

Chapter 1

Prologue

Play = Learning: A Challenge for Parents and Educators

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*Computers are useless. They only
give you answers! Pablo Picasso*

Imagine a world in which children are encouraged to parrot answers, to fill in the blanks and to not go beyond the facts. Imagine a world in which one size fits all (as in today's educational standards) and no size fits any. Madeleine L'Engle (1962) describes just such a world in her classic book, *A Wrinkle in Time*.

Below them the town was laid out in harsh angular patterns. The houses in the outskirts were all exactly alike, small square boxes painted gray... In front of all the houses children were playing. Some were skipping ropes, some were bouncing balls. Meg felt vaguely that something was wrong with their play...

'Look!' Charles Wallace said suddenly. They're skipping and bouncing in rhythm! Everyone's doing it at exactly the same moment.'

This was so. As the skipping rope hit the pavement, so did the ball. As the rope curved over the head of the jumping child, the child with the ball caught the ball.

Down came the ropes. Down came the balls. Over and over again...All in rhythm.

All identical. Like the houses. Like the paths. Like the flowers (p.103).

From the living room to the classroom, children are being increasingly programmed and structured – as are the teachers who teach them. There is little time for play; the focus is on memorization of the “facts.” Indeed play is viewed as a waste of time when more important “work,” the work of memorizing and parroting, could be done. As the pressure on children in school increases, paradoxically their ability to relax and just have fun through play is being restricted.

Today, for example, many schools have reduced or eliminated recess time (Pellegrini and Holmes, Chapter 3). This is unfortunate, since during recess, children engage in rough and tumble play (pouncing, chasing, and wrestling), which is distinct from aggression (Gordon, Kollack-Walker, Akil, Panksepp, 2002). In Finland recess is an important part of the schedule, and children return to classrooms refreshed and ready to learn; indeed, Finnish children score high on reading tests. (Alvarez, 2005). Research finds that rough and tumble play is not only a physical release but “may facilitate friendships and promote cooperative pro-social behaviors and attitudes (Scott & Panksepp, 2003, p. 549). In rats, certain parts of the cortex were more activated in animals that played than those who did not (Gordon et al., 2002). Children who play together learn to work together.

According to a recent report, 25% of class time in the Los Angeles schools are now spent in either assessment or assessment preparation – in having children learn to fill

in the blanks with rote answers. The classrooms that used to display children's work and drawings now devote their walls to "testing tips" designed to help children do well on standardized assessments. The multi-billion dollar educational toy industry sells toys that teach isolated facts to children young enough to push their buttons and ring their bells. There exists a booming tutoring industry for the preschool set so that Johnny can enter *kindergarten* at the head of his class. Schools have either dropped or cut back on creative curricula like music and art. These cultural activities are considered unnecessary flourishes in an educational system that is obsessively focused on core academic topics like reading and math.

According to a recent statement in *The Wall Street Journal*, "President Bush's No Child Left Behind program pushed districts to require more from younger pupils. As a result, in many districts, skills once thought appropriate for first or second graders are being taught in kindergarten, while kindergarten skills have been bumped down to preschool" (Kronholz, 2005, p.B 1). Is it any wonder that preschoolers are being expelled as a disciplinary measure at unprecedented rates (Gilliam, 2005)? Gilliam's national survey of 3898 pre-kindergarten classrooms, reveals that 10.4 percent of teachers reported expelling at least one preschooler within the past 12 months of the study. Rates were found to be highest for older preschoolers and African-Americans. More boys were expelled than were girls. The boys were having more behavioral problems in school. The highest rates for expulsion were found in faith-affiliated centers and for-profit childcare. Are these children being expelled because the school expectations have changed and they have little time for play?

Our living rooms and classrooms have become pressure cookers and children are getting less opportunity to be active physical players. In fact, some have suggested that children suffer from a “nature deficit disorder,” (Louv, 2005) as they spend so little time outside at play.). Is it any wonder that third graders wake up crying and with stomachaches because they know they are to take a high stakes test that day? Parents praise videos like *Baby Einstein* for having beautiful trees, apparently forgetting that these are available for endless inspection, and for free, in the real world. Obesity and childhood hypertension are on the increase in the 0 to 6 sets. The Mayo Clinic web site offers a chilling view on the long term effects of childhood obesity,

Over the past 30 years, the rate of obesity in the US has more than doubled for preschoolers and adolescents, and it has more than tripled for children ages 6 to 11. Obese children get a head start on health problems such as diabetes and heart disease, often carrying these problems into an obese adulthood. ... obesity may soon top smoking as the nation's most preventable cause of death.

(Mayo Clinic web site)

Obesity in children seems an inevitable outcome of the fact that even children under two are spending an average of two hours a day watching television (Rideout, Vandewater, & Wartella, 2003). This does not include the extra 40 minutes a day they spend watching videos. Children as young as 3 months are already viewing television and VCRs (Weber, chapter 9). A report from the American Psychological Society in 2003 tells us that 25% of 6th graders watch 40 or more hours of television per week, effectively turning media viewing into a full-time job. A statement by Anderson, Berkowitz, and Donnerstein et al. (2003) captures the dramatic situation American children find

themselves in, “Children ages 0-6 spend more time on entertainment media than on reading, being read to, and playing outside combined” (p. 100).

The Problem Has No Borders

Children in other Western countries are also playing less with peers and parents. In the past, schools could count on children arriving with some literacy skills that they would have acquired in play with parents and other adults. In England, children are now starting school unable even to recite a simple rhyme. A survey entitled, *Young Children’s Skills on Entry to Education*, administered by the government’s basic skills agency (Smithers, 2003), was given to more than 700 teachers. Teachers claim that half of all children now start school at four or five unable to speak audibly, be understood by others, respond to simple instructions, recognize their own names, or even count to five. Smithers states that learning nursery rhymes on a parent or caregiver’s lap has traditionally been seen as an important first step towards literacy and numeracy skills, as well as key to phonological awareness.

The article laments the lack of adult participation and playful learning in these children’s lives. At the same time, the growth of television and computers seem to serve as substitutes for parental guidance. Several chapters in this volume attest to the importance of parental or teacher guidance in children’s play as a way to foster learning (see for example, Chapters 8, 6, and 5, respectively by Ginsburg, Bellin and Singer, and Berk et al.).

In Ireland, *Ready, Steady, Play* is a program organized in response to the lack of playtime in schools, healthcare, and childcare facilities. Large sums of government monies (one million pounds) have now been allocated to local authorities to expand play facilities. From a conference in London, with researchers from Sweden, Austria, Italy, Australia and Brazil, a strong message emerged about the importance of play to children's lives and learning (Hartmann, 2002). Teachers were trying to encourage more imaginative play in the classrooms. Despite the strong evidence in favor of play and the international attention, teachers in Brazil continue to believe that the classroom is best used for learning only and that the playground is for play.

In a five-country study conducted by LEGO on parents' beliefs about play from France, Germany, Great Britain, Japan, and the United States, 94% of the parents, agreed that time spent playing is time spent learning (LEGO Learning Institute, 2002). Nonetheless, parents felt that more time should be given to cognitive tasks at the *expense of free time* when play occurs. Parents in this study seem confused about whether play is really a way to learn. The same finding emerged in a more recent survey conducted by Fisher-Price, Inc., that asked parent to rank the benefits of play. Parents ranked "learning through play" as number 12 on a list of 14, while "releasing energy" was rated as number 1 (Glick Gryfe, 2005). It seems that many parents do not appreciate that children can learn as they play, and that through play, children are motivated to learn the basic skills they will need for success in school.

As Zigler and Bishop-Josef (Chapter 2) wrote, "play is under siege." As a result, the academic, social, artistic, and creative skills that flow naturally from ordinary,

everyday, unstructured play are also threatened. This book returns play to center stage, flying in the face of trends all around us that minimize and disparage it. This volume reviews the evidence that play, especially guided play, offers a road to learning. Children need play alongside more traditional learning to build social and cognitive skills. In short, the chapters in the volume set forth the evidence that play prepares children to not only be better people, but also to be better prepared to work in what Tom Friedman (2005) calls today's "flat world" where everyone has ready access to the facts.

Florida (2002) estimates that 30% of the workforce now resides in what he calls the "creative class." Even working and service class jobs require the generation of ideas rather than mere physical labor. "The nation's geographic center of gravity has shifted away from traditional industrial regions to new axes of creativity and innovation" (p. 11). In his new book, *A whole new mind: moving from the information age to the conceptual age* (2005), Daniel Pink makes a similar argument. He writes,

The last few decades have belonged to a certain kind of person with a certain kind of mind – computer programmers who could crank code, lawyers who could craft contracts, MBAs who could crunch numbers. But the keys to the kingdom are changing hands. The future belongs to a very different kind of person with a very different kind of mind – creators and empathizers, pattern recognizers and meaning makers. These people – artists, inventors, designers, storytellers, caregivers, consolers, big picture thinkers – will now reap society's richest rewards and share its greatest joys (Pink, 2005)

The world is moving towards an emerging creative class that values conceptual knowledge and original thinking. Ironically, our educational system is going in the

opposite direction, as if we were educating children for the 19th century instead of the 21st. Instead of encouraging creativity, thinking outside the box, or coloring outside the lines, we are requiring that children memorize information, even in the face of the fact that information constantly changes. This is not to say that we do not need to know facts; we do. But the power of knowledge comes in *weaving* those facts together in new and imaginative ways. And facts *change*. We no longer believe the world is flat, or that the element phlogiston makes up the universe, or that ulcers come from stress. This book confronts the prevailing popular “fact” that play is immaterial to children’s development. Play is crucial to children’s mental health and prepares children for school. It offers both social and cognitive advantages for children and the adults they will become.

Why Play is Important to Children’s Emotional Health

Vygotsky said many years ago that play helps children work out the rules for social interaction and allows children to be at their best. Research supports what Vygotsky wrote in 1932, “In play it is as though he were a head taller than himself...”(Vygotsky, 1930–1935/1978, p. 102), as though the child were trying to jump above his normal behavior competencies. Play is important for building social competence and confidence in dealing with peers, a life skill that is essential for functioning in school (Howes, 1998; Raver; Howes & Matheson, 1992; Singer & Singer, 2005) as well as in life on the job.

For children who have difficult life circumstances, emotional problems, or developmental delays, play may be even more critical. Haight, Black, Jacobsen, and Sheridan (Chapter 11) demonstrate how children who have been traumatized can use pretend play with their mothers to work through the effects of the stress. As Haight et al.

wrote, children can gain immeasurably from “constructing meaning from emotionally challenging experiences” (p. ms) through pretend play. Relatedly, children with autism have a limited ability to engage in symbolic play (Priessler, Chapter 12). Research suggests that creating interventions that are based in play hold promise for helping these children overcome some of their social limitations.

Play is also central to self-regulation or children’s ability to manage their own behavior and emotions. As Berk, Mann, and Ogan (Chapter 5) stated, “Self-regulation is central to our conception of what it means to be human—the foundation for choice and decision making, for mastery of higher cognitive processes, and for morality” (p. ms). For example, when a child learns to inhibit her reach to the light socket when told “no” or to delay gratification (dessert is after dinner) or to calm herself when she is upset, she is manifesting the development of self-regulation. Play is the place where children practice these skills.

An example of how this occurs is when children play the role of the teacher in pretend play. To do this, they must adopt another perspective and practice the rules that operate in the classroom. They are also internalizing the words that help them control their own outbursts, as when they tell a ‘pupil’ imperiously to take turns and sit down. When children acting as teacher scold the ‘pupils,’ they are mastering their own reactions to when they were last scolded. Make-believe play is rule-based and children work at following the rules. They also use play as a way to work through their own emotions as demonstrated by one child experiencing trauma (a mother dying of cancer) and another case of a child learning self-control and more adaptive behavior. That little boy fought with other children in school, and behaved aggressively at home (Singer & Singer, 2005).

As Priessler (Chapter 12) indicated, “Pretend play bridges the gap between real events in the changing world and imagination within one’s head” (p. ms). Play seems to serve as a buffer for children who often need to cope with change and digest baffling new experiences. This fact was illustrated in a study on movie viewing. Children exposed to a stressful movie scene were allowed to have a free play period either before or after viewing the film. Both of the groups allowed to play declined on measures of stress and anxiety compared to a group that was not allowed to play (Barnett & Storm, 1981). Even on the first day of preschool, children who played more evidenced less anxiety about their transition (Barnett, 1984).

This message about play holds not only for preschoolers, but also for older children. Middle schoolers are suffering from increased pressure and the lack of downtime needed to absorb the events of the day and regroup their emotions. Research by Luthar and Latendresse (2005) suggests that, “...we need to raise awareness of the potential cost of overscheduled, competitive lifestyles” (p. 52) since even affluent teenagers show serious problems in anxiety, depression, and substance abuse. No one is immune from the effects of missing relaxed family time. Play and unscheduled downtime is central to our emotional well being throughout our lives.

The Good Old Days when Play was Valued

It was not always the case that play was perceived as outmoded and a waste of time for young children. Many theorists wrote about the utility of play for children’s development. Piaget (1951), in particular, viewed play as an adaptive behavior that was instrumental in furthering children’s thinking. Engaging in what Piaget called “functional assimilation”, children might count sets of small objects over and over again,

not because they were told to do so, but because they apparently gained pleasure from consolidating and practicing this burgeoning skill (Ginsburg, chapter 8). For Piaget, and for Vygotsky (see Berk et al, Chapter 5; Bellin & Singer, Chapter 6) play was an opportunity for children to learn more about their world, to stretch to accommodate new ideas, and to foster their imagination.

Despite extensive evidence on the value of play, some began to question its utility when it appeared that Americans were falling behind in education. Zigler and Bishof-Josef (Chapter 2) describe how the launching of the Russian Sputnik in the 1950's can be identified with the time when play began to be repudiated and cognitive skills overemphasized. When Head Start was conceived in 1965 it was seen as a "whole child" program, supporting emotional, cognitive, and physical development, among other areas. It too, began to tip toward a concentration on cognitive achievement. As Zigler and Bishof-Josef point out, assuming that cognitive skills can be considered in isolation, and not intertwined with the physical, social, and emotional systems, "is short-sighted, if not futile" (p. x). What it takes to achieve in school is bound up with a child's emotional and physical status. A hungry child or a child suffering from emotional trauma is unlikely to be able to concentrate on the 3 R's.

In today's world, the pressure on the educational establishment is intense. Teachers and administrators who know that children need to learn playfully and that children learn best in meaningful contexts. Yet, many teachers feel compelled to homogenize and narrow their offerings to be responsive to the testing movement (Christie and Roskos, chapter 4). Kagan and Lowenstein (2004) put it best when they wrote, "A

scan of current literature might easily lead one to believe that the achievement of school readiness through children's play is an oxymoron (p. 59).

What Do the Data Tell Us About the Role of Play in Children's Lives?

The data are incontrovertible. They have been telling the same story throughout the last 40 years of research. When children are in environments where learning is occurring in a meaningful context, where they have choices, and where they are encouraged to follow their interests, learning takes place best (Hirsh-Pasek & Golinkoff, 2003). Ironically, as Hirsh-Pasek and Golinkoff argued, we have adopted a metaphor of the child as 'empty vessel': pour in the facts and the child will passively absorb the material. However, the research tells us exactly the opposite. In preschool, when children are pressured to learn in schools with "academic" as opposed to developmentally appropriate curricula, they report being more anxious and perfectionist (Rescorla, Hyson, & Hirsh-Pasek, 1991) than their more playful peers. They are also no more ahead in first grade in academic achievement. Such programs also have the effect of reducing children's motivation, making them have lower expectations for their academic abilities, less pride in their achievements and more dependent on adults (Stipek, 1995) – regardless of social class. Children who have been schooled to think that there is one right answer, and that learning is memorization, are also dependent on adults for their learning. They have not learned *how to learn*. Ironically, these are the children who we hope will join

the creative class in the 21st century and continue to keep the United States at the forefront of ingenuity and innovation.

On the other hand, there is also evidence that children learn what they are taught. Children who experience “direction instruction” (e.g., Bereiter, 1986) with emphasis on drill-and-practice can learn lessons and even achieve general cognitive gains (Bowan, Donovan, & Burns, 2001). Differences arise in variables that matter for socialization and for instilling a love of learning. Children in the direct instruction programs had higher rates of delinquency, were less willing to help other children, and more likely to experience emotional problems (p. 139). Hart, Yang, Charlesworth, and Burts (2003) confirm these findings in a longitudinal study that directly compared children who received direct instruction with those who received developmentally appropriate pedagogical practices. Results showed that through the third grade, children receiving direct instruction experienced more stress than children receiving developmentally appropriate curricula. Furthermore, stress seemed to play a causal role in Hart et al.’s model as it predicted the appearance of hyperactive and distractible behaviors as well as greater hostility and aggression. Importantly, these findings emerged regardless of gender, race, and socio-economic status. Being placed in a direct instruction classroom also hindered boys’ achievement, mediated by the stress of being in such a classroom. These children grew more slowly in reading (vocabulary and comprehension) and language expression than did their peers in more developmentally appropriate classrooms.

Findings from the Cost Quality study add to the power of developmentally appropriate pedagogy based in play over a “back to basics” pedagogy (Peisner-Feinberg,

Burchenall, Clifford et al., 1998). With a large subject base of 812 children from kindergarten to second grade, Howes and Byler (in preparation) noted that children experiencing developmentally appropriate pedagogy experienced higher levels of academic achievement, scoring higher on receptive language as well as mathematics and reading in second grade. Furthermore, these data defied a common assumption about how poor children learn best. There was no evidence that poor children did better in back-to-basics programs (see also, Peisner-Feinberg, 1999).

In the rush to cram academics into children's heads, more and more schools are eliminating recess. Yet the research data dramatically contradict the practice of removing recess. Research by Pellegrini and Holmes (Chapter 3) shows that play breaks maximize attention to school tasks that involve thinking. In fact, in Finland, a country that exceeds the United States by far in academic achievement, children are given a 15-minute break every hour (Alvarez, 2005). Recess clears the mind. It enables consolidation in memory of what children have just learned and clears the deck so that children can concentrate on academic tasks again.

In sum, treating children like empty vessels whose heads can be filled with knowledge because we select what they will learn and teach it directly, leads to problems in two domains. First, studies show that children in these programs often learn less academically than their peers who are not being taught concepts directly but in a more playful manner. Second, these programs have unintended social consequences, creating students who are less likely to experience empathy with their peers, more likely to show evidence of stress-induced hyperactivity, and more likely to engage in delinquent acts.

Conclusions

What can we do to stem the tide of well-meaning parents who cart their children to endless adult-structured activities believing it will enable their children to achieve their fullest potential? What can we do to encourage debate on the learning strategies that really promote children's learning? We can call attention to the fact that **Play = Learning**. This prologue reviews just the tip of the iceberg of research on the importance of play to diverse areas of children's development. The data that speak to the value of play are presented in the chapters that follow. The evidence is compelling: play promotes learning and guided play is a powerful teaching tool. It is imperative that we not only attend to this message, but that we also take seriously Kagan and Lowenstein's (2004) call to action, "the challenge ahead is not to blithely romanticize or to falsely criticize play; it is to discern the purposes for and the conditions under which play is an optimally useful pedagogical strategy, fully realizing the heterogeneous effects on children's development and their school readiness (p. 590-60). It is in this spirit that this book presents the next generation of findings about play across the spectrum of development.

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