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Standards, Science, and the Role of Play in Early Literacy Education

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Play is being shunted aside in early childhood programs in favor of more direct forms of instruction that address the new 'Pre- K basics' of language, early literacy and numeracy skills. Once seen as a key promoter of child development, play is increasingly regarded by administrators, policy makers, and some teachers as a waste of instructional time with no clear benefits for high priority cognitive outcomes, such as pre-reading skills (Zigler & Bishop-Josef, 2004).

Two majors shifts in policy, originating in the latter decades of the 20th century, have contributed to this dramatic shift in play's status in early learning, especially as it applies in language and literacy domains. One is the powerful movement to prevent reading difficulties which has given rise to a new perspective on reading instruction that is anchored in a body of 'Scientifically Based Reading Research' (SBRR) (McCardle & Chhabra, 2004; Snow, Burns, & Griffin, 1998). The other is the standards movement, with its persistent press for accountability, presently manifested in the rise of state-level early childhood academic standards, the development of standardized assessments of academic achievement at the preschool level, and a heavy emphasis on school readiness (Kagan & Lowenstein, 2004). The combination of the science of reading and standards converge to form current conceptions of 'excellent instruction.' Excellent instruction as framed by the SBRR perspective and related academic standards has little, if anything, in common with play (or so it seems).

In this chapter we attempt to show how play can further the ambitious goal of achieving excellent early literacy instruction for all children – instruction that encompasses research evidence, strong standards, and play in the early childhood classroom. We start with early literacy policy, examining the role of play in a standards-based context and exploring its

potential to assist children to meet more rigorous early literacy expectations. Standards increase accountability for emergent literacy instruction, thus creating new pressures for play's role as a medium for learning and a shift from unfocused free play to 'educational' play – play activities that are linked to educational goals, objectives and outcomes. We then turn our attention to relationships between the 'science of play' and the 'science of early literacy,' noting the overlap between these two complex areas of preschool development and learning, and making the case for research-based connections between play and core literacy skills. Closing the chapter, we urge the more vigorous advocacy of educational play in early childhood programs and propose several strategies that can better secure play's position in early literacy instruction across preschool, day care, and pre-kindergarten settings.

Early Literacy Policy, Standards, and Play

Early literacy policy is a new topic in the field of early childhood, introduced into the national policy arena at the turn of this century (Roskos & Vukelich, in press). Research on children's rapidly developing brains in the first years of life, their emerging print knowledge and skills, and the influence of rich early literacy experiences (e.g. being read to) on later reading achievement demonstrated the early onset of literacy development in young children (Bowman, Donovan, & Burns, 2001; Shonkoff, & Phillips, 2000; Snow, Burns, & Griffin, 1998). As scientific research converged on a new realization of an earlier, longer developmental path to literacy, it also revealed a difficult social problem. Some infants, toddlers and preschoolers receive quality, education-oriented care filled with literacy experiences at home or in child care that prepare them for school and successful reading achievement. Many others do not, and they

enter school with deficits (e.g., weak vocabulary), that are extremely difficult to remedy and that put them at risk for reading failure. The psychological, social and economic consequences of reading failure are well-documented (Snow, Burns, & Griffin, 1998) with serious implications for an information-based society over the long-term (Heckman, 2002). Effective, research-based early literacy instruction for all young children offers a strong preventive measure for reducing the incidence of reading failure.

Spread into the policy environment, this movement to prevent reading disabilities through early instruction formed the basis of an ambitious federal early reading policy, *Good Start, Grow Smart* (2002), which called for early learning content guidelines linked to reliable, valid assessments in Head Start and child care in general. One component of this initiative was a strong recommendation that, in order to receive federal education funds, the states voluntarily needed to adopt early childhood standards for early literacy and mathematics that were "science-based" with firm support from empirical research studies. Standards were defined as statements about specific child outcomes; and the guidelines specified that early literacy standards should focus on the "science-based" outcomes in oral language, background knowledge, phonological processing, and print knowledge.

Good Start, Grow Smart accelerated the movement to establish state early childhood standards. The number of states with early childhood standards increased from 18 in 2000 to 35 in 2004 (Neuman & Roskos, in press). By 2005, a total of 43 states had pre-K standards, most of which specify "science-based" early literacy outcomes for young children. This development has led to a decidedly mixed reaction in the early childhood education community.

Standards are static expectations, outcome statements, or 'amounts' meant to satisfy established criteria (e.g., what children should know and be able to do at certain age levels)

(Marzano & Kendall, 1998). They are durable end-points, i.e., models or examples of what should be, that share a consensus of acceptance. Standard-setting inevitably raises concerns about what is expected because so much is at stake for educators, families and students in meeting rigorous standards. Expectations that are too high can frustrate learning, and those too low can squander it. Establishing academic standards is an especially sensitive endeavor in the preschool years, given the young age of the learners, the diversity of their early learning experiences, and the variability of early development (Burns, Midgette, Leong & Bodrova, 2003; Scott-Little, Kagan & Frelow, 2003).

Many early educators fear that early literacy standards will result in a K-3 literacy curriculum that is being 'pushed down' into preschool programs; that teachers will be required to teach to the standards in ways that are highly structured and scripted (Vukelich & Christie, 2004). Traditionally, early education has emphasized the integration of content areas, not isolated subject learning in well-defined instructional groups (Schickedanz, Pergantis, Kanosky, Blaney & Ottinger, 1997). It has focused on the whole child's cognitive, physical, social/emotional development with high regard for individual differences in learning and development (Bowman, Donovan & Burns, 2000; Bredekamp & Copple, 1997). A 'push down' early literacy curriculum, however, threatens developmentally appropriate forms of teaching that honor children's personal inventions, discoveries, and meanings, including play (Zigler & Bishop-Joseph, 2004). Moreover, in the 2-hour time frame of many programs, it might lead to the neglect of other important areas of development that are necessary for school readiness (e.g., social-emotional skills; Shonkoff, 2004).

Other policymakers and early educators view standards as critical framers of content and curriculum, professional development, and assessments in building a coherent education system

that promotes the development of school readiness skills for all children (Good Start, Grow Smart, 2002; Schweinhart, 2003). If standards consist of quality, age-appropriate, research-based indicators (Neuman, Roskos, & Vukelich, 2003), they can guide preschool teachers' decision-making about early literacy curriculum, instruction and assessment. As clear instructional goals, performance indicators can help cohere daily instruction, thus leading to better curriculum alignment which has been found to improve students' achievement in K-3 basic skills (Cohen & Hill, 2001; Grissmer, Flangan, Kawata, & Williamson, 2000).

While it is too soon to assess the influence of a standards-based architecture on preschool literacy education, it is not too soon to recognize the growing influence of early literacy standards in shaping preschool language and literacy teaching practices. A good example is the *Early Reading First* program (NCLB, 2001). Between 2002 and 2005, *Early Reading First* has funded approximately 120 well-funded projects which are designed to increase low-income preschool children's academic readiness by means of Scientifically-Based Reading Research (SBRR) early literacy instruction. The latest round of *Early Reading First* guidelines, for example, specifies that programs should insure children develop: (A) recognition, leading to automatic recognition, of letters of the alphabet; (B) knowledge of letter sounds, the blending of sounds, and the use of increasingly complex vocabulary; (C) an understanding that written language is composed of phonemes and letters, each representing one or more speech sounds that in combination make up syllables, words, and sentences; (D) spoken language, including vocabulary and oral comprehension abilities; and (E) knowledge of the purposes and conventions of print (Application for New Grants for the Early Reading First Program, 2004, E-10). To achieve these outcomes, programs need to use a "structured, systematic and aligned" curriculum

that supports "development of children's oral language, phonological awareness, print awareness and alphabet knowledge."

Is there room for play in these policies and the standards-based, SBRR early literacy programs they promulgate? Some answer with a firm "no" because the very nature of play seems at odds with the rigors of skill instruction called for in literacy programs like *Early Reading First*. In a dynamic view of development, play is not an end-state, terminus nor outcome (Bronfenbrenner & Ceci, 1994; Thelen & Smith, 1995). It is a process recognizable as a pattern of activity with certain salient features, such as positive affect, nonliterality, means-over-ends orientation, flexibility, and autonomy (King, 1979; Rubin, Fein, & Vandenberg, 1983; Smith & Vollstedt, 1985). Play can be guided, but not scripted; it can be assembled, but not tightly structured; it can be educationally significant, but often indirectly. Given its fluidity, flexibility and unpredictability, play may be difficult to systematically control in the pursuit of serious skill sets for which program and teacher will be held accountable. Time allocated to play, therefore, can be viewed inefficient and better spent on more specific literacy activities where the educational benefits are scientifically clear (e.g., learning alphabet letter names), especially for children at risk of having difficulties in learning to read (Zigler, Singer, Bishop-Josef, 2004).

Other educators may not be so quick to relegate play to the very edges of the preschool day in reaching the goal of excellent early literacy instruction for all children. To instruct (as in *to tell*), they would argue, is not enough and can reduce learning to isolated skills. Considerable research, in fact, supports a more integrated view of skill development and learning that involves exploration, selective copying toward mastery, a 'push' to test the limits of behavior, and sheer playful repetition of skill sequences in space and time to initiate a developmental cascade (Bronfenbrenner & Ceci, 1994; Bruner, 1972; Thelen & Smith, 1995; Vygotsky, 1978). Play

provides an ideal context for this combinatorial activity in early childhood. Bruner (1972, p. 689) referred to play as "that special form of violating fixity" so essential for complex skill mastery. Play with its freedom from insistence on the 'here and now' introduces the flexibility that converts the rigidities of skill instruction into the realities of skill use by the child. Lacking this, children may be taught, but they may not learn in ways that evolve toward higher levels of skill performance and that, in the end, are educationally significant.

The future role of play lies at this standards-practice nexus. And the important question is not should play have a role in the new science/standards-based early childhood programs. It is more fruitful to ask: (a) how can play help children meet important early literacy outcomes that are the building blocks of school reading and writing achievement, and (b) which types of play are most effective in accomplishing this. We believe that the answers to these questions reside in the overlap between two extensive lines of inquiry – research on early literacy and research on play. We believe that, just as there is a "science" to early literacy, there also is a "science" to play and its educational applications.

The Science of Early Literacy and Play

Emergent literacy is a relatively young field of inquiry that became a dominant theoretical perspective in the field of early education. During the 1980s, emergent literacy researchers conducted a series of descriptive studies which showed that children begin learning about reading and writing at a very early age by observing and interacting with adults and other children in literacy-focused routines such as storybook reading and in everyday life activities that involve reading (e.g., menus, signs) and writing (e.g., shopping lists, notes to family members). (For detailed reviews of this first generation of emergent literacy investigations, see Mason,

1984, and Sulzby & Teale, 1991). The pace of emergent literacy research picked up during the 1990s, providing broad-based support for early literacy programs that had print-rich classroom environments, frequent storybook reading, and opportunities for literacy-enriched play (see Senechal, LeFevre, Colton, & Smith, 2000; Yaden, Rowe, & MacGillivray, 2000).

During the same decade of the 90s, a "parallel universe" of very different early literacy research was being conducted in the fields of educational psychology and special education (Vukelich & Christie, 2004). This research, which became known as *Scientifically-Based Reading Research* (SBRR), was quantitative in nature and used correlational and experimental designs (McCardle & Chhabra, 2004; Snow, Burns, & Griffin, 1998). SBRR investigations have identified core early literacy knowledge and skills that are highly predictive of reading achievement, namely oral language, phonological awareness, alphabet letter knowledge, and print awareness (NELP, in progress; Neuman & Dickinson, 2000; Snow, Burns, & Griffin, 1998.) Background knowledge has also been identified as having a key role in children's reading acquisition (Neuman, 2001). SBRR researchers have also identified "science-based" instructional strategies, such as dialogic reading (Whitehurst et al., 1994), that appear to be effective in teaching these skills. The SBRR perspective fit well with the new policy focus on reading disabilities and the movement to establish early childhood standards and has arguably supplanted emergent literacy as the dominant view of early reading development and instruction.

Play theory and research in early childhood have a longer history than their counterparts in early literacy, reaching back to the beginnings of the 20th century when psychologists Karl Groos (1898) and G. Stanley Hall (1907) began making connections between play and development. During the period of 1880-1979 no fewer than 739 scholarly articles and books were written about children's play (Sutton-Smith, 1985). The pace accelerated in the 1980s,

stimulated by Rubin, Fein, and Vandenberg's (1983) chapter in the *Handbook of Child Psychology* and Singer & Singer's (1990, 2005) *House of Make-Believe* and *Imagination and Play in the Electronic Age*.

Research-based evidence on the role of play in early child development in general, and on its role in language acquisition and social competence in particular, is considerable (see Johnson, Christie, & Wardle, 2005). The theoretical formulations of both Piaget (1966) and Vygotsky (1966) address the significance of play in the development of symbolic thinking as a cornerstone of cognition. More so than Piaget, Vygotsky attributed a key role in the development of language and thought, to make-believe play, describing it as a "particular feature of the preschool age" with profound implications in future development (p. 17). Vygotsky (1966, p. 16) argued that play "contains all the developmental tendencies in a condensed form" (physical, cognitive, emotional) and thus creates a zone of proximal development that pulls the child forward. For this reason, play activity is essential in the preschool years because it leads development, giving rise to abstract thinking (thought separate from action or object), self-awareness and self-regulation. Play, in other words, is a process particularly influential in the preschool age for achieving cycles of self-organization and development that contribute to cognition. It is a mechanism of developmental change.

Jerome Bruner (1972) argued that play is a necessary 'point of departure' for learning the symbolic means of culture, i.e., language, and that play contributes to children's ability to the problem by increasing their behavioral options. Singer and Singer (1990; 2005) have developed a cognitive-affective framework in which play mediates a reciprocal relationship between these two important realms of development. Children who are more imaginative in their play are more open to their affect system and are thus able to develop a more elaborate and richer storehouse of

affect-laden symbols and memories. Together these theories have motivated a rich body of investigative work on the role of play in children's early development and learning.

Beginning in the late 1980s, researchers began investigating direct connections between play and literacy (Christie, 2003). Research on the play-literacy interface exploded during the 1990s (see Roskos & Christie, 2004), becoming the most heavily researched aspect of early literacy during that decade (Yaden, Rowe, & MacGillivray, 2000).

In searching for links between literacy and play, we examined all three areas of inquiry: basic research on early literacy, basic research on play, and studies on direct links between literacy and play.

- Oral Language. Sociodramatic play occurs when groups of children adopt roles and act out make-believe stories and situations (Johnson et al., 2005). Research has documented firm connections between this advanced form of play and oral language development. Both pretend play and language involve symbolic representation. In language, sound represents objects, actions, attributes and situations. In play, children use objects and actions, as well as language, to stand for other things. Thus, it is not surprising that symbolic play and language have been found to be related to each other during the toddler years (Bornstein,Vibbert, Tal, & O'Donnel,1992; Tamis-LeMonda & Bornstein,1993). In addition, there is evidence that older preschool and kindergarten-age children also gain valuable language practice by engaging in sociodramatic play (Garvey, 1974).

  Sociodramatic play also places heavy linguistics demands on children and prods them to use their maximum language abilities. Children must make intentional use of lexical and syntactical features of language in order to: (a) signify the person, object, and

situational transformations that occur in pretense play, and (b) identify and to elaborate upon play themes as they unfold during the play episode. Bruner (1983) contends that "the most complicated grammatical and pragmatic forms of language appear first in play activity" (p. 65).

Findings from a more recent longitudinal study in the United States have shown that rich language used in play has an impact on literacy development. The Home School Study of Language and Literacy Development (Dickenson & Tabors, 2001) examined the home and school literacy environments of low-income children from age 3 through kindergarten. The study reported consistent relationships between the language that children used during play and their performance on literacy and language measures. For example, at age 3, children who engaged in more pretend talk during play were more likely to perform well on assessments of receptive vocabulary and narrative production (also see Singer & Singer, 1981). Dickinson and Tabors also reported consistent links between play and long term language growth. For example, the total number of words and the variety of words that children used during free play in preschool were positively related to their performance on language measures administered in kindergarten.

- Phonological Awareness. Phonological awareness refers to conscious awareness of the sounds of language. This awareness is a prerequisite for learning the alphabetic principle that letters represent the sounds of language. Phonological awareness in the early years is one of the strongest predictors of later success in learning to read (Snow, Burns, & Griffin, 1998), and it is always a key objective of SBBR early literacy programs.

Researchers have observed that infants and toddlers frequently play with the sounds of language. For example, Weir (1976, pp. 610-611) reported that her own 2 ½-

year-old child playfully repeated strings of words containing related sounds ("*Babette / back here/ wet*") exploring both rhyme (words that end with the same sound) and alliteration (words that begin with the same sound). According to Cazden (1976), when children use language to communicate, the form and structure of language are transparent. They just focus on the meaning of what is being said. However, when children play with language, the structural features of language become opaque. This creates opportunities for children to become aware of phonological, syntactic, and lexical aspects of language.

The learning potential of language play is supported by Fernandez-Fein and Baker's (1997) findings that children's knowledge of nursery rhymes and the frequency that they engage in word play were both strong predictors of children's phonological awareness. It is not surprising, therefore, that many research-based strategies for promoting phonological awareness in preschool and kindergarten use playful activities such as singing songs, reciting nursery rhymes, reading books that play with the sounds of language, and game-like activities (e.g., Adams, Foorman, Lundberg, & Beeler, 1998). Hirsh-Pasek & Golinkoff's (2003) intriguingly titled book, *Einstein Never Used Flash Cards*, contains additional suggestions of informal games that parents and early educators can use to help children learn phonemic awareness and other early literacy skills in a fun, playful manner.

- Print Awareness. Literacy-enriched play centers contain theme-related reading and writing materials. For example, a doctor play center might contain pencils, pens, prescription pads, an appointment book, patient folders, wall signs ("Please sign in"), insurance cards, etc. Research has shown that, when available, these literacy tools and

props in marked increases in the amounts of emergent reading and writing activity during play (Neuman & Roskos, 1992). In addition, several studies have shown that, when children play in print-enriched settings, they often learn to read the words that are present in centers (Neuman & Roskos, 1993; Vukelich, 1994). In the doctor play example above, children would be more likely to be able recognize the words *please*, *sign*, and *in*, than children who were not exposed to these words in the context of play.

- Background Knowledge. Sara Smilansky (1968) has proposed that sociodramatic play helps children integrate experiences that seem unrelated at first, such as selecting menu items and paying money to a cashier in restaurant play. Several research studies have supported this claim. For example, Saltz, Dixon, and Johnson (1977) found that sociodramatic play and thematic fantasy play (*i.e.*, adult facilitated role enactment of fairy tales) helped preschool children connect separate events into logical sequences. More recently, Gmitrova and Gmitrova (2003) demonstrated a link between teacher-guided play of 3- to 6-years-olds and their manifestation of conceptual development. With small groups of children, teachers were able to gently enter the playing process and shift the children's cognitive behaviors to a higher conceptual level "using the powerful natural engine of the free play "(p. 245).

Singer and Singer (2004) have created the *Circle of Make-Believe*, an interactive video based program for parents and other caregivers of three- to-five year olds which contains seven different "learning games" illustrated on video (demonstrated by real people, actual parents, preschooler, and teachers), which use play activity to build background knowledge and other school readiness skills such as alphabet recognition and counting. For example, in *Where is My Kitten?*, children use a kitten puppet (a cat face

drawn on a paper plate) and pretend binoculars to practice words that describe spatial relationships: *on top of & under, in front of & behind.* Data from a study conducted in eight states indicated that children who engaged in the Circle of Make-Believe program made substantial gains on a Readiness Skills measure that included letter, shape, and number recognition.

Our brief review of play-literacy research highlights the science that suggests play in early childhood contains critical components (oral language, phonological awareness, print knowledge, and background knowledge) that are linked to later literacy achievement. And this is necessary because early educators need an empirical basis for choosing learning activities that aim children's early literacy. Consider, for example, the common early literacy standard of alphabet knowledge (knowledge of letter names and sounds), one of the best predictors of future reading achievement (Byrne & Field-Barnsley, 1993; Ehri & Sweet, 1991). Instruction often involves drawing children's attention to selected letters during storybook reading, brief lessons using posters containing illustrations of objects that begin with the same letter, alphabet 'word walls,' or writing activities. As such, this 'pointing out' of letters may not hold much meaning for young children, although they will often attentively follow the teacher's lead. Literacy-enriched play settings, however, provide an effective venue for children to use their emerging knowledge of the alphabet. Let's say the letter *t* has been the focus of instruction, which by itself holds little real meaning for the child. But in the context of a taxi play center this 'bit' of linguistic information can grow more relevant. Here children can practice and consolidate their name and sound knowledge. Couple these props with sensitive teacher scaffolding ("Why don't you make a sign for your taxi stand"), and children are presented with meaningful, highly contextualized opportunities to recognize and write the letter *t*. This linking of immediate play

activity and distant literacy standards rarely occurs by happenstance. Rather it reflects thoughtful planning by a knowledgeable teacher who understands the interests and needs of the children she teaches.

As another example, one of the authors recently visited a preschool classroom that was part an Early Reading First project. The teacher was using a blend of SBBR instructional techniques and academically-linked play. During large group circle time, she and children sang a song that had to do with building a tree house. The teacher paused to point out the words that rhymed in the story, and then encouraged the children to come up with other words that ended with the same rhyming sound. She also focused on several vocabulary tool-related vocabulary terms: *hammer* and *nail*. Next, the teacher did a shared reading lesson with a big book about building a doghouse. Before reading the book with the children, she did a "picture walk," engaging the children in a discussion about objects in the photos in this informational book. The teacher focused children's attention on several tool vocabulary terms: *hammer, nail, saw, measuring tape,* and *safety goggles*. Then the teacher read the book and encouraged the children to read along. Some were able to do so because of the simple text and picture clues. During center time, children had the option of playing in a dramatic play center that was set up as a house construction site. There was a "house" made out of large cardboard boxes. In addition, there were toy tools (hammers, saw, measuring tape, level), safety goggles, hard hats, some golf tees that were used as make-believe nails, and several signs ("Hard Hat Area" "Danger" "Construction Site"). Two girls and a boy spent 30 minutes in the center, using the toy tools to measure, plan, and build the house. During this play, they used the target vocabulary repeatedly and also explored the uses of the tools. The dramatic play center was used a means to provide

children with an opportunity to practice and consolidate the vocabulary and concepts that were being taught in the instructional part of the curriculum.

Play and standards can indeed co-exist, and play-based strategies are legitimate practices in the early childhood curriculum. Play's role, however, is tenuous at best and its position shaky. Unless more vigorous steps are taken, it may not survive this round of educational reform that has reached so deep into the everyday practice of early childhood teachers.

Policy Recommendations

Three steps that can strengthen play's status in this era of early childhood standards: a shift toward 'blended' curricula that integrate direct instruction with educational play activities, improved teacher education, and increased play advocacy.

1. Blended early literacy programs – We need to move away from the old 'either /or' mentality that separates play from academic instruction. Kagan and Lowenstein (2004) conclude that:

> The literature is clear: Diverse strategies that combine play and more structured efforts are effective accelerators of children's readiness for school and long-term development. Apparently, just as children need intentionality in their exposure to all dimensions of development, so too may they need exposure to play-based and child-initiated as well as teacher-directed pedagogical strategies. Clearly, no single strategy can be expected to work for all children, all the time.

We agree and therefore favor 'blended' early literacy programs that provide both focused instruction and related play activities. Design features of blended programs include large-group

shared reading, small-group instruction, and content-rich language experiences to model, demonstrate, clarify, and apply core literacy skills. Theme-related dramatic play centers, linked conceptually to language and literacy content, allow more reading and writing, listening and talking that help establish new concepts and skills in action. Time, play props, materials and equipment are organized to help children grasp and practice early literacy skills on a developmental basis and are highly supportive of learning-through-doing.

Blended programs align well with an integrated view of skill development. Content-related play experiences provide children with enjoyable opportunities to explore, copy, and repeat skills and concepts that are initially introduced through instruction. In addition, these programs also fit with the principle of *equifinality*. The *equifinality* hypothesis contends that specific positive outcomes can happen in multiple ways in an open system (Sackett, Sameroff, Cairns, & Suomi, 1981). As a result, there are multiple avenues or routes to the same developmental destination (Martin & Caro, 1985). While direct instruction can facilitate core literacy skills and concepts, there are also other ways means for obtaining the same outcomes, including play.

The Early Reading First grant example described in the previous section is a good example of the equifinality principle. In this classroom, some children learned vocabulary words as a result of teacher instruction during shared reading of books that contain these terms. Other children learned the vocabulary during play as a result of interactions with peers or a teacher during play. We witnessed collaborative peer learning in action when a four-year-old female ‘construction worker’ strenuously reprimanded a male coworker for not wearing safety goggles when using a toy power saw. Initially, the boy put down the saw and walked away (with his feelings hurt a bit). Back on the job with the saw a few minutes later, the boy had the goggles on

and the term *safety goggles* also firmly entrenched in his lexicon because of his interaction with his bossy playmate.

2. Improved teacher education – Dunn, Beach, and Kontos (2000) surveyed the play settings in 24 child care centers and discovered that these areas contained few functional, theme-related literacy materials. In fact, few opportunities existed for any type of literacy activity during free play periods. These findings suggest that either the teachers did not believe that it was important to link literacy and play and/or that they were not familiar with the literacy-enriched play setting strategy. Similarly, McLane (2003) had 90 Head Start teachers complete a questionnaire that focused on their beliefs about play's role in development and education. Results indicated that, while a majority of the teachers viewed play as making important contributions to children's social, emotional, and language development, only 6% believed that play contributed to literacy development.

These findings indicate a need for early childhood teacher education programs and professional development efforts to focus on increasing early childhood teachers' knowledge of the connections between play, early literacy learning, and pre-K academic standards. In addition, teachers need to learn how to plan and implement play experiences that will help children learn core academic content. Play needs to be used in a thoughtful, intentional teaching strategy. Bredekamp (2004, p. 171) points out that:

> For children to benefit fully from play, teachers must take their own roles seriously. Early childhood educators cannot wander about the classroom operating on the vague assumption that children learn through play while, at the same time, lamenting the challenges to play coming from parents and administrators. Instead, teachers must recognize play as one of the key teaching and learning contexts in the early childhood

classroom, must acquire skills themselves in research-based effective teaching strategies such as scaffolding language use during play, and must incorporate play along with other more directive teaching throughout the preschool day.

Equipping teachers to be mindful and strategic in using play to help children learn academic requires that play be front and center in early childhood teacher education programs. In order to affect practice, coverage of play in teacher preparation programs needs to move beyond traditional lecture and textbook readings. Future teachers also need opportunities plan and use play-related strategies to promote the learning of academic outcomes specified in state early childhood standards and reflect on how children respond to play-based teaching.

3. Increased Play Advocacy – A major cause of the current 'anti-play' shift across all levels of schooling is the widespread belief held by many educators, parents, administrators, politicians, and education policy makers – is the belief that play is not educational. This belief leads to the unfortunate conclusion that, in order to free up time for more productive educational strategies such as direct instruction, we must reduce or eliminate play and play opportunities (Jones, 2003). To counter this trend, early childhood educators and play researchers need to be more vigorous advocates for educational play (Hewit, 2001). This advocacy needs to occur at home, local school and national level.

On the home front, Hirsh-Pasek and Golinkoff (2003, p. 259-260) recommend a "new three R's" for parents who are trying to balance the pressures to boost their young children's achievement with children's need for authentic, playful learning:

- *Reflect*. Ask yourself, Why am I enrolling 4-year-old Johnny in the class? Does he really like (art, yoga, computer science, music, fill in the blank), or do I fell pressure to make sure that Johnny has a leg up on other children his age?...

- *Resist*. It takes courage to resist the forces that tell us that earlier is better….
- *Re-center*….Each time you engage in a teachable moment with your child – each time you play with your child – you are seeing child development in action. You are connecting with you child and have become a more sensitive and responsive parent.

If parents can come to believe in the educational value of play, they will be much less likely to put pressure on teachers and policy makers to remove play from the early childhood curriculum.

At the school level, early childhood teachers can make a valuable contribution to this effort by clearly documenting the learning opportunities that occur during classroom play. As the old saying goes, a picture can be worth a million words. With the advent of digital photography, teachers can take photos that illustrate the literacy learning opportunities in play, such as children reading menus, writing down orders, and using coupon to get reduced rates on meals a restaurant play center. These photos can be displayed on classroom walls and in newsletters sent home to parents. This play documentation can also serve as an assessment tool. For example, samples of play-related writing can be saved in folders or more elaborate 'portfolios' and used to document children's writing development to parents.

At the national level, educators and researchers need to do a better job of disseminating findings that demonstrate that play is means to promote academic achievement (Johnson, 1994). As the studies cited above illustrate, there is a robust body of research supporting the connection between play and early literacy. Research also has highlighted effective play-based teaching strategies, such as games, literacy-enriched play settings and appropriate forms of teacher scaffolding. This research needs to be presented to pre-service and inservice teachers, administrators, and educational policy makers. Books such as *Einstein Never Used Flash Cards* (Hirsh-Pasek & Golinkoff, 2003) are ideal for this purpose. Jim Johnson (1994) recommends we

also utilize radio (e.g., National Public Radio), television and the internet to spread the word about the educational value of play.

Summary

We believe that play can and must hold its central role in early literacy education, even in this era of science and standards. However, this is not going to be an easy task. Even though robust theoretical and research connections exist between play and core early literacy skills and dispositions, there are strong anti-play forces at work – most prominently a pervasive attitude that play is not educational. Overcoming these challenges and biases will require a multi-pronged effort by teachers, teacher educators, and researchers. New blended curricula that integrate multiple forms of instruction with academically-connected play need to be adopted, implemented and evaluated. We also need to improve early childhood teacher education programs so that new teachers are truly play experts, well versed in play theory, play research, and (most important of all) how to use play to help children learn standards-based academic content. Finally, we need to increase our advocacy and marketing of play so that parents, administrators, and policy makers are cognizant of the educational benefits of play and play's impressive research base. Tongue in cheek, Brian Sutton-Smith (1995, p. 283), the famous play theorist, once remarked that play is a "medium for propaganda for one propaedeutic sort or another" And in this instance we gladly use it to argue for the preservation of play in children's early literacy learning – for without it, learning to read and write can be very dreary indeed.

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