Play: essential for all children. (A Position Paper of the Association for Childhood Education International).

Subject:
Play (Psychological aspects)
Child development (Research)
Education (Research)
Education (United States)
Authors:
Isenberg, Joan Packer
Quisenberry, Nancy
Pub Date:
09/22/2002
Publication:
Name: Childhood Education **Publisher**: Association for Childhood Education International **Audience**: Academic; Professional**Format**: Magazine/Journal **Subject**: Education; Family and marriage**Copyright**: COPYRIGHT 2002 Association for Childhood Education International **ISSN:** 0009-4056
Issue:
Date: Fall, 2002 **Source Volume**: 79 **Source Issue**: 1
Topic:
Event Code: 310 Science & research **Computer Subject**: Technology in education
Product:
Product Code: 8200000 Education **NAICS Code**: 61 Educational
Services **SIC Code**: 8200 EDUCATIONAL SERVICES
Organization:
Organization: Association for Childhood Education International
Geographic:
Geographic Scope: United States **Geographic Code**: 1USA United States

Accession Number:
93348877

Full Text:

Children are growing up in a rapidly changing world characterized by dramatic shifts in what all children are expected to know and be able to do. Higher and tougher standards of learning for all populations of students are focusing on a narrow view of learning. Consequently, students have less time and opportunity to play than did children of previous generations. Few would disagree that the primary goal of education is student learning and that all educators, families, and policymakers bear the responsibility of making learning accessible to all children. Decades of research has documented that play has a crucial role in the optimal growth, learning, and development of children from infancy through adolescence. Yet, this need is being challenged, and so children's right to play must be defended by all adults, especially educators and parents. The time has come

to advocate strongly in support of play for all children.

ACEI POSITION

The Association for Childhood Education International (ACEI) recognizes the need for children of all ages to play and affirms the essential role of play in children's lives. ACEI believes that as today's children continue to experience pressure to succeed in all areas, the necessity for play becomes even more critical. ACEI supports all adults who respect, understand, and advocate legitimizing play as an essential pathway to learning for all populations of children. When working with children, adults should use their knowledge about play to guide their practice.

The 1988 ACEI position statement on play, "Play: A Necessity for All Children" (ACEI/Isenberg & Quisenberry, 1988), has been widely cited and continues to influence the thinking of educators. Unfortunately, the issues presented in 1988 remain unresolved today. The fundamental beliefs, guiding principles, and recommended practices in this position paper are similar to those in the 1988 paper, and continue to be rooted in the latest research, theory, and exemplary practice. We first discuss ACEI's beliefs about play and cite the supporting research and theory. Then, we discuss the guiding principles and practices for play experiences. Finally, we present ACEI's call to action on play.

* ACEI believes that play--a dynamic, active, and constructive behavior--is an essential and integral part of all children's healthy growth, development, and learning across all ages, domains, and cultures.

Play is a dynamic process that develops and changes as it becomes increasingly more varied and complex. It is considered a key facilitator for learning and development across domains, and reflects the social and cultural contexts in which children live (Christie, 2001; Fromberg, 1998, 2002; Hughes, 1999, in press).

Theorists, regardless of their orientation, concur that play occupies a central role in children's lives. They also suggest that the absence of play is an obstacle to the development of healthy and creative individuals. Psychoanalysts believe that play is necessary for mastering emotional traumas or disturbances; psychosocialists believe it is necessary for ego mastery and learning to live with everyday experiences; constructivists believe it is necessary for cognitive growth; maturationists believe it is necessary for competence building and for socializing functions in all cultures of the world; and neuroscientists believe it is necessary for emotional and physical health, motivation, and love of learning.

Moreover, findings from the recent explosion of research on the brain and learning also delineate the importance of play (Jensen, 2000, 2001; Shore, 1997). We know that active brains make permanent neurological connections critical to learning; inactive brains do not make the necessary permanent neurological connections. Research on the brain demonstrates that play is a scaffold for development, a vehicle for increasing neural structures, and a means by which all children practice skills they will need in later life.

This research raises new questions for those who view play as a trivial, simple, frivolous, unimportant, and purposeless behavior (Christie, 2001; Frost, Wortham, & Reifel, 2001; Shore, 1997) and challenges them to recognize play for what it is--a serious behavior that has a powerful influence on learning. Such an attitude shift could increase the level of respect accorded to currently undervalued activities such as recess, physical education, the arts, and rich personal adult/child interactions.

A body of research on socio-cultural variations on play exists, but is less robust. We know that socio-cultural variations in play depend not only upon the attitudes of parents, teachers, and society in general, but also on such variables as the amount of play space and time that is available to children (Roopnarine, Lasker, Sacks, & Stores, 1998). Child development experts have been far less successful in understanding the contexts within which play occurs (Roopnarine, Shin, Donovan, & Suppal, 2000).

Both theorists and researchers do concur upon a common set of characteristics that distinguish play behaviors from nonplay behaviors for children across all ages, domains, and cultures. These unique features include behaviors that are: 1) intrinsically motivated and self-initiated, 2) process oriented, 3) non-literal and pleasurable, 4) exploratory and active, and 5) rule-governed (Fromberg, 1998, 2002; Garvey, 1990; Johnson, Christie, & Yawkey, 1999; Rubin, Fein, & Vandenberg, 1983). These features make play both a process and a product. As a process, play facilitates individual understanding of skills, concepts, and dispositions; as a product, play provides the vehicle for children to demonstrate their understanding of skills, concepts, and dispositions (Fromberg, 1998, 2002).

* ACEI believes that play enhances learning and development for children of all ages, cultures, and domains.

To best understand the relationship of play to learning and development, teachers must be knowledgeable about the research base and typical characteristics that describe how play enhances all children's learning and development. From this knowledge base, teachers will be able to argue convincingly and make appropriate decisions about providing adequate opportunities and time for all children to play (Christie, 2001; Fromberg, 1998, 2002; Frost et al., 2001; Johnson et al., 1999; Wolery & McWilliams, 1998).

Physical Development. Because play often involves physical activity, it is closely related to the development and refinement of children's gross and fine motor skills and their body awareness. As children vigorously and joyfully use their bodies in physical exercise, they simultaneously refine and develop skills that enable them to feel confident, secure, and self-assured. In societies where children experience pressure to succeed in all areas, confidence and competence are essential (Berk, 2002; Fromberg, 2002; Frost et al., 2001; Holmes & Geiger, 2002; McCune & Zanes, 2001; Murata & Maeda, 2002; Santrock, 2003).

Social and Emotional Development. As social organisms, humans have a basic need to belong to and feel part of a group and to learn how to live and work in groups with

different compositions and for different purposes. Play serves several functions in satisfying these needs and developing these social and emotional life skills. For example, children of all ages need to be socialized as contributing members of their respective cultures. Numerous studies (Creasey, Jarvis, & Berk, 1998; Erikson, 1963; Goleman, 1995; Piaget, 1962; Rubin & Howe, 1986; Rubin, Maioni, & Hormung, 1976; Rubin, Watson, & Jambor, 1978; Sutton-Smith, 1997; Vygotsky, 1978) indicate that play with others gives children the opportunity to match their behavior with others and to take into account viewpoints that differ from their own. Thus, play provides the rich experience children need to learn social skills; become sensitive to others' needs and values; handle exclusion and dominance; manage their emotions; learn self-control; and share power, space, and ideas with others. At all levels of development, play enables children to feel comfortable and in control of their feelings by: 1) allowing the expression of unacceptable feelings in acceptable ways and 2) providing the opportunity to work through conflicting feelings.

Cognitive Development. Evidence also suggests a strong relationship between play and cognitive development. Studies indicate a positive relationship between play and student learning (Kumar & Harizuka, 1998; Lieberman, 1977). They identify improvements to attention, planning skills, and attitudes (McCune & Zanes, 2001; Smilansky & Shefatya, 1990; Sylva, Bruner, & Genova, 1976); creativity and divergent thinking (Dansky, 1980; Holmes & Geiger, 2002; Pepler, 1982; Sutton-Smith, 1997); perspective-taking (Burns & Brainerd, 1979); memory (Jensen, 1999, 2000; Saltz, Dixon, & Johnson, 1977); and language development (Clawson, 2002; Creasey, Jarvis, & Berk, 1998; Gardner, 1993; Howes, Droege, & Matheson, 1994).

* ACEI believes that the forms and functions of children's play must be considered in the context of our knowledge about age-related play behaviors. Knowledge about how children play at different ages should guide the practice of all adults who work with children.

While some consider play to be trivial and simple, and even a waste of time, "play is not wasted time but rather time spent building new knowledge from previous experience" (Bruner, 1972, cited in Harris, 1986, p. 263; Piaget, 1962). Information about typical age-related play behaviors at different ages provides a useful framework for understanding different forms of children's play and for providing environments that will facilitate those forms.

Nursery educators long have recognized the centrality of play to children's development and have provided opportunities for both structured and spontaneous play. Both theory and research supports such a relationship. Play is not only children's unique way of learning about their world, but also their way of learning about themselves and how they fit into their world, building on familiar knowledge and deepening their understanding through the recurring cycle of learning that is essential to what all children can understand and do (Erikson, 1963; Fromberg, 1998, 2002; Frost et al., 2001; Johnson et al., 1999; Monighan-Nourot & Van Hoorn, 1991; Piaget, 1962).

Infants and toddlers engage in activities that stimulate their senses and develop motor skills. They actively explore objects and their own capabilities through simple non goal-oriented and repetitious play. While infants play alone or with playthings, toddlers play beside other children, although not with them. They are sometimes within speaking distance of others but make little or no effort to communicate. Two children playing with similar toys may pursue unrelated activities. They concentrate on their own needs, reflecting egocentric behavior, and have no concept of rules (Parten, 1932; Piaget, 1962). Such play contributes to infants' and toddlers' growing ability to pay attention and to the development of physical skills, social competence, and intellectual growth (McCune & Zanes, 2001).

Young preschoolers play with other children, talk about common activities, and borrow and loan toys. They have no explicit goals, nor do they make an effort to establish rules (Parten, 1932; Piaget, 1962). Older preschoolers can play together and help each other in an activity that produces some material or product or pursues some goal. Preschool children like to build and create with objects, take on roles, and use props to replace an original object. They playfully re-enact events and change details to match personal needs and desires. Although they may imitate codified rules, their concepts of rules are individual and they make no attempt to win. Through play, preschoolers develop and refine motor skills, experience the joy of mastery, and develop and use basic academic skills such as counting, reading, and writing.

In the primary grades, children play formal and informal games with their peers (e.g., hopscotch; jump rope; board, card, and computer games). This kind of play enhances their coordination and physical prowess, refines their social skills, and builds concepts such as cooperation and competition, and enables them to demonstrate to themselves and to others their skills, talents, and abilities (Eifermann, 1971; Goleman, 1995; Kumar & Harizuka, 1998; McCune & Zanes, 2001). They like to explore and to create their own games. Through riddles, number games, and secret codes and messages, children practice and demonstrate their growing understanding of word meanings, letter meanings, and numbers.

In later childhood and early adolescence, children's play is more organized and structured as their passion for orderly thinking manifests itself through games with rules and in organized sports. Winning becomes important as they begin to internalize that winning means following the rules. This is the age when team sports become important. As children grow in social awareness, their focus moves from the family and school to the peer group. Now they can channel their energies into specialized clubs, youth groups, volunteer activities, and team sports. Through role taking and play in such organizations, they better understand how they will fit into the significance and structure of their social, political, and economic systems (Hughes, 1999; Manning, 2002).

* ACEI believes that play is a powerful, natural behavior contributing to children's learning and development and that no program of adult instruction can substitute for children's own observations, activities, and direct knowledge.

A major way children take ownership of new information is by playing with it. Learning requires an interactive balance of gaining the facts and skills required by the culture and making information one's own. This interactive cycle helps children understand their world in an intrinsically motivating fashion (Fromberg, 2002; McCune & Zanes, 2001; Wolery & McWilliams, 1998).

Active play fosters personal meaning. When children perceive events as personally relevant, their neural connections proliferate and situations, ideas, and skills become part of their long-term memory. Meaningless concepts, such as isolated facts, are irrelevant and typically will not become part of long-term memory (Fromberg, 2002).

Moreover, play and play contexts support intrinsic motivation that is driven by positive emotions (Jensen, 1999). Positive emotions, such as curiosity, generally improve motivation and facilitate learning and performance by focusing a learner's attention on the task; negative emotions, such as anxiety, panic, threats, and stress, generally detract from motivation (Santrock, 2003). Curiosity, flexible and insightful thinking, and creativity are major indicators of the learner's intrinsic motivation to learn, which is in large part a function of meeting basic needs to be competent and to exercise personal control. Because play is intrinsically motivating, learners perceive it to be interesting, personally relevant, meaningful, and appropriate in terms of their abilities and their expectations of success (Johnson et al., 1999; Santrock, 2003).

Play-based learning activities provide multiple ways for children to learn a variety of different skills and concepts. They allow children the opportunities to learn relevant skills and feel competent about their ability to learn. When children are concerned about their competence or adequacy, they cannot make sense of their learning because emotions drive attention, create meaning, and forge their own memory pathways (Goleman, 1995). Children are more likely to feel successful when they can experience active, meaningful learning; use complex, challenging, and varied materials; learn in a safe, nonthreatening environment; and receive accurate and timely feedback (Fromberg, 1998, 2002; Isenberg & Jalongo, 2000; Jensen, 1999).

In sum, ACEI believes that children will "master their experiences through continual play, which is actually the most intensive and fruitful learning in their whole life cycle" (Frank, 1968, p. 435). Given the appropriate materials, learning environment, feedback, and challenge, teachers can capitalize on the power of play by addressing the following guiding principles and practices.

GUIDING PRINCIPLES AND PRACTICES

* We must provide appropriate play activities and experiences for all children.

Children's play depends largely upon the play materials, equipment, and role models available to them. Early exposure to appropriate play activities and materials is important and provides a sound basis for development (Fromberg, 2002; Frost et al., 2001; Hughes, 1999, in press; Isenberg & Jalongo, 2000; Johnson et al., 1999; Moyer, 1995).

Children need early exposure to both visual and auditory stimuli (Murata & Maeda, 2002). Young children are interested in colors, sizes, shapes, and sounds and enjoy working with table toys that encourage matching, ordering, and comparing. Play with such equipment stimulates vocabulary and concept building. Young children play with these materials by grouping them according to size, color, form, and texture. They can recognize things that do not belong to a group. Older children group by function (Frost et al., 2001; Johnson et al., 1999; Moyer, 1995).

Clay, sand, and mud give children of all ages opportunities to explore changes in form as they mold the substance (Jenson & Bullard, 2002; Langstaff & Sproul, 1979). Adding water enables the younger child to observe changes in the substance and the older child to build and form more complex shapes. Ample opportunity to explore and experiment with these substances should be provided.

Children are interested in materials that help them understand spatial concepts, such as puzzles and blocks. In addition, cups, pans, and cans can be filled with sand or water to help develop a sense of volume. Large blocks are first used to lay out flat roads or outline buildings. Later, children fill in the spaces and, by primary age, build to great heights. Blocks with special pieces, such as tunnels or steeples, allow imagination to flourish. Sturdy transportation vehicles add realism and encourage dramatic play that develops concepts of distance and space.

Imitative play is important to children's development. Children need opportunities to act and dress up like people they know. Equipment that encourages such play includes housekeeping furniture, dolls, dress-up clothes, utensils, blocks, vehicles, carpentry equipment, and musical instruments. Freedom to use various paints, clay, water, and other art materials encourages imitation as well as conversation and creative expression of ideas and understandings (Fromberg, 2002; Johnson et al., 1999; Monighan-Nourot & Van Hoorn, 1991; Moyer, 1995).

To build a broader basis for children's expression through play, educators should provide access to information and ideas that go beyond children's immediate environment. A good collection of children's books is essential. Field trips and media also provide play experiences that are unavailable in the immediate environment.

Primary age children need plenty of opportunity to move and to engage in recreational activities such as recess, classroom breaks, group games, and physical education. Brain research "confirms that physical activity--moving, stretching, walking--can actually enhance the learning process" (Jensen, 2000, p. 34). Group games also can provide opportunities to consolidate social and cognitive skills. On the playground or in the gym, games that require skill with balls, ropes, running, and jumping may be organized into relays or exercises. These recreational activities are a powerful way to influence learning (Jensen, 1999, 2000).

In later childhood and early adolescence, children enjoy developing their skills through

team and individual sports, games with increasingly more complex rules, and specialized club and youth activities. Such group endeavors provide them with an arena for refining their social, decision-making, and problem-solving skills. It is important to remember that adults serve crucial roles as coaches and providers of positive feedback (Hughes, 1999; McCune & Zanes, 2001).

* We must provide safe and inviting environments for all children.

All children need safe and inviting environments in which to play. Materials and equipment that are safe, durable, and take into consideration the age, ability, and cultural background of the children should be selected (Moyer, 1995; Murata & Maeda, 2002). Culturally reflective materials help children understand the social and ethnic values of their communities. Stereotypes must be avoided in all materials, including books.

Equipment and toys that can be adapted to different age and ability levels will be more useful, even in a classroom for one age, since developmental differences across one year can be great. Sturdy school equipment may cost more, but the life of the equipment and the increased satisfaction and safety make it worth the added initial cost.

Equipment that encourages use of both large and small muscles, as well as independent activity and social interaction, is of greatest benefit. Materials also should stimulate imagination and creative ideas, and reflect the backgrounds of the children.

* We must provide appropriate, planned outdoor play environments.

Outdoor play provides many benefits for children (Frost, Bowers, & Wortham, 1990; Frost et al., 2001; Henninger, 1994; McGinnis, 2002; Rivkin, 1995). Large muscle play, often impossible or impractical indoors, provides children with opportunities to expand their range of activity. To encourage curiosity and creativity, playground environments should allow children to explore, build, climb, hide, and move about. While some commercial equipment may be useful, materials such as tires, lumber, telephone poles, railroad ties, cable spools, scrap pipe, barrels, and boxes can be used to build suitable play structures. Equipment that allows increasingly complex use is most functional. Children should be able to build temporary structures on the playground. Older children should have adequate tools and fewer restrictions for building forts and models. They should have ample opportunities for climbing on ropes, ladders, nets, and trees. Adaptation may be necessary for children with special needs, such as physical disabilities or attention disorders (Flynn & Kieff, 2002).

Playgrounds should include a sloping area, large sand areas, and areas for digging. While climate may restrict some outdoor activity, playgrounds should be planned for utilization throughout the year. Water play should be encouraged in warm weather and snow activities in cold weather. If space permits, gardening and animals add an important dimension to children's outdoor play activity (Rivkin, 1995).

When possible, location of play areas near classrooms permits props and play to move

freely from one area to another. Outdoor play space also should include cubbyholes or spaces that can serve as role-game features (e.g., a house, a boat, a plane).

Outdoor play is significantly different from indoor play. The outdoor environment permits noise, movement, and greater freedom with raw materials, such as water, sand, dirt, and construction materials. When challenging playground equipment is available, outdoor play offers children the opportunity to increase physical activity, and thus develop muscle strength and coordination. Outdoor play time and school recess should be provided in all programs for children of all ages and abilities (Frost et al., 2001; Griffin & Rinn, 1998; Jensen, 2000; McGinnis, 2002; Rivkin, 1995).

* We must provide for carefully planned curricula for all populations of children.

Through careful planning, all children--from infants through adolescents--can learn concepts by way of play activities (Frost et al., 2001; Isenberg & Jalongo, 2000; Jensen, 2000; Johnson et al., 1999). School programs should recognize this truth and build upon the interrelatedness of all aspects of a child's development. To do so, teachers and administrators must ensure a balance among the cognitive, physical, and affective areas of the curriculum. Play has a central role in achieving this balance. Professionals must help parents understand that a curriculum that incorporates play strengthens and supports children's intellectual development.

Many play activities enable children to gain perspectives on the world and to practice culturally sensitive skills that will allow adequate functioning in the global world in which they live. Notable curriculum planning provides for this sensitivity and skill development through play.

* We must assume responsible parent/teacher roles.

Adults have a major responsibility in fostering children's play (Berger, 1999; Murata & Maeda, 2002; Swick, in press). Parents and teachers provide stimulation, attitudes, and insight that support the development of each child's potential. With the youngest of children, the adult is totally responsible for providing materials and playing with the child. As a child's attention span increases and interest in the world emerges, provision of materials and experiences takes on new meaning. Teachers must be aware of each child's needs and know when and how to match materials and activities with the child's interests. They need to know when to offer new materials, a prop, or an idea to move the play toward a more challenging and satisfying end. Teachers also must be observant of children in spontaneous play settings, and intervene at critical times (Isenberg & Jalongo, 2000; Johnson et al., 1999). In some settings, children will need adults who serve as role models in play situations. Teachers also must know how to play with children in those settings, yet maintain the teacher role of leading and directing. At times, a teacher must intervene to check and control a child's impulse, or to help a child verbalize a feeling.

A CALL TO ACTION

To assume strong advocacy roles, it is imperative that all educators, parents, and policymakers who work with or for children from infancy through adolescence fully understand play and its diverse forms. Equally important is the ability to use that knowledge to achieve what is best for children in all settings. This paper has argued strongly for legitimizing play as an appropriate activity in schools and other educational settings. Therefore, educators, families, and policymakers can and should:

* Optimize brain functions by providing rich experiences that include a variety of learning materials, feedback, appropriate levels of challenge, and enough time to process information

* Rethink and transform the nature of relationships and communication between adults and children

* Make play a fundamental part of every school curriculum

* Recognize, respect, and accept play in all its variations as worthwhile and valuable

* Balance work and play to ensure that children reap the benefits of intrinsic motivation and experience sheer joy in their endeavors

* Balance encouragement and opportunity to fulfill children's natural tendency and need to play; children will find the means to play if the environment affords an opportunity to do so

* Create a climate of acceptance by respecting children's play choices, recognizing the cultural context in which play occurs, and providing many play options.

References

Association for Childhood Education International/Isenberg, J.,& Quisenberry, N. (1988). Play: A necessity for all children. A position paper. Olney, MD: Association for Childhood Education International.

Berger, E. (1999). Parents as partners in education: Families and schools working together (5th ed.). Upper Saddle River, NJ: Merrill/Prentice-Hall.

Berk, L. (2002). Infants, children, and adolescents (4th ed.). Boston: Allyn & Bacon.

Burns, S. M., & Brainerd, C.J. (1979). Effects of constructive and dramatic play on perspective taking in very young children. Developmental Psychology, 15, 512-521.

Christie, J. (2001). Play as a learning medium. In S. Reifel (Ed.), Theory in context and out (Vol. 3, pp. 358-365). Westport, CT: Ablex.

Clawson, M. (2002). Play of language: Minority children in an early childhood setting. In

J. L. Roopnarine (Ed.), Conceptual, social-cognitive, and contextual issues in the fields of play (Vol. 4, pp. 93-116). Westport, CT: Ablex.

Creasey, G. L., Jarvis, P. A., & Berk, L. (1998). Play and social competence. In O. N. Saracho & B. Spodek (Eds.), Multiple perspectives on play in early childhood education (pp. 116-143). Albany, NY: State University of New York Press.

Dansky, J. L. (1980). Make-believe: A mediator of the relationship between play and associative fluency. Child Development, 51, 576-579.

Eifermann, R. R. (1971). Social play in childhood. In R. E. Herron & B. Sutton-Smith (Eds.), Child's play. New York: Wiley.

Erikson, E. (1963). Childhood and society (2nd ed.). New York: Norton.

Flynn, L. L., & Kieff, J. (2002). Including everyone in outdoor play. Young Children, 57(3), 20-26.

Frank, L. K. (1968). Play is valid. Childhood Education, 44, 433-440.

Fromberg, D. P. (1998). Play issues in early childhood education. In C. Seefeldt (Ed.), The early childhood curriculum: A review of current research (2nd ed., pp. 190-212). Columbus, OH: Merrill.

Fromberg, D. P. (2002). Play and meaning in early childhood education. Boston: Allyn & Bacon.

Frost, J., Bowers, L., & Wortham, S. (1990). The state of American preschool playgrounds. Journal of Physical Education, Recreation, and Dance, 61(8), 18-23.

Frost, J., Wortham, S., & Reifel, S. (2001). Play and child development. Upper Saddle River, NJ: Merrill/Prentice-Hall.

Gardner, H. (1993). Frames of mind. The theory of multiple intelligences (10th anniversary ed.). New York: Basic Books.

Garvey, C. (1990). Play. Cambridge, MA: Harvard University Press.

Goleman, D. (1995). Emotional intelligence. New York: Bloomsburg.

Griffin, C., & Rinn, B. (1998). Enhancing outdoor play with an obstacle course. Young Children, 53(3), 18-23.

Harris, A. C. (1986). Child development. New York: West Publishing.

Henninger, M. L. (1994). Planning for outdoor play. Young Children, 49(4), 10-15.

Holmes, R., & Geiger, C. (2002). The relationship between creativity and cognitive abilities in preschoolers. In J. L. Roopnarine (Ed.), Conceptual, social-cognitive, and contextual issues in the fields of play (Vol. 4, pp. 127-148). Westport, CT: Ablex.

Howes, C., Droege, K., & Matheson, C. C. (1994). Play and communication processes within long- and short-term friendship dyads. Journal of Social and Personal Relationships, 11,401-410.

Hughes, F. (1999). Children, play, and development (3rd ed.). Boston: Allyn & Bacon.

Hughes, F. (in press). Sensitivity to the social and cultural contexts of the play of young children. In J. P. Isenberg & M. R. Jalongo (Eds.), Major trends and issues in early childhood education: Challenges, controversies, and insights (2nd ed.). New York: Teachers College Press.

Isenberg, J. P., & Jalongo, M. R. (2000). Creative expression and play in early childhood (3rd ed.). Upper Saddle River, NJ: Merrill/Prentice Hall.

Jensen, E. (1999). Teaching with the brain in mind. Alexandria, VA: Association for Supervision and Curriculum Development.

Jensen, E. (2000). Moving with the brain in mind. Educational Leadership, 58(3), 34-37.

Jenson, B. J., & Bullard, J. A. (2002). The mud center: Recapturing childhood. Young Children, 57(3), 16-19.

Johnson, J., Christie, J., & Yawkey, T. (1999). Play and early childhood development (2nd ed.). New York: Longman.

Kumar, S., & Harizuka, S. (1998). Cooperative learning-based approach and development of learning awareness and achievement in mathematics in elementary schools. Psychological Reports, 82, 587-591.

Langstaff, N., & Sproul, A. (1979). Exploring with clay. Olney, MD: Association for Childhood Education International.

Lieberman, J. N. (1977). Playfulness: Its relationship to imagination and creativity. New York: Academic Press.

Manning, M. L. (2002). Revisiting developmentally appropriate middle level schools. Childhood Education, 78, 225-227.

McCune, L., & Zanes, M. (2001). Learning, attention, and play. In S. Golbeck (Ed.), Psychological perspectives on early childhood education (pp. 92-106). Mahwah, NJ: Lawrence Erlbaum.

McGinnis, J. L. (2002). Enriching outdoor environments. Young Children, 57(3), 28.

Monighan-Nourot, P., & Van Hoorn, J. L. (1991). Symbolic play in preschool and primary settings. Young Children, 46, 40-50.

Moyer, J. (Ed.). (1995). Selecting educational equipment for school and home. Olney, MD: Association for Childhood Education International.

Murata, N., & Maeda, J. (2002). Structured play for preschoolers with developmental delays. Early Childhood Education Journal, 29(4), 237-240.

Parten, M. (1932). Social participation among preschool children. Journal of Abnormal and Social Psychology, 27, 242-269.

Pepler, D. J. (1982). Play and divergent thinking. In D. J. Pepler & H. Rubin (Eds.), Contributions to human development: Vol. 6. The play of children: Current theory and research (pp. 64-78). Basel, Switzerland: Karger.

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

Rivkin, M. S. (1995). The great outdoors: Restoring children's right to play outside. Washington, DC: National Association for the Education of Young Children.

Roopnarine, J. L, Lasker, J., Sacks, M., & Stores, M. (1998). The cultural context of children's play. In O. N. Saracho & B. Spodek (Eds.), Multiple perspectives on play in early childhood education (pp. 194-219). Albany, NY: State University of New York Press.

Roopnarine, J. L., Shin, M., Donovan, B., & Suppal, P. (2000). Sociocultural contexts of dramatic play; Implications for early education. In K. A. Roskos & J. F. Christie (Eds.), Play and literacy in early childhood (pp. 205-230). Mahwah, NJ: Lawrence Erlbaum.

Rubin, K. H., Fein, G., & Vanderberg, B. (1983). Play. In P. Mussen & E. M. Hetherington (Eds.), Handbook of child psychology: Vol. 4. Socialization, personality, and social development (pp. 693-774). New York: Wiley.

Rubin, K. H., & Howe, N. (1986). Social play and perspective-taking. In G. Fein & M. Rivkin (Eds.), The young child at play: Reviews of research (Vol. 4, pp. 113-125). Washington, DC: National Association for the Education of Young Children.

Rubin, K. H., Maioni, T. L., & Hormung, M. (1976). Free-play behaviors in middle and lower class preschoolers: Parten and Piaget revisited. Child Development, 47, 414-419.

Rubin, K. H., Watson, K. S., & Jambor, T. W. (1978). Free-play behavior in preschool and kindergarten children. Child Development, 48, 534-536.

Saltz, E., Dixon, D., & Johnson, J. (1977). Training disadvantaged preschoolers on various fantasy activities: Effects on cognitive functioning and impulse control. Child Development, 48, 367-380.

Santrock, J. (2003). Children (7th ed.). Boston: McGraw-Hill.

Shore, R. (1997). Rethinking the brain: New insights into early development. New York: Families and Work Institute.

Smilansky, S., & Shefatya, L. (1990). Facilitating play: A medium for promoting cognitive, socio-emotional and academic development in young children. Gaithersburg, MD: Psychosocial and Educational Publications:

Sutteby, J., & Frost, J. (2002). Making playgrounds fit for children and children fit for playgrounds. Young Children, 57(3), 36-42.

Sutton-Smith, B. (1997). The ambiguity of play. Cambridge, MA: Harvard University Press.

Swick, K. (in press). Working with families of young children. In J. P. Isenberg & M. R. Jalongo (Eds.), Major trends and issues in early childhood education. Challenges, controversies, and insights (3rd ed.). New York: Teachers College Press.

Sylva, K., Bruner, J. S., & Genova, P. (1976). The role of play in the problem-solving of children 3-5 years old. In J. Bruner, A. Jolly, & K. Sylva (Eds.), Play--Its role in development and evolution. New York: Basic Books.

Vygotsky, L. (1978). Mind in society. The development of higher psychological processes. Cambridge, MA: Harvard University Press.

Wolery, M., & McWilliams, R. (1998). Classroom-based practices for preschoolers with disabilities. Interventions in Schools and Clinics, 34, 95-102.