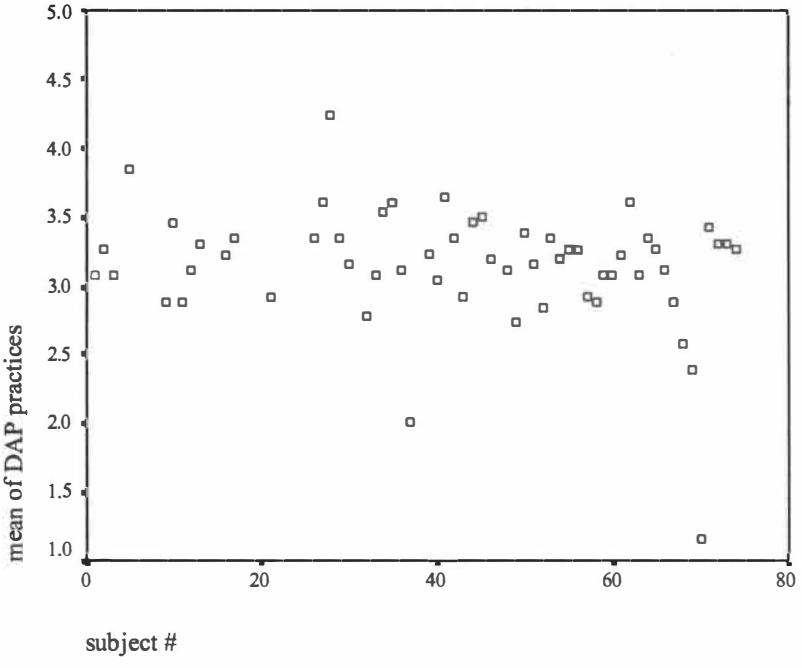


Figure B1.

Total Mean Scores of Teachers' Self-Reported DAP Practices (Study I).

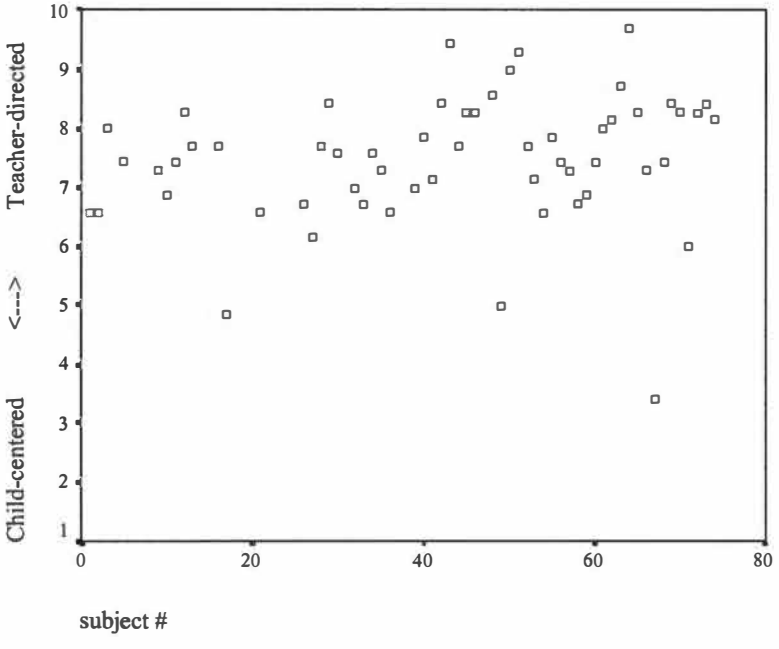


Figure B2.

Total Mean Scores of Teachers' Classroom Interaction Approach (Study I).

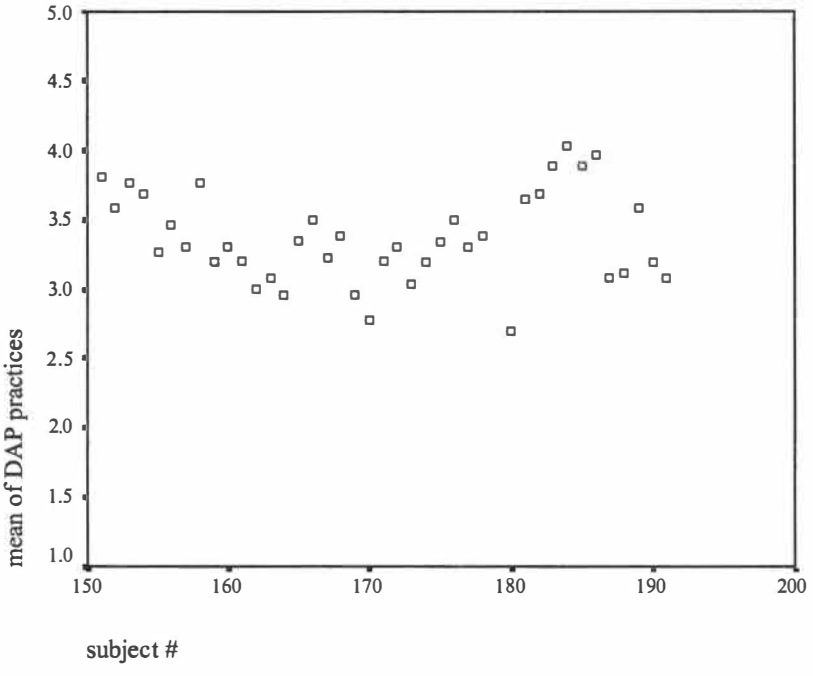


Figure B3.

Total Mean Scores of Teachers' Self-Reported DAP Practices (Study II).

Appendix C: Teacher Questionnaire (Study I)

Preschool Teacher's Survey

This questionnaire is designed to examine teachers' and parents' beliefs and practices in Korea and in the United States. Your participation is voluntary, there are no anticipated risks, and you may decline to participate without penalty. There is no way to identify you or to connect your responses back to you. This information will be used only for purposes of this research project. By completing and returning this questionnaire you are helping teachers and educators understand appropriate practices for teaching young children. The total amount of time to complete this questionnaire is expected about 20 minutes.

If you have questions about your participation, you may contact Mi-Hyang Ryu at mryu@utk.edu or 865-946-5036. If you have questions about your rights, you can also contact Research Compliance Services of Office of Research at 865-974-3466 (phone) or 865-974-2805 (fax). Please return the surveys to your director. Thank you for your cooperation.

I understand that by completing and returning this questionnaire, I agree to participate in this project.

Center # Classroom # Subject #

Age: _____ Gender: _____Female/ _____Male

Highest degree earned (please check only one):

____ Did not complete high school
____ High school
____ CDA
____ 2 year college
____ 4 year college
____ Some graduate classes
____ Master's degree
____ More than master's degree

Major: _____

How many years have you taught at a preschool?

How many years have you been as a teacher other than a preschool teacher?

Which of whom do you feel has the most influence on the way you plan and implement instruction. Please circle **only one**.
Teacher (Yourself)_____ / Director (Principal)_____ / Parents_____ / Policy_____ /

Is your center public or private? _____Public/ _____Private

Where is your center? _____ Urban/ _____Suburban/ _____Rural
(Please name of the nearest city from your center _____)

Number of children and teachers in your classroom: _____

_____ Teacher(s) _____ Children

Number of classrooms in your center _____

Age range of the children in your classroom_____

Please list any purchased/commercial instructional programs or kits used regularly in your center (any adopted curriculum).

_____

Please list any extracurricular activities your center regularly provides.

_____

Preschool Teacher's Beliefs and Practices about Play

Instructions:

The purpose of this survey is to inform of your beliefs about your roles and your classroom practices during children's play. For items from #1 to #4, you are going to read three statements for beliefs and for practices. Please read each statement carefully and indicate your agreement for the each statement by circling only one number according to your agreement. Please rate all the six statements for one item. Thank you.

Please use this scale to rate the items

Strongly Disagree	Disagree	Somewhat Disagree	Somewhat Agree	Agree	Strongly Agree
(1)	(2)	(3)	(4)	(5)	(6)

1. Teachers as stage managers

Belief: I believe that a preschool teacher's main role is to…

(A) give children opportunities to play with and explore materials by themselves without adult intervention (1) (2) (3) (4) (5) (6)

(B) actively help children get ready to play through providing materials, giving suggestions of how to use materials and physically helping children use materials (1) (2) (3) (4) (5) (6)

(C) direct the children how to use materials properly and actively help the children to follow the teacher's direction (1) (2) (3) (4) (5) (6)

Practice: In my preschool classroom, I mainly...

(A) give children opportunities to play with and explore materials by themselves without adult intervention (1) (2) (3) (4) (5) (6)

(B) actively help children get ready to play through providing materials, giving suggestions of how to use materials and physically helping children use materials (1) (2) (3) (4) (5) (6)

(C) direct the children how to use materials properly and actively help the children to follow the teacher's direction (1) (2) (3) (4) (5) (6)

2. Teachers' role during ***constructive play***

(Constructive Play is defined as children's activities to make and create things (e.g., art, play dough, or building blocks)

Belief: I believe that a preschool teacher's main role during constructive play is to …

(A) mostly observe and watch children in their constructive play rather than actually engage with children in their constructive play activities (1) (2) (3) (4) (5) (6)

(B) engage with children in their constructive play and (1) (2) (3) (4) (5) (6)

mediate children's thinking by giving suggestions or asking questions

(C) Give clear directions, such as what color to use or how to build blocks, and help the children follow those directions (1) (2) (3) (4) (5) (6)

Practice: During the children's constructive play in my classroom, I …

(A) mostly observe and watch children in their constructive play rather than actually engage with children in their constructive play activities (1) (2) (3) (4) (5) (6)

(B) engage with children in their constructive play and mediate children's thinking by giving suggestions or asking questions (1) (2) (3) (4) (5) (6)

(C) Give clear directions, such as what color to use or how to build blocks, and help the children follow those directions (1) (2) (3) (4) (5) (6)

3. Teacher's role during ***pretend play***
(Pretend Play is defined as role playing/using props symbolically.)

Belief: I believe that a preschool teacher's main role during pretend play is to…

(A) mostly observe and watch children in their pretend play rather than actually engage with children in their play activity (1) (2) (3) (4) (5) (6)

(B) engage with children in their pretend play and mediate children's thinking by giving suggestions or asking questions (1) (2) (3) (4) (5) (6)

(C) give clear directions such as what costume and props to wear and use or how to pretend to be a character , and help the children follow those directions (1) (2) (3) (4) (5) (6)

Practice: During children's pretend play in my classroom, I …

(A) mostly observe and watch children in their pretend play rather than actually engage with children in their play activity (1) (2) (3) (4) (5) (6)

(B) engage with children in their pretend play and mediate children's thinking by giving suggestions or asking questions (1) (2) (3) (4) (5) (6)

(C) give clear directions such as what costume and props to wear and use or how to pretend to be a character , and help the children follow those directions (1) (2) (3) (4) (5) (6)

4. Teachers' role during ***manipulative (functional) play***
Manipulative (or Functional) Play is defined as activities such as puzzles, games, reading, manipulating toys without building something

Belief: I believe that a preschool teacher's main role during manipulative play is to ...

(A) mostly observe and watch children in their manipulative play rather than actually engage in their play activity	(1)	(2)	(3)	(4)	(5)	(6)
(B) engage with children in their manipulative play/reading and periodically evaluate and intervene in the play	(1)	(2)	(3)	(4)	(5)	(6)
(C) give clear directions and help the children follow those directions	(1)	(2)	(3)	(4)	(5)	(6)

Practice: During the children's manipulative play in my classroom, I...

(A) mostly observe and watch children in their manipulative play rather than actually engage in their play activity	(1)	(2)	(3)	(4)	(5)	(6)
(B) engage with children in their manipulative play/reading and periodically evaluate and intervene in the play	(1)	(2)	(3)	(4)	(5)	(6)
(C) give clear directions and help the children follow those directions	(1)	(2)	(3)	(4)	(5)	(6)

Instructions: Items 5 and 6 are asking only your beliefs. Please read two statements carefully and indicate your agreement for the each statement by circling only one number according to your agreement. Please rate both of the statements for each item.

5. I believe that play activities should be:

(A) mostly teacher-initiated ones that are pre-planned by the teacher according to his/her curriculum	(1)	(2)	(3)	(4)	(5)	(6)
(B) mostly child-initiated ones that are led by the child's interest and needs	(1)	(2)	(3)	(4)	(5)	(6)

6. I believe that the **role/nature of play** in the preschool classrooms is:

(A) primary for children to relax and have fun and also provide time for teachers to plan and prepare academically valuable and necessary activities for children	(1)	(2)	(3)	(4)	(5)	(6)
(B) a valuable and necessary part of the curriculum that is tied closely to children's learning & development and is a good medium for assessing children's learning and development	(1)	(2)	(3)	(4)	(5)	(6)

Instructions: Each statement at items 7 through 10 represents a continuum of two different beliefs concerning children's basic skills development. Please circle the only one numberthat best represents your beliefs. Please rate all the **FOUR** statements for an item.

7. **Belief**: I believe that preschool children develop **Thinking Skills (literacy & math)** through:

(A) direct instruction with teacher and standard activities that enhance academic skills (1) (2) (3) (4) (5) (6)

(B) facilitation of classroom play experiences (engaging with materials and others) (1) (2) (3) (4) (5) (6)

Practice: In my classroom, I mainly help children's thinking skill development through:

(A) direct instruction with teacher and standard activities that enhance academic skills (1) (2) (3) (4) (5) (6)

(B) facilitation of classroom play experiences (engaging with materials and others) (1) (2) (3) (4) (5) (6)

8. **Belief**: I believe that preschool children develop **Social Skills** through:

(A) learning to understand and follow teachers' classroom rules where consequences for behavior are established (1) (2) (3) (4) (5) (6)

(B) play situations where conflict and social problem solving skills are developed in context (1) (2) (3) (4) (5) (6)

Practice: In my classroom, I mainly help children's social skill development through:

(A) learning to understand and follow teachers' classroom rules where consequences for behavior are established (1) (2) (3) (4) (5) (6)

(B) play situations where conflict and social problem solving skills are developed in context (1) (2) (3) (4) (5) (6)

9. **Belief**: I believe that preschool children develop **Physical Skills** (small and large motor) through:

(A) planned/guided/structured activities such as coloring worksheets, writing letters, or organized outdoor games (1) (2) (3) (4) (5) (6)

(B) Indoor and outdoor play experiences such as exploring manipulatives, art materials or running, and climbing (1) (2) (3) (4) (5) (6)

Practice: In my classroom, I mainly help children's physical skill development through:

(A) planned/guided/structured activities such as coloring worksheets, writing letters, or organized outdoor games (1) (2) (3) (4) (5) (6)

(B) Indoor and outdoor play experiences such as exploring manipulatives, art materials or running, and climbing (1) (2) (3) (4) (5) (6)

10. **Belief**: I believe that a **preschool program** should develop children's **Physical Skills (small and large motor)**through:

(A) Providing pull out programs such as swimming, (1) (2) (3) (4) (5) (6)

gymnastics, or Taekwando

(B) Providing appropriate space for play and movement activity within the preschool setting (1) (2) (3) (4) (5) (6)

Practice: Our preschool program mainly help children's physical skill development through:

(A) Providing pull out programs such as swimming, gymnastics, or Taekwando (1) (2) (3) (4) (5) (6)

(B) Providing appropriate space for play and movement activity within the preschool setting (1) (2) (3) (4) (5) (6)

Classroom Practices Inventory

This scale was developed to assess the appropriateness and use of classroom practices. It is intended to evaluate the curricular emphasis of educational programs for young children.

The rating is done on two scales:
To the **left** of each statement is the scale used to determine the appropriateness of each practice. Please circle the letter "**A**" if you feel the statement reflects a practice that is Appropriate for use with preschool children or an "**I**" if the practice is Inappropriate.

The scale to the **right** of each statement asks how often you personally use this practice in the classroom. Please circle one answer on this scale, too.

On the last page is there space for you to give further opinions. You may select up to three statements about which you would like to make additional comments. This input is very valuable and will make the information that you provide on this inventory even more meaningful

Now, for the inventory, please circle one answer on each scale for each statement.

The choices for the left side are:
A = Appropriate Practice
I = Inappropriate Practice

The choices for the right side are:
1 = Used not at all in my classroom
2 = Used very little in my classroom
3 = Used somewhat in my classroom
4 = Used much in my classroom
5 = Used very much in my classroom

Level of Appropriateness			Level of Personal Use				
A	I	1. Children select their own activities from a variety of learning areas the teacher prepares, including dramatic play, blocks, science, math, games and puzzles, books, recordings, art, and music.	1	2	3	4	5
A	I	2. Large group, teacher directed instruction is used most of the time. Children are doing the same things at the same time.	1	2	3	4	5
A	I	3. Children are involved in concrete, three-dimensional learning learning activities with materials closely related to children's daily life experiences.	1	2	3	4	5
A	I	4. The teacher tells the children exactly what they will do and when. The teacher expect the children to follow her plans.	1	2	3	4	5
A	I	5. Children are physically active in the classroom, choosing from activities the teacher has set up and spontaneously initiating many of their own activities.	1	2	3	4	5
A	I	6. Children work individually or in small, child-chosen groups most of the time. Different children are doing different things.	1	2	3	4	5

A	I	7. Children use workbooks, ditto sheets, flashcards, and other abstract of two-dimensional learning materials.	1	2	3	4	5
A	I	8. Teachers ask questions that encourage children to give more than one right answer.	1	2	3	4	5
A	I	9. Teachers expect children to sit down, watch, be quiet, and listen, or do paper and pencil tasks for major periods of time.	1	2	3	4	5
A	I	10. Reading and writing instruction emphasizes direct teaching of letter recognition, reciting the alphabet, coloring within the lines, and being instructed in the correct formation of letters.	1	2	3	4	5
A	I	11. Teachers use activities such as block building, measuring ingredients for cooking, wood working, and drawing to help children learn concepts in math, science, and social science.	1	2	3	4	5
A	I	12. Children have planed lessons in writing with pencils, coloring predrawn forms, tracing or correct use of scissors.	1	2	3	4	5
A	I	13. Children use a variety of art media, including easel and finger painting, and clay, in ways of their choosing.	1	2	3	4	5
A	I	14. Teachers expect children to respond correctly with one right answer. Memorization and drill are emphasized.	1	2	3	4	5
A	I	15. When teachers try to get children involved in activities, they do so by stimulating children's natural curiosity and interest.	1	2	3	4	5
A	I	16. The classroom environment encourages children to listen to and read stories, dictate stories, notice print in use un the classroom, engage in dramatic play, experiment with writing by drawing, copying, and inventing their own spelling.	1	2	3	4	5
A	I	17. Art projects involve copying in adult-made model, coloring predrawn forms, finishing a project the teacher has started, or following adult instruction.	1	2	3	4	5
A	I	18. Separate times or periods are set aside to learn materials in specific content areas such as math, science, or social studies.	1	2	3	4	5
A	I	19. Children have daily opportunities to use pegboards, puzzles, legos, markers, scissors, or other similar materials in ways the children choose.	1	2	3	4	5
A	I	20. When teachers try to get children involved in activities, they do so by requiring their participation, giving rewards, disapproving of failure to participate, etc.	1	2	3	4	5

A I	21. Teachers show affection by smiling, touching, holding, and speaking to children at their eye level throughout the day, but, especially at arrival and departure times.	1	2	3	4	5
A I	22. The sound of the environment marked by pleasant conversation, spontaneous laughter, and exclamations of excitement.	1	2	3	4	5
A I	23. Teachers use competition, comparison, or criticism as guidance or discipline techniques.	1	2	3	4	5
A I	24. Teachers talk about feelings. They encourage children to put their emotions (positive and negative) and ideas into words.	1	2	3	4	5
A I	25. The sound of the environment is characterized by harsh noise or enforced quiet.	1	2	3	4	5
A I	26. Teachers use redirection, positive reinforcement, and encouragement as guidance or discipline techniques.	1	2	3	4	5

As you were selecting your ratings for the statements, you may have had some for which you circled "A" for appropriate and 1 or 2 for a low level of personal use OR you may have circled "I " for inappropriate and 4 or 5 for a high level of personal use. Please look back at the statements that were rated like this and select three. Please explain why you chose to rate the statement as you did.

Statement Number:
Explanation:

Statement Number:
Explanation:

Statement Number:
Explanation:

Survey of Beliefs and Practices

Instructions

Each statement on this survey represents a continuum of two different thoughts or ideas regarding early childhood education. Please mark an "X" anywhere on the line that best represents your conception of early childhood education. Because situations often affect how we implement our actual beliefs, this survey asks first about your belief and then about your actual classroom situation.

1. I believe the most important developmental goal of preschoolers is:

Academic Preparation ← — — — — — — — — → Social and emotional growth

My preschool classroom is most effective in fostering:

Academic Preparation ← — — — — — — — — → Social and emotional growth

2. I believe that preschool children learn best through:

Direct instruction ← — — — — — — — — → Active experience

Children in my preschool classroom are learning predominantly through:

Direct instruction ← — — — — — — — — → Active experience

3. I believe that activities in a preschool classroom should be:

Teacher initiated ← — — — — — — — — → Child initiated

The activities in my preschool classroom are typically:

Teacher initiated ← — — — — — — — — → Child initiated

4. I believe that my role as a preschool teacher is to:

Dispense knowledge ← — — — — — — — — → Facilitate learning

In my present preschool classroom I am more likely to :

Dispense knowledge ← — — — — — — — — → Facilitate learning

5. L believe that preschool programs should use a learning format which is:

Group oriented ← — — — — — — — — → Individualized one-to-one

My preschool classroom is typically:

Group oriented ← — — — — — — — — → Individualized one-to-one

6. I believe that preschool children in a group learn effectively through interaction with:

Adults ← — — — — — — — — → Peers

Most learning in my preschool classroom takes place through interaction with:

Adults ← — — — — — — — — → Peers

7. I believe that class materials and resources for preschool children should be:

Teacher distributed ← — — — — — — — — → Child accessbile

In my preschool classroom materials and resources are:

Teacher distributed ← — — — — — — — — → Child accessbile

♦ PLEASE RETURN THIS SURVEY TO YOUR DIRECTOR. THANK YOU.

Appendix D: Demographic Form for Parents

♦ About the person who is going to complete this questionnaire:

Your age: _____

Please circle only one: Mother/ Father/ Guardian/ Other

Highest degree earned:

____ Did not complete high school
____ High school
____ 2 year college
____ 4 year college
____ More than 4 year college

Age of your child enrolled at this center:

Is your child a boy or a girl?

Please list any extracurricular class your child is attending outside of the preschool (example: swimming, gymnastics, or music, etc.)

♦ If you have more than one children enrolled at the same center and you received more than one questionnaires, **please complete one questionnaire for each child**.

♦ Please check this box, if this applies to you.

I HAVE COMPLETED MORE THAN ONE QUESTIONNAIRES ☐

Appendix E: Revised Questionnaire (Study II)

In this appendix, the demographic form, Preschool Teachers' Beliefs and Practices about Play, and Pre-K Survey of Beliefs and Practices that were revised from Study I are included.

Demographic Form

Age: _____ Gender: _____Female/ _____Male

Highest degree earned (please check only one):

____ Did not complete high school
____ High school
____ CDA
____ 2 year college
____ 4 year college
____ Some graduate classes
____ Master's degree
____ More than master's degree

Major: (1) Child Development (2) Early Childhood Education (3) Other Education
(4) Others _____

How many years have you taught at a preschool?
How many years have you been as a teacher other than a preschool teacher?

Which of whom do you feel has the most influence on the way you plan and implement instruction. Please circle **only one**.
Teacher (Yourself)_____ / Director (Principal)_____ / Parents_____ / Policy_____ /

Is your center public or private? _____Public/ _____Private

Where is your center? _____ Urban/ _____Suburban/ _____Rural
(Please name of the nearest city from your center _____)

Number of children and teachers in your classroom:_____

_____ Teacher(s) _____ Children

Number of classrooms in your center

Age range of the children in your classroom

Please list any purchased/commercial instructional programs or kits used regularly in your center (any adopted curriculum).

Please list any extracurricular activities your center regularly provides

Preschool Teacher's Beliefs and Practices about Play

Instructions:

The purpose of this survey is to inform of your beliefs about your roles and your classroom practices. Each statement on this survey represents a continuum of three or two different thoughts or ideas regarding early childhood education. Please mark an "X" anywhere on the line that best represents your conception of early childhood education.

1. Teachers' role during ***constructive play***
   (Constructive Play is defined as children's activities to make and create things (e.g., art, play dough, or building blocks)
   I believe that a preschool teacher's main role during constructive play is to …

Give clear directions, such as what color to use or how to build blocks, and help the children follow those directions	engage with children in their constructive play and mediate children's thinking by giving suggestions or asking questions	mostly observe and watch children in their constructive play rather than actually engage with children in their constructive play activities

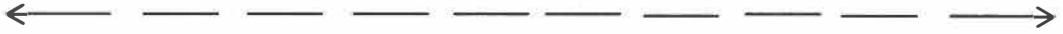
2. Teacher's role during ***pretend play***
   (Pretend Play is defined as role playing/using props symbolically.)
   I believe that a preschool teacher's main role during pretend play is to…

give clear directions such as what costume and props to wear and use or how to pretend to be a character , and help the children follow those directions	engage with children in their pretend play and mediate children's thinking by giving suggestions or asking questions	mostly observe and watch children in their pretend play rather than actually engage with children in their play activity

3. Teachers' role during ***manipulative (functional) play***
Manipulative (or Functional) Play is defined as activities such as puzzles, games, reading, manipulating toys without building something
I believe that a preschool teacher's main role during manipulative play is to …

give clear directions and help the children follow those directions	engage with children in their manipulative play/reading and periodically evaluate and intervene in the play	mostly observe and watch children in their manipulative play rather than actually engage in their play activity

4. Teachers as stage managers
I believe that a preschool teacher's main role is to…



give children opportunities to play with and explore materials by themselves without adult intervention	actively help children get ready to play through providing materials, giving suggestions of how to use materials and physically helping children use materials	direct the children how to use materials properly and actively help the children to follow the teacher's direction

5. I believe that play activities should be:

mostly teacher-initiated ones that are pre-planned by the teacher according to his/her curriculum	mostly child-initiated ones that are led by the child's interest and needs

6. I believe that the **role/nature of play** in the preschool classrooms is*:*

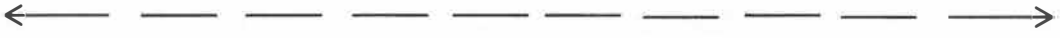
a valuable and necessary part of the curriculum that is tied closely to children's learning & development and is a good medium for assessing children's learning and development	primarily for children to relax and have fun and also provide time for teachers to plan and prepare academically valuable and necessary activities for children

7. I believe that preschool children develop **Thinking Skills (literacy & math)** through:

direct instruction with teacher and standard activities that enhance academic skills

facilitation of classroom play experiences (engaging with materials and others)

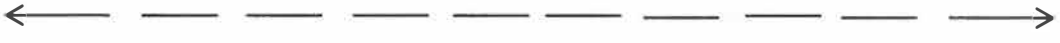
8. I believe that preschool children develop **Social Skills** through:



learning to understand and follow teachers' classroom rules where consequences for behavior are established

play situations where conflict and social problem solving skills are developed in context

9. I believe that preschool children develop **Physical Skills** (small and large motor) through:



indoor and outdoor play experiences such as exploring manipulatives, art materials or running, and climbing

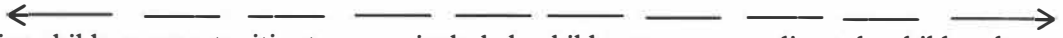
planned/guided/structured activities such as coloring worksheets, writing letters, or organized outdoor games

10. I believe that a **preschool program** should develop children's **Physical Skills (small and large motor)** through:

providing pull out programs such as swimming, gymnastics, or Taekwando

providing appropriate space for play and movement activity within the preschool setting

11. In my preschool classroom, I mainly...



give children opportunities to play with and explore materials by themselves without adult intervention	actively help children get ready to play through providing materials, giving suggestions of how to use materials and physically helping children use materials	direct the children how to use materials properly and actively help the children to follow the teacher's direction

12. During the children's **constructive** play in my classroom, I ...

give clear directions, such as what color to use or how to build blocks, and help the children follow those directions	engage with children in their constructive play and mediate children's thinking by giving suggestions or asking questions	mostly observe and watch children in their constructive play rather than actually engage with children in their constructive play activities

13. During children's **pretend** play in my classroom, I ...

mostly observe and watch children in their pretend play rather than actually engage with children in their play activity	engage with children in their pretend play and mediate children's thinking by giving suggestions or asking questions	give clear directions such as what costume and props to wear and use or how to pretend to be a character , and help the children follow those directions

14. During the children's **manipulative** play in my classroom, I...

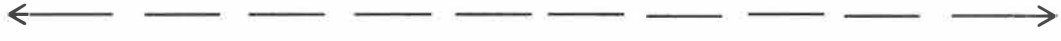
give clear directions and help the children follow those directions	engage with children in their manipulative play/reading and periodically evaluate and intervene in the play	mostly observe and watch children in their manipulative play rather than actually engage in their play activity

15. In my classroom, I mainly help children's **thinking skill development** through:

facilitation of classroom play experiences (engaging with materials and others)

direct instruction with teacher and standard activities that enhance academic skills

16. In my classroom, I mainly help children's **social skill development** through:



learning to understand and follow teachers' classroom rules where consequences for behavior are established

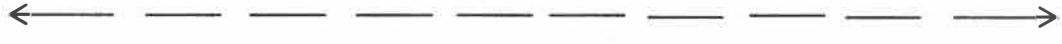
play situations where conflict and social problem solving skills are developed in context

17. In my classroom, I mainly help children's **physical skill development** through:

indoor and outdoor play experiences such as exploring manipulatives, art materials or running, and climbing

planned/guided/structured activities such as coloring worksheets, writing letters, or organized outdoor games

18. **Our preschool program** mainly help children's **physical skill development** through:



providing pull out programs such as swimming, gymnastics, or Taekwando

providing appropriate space for play and movement activity within the preschool setting

Pre-K Survey of Beliefs and Practices

Instructions

Each statement on this survey represents a continuum of two different thoughts or ideas regarding early childhood education. Please mark an "X" anywhere on the line that best represents your conception of early childhood education. Because situations often affect how we implement our actual beliefs, this survey asks about your beliefs and your actual classroom situations.

1. I believe the most important developmental goal of preschoolers is:

Academic Preparation ← — — — — — — — — → Social and emotional growth

2. I believe that preschool children learn best through:

Active experience ← — — — — — — — — → Direct instruction

3. I believe that activities in a preschool classroom should be:

Teacher initiated ← — — — — — — — — → Child initiated

4. I believe that my role as a preschool teacher is to:

Facilitate learning ← — — — — — — — — → Dispense knowledge

5. L believe that preschool programs should use a learning format which is:

Group oriented ← — — — — — — — — → Individualized one-to-one

6. I believe that preschool children in a group learn effectively through interaction with:

Adults ← — — — — — — — — → Peers

7. I believe that class materials and resources for preschool children should be:

Teacher distributed ← — — — — — — — — → Child accessible

8. Children in my preschool classroom are learning predominantly through:

Direct instruction ← — — — — — — — — → Active experience

9. The activities in my preschool classroom are typically:

Teacher initiated ← — — — — — — — — → Child initiated

10. My preschool classroom is most effective in fostering:

Social and emotional growth ← — — — — — — — — → Academic Preparation

11. In my preschool classroom materials and resources are:

Child accessible ← — — — — — — — — → Teacher distributed

12. My preschool classroom is typically:

Individualized One-to-one ← — — — — — — — — → Group oriented

13. In my present preschool classroom I am more likely to :

Dispense knowledge ← — — — — — — — — → Facilitate learning

14. Most learning in my preschool classroom takes place through interaction with:

Peers ← — — — — — — — — → Adults

♦ PLEASE RETURN THIS SURVEY TO YOUR DIRECTOR. THANK YOU.

Appendix F: Human Subject Approval for Study I

Form A

IRB #_____

Certification for Exemption from IRB Review for Research Involving Human Subjects

---

A. PRINCIPAL INVESTIGATOR(s) and/or CO-PI(s): (For student projects, list both the student and the advisor.)
Student: Mi-Hyang Ryu, master candidate
Adviser: Deborah W. Tegano, Ph.D

B. DEPARTMENT:
Child and Family Studies

C. COMPLETE MAILING ADDRESS AND PHONE NUMBER OF PI(s) and CO-PI(s):
Mi-Hyang Ryu
2521 Kingston PK #902
Knoxville, TN 37919
Phone: 865-946-5036
E-mail: mryu@utk.edu

Dr. Deborah W. Tegano
The University of Tennessee
College of Education, Health, and Human Sciences
Department of Child and Family Studies
115 JHB
Phone: 865-974-4538
E-mail: dwtegano@utk.edu

D. TITLE OF PROJECT:
Appropriate and Inappropriate Curricular Approaches for Young Children: Beliefs and Perceived Practices of Early Childhood Teachers and Parents in Korea and the United States

E. EXTERNAL FUNDING AGENCY AND ID NUMBER (if applicable): N/A

F. GRANT SUBMISSION DEADLINE (if applicable):N/A

G. STARTING DATE: (NO RESEARCH MAY BE INITIATED UNTIL CERTIFICATION IS GRANTED.)
Upon approval

H. ESTIMATED COMPLETION DATE (Include all aspects of research and final write-up.):
May 2003

I. RESEARCH PROJECT:

1. Objective(s) of Project:

In the proposed study, I will examine both of the cross-cultural variability and the intra-cultural variability among Korean and American early childhood teachers' and parents' beliefs and perceived practices about curricular approaches to early childhood education. This study will involve the use of anonymous questionnaires (three for teachers and two for parents).

2. Subjects:

The subjects will be about 100-150 teachers and about 100 parents in each of two countries, Korea and the US. The teachers will be early childhood educators and the parents will be those of the children enrolled in a subsample of teachers' classrooms. Children will not be included and all the participants will be over the age of 18. Subjects will be involved only for the duration of their participating in obtaining, completing, and returning the questionnaires (No observation methods will be used).

3. Methods or Procedures:

During a large early childhood teacher education training session in Korea (summer 2002), the instructor of the session, who is my collaborator in Korea, explained to the teachers about the purposes and procedures of the proposed study and participants' rights concerning a voluntary participation in the research and anonymity of the names. The Korean collaborator asked the preschool teachers if they would be willing to participate in the study in fall 2002 or spring 2003. Two hundred and thirty three affirmative responses from Korean preschool teachers were received. In these interest forms, teachers were asked to write their mailing address (i.e., their preschool names and address). They were asked to indicate if they would be willing to cooperate in collecting data from parents of the children in their classrooms.

After obtaining human subject approval from UT, my collaborator will distribute, by mail, the teacher questionnaires to the teachers who expressed interests in participating in the study. The questionnaires with informed consent procedures are attched to an appendix. With the questionnaires, a return envelope will be included. After filling out the questionnaires, teachers will be asked to return them to my collaborator using the return envelope. The Korean teachers will not be asked to identify themselves by name.

At the same time, questionnaires for Korean parents will be distributed to 10 teachers who expressed their willingness to cooperate with this part of the study when invited to participate in summer 2002. Each of these teachers will receive 20 parent questionnaires. In total, about 100 completed parent questionnaires are expected to be returned, conservative estimate yielding a 50% returning rate. Because each of the Korean teachers who will participate in the proposed study comes from a different center, parents will be asked to return the completed questionnaires directly to my Korean collaborator, thus assuring parents' anonymity.

For the American sample, teacher questionnaires will be distributed through Family and Consumer Science Department of UT Agricultural Extension Service. This procedure will be overseen by our collaborator, Dr. Matthew Devereaux's (child care specialist) personal contact with extension agents who work with child centers across the state, and/or by mail, as a part of the regular contacts of the Extension Service with child care teachers across the state. The first 100-150 questionnaires returned will be used as the sample for this study. The contacted teachers will not be asked to identify themselves by the name. In order to select approximately 100 American parents, teachers will be chosen by convenience by Dr. Devereaux. He will select 20 teachers who indicate that they are willing to distribute parent questionnaires, using the first 20 classroom teachers who indicate their willingness to cooperate in this part of the study.

American parents will be also ensured their anonymity. The Parent questionnaires will be distributed by the directors of centers. The parents will be asked to directly return the filled-out

questionnaires to the center in a box designated for returned questionnaires. If 20 teachers distribute questionnaires to 10 parents each (conservative estimate), then we anticipate a 50 % return rate to provide 100 completed parent questionnaires.

All data will be anonymous. No masterlists of schools, classrooms, or teachers will be kept. The Korean and American parents and their teachers will be identified not by the class and school names but by assigned subject numbers. In order to match parents with a particular teacher(s), the teacher(s) and the parents of a given classroom will receive the same classroom number and the same school number. With these numbers, it will be possible for the researcher to match teachers and parents but impossible to identify a school, classroom, or the names of the participants.

There are not anticipated risks to the participants. Rather, teachers will have the opportunity to assess themselves and reflect on their beliefs and practices as teachers. Parents will also have the opportunity to think about their perception of appropriate curriculum for young children. Overall, the results of the proposed study will be used to compare teachers' and parents' beliefs and to identify the possible reasons for the conflicts between one's beliefs and practices. In addition, this proposed research will contribute to our understandings of appropriate and inappropriate practices with young children. The data finally will be mailed to the researcher and ***all*** data will be kept in a locked office (JHB 240, Dr. Tegano) in a locked file cabinet and destroyed after three years. Dr. Tegano and Mi-Hyang Ryu will have access to the data.

4. **CATEGORY(s) FOR EXEMPT RESEARCH PER 45 CFR 46** (see reverse side for categories): (2)

J. CERTIFICATION: The research described herein is in compliance with 45 CFR 46.101(b) and presents subjects with no more than minimal risk as defined by applicable regulations.

Principal Investigator_____ _____ _____

Signature Name Date

Student Adviser_____ _____ _____
Signature Name Date

Dept. Review
Comm.
Chair_____ _____ _____
Signature Name Date

APPROVED:
Dept. Head_____ _____ _____
Signature Name Date

Appendix G: Human Subject Approval for Study II

Form D

Status for Changes and/or Project Termination
Form B Approved Research Involving Human Subjects
(Instructions on Reverse)
Research Compliance Services
Office of Research
The University of Tennessee
404 Andy Holt Tower
Knoxville, TN 37996-0140

1. IRB No. 664 A

2. Principal Investigator

Student: Mi-Hyang Ryu

Advisor: Deborah W. Tegano, Ph. D.

Department Child and Family Studies

3. Mailing Address

2521 Kingston Pike #902, Knoxville, TN 37919

4. Project Title:

Appropriate and Inappropriate Curricular Approaches for Young

Children: Beliefs and Perceived Practices of Early Childhood

Teachers and Parents in Korea and the United States

PLEASE CHECK THE APPROPRIATE LINE(S) BELOW (see instructions on reverse):

5. ___ Change of Project Title

6. ___ Change of Principal or Co-Principal Investigator(s), Other Collaborators, Student Advisor

7. _X_ Change(s) to Project Which Affect Participation of Human Subjects * **SEE**

EXPLANATION OF CHANGES, BELOW.

8. ___ Change(s) to Informed Consent Forms and/or Assent Form(s)

9. ___ Additional Locations for Conducting Project

10. ___ Unexpected Risks to Subjects

11. ___ Project Completed -- Please Close the IRB Files.

---

12. **Signatures:**

Principal Investigator_____
Date_____

Student Advisor_____
Date_____

Departmental Review_____
Date_____
(if required)

Rev. 9-01-95

***EXPLANATION OF CHANGES**

Attached are two questionnaires, marked as Original Questionnaire and Revised Questionnaire. The format of the questionnaire has been modified in the revised version. NO CHANGES have been made in wording of the items. The revised questionnaire creates a more discerning, forced-choice option of the respondent that will maximize the variability in the responses.

Vita

Mi-Hyang Ryu was born in Busan, Korea on November 11, 1971. She has stayed in her hometown until she graduated from Sung Mo Woman's high school in 1990. In the same year, she went to Hankuk University of Foreign Studies in Seoul, Korea and received a B.A. in French and English in 1995. After her graduation, she first started her career as a management consultant in NonNo inc. between 1995 and 1996. In 1996, she started her part time work as a Korean language teachers at American Embassy in Seoul, Korea and she also taught Korean language to American soldiers during the same period. In 2000, she went to the University of Tennessee, Knoxville and majored Child and Family Studies. After her degree of a M.A. in Child and Family Studies, she is pursuing her doctorate in the same department from the fall semester of 2003.