

## The Cognitive Child vs. the Whole Child: Lessons from 40 Years of Head Start

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Children's play has come under renewed attack. Some have argued that in the current policy environment, play has become a "four-letter word" (Hirsh-Pasek & Golinkoff, 2003, p. 8). Many preschools and elementary schools have reduced or even eliminated play from their schedules (Bodrova & Leong, 2003; Brandon, 2002; Johnson, 1998; Murline, 2000; Vail, 2003). In some locations, dress-up areas and blocks are being removed from preschool classrooms and recess periods in elementary schools are being shortened or omitted (Steinhauer, 2005; Vail, 2003). In Atlanta, an elementary school was built -without including a playground (Axtman, 2004). In response to a bill before the Connecticut legislature, opponents argued that mandating a daily 20-minute recess to help prevent obesity would "cut into needed time for academics" (Hladky, 2005, p. A4). In sum, Bodrova and Leong (2003) described the current situation as "the disappearance of play from early childhood classrooms" (p. 12).

Play is being replaced by lessons focused on cognitive development, particularly literacy and reading, to match the content of standardized testing (Brandon, 2002; Fromberg, 1990; Johnson, 1998; Steinhauer, 2005; Vail, 2003). One expert stated: "We are not allowing normal, creative, interactive play. We are wanting kids to sit down and write their names at 3 and do rote tasks that are extremely boring at a young age." (Adele Brodtkin, quoted in Steinhauer, 2005, p. 4). Brodtkin argued that these inappropriate expectations are likely responsible for the recent trend of young children being expelled from preschool. The lessons addressing cognitive development often involve "children sitting at tables engaged in whole-class activities" (Whitehurst, 2001, p. 16), instead of

activities such as making Play-Doh gifts, with the teacher engaging the children in conversations about their work (contrasting example of “child-centered approach” provided by Whitehurst, 2001, p. 9). Alphabet drills and “quiet desk work” are also increasingly used (Steinhauer, 2005). Some teachers have argued that “The instruction techniques that early childhood education experts say are ideal for learning frequently are derided as ‘just play’ by administrators and policymakers pushing what they consider to be more academically oriented curricula” (Brandon, 2002, p. 1).

The policy change away from play and toward cognitive development resulted partially from findings showing the poor academic achievement of many American children, in comparison to students from other nations (Elkind, 2001). The change also reflects an attempt to eliminate the well-documented achievement gap between children from low socioeconomic backgrounds and minority families and those from higher income, non-minority backgrounds (Raver & Zigler, 2004).

The George W. Bush administration has done much to fuel the current attack on play. The president has spoken often about reforming education, including preschool education, by focusing on cognitive development, literacy, and “numeracy.” Mrs. Bush, a former librarian, hosted a White House Summit on Early Childhood Cognitive Development—not child development nor even the whole of cognitive development. The focus was on literacy, one cognitive skill out of many related to school success. In the 2001 reauthorization, The Elementary and Secondary Education Act (Pub. L. No. 89-10), first passed in 1965, was renamed “The No Child Left Behind Act” (Pub. L. No. 107-110). The new law added the President’s initiative that all children be able to read by

third grade (Bush, 2003). The reading mandate and accompanying testing resulted in further emphasis on literacy training in the early elementary grades.

Parents of young children are also increasingly demanding preschool content that they view as “academic”, rather than play (Vail, 2003). For example, one preschool director commented about parents: "They agree in theory that play is important, but they say, 'Could you just throw in the worksheets, so I can see what they are learning?'" (Vail, 2003). Another noted: “All parents want now are worksheets, and they want them in their babies’ hands as early as possible” (Bodrova & Leong, 2003, p. 3). A recent article in the National Association for the Education of Young Children’s (NAEYC) journal provided guidance for teachers who need to defend play-based preschool environments from attacks from individuals, including parents, who question their value (Stegelin, 2005). As parents are the “customers” of early childhood programs, it is likely that programs will eventually succumb to parental pressure and change curricula to reflect parental preferences, even if these are ill-advised, such as devaluing play.

The focus on cognition and literacy also found its way into policies and proposals for Head Start. The Bush administration initially wanted to change Head Start from a comprehensive intervention to a literacy program (Raver & Zigler, 2004; Steinberg, 2002; Strauss, 2003; Zigler, 2003). However, changing the law governing Head Start would require considerable time. To move the program in the direction it wanted to go more quickly, the administration imposed new protocols on how the program should be run (decisions that are within its power). For example, a new National Reporting System (NRS) was instituted that requires standardized testing of Head Start preschoolers twice a year to assess their cognitive development (language, pre-literacy, and pre-math skills).

The results of the testing will be used to determine whether centers are performing adequately; one fear is that funding decisions will be based on children's test scores. Another fear is that teachers will "teach to the test", focusing only on the narrow range of skills assessed by the NRS. Recent data support the validity of this latter fear: the U.S. Government Accountability Office (GAO, 2005) found that at least 18% of Head Start programs have changed their instruction to correspond to the content of the NRS standardized testing. The GAO stated that this could prove detrimental to children if it results in teachers omitting other equally important skills from their curricula and called for studies to examine the impact of the changes.

In addition, as part of his early childhood initiative "Good Start, Grow Smart", President Bush announced a national program to train all Head Start teachers on strategies to promote literacy (U. S. Department of Health and Human Services [USDHHS], 2002). In response, DHHS developed the Strategic Teacher Education Program (STEP), which included training on a literacy curriculum developed by the Center for Improving the Readiness of Children for Learning and Education (CIRCLE). Training was held in June 2002 for 3000 Head Start teachers and a follow-up training was conducted in November 2002 (Advisory Committee on Head Start Research & Evaluation, 2003). Although the training was supposed to be voluntary, Head Start personnel reported being pressured to participate (Strauss, 2002). Some argued that the training essentially establishes a national curriculum, thereby violating the "local control" tradition which was designed to ensure that Head Start is responsive to the needs identified in each local community.

During the last session, in 2003, Congress began work to reauthorize Head Start. The reauthorization process typically adjusts program details to keep budgets and services current. This time, however, Congress sought to redesign Head Start. A version of a bill later passed in the House (H.R. 2210) removed language in the law relating to what has always been one focus of Head Start, social and emotional development. Most occurrences of these words were replaced with the word “literacy.” This version also stopped assessments of children’s social and emotional functioning in ongoing national evaluations of Head Start (Schumacher, Greenberg, & Mezey, 2003). Instead, Representatives wanted assessments of whether children meet specified goals on pre-literacy and pre-math tests. The bill also proposed block granting Head Start to as many as eight states (Zigler & Styfco, 2004). For 40 years, Head Start has been the only federal program with a funding stream that goes directly from the federal government to local grantees. Local grantees receive the federal funds, not the state, thereby avoiding state control of Head Start. The proposed legislation changed this funding pattern to allow up to eight states to receive block grants for Head Start, rather than providing the federal funding directly to local grantees. The assessment and block granting goals prevailed in the bill that eventually passed the House (by one vote), although the obliteration of language pertaining to social and emotional competence and evaluations did not.

The Senate also introduced a Head Start bill, the Head Start Improvements for School Readiness Act (S. 1940). This bill did not call for drastic changes like those in the House bill (Schumacher & Greenberg 2004). However, the Senate bill included a detailed list of items that all Head Start children must learn. Congress was unable to pass

a bill reauthorizing Head Start during the 108<sup>th</sup> session, so efforts have begun anew in the 109<sup>th</sup> Congress. Based on the experience of the 108<sup>th</sup> session, it is likely in the upcoming reauthorization that Head Start's defining whole child approach (encompassing physical health and social and emotional development, as well as cognitive development) will again be pitted against an exclusive focus on cognitive development (literacy and math). The resolution of this controversy will influence the use of play (which some inaccurately view as relevant only to social and emotional development) as a learning mechanism in Head Start.

Many experts have criticized the proposed changes to Head Start policy that overemphasize cognitive development and standardized testing, arguing that this is inappropriate (Raver & Zigler, 2004; Steinberg, 2002; Stipek, 2004; Strauss, 2003). David Elkind (2001), in a piece reminiscent of Piaget's constructivist views, entitled "Young Einsteins: Much Too Early," argued that young children learn best through direct interaction with their environment. Before a certain age, they simply are not capable of the level of reasoning necessary for formal instruction in reading and mathematics. Elkind believed this fact of development explained why the pioneers of early childhood education developed hands-on models of learning. Elkind's article was accompanied by a counterpoint by Whitehurst (2001) titled, "Young Einsteins: Much Too Late." Whitehurst, who was subsequently appointed director of the Institute of Education Sciences at the U. S. Department of Education by President Bush, claimed that "content-centered" approaches (i.e., academically oriented) are more likely to facilitate children's literacy learning. Raver and Zigler (2004) disagreed, criticizing the emphasis on cognitive development and standardized testing as being far too narrow and unsupported

by scientific evidence on how children learn. They advocated continued attention to, and assessment of, children's social and emotional development, viewing this domain as synergistic with intellectual development. With regard to the Elkind /Whitehurst debate, the authors of this chapter agree with Stipek (2004) that quality preschool education requires pursuing both hands-on, play based learning and direct instruction of academic skills simultaneously. Kagan and Lowenstein (2004), in a comprehensive review of the literature on school readiness and play, reached the same conclusion. Without taking sides on whether emotion or cognition should be primary, more than 300 scholars signed a letter protesting the plan to carry out standardized testing in Head Start, questioning the validity of the proposed assessments (Raver & Zigler, 2004; cf. Meisels & Atkins-Burnett, 2004.). The concerns of these scholars were borne out by the recent GAO study (2005) which severely criticized the NRS. The GAO found that the reliability and validity of the NRS have not been established and argued therefore that "results from the first year of the NRS are of limited value for accountability purposes". Critics have also questioned the wisdom of Congress "micro-managing" Head Start, which has always been a program run at the local level and tailored to meet the needs of children and families in each particular locality.

### **An Historical Perspective**

Similar repudiation of play and overemphasis on cognitive skills has occurred since the 1950s. We have presented this history in detail elsewhere (Zigler & Bishop-Josef, 2004), so will provide only a brief discussion here.

American attitudes toward education were seriously affected by the Russians' launching of Sputnik in 1957 (Zigler, 1984). The Russians' beating the United States into

space was traumatic for Americans and many perceived the Russians' feat as evidence that the more rigorous Soviet education system was more effective than ours. A return to the "3 Rs" was touted as the way to build American superiority in the global arena. This emphasis on cognitive development had nothing to do with new knowledge about child development or education. Rather, it was a result of overreaction to an historical event. Admiral Hyman G. Rickover, a key spokesperson, made the provocative assertion that young children in Russia were being trained in mathematics while American children were busy finger painting. Thus, the battle line was clearly drawn between "academic" pursuits and play.

By the 1960s, the emphasis on cognition was accompanied by an "environmental mystique" (Zigler, 1970). This view held that minimal environmental interventions could yield dramatic increases in children's cognitive functioning. The environmental formulation was propagated through the popular press, and bookstores filled with titles such as "Give Your Child A Superior Mind." (Engelmann & Engelmann, 1966). Another guiding principle of this environmental approach was that intervention programs are most effective if they are administered during a critical period—the earlier the better (Bloom, 1964). This questionable argument fueled the infatuation with cognitive development and compelled parents and educators to feverishly teach children as much as possible, as early as possible. Play, previously considered the work of children, became suspect. Instead, drill and exposure to educational gadgetry were seen as the activities worthy of children's time and attention.

Even Head Start fell victim to the excessive focus on cognitive skills and naïve environmentalism (Zigler, 1970). From its inception in 1965, Head Start has been a



comprehensive, whole child program, with components to support physical and mental health, nutrition, social and emotional development, early education and cognitive development, social services for children's families, and community and parental involvement (Zigler & Styfco, 2001). The founders of Head Start believed that preparing children who live in poverty for school requires meeting all of their needs, not just focusing on their academic skills. As will be discussed later, play has a prominent place in Head Start curricula. However, when researchers began to evaluate early intervention programs, they were drawn to assessments of cognitive functioning, particularly IQ test scores (Zigler & Trickett, 1978). The researchers ignored the rich, comprehensive nature of the Head Start intervention and focused on one narrow outcome. Part of the reason was the zeitgeist of the time.

Evaluators also became enthralled with the results: Relatively minor interventions—even six to eight weeks of Head Start—seemed to produce large increases in children's IQs. These gains were soon found to be caused by improvements in motivation rather than cognitive functioning (Zigler & Butterfield, 1968). Yet findings such as these did not (and still do not) deter the use of IQ as a primary measure of Head Start's effectiveness (Raver & Zigler, 1991; Zigler & Trickett, 1978). This practice is understandable in that measures of IQ were readily available, easy to administer and score, and deemed reliable and valid, whereas measures of socio-emotional constructs were and still are less well developed. Also, IQ was a construct that policymakers and the public could easily understand, and it was known to be related to many other behaviors, particularly school performance.

Soon, researchers lost faith in IQ as a measure of Head Start's success (Raver & Zigler, 1991), when the 1969 Westinghouse Report found that Head Start children failed to sustain their IQ advantage once they moved to elementary school. This report nearly proved fatal to Head Start, since some concluded that this failure to sustain IQ gains meant that Head Start was ineffective. However investigators began to understand that Head Start children's rapid IQ gains could be explained by motivational factors (e.g., less fear of the test and tester), rather than by true improvement in cognitive ability (Zigler & Trickett, 1978). Experts also pointed out the numerous difficulties and biases in using IQ to evaluate comprehensive intervention programs (e.g., Zigler & Trickett, 1978).

In the early 1970s, the Office of Child Development (OCD; now the Administration on Children, Youth, and Families, ACYF) articulated every day social competence as the overriding goal of Head Start and encouraged broader evaluations to measure more accurately the program's effectiveness (Raver & Zigler, 1991). However, no accepted definition was available of social competence, much less established measures. Therefore, OCD funded the Measures Project in 1977, a multi-site study to develop a battery of measures of the factors making up social competence, including but not limited to appropriate cognitive measures. Zigler and Trickett (1978) also suggested approaches to assessing social competence, arguing that measures of motivational and emotional variables, physical health and well-being, achievement, and formal cognitive ability must all be included.

Thus, by the late 1970s to early 1980s, the naïve cognitive-environmental view had largely been rejected, and a renewed appreciation of the whole child and the value of play was becoming evident. Books by David Elkind, *The Hurried Child* (1981) and

*Miseducation: Preschoolers at Risk* (1987), argued that children were being pushed too hard, too early, especially with respect to intellectual tasks. Children were being rushed through childhood, Elkind stated, with little time allowed for being a child and experiencing age-appropriate activities, including play. He saw the consequences of this pressure as severe, ranging from stress to behavior problems and even to suicide.

Elkind's books were very popular and were important in moving both professionals and the general public toward a view that social and emotional development is a valuable part of child development and strongly affects intellectual growth. There was also a renewed appreciation for the value of play. The "risks" associated with academic activities in preschool can be overstated, however. The pendulum had certainly swung too far when many Head Start teachers refused to even put up letters of the alphabet on the walls of Head Start classrooms. Like Stipek (2004), the authors of this chapter are seeking a middle ground position in which all the current views are mined for value and incorporated into a combined approach to children's preschool education.

During the 1980s, however, the pendulum had already started to swing back in the opposite direction. In 1982, the Reagan administration cut most of the funding for the Measures Project, supporting only the site that was developing measures of cognitive functioning. During the Reagan and George H. W. Bush years, the Head Start administration was again focusing almost exclusively on cognitive measures to assess the program's effectiveness (Raver & Zigler, 1991). Further, the cognitive measurement system that emanated from the Measures Project (Head Start Measures Battery) was accompanied by a curriculum, which led to concerns about "teaching to the test" and worries that play would be devalued.

The tide began to shift yet again during the next decade (Zigler, 1994). For example, in 1995, the National Educational Goals Panel, a semi-governmental group composed of federal and state policymakers, officially defined school readiness as consisting of five dimensions: (a) physical well-being and motor development, (b) social and emotional development, (c) approaches to learning, (d) language development, and (e) cognition and general knowledge (Kagan, Moore, & Bredekamp, 1995). This definition emphasized that these factors are inextricably linked and must be considered in their totality as indicators of school readiness. The 1998 reauthorization of Head Start explicitly stated that the goal of the program is “school readiness,” similarly defining readiness in terms of physical and mental health, social and emotional development, as well as parental involvement and pre-academic skills (Raver & Zigler, 2004). Finally, a sensible middle ground seemed to have been reached, a consensus that learning is fostered by more than cognitive training. However, the tide turned again shortly thereafter, culminating in the recent attack on play and the prescribed focus on academics described early in this chapter. Once again, the emphasis on cognition was accompanied by a simplistic environmentalism, as when mothers were given Mozart CDs in the hospital, with the prescription to play them for their infants to increase their intelligence (Jones & Zigler, 2002).

This brief historical narrative demonstrates that the current disenchantment with play is a step backward in our nation’s history. It is also a clear illustration of the swinging pendulum that is often evident in American education, where prevailing political winds allow one extreme view to quickly rise to ascendancy, only to be replaced by another view. Clearly, what is needed is a balanced approach that is based on

knowledge derived from the best child development research and sound educational practice.

### **The Whole Child Approach**

Proponents of the whole child approach do not deny the importance of cognitive skills, including literacy. President George W. Bush's initiative to ensure that every American child will be a proficient reader is laudable. However, reading is only one aspect of cognitive development, and cognitive development is only one aspect of human development. Cognitive skills are very important, but they are so intertwined with the physical, social, and emotional systems that it is short-sighted, if not futile, to dwell on the intellect and exclude its partners.

Consider what goes into literacy. It involves mastery of the alphabet, phonemes, and other basic word skills, for certain. But, a prerequisite to achieving literacy is good physical health. The child who is frequently absent from school because of illness or who has vision or hearing problems will have difficulty learning to read, as will children who suffer emotional problems such as depression or post-traumatic stress disorder. By the same token, a child who begins kindergarten knowing letters and sounds may be cognitively prepared, but if he or she does not understand how to listen, share, take turns, and get along with teachers and classmates, this lack of socialization will hinder further learning (Raver, 2002). To succeed in reading and at school, a child must receive appropriate education, of course, but he or she must also be physically and mentally healthy, have reasonable social skills, and have curiosity, confidence, and motivation to succeed. This broader view was endorsed in the authoritative book, *Neurons to Neighborhoods* (Shonkoff & Phillips, 2000) in which the finest child development

thinkers in the nation pointed out the importance of emotional and motivational factors in human development and learning.

The position that social and emotional factors are essential for cognitive development, including literacy, is not new. The founders of Head Start recognized the importance of these factors 40 years ago, when they designed the program in 1965. Since that time, a body of research has demonstrated the importance of emotional and social factors for school readiness (Raver, 2002; Shonkoff & Phillips, 2000). For example, emotional self-regulation has been found to be an especially important component of learning (Raver & Zigler, 1991). Children must be able to focus their attention on the task at hand, filtering out distractions. They must be able to control their emotions when in the classroom, both during individual and group activities. They must be able to organize their behavior and listen to the teacher. All of these are essentially non-cognitive factors that foster learning. Further, this type of emotional self-regulation can be developed through play when children take turns, regulate one another's behavior, and learn to cooperate (Bredekamp, 2004).

Play also provides opportunities for acquiring many cognitive skills. Although play is often thought of in terms of "free play", dictated by the child, play can also be educationally focused, directed by the teacher or parent, to reach specific educational goals. Through both forms of play, children can learn vocabulary, language skills, concepts, problem solving, perspective taking, representational skills, memory, and creativity (e.g., Davidson, 1998; Newman, 1990; Russ, Robins, & Christiano, 1999; Singer, Singer, Plaskon, & Schweder, 2003). Play has also been found to contribute to early literacy development (Christie, 1998; Owocki, 1999).

In addition, play has been shown to contribute to social development, including social skills such as turn taking, collaboration and following rules, empathy, self-regulation, self-confidence, impulse control, and motivation (e.g., Corsaro, 1988; Klugman & Smilansky, 1990; Kraft & Berk, 1998). These factors impact cognitive development and are just as important in learning to read as the ability to recognize letters or sounds.

### **Theory Regarding Children's Play and Development**

The current attack on play contradicts sound developmental theory. The two preeminent theorists of cognitive development of the 20th century, Jean Piaget and Lev Vygotsky, both stressed the essential role of play for cognitive development.

Jean Piaget (1896–1980) was a Swiss psychologist who studied cognitive development for more than 50 years, beginning in the 1920s (Zigler & Finn-Stevenson, 1993). Piaget developed his theory of cognitive development after conducting extensive observations of his own children, including their play. He argued that children actively acquire knowledge through interacting with the physical environment. In particular, cognitive development occurs through the complementary processes of assimilation and accommodation. In assimilation, the child interprets the environment in terms of his or her present way of thinking. For example, a child using a box as if it were a car is assimilating the box to his or her mental concept of a car. Accommodation, in contrast, consists of the child changing and expanding on what he or she already knows. When the child encounters something in the environment that he or she does not understand, the child has to expand, through accommodation, his or her view of the world and thereby restore equilibrium. Play, according to Piaget (1932), provides the child with a multitude

of opportunities to interact with materials in the environment and construct his or her own knowledge about the world. Thus, play is one of the primary contexts in which cognitive development occurs.

Lev Vygotsky (1896–1934) was a Russian psychologist and theorist of cognitive development (see Berk et al . this volume) and a contemporary of Piaget. Vygotsky emphasized socio-cultural influences on development, particularly how interactions with people—parents, teachers, and peers—foster cognitive development. He argued that development occurs within the “zone of proximal development,” when tasks that are difficult for children to learn alone can be mastered if they are guided by someone who is skilled at the task. The zone of proximal development has a lower limit (what the child can do alone) and an upper limit (what the child is capable of with guidance). In interacting with more skilled partners, the child can be taught the upper limit of the zone. Vygotsky (1978a, 1978b) claimed that play serves as the primary context for cognitive development: “Play is the source of development and creates the zone of proximal development” (1978a, p. 138). In play, the child interacts with others (more skilled peers, teachers, and parents) and can learn from them. Further, Vygotsky argued, when children use objects to represent other objects in play (e.g., using a block as a telephone), they inadvertently set the stage for abstract thought. Play allows children to understand that an object (telephone) can be represented by another object (block), separating the actual physical object from its meaning. Children can then take the step to thinking in the absence of any object. Once the child has developed representational abilities through play, he or she is able to use these abilities to develop reading and writing (where sounds are represented by symbols). In addition, following the rules inherent in all play leads



children to develop self-regulation, which is essential for success in the structured environment of the school classroom.

### **Practice Concerning Children's Play and Development**

Recognizing the vital importance of play for children's development, experts have designed curricula using play to enhance cognitive development as well as teach pre-literacy and literacy skills (e.g., Bodrova & Leong, 2001, 2003; Bruce, 2001; Gronlund, 2001; Owocki, 1999; Sawyers & Rogers, 1988; Singer et al., 2003). For example, Bodrova and Leong's (2001, 2003) "Tools of the Mind" preschool and kindergarten classrooms, based on Vygotsky's theory of cognitive development and the work of his student, Elkonin, use sociodramatic play to foster literacy. These classrooms contain dramatic play areas where children spend a substantial amount of time daily, and dramatic play permeates many classroom activities. Teachers support children's play by helping them create imaginary situations, providing props and expanding possible play roles. Children, with the teacher's assistance, develop written play plans, including the theme, the roles, and the rules that will govern the play. Preliminary evaluations of the Tools of the Mind curriculum support its effectiveness (Bodrova & Leong, 2001; Bodrova, Leong, Norford, & Paynter, 2003). In one study, children who spent 50 to 60 minutes of a 2 1/2-hour program engaging in supported sociodramatic play scored higher on literacy skills than did children in control classrooms (Bodrova & Leong, 2001). Thus, play, rather than detracting from academic learning, actually supported it.

Other experts have also developed play-based curricula and provided evidence of their beneficial effects on cognitive development. For example, Learninggames (Sparling & Lewis, 2003) offers caregivers (and parents) activities to enhance child development,

including cognitive development, from birth to age 5. The Learninggames curriculum was developed in the Carolina Abecedarian Project, which provided an early education program to poor children from infancy through age five. Longitudinal results indicated that children in the Project had higher scores on tests of cognitive ability from preschool to age 21, higher reading and math achievement from elementary school to age 21, completed more years of education, and were more likely to attend college than children in the control group (Campbell, Ramey, Pungello, Sparling, & Miller-Johnson, 2002).

The Singers' *Learning Through Play /Circle of Make-Believe* project (Singer & Singer, 2004) uses videotapes and a manual to train parents and caregivers of low-income children to play pretend games involving school readiness concepts with the children. Results from several studies indicated that children who engaged in the pretend games with their parents and caregivers, compared to a comparison group, had superior school readiness scores.

### **Children's Play in the Context of Head Start**

#### **Performance Standards**

As discussed above, from its very inception, Head Start has embodied a focus on the whole child, with components addressing physical health, nutrition, social and emotional development, education, services for children's families, and community and parental involvement. Included in this comprehensive approach is recognition of the importance of play for child development. Several of the Head Start Performance Standards for Education and Early Childhood Development (USDHHS, 1998; 45 CFR, 1304.21) include a focus on play.

Performance Standard 1304.21 (a) (4) describes the various means by which Head Start programs must “provide for the development of each child’s cognitive and language skills” (USDHHS, 1998, p. 68). This Standard identifies play as one of the primary strategies for promoting children’s cognitive and language skills, requiring that Head Start programs support “each child’s learning, using various strategies, including experimentation, inquiry, observation, play and exploration” (1304.21 (a) (4) (i); USDHHS, 1998, p. 68). With regard to literacy and numeracy, in particular, this Standard requires that programs support “emerging literacy and numeracy development through materials and activities according to the developmental level of each child” (1304.21 (a) (4) (iv); USDHHS, 1998, p. 70). The Guidance section for this Standard lists a variety of ways adults can support the development of literacy and numeracy, including: “games, dramatic play, fingerplays, puzzles, blocks” (p. 71). The Standard also mentions play as a means of promoting the development of language skills, urging adults in Head Start to encourage “dramatic play in which children act out familiar activities, such as going to the grocery store or the library, and using the telephone” (1304.21 (a) (4) (iii), USDHHS, 1998, p. 70). Thus the Performance Standard regarding cognitive and language development includes several explicit references to how play can be used to support this development.

Play is also mentioned in the Head Start Performance Standard concerning physical development (1304.21 (a) (5); USDHSS, 1998). This Standard requires Head Start programs to “promote each child’s physical development by providing sufficient time, indoor and outdoor space, equipment, materials and adult guidance for active play and movement that support the development of gross motor skills” (p. 71). Further the

Standard states “A child’s gross motor development is important to overall health. As such, that development is important to the achievement of cognitive skills...” (p.71), again making the link between play and cognitive development.

## **Curricula**

The curricula used in Head Start also demonstrate an understanding of the value of play and its essential role in children’s learning. The Head Start Performance Standards require that programs implement a curriculum (1304.3(a) (5); USDHHS, 1998). Curriculum is defined as a written plan that includes:

- (I) the goals for children’s development and learning;
- (II) the experiences through which they will achieve these goals;
- (III) what staff and parents do to help children achieve these goals; and
- (IV) the materials needed to support the implementation of the curriculum.

Any curriculum used in Head Start must meet the above definitional criteria. The curriculum also must provide for “the development of cognitive skills by encouraging each child to organize his or her experiences, to understand concepts, and to develop age appropriate literacy, numeracy, reasoning, problem solving and decision making skills which form a foundation for school readiness and later school success” (1304.21 (c) (1) (ii); USDHHS, 1998, p. 79). The Guidance for this Standard lists various ways adults in Head Start can support children’s cognitive development, including: “Supporting play as a way for children to organize their experiences and understand concepts” (p. 79). Thus, when discussing the Head Start curriculum, the Performance Standards again include a focus on play.

The Head Start Performance Standards do not prescribe any particular curriculum. Programs are free to write their own curriculum, use a locally-developed curriculum, or purchase a published curriculum. A study by the Government Accounting Office (U.S. General Accounting Office, 2003) found that most Head Start programs were compliant in implementing a curriculum. Further, the majority (58%) of Head Start programs used one of two published curricula: either the Creative Curriculum (36%) or the High Scope curriculum (22%).

Creative Curriculum. The Creative Curriculum for Preschool (Dodge, Colker, & Heroman, 2002) focuses on children's active learning through play and stresses the importance of social and emotional development for learning. Each classroom has 11 interest areas: blocks, dramatic play, toys and games, art, library, discovery, sand and water, music and movement, cooking, computers, and outdoors. The curriculum has 6 content areas (literacy, mathematics, science, social studies, the arts, and technology), and learning in each of these content areas occurs in each of the interest areas. For example, literacy activities are infused throughout each of the 11 interest areas, rather than occurring just in the library area or during book reading activities (Heroman & Bickart, 2002). Teachers label toy boxes with drawings of the toys they contain, as well as with the words naming the toys. The cooking area has picture-word instructions for activities like washing hands. The daily schedule is posted with both pictures and words outlining the day's activities, etc.

Several of the interest areas include a focus on play (Dodge, et al., 2002). For example, the dramatic play area encourages children to engage in imaginative play. This play can be used to promote cognitive development, including literacy and numeracy. For

example, vocabulary development is enhanced when the teacher introduces props for the play scenarios and teaches children the props' names (e.g., stethoscope, tongue depressor, etc. for playing "doctor's office"). Pre-writing skills can be developed through using writing tools and paper of various kinds (e.g., prescription pads). Pre-math skills can also be developed in the dramatic play area (e.g., providing a height chart and scale for the doctor's office). Play is also incorporated into the outdoor interest area and is used in the service of cognitive development. For example, to promote pre-literacy skills, teachers can ask children to explore outdoors and record on clipboards what plants they observe. Later, in the classroom, children can use resource books to find pictures of what they discovered outside. They can also make charts and graphs to organize their observations, promoting pre-math skills.

The Creative Curriculum is based on research in child development and children's learning. Preliminary research has also supported the curriculum's effectiveness. One study evaluated the use of the curriculum in the Department of Defense's Sure Start preschool program (Abbott-Shim, 2000). Examining 10 randomly selected classrooms, researchers found that children made significant gains on receptive vocabulary, language production, print awareness, and mathematical problem solving over the course of one year of participation in the Sure Start preschool. However, this study did not have a comparison group. Several randomized controlled studies of the Creative Curriculum are also currently in progress through the U.S. Department of Education's Preschool Curriculum Evaluation Research Grants Program ("Research Studies on the Effectiveness of The Creative Curriculum", 2002), so more rigorous evidence of the curriculum's effectiveness will be forthcoming.

High Scope curriculum. The High Scope curriculum (Hohmann & Weikart, 1995) encourages children to pursue their own interests and takes advantage of children's natural desire to communicate what is meaningful to them to others. It is based on Piaget's theory of cognitive development, particularly his central idea that children actively acquire knowledge through interacting with the physical environment, which includes play. The curriculum includes 58 key experiences for children, grouped into 10 categories: creative representation, language and literacy, initiative and social relations, movement, music, classification, seriation, number, space, and time. Like the Creative Curriculum, the High Scope classroom is divided into various interest areas, including blocks, house, toy, book, sand and water, outdoors, etc. Also similar to Creative Curriculum, literacy and numeracy learning occurs in all of the interest areas. The High Scope curriculum stresses the need for a daily routine, including a "plan-do-review" sequence. Children plan what activities they want to engage in, engage in these activities during "work" times (or, more accurately, "play" times), and end by recalling and reflecting on what they have done. In each of these phases, there are opportunities for gaining pre-literacy skills. For example, children can describe their plans to the teacher or make a drawing of their plans. During the work time, children locate toys by going to bins labeled with both a picture of the toys and their names. In reviewing the activity, children are required to use words to describe what they have done.

The High Scope curriculum was developed in the early 1960s for the High Scope Perry Preschool Project, one of the most studied preschool intervention programs. Therefore, there is considerable longitudinal evidence available on the curriculum's effectiveness. Low-income 3- and 4-year-olds ( $N=123$ ) were randomly assigned to the

Perry Preschool Project or a no-preschool comparison group. Researchers have followed the children over time, assessing them every year from ages 3 to 11, and then at ages 14, 15, 19, 27, and 40. The most recent study at age 40 found that, compared to the comparison group, Perry Preschool attendees were more likely to have graduated from high school and have a job, had higher earnings, and had committed fewer crimes (Schweinhart, 2004). Preschool attendees performed better on intellectual and language tests during early childhood, on school achievement tests between age 9 and 14, and on literacy tests at age 19 and 27. A cost-benefit analysis determined that the Project returned \$17 for every dollar invested. Schweinhart and colleagues determined that the program cost \$15,166 per participant, but had an economic return to society of \$258,888. The savings to society came in the form of reduced costs for crime, special education and welfare, and increased tax revenue due to participants' increased wages.

Marcon (1999) also found evidence for the value of child-initiated curricula and play for later school outcomes. Her study evaluated three approaches to preschool education: child-initiated, academically focused, and a combination. She found that although children who had been in more academically focused preschools were less likely to be held back, by 4<sup>th</sup> grade they had significantly lower grades than children who had experienced more child-initiated preschool models.

### **Impact of Head Start on School Readiness and Educational Success**

The question of whether Head Start impacts children's school readiness and educational success has been a matter of long-standing debate. This debate may have been fueled, in part, by the fact that Head Start focuses on the whole child, its Performance Standards demonstrate an appreciation for the key role of play in children's



learning, and programs typically employ curricula that include a strong emphasis on play. Head Start is not a place where children are given rote memorization tasks or taught to some external test of narrow cognitive ability (although the recent adoption of the NRS has raised concerns about teaching to the test). Rather, children learn through active engagement with people and materials in the very rich classroom environment, including substantial time in both free and structured play (Dodge, Colker, & Heroman, 2002; Hohmann & Weikart, 1995; Zigler & Styfco, 2001).

Barnett (2004) conducted a critical review of the extensive body of research examining Head Start and other preschool programs' effects on children's cognitive development. He concluded "The weight of the evidence indicates that a wide range of preschool programs including Head Start can increase IQ scores during the early childhood years, improve achievement, and prevent grade retention and special education" (p. 242). Barnett cited many methodological shortcomings in studies to date, however, and called for better research designs in future studies.

One such better-designed study has demonstrated positive effects of Head Start on children's literacy development. This study, using random assignment to Head Start versus a comparison group, found that Head Start children developed pre-literacy skills significantly faster than children in the comparison group (Abbott-Shim, Lambert and McCarty, 2003). For both receptive vocabulary (the Peabody Picture Vocabulary Test) and phonemic awareness (Early Phonemic Awareness Profile), the comparison group showed only normal maturation from pre-test to post-test; whereas Head Start children had rates of growth that were significantly faster than the comparison group.

The FACES study (Head Start Family and Child Experiences Survey; Administration for Children & Families, Office of Planning, Research & Evaluation [ACF OPRE], 1997, 2003) also offers evidence of Head Start's effects on school readiness. FACES provides information on outcomes for nationally representative samples of children served by Head Start. There have been three waves of the FACES study, in 1997, 2000, and 2003. Results to date indicate that children show substantial gains on measures of school readiness, particularly vocabulary and early writing skills, over the course of participating in one year of Head Start. These children continue to show gains in vocabulary, early writing skills, and early math skills in kindergarten. Further, the gains that children made in Head Start predicted their achievement in kindergarten (ACF OPRE, 2003).

More definitive data on the question of Head Start's effects on school readiness will be forthcoming in the near future. The 1998 reauthorization of Head Start mandated a rigorous national study to examine the impact of the program. In 2000 the Department of Health and Human Services awarded a contract for the study, and data collection began in 2002 (ACF OPRE, 2000). The study includes randomized assignment to Head Start or a control group, and follows a nationally representative sample of 5000 children from ages 3-4 through the end of first grade. The study's final report is due in December 2006.

At this point, however, there is already converging evidence that Head Start, although it is designed to provide comprehensive services to meet the needs of the whole child and includes a focus on play in its Performance Standards and curricula, has significant impact on children's cognitive development and school readiness, including

important pre-literacy skills. The available data do not allow us to determine if play, per se, is linked to school readiness outcomes among Head Start children. Head Start is a comprehensive program and studies have not examined the impact of its individual components, including play. But since Head Start curricula embody a strong emphasis on play, it is not unreasonable to assume that play accounts, at least in part, for the positive school readiness outcomes found.

## **Conclusion**

Four decades of research and practice, offer unequivocal evidence for the critical importance of play for children's development. Play has been found to contribute to development in several domains, including social, emotional, and cognitive development, including language, numeracy and literacy. Play is children's work (Zigler, 1987). Thus, the current attack on play defies the evidence and is misguided.

In response to the renewed focus on cognitive skills, many organizations have advocated for the important role of play in children's development. For example, the NAEYC, the leading organization of early childhood educators, developed a position statement on "principles of child development and learning that inform developmentally appropriate practice." The statement includes the item: "Play is an important vehicle for children's social, emotional, and cognitive development, as well as a reflection of their development" (NAEYC, 1996). Articles in NAEYC's professional journal also promote the benefits of play (e.g., Stone, 1995). In addition, several organizations have been founded to advocate for the importance of play. These include Playing for Keeps ([www.playingforkeeps.org](http://www.playingforkeeps.org)); Alliance for Childhood ([www.allianceforchildhood.net](http://www.allianceforchildhood.net));

American Association for the Child's Right to Play ([www.ipausa.org](http://www.ipausa.org)); and Play Matters ([www.playmatters.net](http://www.playmatters.net)), founded by Dorcia Zavitkovsky, a former president of NAEYC.

The need to defend play should not be necessary, just as the need to muster support for cognitive training should not be required. Research demonstrates the two-way relationship between the two, which leads back to the position advocated in this chapter and, in fact, back to the time before any formal study of child development: To foster learning, parents, teachers, and policymakers must focus on the whole child. An important point to emphasize is that those who espouse the whole child approach view all systems of development (including cognitive development) as synergistic and, in that regard, as the proper focus of child rearing and education. In contrast, those who believe that the cognitive system merits the most attention are essentially rejecting the needs of the rest of the child. By ignoring the contributions of the physical and psychological systems to learning, they promote an educational system designed to fail. To be fair, their extreme view that only cognitive skills are important may be simply a backlash reaction to extreme views that only socio-emotional health is important. Both extremes are unfounded and likely detrimental to optimal child learning and development.

There is reason to hope that the tide will again turn and an appreciation for the value of play will be reborn. We are optimistic that the rigorous randomized control trials currently in the field (the Department of Education's Preschool Curriculum Evaluation studies and the Head Start national impact study), will provide strong evidence of the value of both play-focused curricula and Head Start for children's school readiness and school success. There is also a beginning backlash to attacks on play in the policy arena: legislators in Virginia and Michigan have recently passed laws mandating daily recess

periods, and other states, including Connecticut, have similar legislation pending (Axtman, 2004). A new article in the *Archives of Pediatric and Adolescent Medicine*, published by the American Medical Association, focused on “resurrecting free play in young children”, arguing that beyond its benefits for physical health, play enhances child well-being, including attention, affiliation, and affect (Burdette & Whitaker, 2005). We add our voices to these in advocating for a renewed focus on the whole child, including an appreciation for the essential role of play, in both education and parental child rearing.

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The Cognitive Child vs. the Whole Child: Lessons from 40 Years of Head Start  
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