

# **All Work and No Play: How Educational Reforms are Harming Our Preschoolers**

## **Introduction**

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Education in America is undergoing a sweeping reform. Its guiding mantra is 'Standards, Accountability, Testing, and Technology' and its effects reverberate from Ivory Towers through to Head Start programs. At the preschool and kindergarten level, it translates into early academics, 'scripted teaching', deskwork, computer based learning, and a paucity of play. And as a result, a rich multidisciplinary literature demonstrating the critical role of play for cognitive, social, emotional, and ethical development – a literature that was decades in the making - is being ignored.

Remarkably, the current educational reforms are not driven by the findings and recommendations of educators and child development experts, but by politicians and policy makers at the federal, state, and local levels, with the express intention of ensuring America's competitive edge in the new information based economy. This agenda was first articulated in the 1983 *Nation at Risk* report, issued by President Reagan's National Commission on Excellence:

"If only to keep and improve on the slim competitive edge we still retain in world markets, we must dedicate ourselves to the reform of our educational system...Learning is the indispensable investment required for success in the "information age" we are entering". (cited in Kane p. 10).

The 'high-stakes' testing movement and race to 'wire the classroom' were launched by Reagan in 1983, given renewed vigor by President Bush and President Clinton, and have now gained further momentum with George W. Bush's 2001 *No Child Left Behind Act*, which received overwhelming bipartisan support. On January 16, 2003, the current administration announced that it is implementing a standardized assessment of all 4-year-olds in Head Start programs nationwide to assess reading readiness, thus officially delivering 'high-stakes' testing to preschoolers. And *The Early Care and Education Act*, now before Congress, will give bonuses to states that demonstrate that their preschool programs are successfully teaching early literacy skills, necessitating even more academic pressure and wide-scale testing of preschoolers.

### **Testing and Technology: A Failing Grade**

Given that education reform is now spearheaded by politicians and the corporate elite rather than by experts in childhood, it comes as no surprise that the 'accountability' movement, now in its 20<sup>th</sup> year, and its handmaiden, 'the wired classroom' has not only failed to improve education, but indeed, has undermined it. Recent results of the Congressionally mandated *National Assessment of Educational Progress* (NAEP), commonly referred to as the *Nation's Report Card*, which has been assessing school performance for almost 30 years, reveal that states with the *highest* stakes attached to standardized testing are more likely to perform below average on the NAEP, whereas states that give minimum import to standardized tests are more likely to perform above the average. Furthermore, in 1998, the highly acclaimed

Third International Math and Science Study (TIMSS), which compared a half-million students from 41 countries, revealed that U.S. high school seniors were tied for last place in math among developed nations (Sacks, 1999).

### **'Teaching to the Test': Narrower and Shallower**

The impact of tying teachers' and administrators' bonuses, salaries, and job security, state and federal funding of schools, and students' graduation to standardized tests, are that teachers are compelled to 'teach to the tests'. The tests, which are usually multiple choice, merely sample the curriculum, and do not assess depth of understanding, meaningful application of knowledge, or original thinking. And so, the curriculum becomes narrower and shallower, and the teaching methods are increasingly dominated by drills, rote learning, and practice tests. This was demonstrated by James Stigler and his colleagues from UCLA, who analyzed videotapes of Japanese, American, and German high-school math classes as part of the TIMSS assessment (cited in Sacks, 1999). "[R]ote, mechanical, and superficial teaching was far more evident in the American classrooms than in Japan[.]" (p. 133) The Japanese lessons covered much less content in any given class as compared to the American lessons, but did so for the purposes of achieving depth of understanding, and meaningful and creative application of the concepts.

In the race for high test scores, kindergarten students and even preschoolers are now subjected to a similar barrage of academic drill work at an age when they are meant to learn through play, and 'hands-on' experience. If the NAEP and TIMSS results are any indication, these teaching methods are unsuccessful. Yet, they are being introduced at increasingly younger ages, in the vain hope that they'll somehow 'take', if we start young enough.

### **Screens in Preschool: 'Failure to Connect'**

A very similar scenario prevails with respect to computer use in the classroom. As Jane Healy (1998) documents in *Failure to Connect: How Computers Affect Our Children's Minds – and What We Can Do About It*, children with specific handicaps and older children benefit from thoughtful applications of computer and internet technologies. But their use with preschoolers and children in the early grades actually undermine the very skills that they are intended to support: literacy, higher-order thinking, problem solving, and creativity. Even when young children learn to decode the words on the page with the aid of reading software, they are often unable to understand what they have read, let alone apply the knowledge meaningfully; a trait which Healy terms 'alliteracy'. And certainly, the pervasive presence of screens in our culture undermines the desire to read. As Barry Sanders (1995) argues in *A is for Ox*, the proliferation of screen technologies, actually threatens to eradicate literacy.

### **Testing and Technology: The Key to Their Popularity**

And yet, despite these dismal prognoses, the titans of testing and technology remain popular among policy makers and the general public. Given the appalling results of these reforms so far, their appeal is remarkably robust. Why? Perhaps the rhetoric surrounding them contains a piece of the puzzle. Standardized testing and access to the internet are nowadays touted as 'the great levelers in society which will ensure quality education for all'. 'No Excuses' is the motto of the *No Child Left Behind Act*. Parents are told that all children and schools will be held to a

uniform standard of excellence, and given access to the same vast store of information through the internet. And so, whether a child becomes a President or a street person, depends exclusively on her own effort and resolve.

These rhetorical strategies are irresistible on two counts. First, any thoughtful and ethical individual supports, indeed *demand*s high standards and accountability from the public school system. Having co-opted the language of 'standards', it becomes difficult to stand in opposition. Unfortunately, the critical debate about what these standards should be, and how they should be measured is not taking place. Second, the rhetoric of 'standards' embodies the quintessential American Dream. 'Hard work and fair play will liberate us from the bondage of blood lines, social class, and racism'.

The reality however, is that the 'accountability' movement is actually deepening class and race divisions. Profoundly so. As Peter Sacks (1999) noted in *Standardized Minds*:

"... [I]f social engineers had set out to invent a virtually perfect inequality machine, designed to perpetuate class and race divisions, and that appeared to abide by all requisite state and federal laws and regulations, those engineers could do no better than the present-day accountability systems already put to use in American schools." (p. 158)

#### **Standardized Testing: Rooted in Racism**

The use of standardized intelligence tests as tools of racist policies has a long and inglorious history in the USA. Terman, and Brigham, the American Fathers of standardized testing, were overtly racist in their attitudes and agenda (cited in Sacks, 1999). Today, the rhetoric of testing is more 'politically correct', but the overall effects are the same; the measurements we are using to assess children are culturally loaded in favor of white middle and upper-middle class children. (Biddle, cited in Sacks, 1999) The race to 'wire' the classroom often intensifies these problems. When poor school districts feel compelled to overcrowd their classrooms, strip their libraries, eliminate music, art, physical education and playtime in order to pay for computer and internet access - so that their students can take field trips 'on-line' - quality of education is tragically diminished (Cordes & Miller, 2000). As a result, across the nation, poor and minority children in dramatically disproportionate numbers are failing, and made to feel like failures.

#### **Egalitarianism Versus Genetic Determinism**

This sad state of affairs reflects a curious paradox at the heart of American culture. On the one hand, we embrace ideals of egalitarianism and self-determination. On the other hand, we are captivated by the deterministic notion that all of our traits, including personality, intelligence, creativity, and mental health, are chiefly determined by our genes. Genes do contribute significantly to our physical and psychological make-up, but their effects are exquisitely sensitive to environmental input. Nevertheless, the media feeds our insatiable appetite for stories about the genome project, cloning, or the latest claim that gene A is the 'depression' gene and gene B dictates our preference for Pepsi over Coca Cola. And in this climate of striking cultural contradictions, we allow intelligence and achievement scores, which allegedly disclose children's 'true' abilities, to determine their future, regardless of their abilities in the real world. Similarly, we seek to

enhance our genetically programmed brains, which we liken to organic computers. If a child is struggling in the classroom, we are more likely to tinker with their 'hardware' with drugs that increase attention, or lessen anxiety than to address underlying psychological or socioeconomic issues that give rise to their symptoms. Environment have very little role in our gene-driven discourse on learning nowadays, so we have no qualms about holding different children or different school districts to the same 'standard', despite dramatically different circumstances. As a result, the following scenarios become increasingly common:

Mary attends a school that is rich in resources, with small classes, state-of-the-art science labs, yearly textbook upgrades, a beautiful library, weekly field trips, well paid and well educated teachers, and an abundance of parent volunteers. She lives in a safe neighborhood, with lawns that beckon her to play, and has access to the finest medical care. Susan dodges bullets and drug-dealers on her walk home from school. Her school is drafty, overcrowded, and has a high turnover rate of underpaid teachers struggling with dated textbooks. She had to enter hospital as an emergency case before receiving treatment for an infection recently, and her devoted Mother, a single parent, works two full-time minimum wage jobs to make ends meet. At 10pm, Susan still waits anxiously for Mother to return home from work with the noise of the television to bolster her courage and keep her 'company'. Before Mother returns, she warms a can of soup for herself and her little brother. She struggles to make sense of her homework, but fear and loneliness overwhelm her. Mary and her school district performed well above average on the mandatory state end-of-year assessment. Her parents are proud of her test scores and district teachers received handsome bonuses. But Susan missed the cut-off score by a few points and has to repeat her year. Her school district is in desperate need of resources and teachers, but was denied both state and federal aid and placed on notice. Susan feels demoralized. Her self-esteem is shaken. Her Mother tries to enroll her in a neighboring school district with better resources, but is told that they have a waiting list.

Meanwhile, Susan's brother Joseph is four years-old. He is enrolled in a Head Start program. His class is large and support staff has been downsized because a portion of the budget went to the purchase of new computers and reading software. Play has been eliminated from the curriculum to give children like Joseph a 'leg-up' in the academic race. Joseph is small for his age, slightly malnourished, chronically asthmatic, and longs for affection and the opportunity to run freely and play, unfettered by concerns for safety. He struggles to sit still in front of the computer terminal. On the recommendation of his teacher, Joseph is sent to a local clinic where he receives a diagnosis of attention/deficit-hyperactivity disorder (ADHD) and a prescription for Ritalin. He no longer disrupts the class. But by the time Joseph is in middle-school, he has been held back twice, and taking Ritalin for a decade. Lacking hope and incentive to do better, he now hoards and sells Ritalin on the street to buy clothes, CDs or drugs that are more to his liking.

By the logic of 'accountability', Mary and Susan were measured by the same yardstick. So either Susan didn't try hard enough or she is simply less capable than Mary. Clearly though, the root cause of Susan and Joseph's classroom struggles are not genetics, or the absence of 'standards', but poverty, a two-tiered school system,

and the absence of essential family services such as subsidized and regulated daycare and after-school programs, a living wage, and humane medical coverage. And so, under the guise of equality, the system privileges wealthy families, and the corporations who manufacture the testing and computer technologies. Admittedly, the story of Susan and Joseph might have turned out differently. They might have beaten the odds, succeeded academically and gone on to successful careers. Many Susans and Josephs do just that. The issue is not whether it is *possible* to do so, but whether it is morally defensible to require some children to leap over so many additional hurdles along the way.

### **The Information Processing Approach to Education**

Although the current educational climate creates unequal conditions for poor and minority children, it is important to emphasize that it is actually less than optimal for *any and all* children. As I will describe below, the proliferation of computer and internet technologies has altered how we conceptualize learning, and the educational goals we establish for our children to their detriment.

In the 1960s, inspired by breakthroughs in the computer field, psychologists created the 'information processing' model of cognition which likens the mind to a computer. Information processing research analyzes how children manipulate information in order to solve problems, and has generated beneficial learning strategies in circumscribed situations such as approaching a particular content area more efficiently, or supporting children with learning disabilities. Beyond that, however, information processing research has had a profound influence on curriculum development in the average American classroom, eclipsing other approaches to cognition that were once more influential in the field of education including Piaget's (1950) Stage theory and Vygotsky's Sociocultural theory (1978). Piaget's work underscored the value of experiential/discovery learning, and the need to be aware of developmental timelines and individual differences. Vygotsky emphasized that learning is a culturally embedded activity that requires sensitive mentoring.

However, the presence of computers in the classroom, and the pressure to prepare children for standardized tests mesh well with the information processing approach. The Piagetian revolution that transformed the classroom in the 60s and 70s from a place of passive learning to an experiential workshop, and the opportunities for one-on-one mentoring afforded by small class size are rapidly receding into the background and being replaced by 'scripted teaching' and computer programs that prepare children for multiple choice tests.

There is a potent synergy between mechanistic models of the mind and the current technological revolution that numbs our hearts and dulls our minds, so we become increasingly comfortable with the idea that children are 'information processors', or that the mind is an 'organic computer', and that education should have the explicit goal of preparing our children to serve technology-based industries. In the current climate, which is rife with contradictions, and an overweening technocratic agenda that blinds us to our children's real needs, it becomes easy, indeed expedient, to overlook the glaring limitations of a mind-as-machine metaphor.

So let us be clear. In sharp contrast to a computer, a child possesses a *self*, which imbues her with the desire to give her life meaning, purpose and a moral compass. A child is motivated to learn by the desire to be grounded in her family, in her community, and the natural order, and yet, at the same time to express herself and place her own personal stamp on the world. Her thinking is infused with emotion, sensory and bodily-kinesthetic experience, artistry, imagination and soulfulness. And it is through this uniquely *human* prism, in the service of uniquely *human* needs, that she ‘processes information’. It is thus a tragic irony that we idealize the disembodied, emotionless computer and try to teach our children to think according to its operating principles. Unfortunately however, when mere information is what we seek to instill or elicit from our students, the content and context of the information at issue becomes completely secondary to one’s ability to access and manipulate it. Real psychological growth ceases, and the educational system encourages a growing cynicism and despair, evidenced in a recent upsurge in adolescent homicide and suicide attempts.

### **Developmental Stages - The Missing Link**

A significant flaw in the information processing model is that 1) it does not recognize the role of (biologically influenced) stages of development, and 2) it artificially separates cognitive processes from other lines of development. Piaget (1950) taught us that development unfolds over time in recognizable stages that nonetheless allow for considerable individual variation. In each of these stages a child’s understanding of her world is *qualitatively* different, and in the preschool and kindergarten years, children learn optimally through play, ‘hands-on’ experience, artistic expression, and sensitive mentoring. In addition, it is now apparent that all modes of development, including the intellectual, social, emotional, ethical, personality, and physical, are inextricably linked (Greenspan, 1997). We embrace stage theories that pertain to our children’s physical development: children must be able to sit before they can stand, and stand before they can walk etc. We understand that the child who enters puberty at 16 as opposed to 11, is nonetheless normal, and may tower over us five years hence. However, we have no such patience for cognitive abilities. Woe to the child who, for example, comes late to her handedness, and consequently reads and writes at seven, rather than five!

In the absence of sound developmental guidelines to inform curriculum development, we have no qualms about taking a curriculum designed for grade one students and forcing it on preschoolers to ‘boost’ their achievement. At the same time, we demote play, artistic expression, and experiential learning to the status of mere diversions (in between the ‘real’ work contained in worksheets) and substitute ‘face time’ with computers for human mentoring. Then, when students struggle with the content or the format of the curriculum, we bristle with an impressive array of psychiatric labels, and a powerful pharmacopia of psychiatric drugs, when often what is needed, is the patience and sensitivity to allow their development to unfold, and humane teaching methods that do not compartmentalize thought, feeling and social development, as we typically insist on doing.

### **Reclaiming the Language of Standards and Accountability**

The goal of this anthology is to reclaim the language of *standards* and *accountability*, and ground them in principles of child development and humane pedagogy in the service of educating children to be caring, ethical, creative human beings, who prize humanity and nature, and who will be masters rather than servants of the technologies they help to create. This anthology represents the work of educators and academics from the disciplines of neurology, educational philosophy, and psychology, who are concerned about recent trends in education and technology, having dedicated years of their professional lives to studying the nature of learning, the vital role of play, and the impact of computer technologies on children's lives.

### **Organization of the Anthology**

Each of the chapters can be read independently. Brief biographies of the contributors are located at the end of each chapter. The volume is divided thematically, into four parts.

#### **Part I The Power of Play in Early Childhood Education**

The first section examines the current climate of early childhood education in the U.S. and Europe in relation to wider cultural trends. The authors reflect on the nature of a developmentally appropriate preschool curriculum, with an emphasis on the role of play.

In chapter 1, Joan Almon, a renowned Waldorf kindergarten consultant and coordinator of the U.S. branch of the Alliance for Childhood, brings three decades of experience to her observations on the vital role of play in child development. Using vivid case examples, she elucidates the nature of play, and she reviews the benefits of play for social, emotional and intellectual development. Almon ties the 'demise' of play in the classroom and the playground to the influence of screen entertainments, and to Federal legislation that has been a catalyst for early academics and 'scripted teaching'. Almon also explores the relationship between play and health in childhood. The chapter concludes with recommendations on how to foster healthy play in the classroom, and how to advocate for change at the policy level.

Dorothy G. Singer, Senior Research Scientist in the Department of Psychology at Yale University, and Jerome Singer, Professor of Psychology at Yale university, have made a prolific contribution to the literature on play, including *The House of Make-Believe: Children's Play and the Developing Imagination*, and *Make-Believe: Games and Activities for Imaginative Play*. Together with research assistants, Sharon L. Plaskon and Amanda E. Schweder, the Singers present their innovative *Learning Through Play* research, in which teachers and parents of preschoolers were given the tools and training to stimulate healthy symbolic play in chapter 2. The project was developed as a corrective to the dearth of play in preschool curricula, and the abysmal level of school readiness among preschool children. The play intervention resulted in significantly higher test scores of school readiness. The authors include an overview of new Federal and State guidelines that promote early formal academic curricula and compare them with the results of a survey of what teachers and parents regard as essential criteria for preschool programs. They also describe settings in which preschool children are typically spending time. While some settings are exemplary, in a majority of cases, play is viewed as a form of relaxation or entertainment, and is not meaningfully incorporated into the curriculum.

In chapter 3, Christopher Clouder, Director of the European Council for Steiner Waldorf Education and co-founder of the Alliance for Childhood, presents illuminating research on European trends in early childhood education. In striking contrast to the U.S., where formal academics now begin in preschool, several European countries are in the process of *raising* the age at which they begin formal schooling to six or seven in light of research that demonstrates that children have greater academic success when they begin their studies later. While American federal policy emphasizes that education is a tool for economic success, many European policy makers start from the assumption that 'the interests of young children are the interests of the whole of society'. Recent policy statements emphasize that education and care are conjoined, and must be flexible and developmentally appropriate.

### **Part II Wired Classrooms/Wired Brains**

The next section examines the direct and indirect impact of the computer on child development and pedagogy. Increasingly, the computer is used as a classroom tool, or even as a surrogate teacher. But it has also shaped how we *define* intelligence, and our educational goals. In addition, the computer may also be 'hard-wiring' children's brains.

Educational psychologist Jane Healy is an internationally renowned educational consultant, and the author of several books on children's brain development. In chapter 4, she describes the impact of computer use on brain development, and on every facet of psychological functioning including motor coordination, perception, attention, memory, self-concept, imagination, language, and thought in early childhood. She underscores the importance of respecting developmental imperatives, and the critical role of play, physical activity, 'hands-on' learning, the arts, and mentoring as key ingredients for healthy learning environments and healthy brain development.

In chapter 5, Frank Wilson, a clinical professor of Neurology at Stanford University, and author of the Pulitzer Prize nominated book: *The Hand: How its Use Shapes the Brain, Language, and Human Culture*, argues that the computer is at the center of our current educational crisis. He takes us on a 25 million year evolutionary journey to demonstrate that the evolving hand provided the stimulus for changes in brain function, and that the human brain and hand have become an integrated system for perception and action. The hand is a catalyst and an experiential focal point for the organization of the young child's perceptual, motor, cognitive, and creative world which passive screen based learning is threatening to undermine.

### **Part III Building Blocks of Intellectual Development: Emotion and Imagination**

In this section we will see that contemporary theories of intelligence, are the direct heirs of the Enlightenment philosophy of Rene Descartes, who privileged abstract thought that was devoid of emotion and direct experience. And it is this disembodied ideal that is at the root of a system of education built around computerized learning and standardized testing.

In chapter 6, Jeffrey Kane, an Educational Philosopher and Vice President for Academic Affairs at Long Island University and his research assistant, Heather



Carpenter, present biographical sketches of Nobel-prize winning geneticist Barbara McClintock, Albert Einstein, and renowned architect Frank Lloyd Wright. We learn that the intellectual depth and originality of their thought was dependent on their imaginative capacity which they developed through *creative play as children*. Kane and Carpenter demonstrate that not only does child's play not detract from intellectual development, but when children are obligated to work precociously at formal academic lessons, before the imagination has become a "vital, fluid foundation for knowledge, their future ability for original scientific or artistic discovery is compromised".

Stuart Shanker is a professor of Philosophy and Psychology at York University, Canada, a prolific author, and co-director (with Stanley Greenspan) of the *Council of Human Development*. In chapter 7, he presents Greenspan's path finding research which demonstrates that emotions create, organize, and orchestrate many of the mind's most important functions, including intelligence and emotional health. He locates the difficulties we are experiencing in education today in Descartes' rationalist philosophy that reason must govern the 'base emotions'. To this day, cognitive scientists continue to study child development as if a child's emotional development had no intrinsic bearing on cognitive development. "The analogy here to our attitudes towards education is disturbingly apposite. For the fact is that the rationalist model of education is so entrenched in our thinking, that, despite the legion of problems that we are witnessing today, which get worse every year, we cannot conceive of any alternative to the current course we are on, except to pursue it even more aggressively".

#### **Part 4 A Mental Health Crisis Among Our Children: The Rise of Technologies and Demise of Play**

In this section, the authors examine the impact of increasingly stressful and developmentally inappropriate learning environments on children's mental health.

In chapter 8, Thomas Armstrong, educational psychologist and award winning author, presents compelling evidence that current approaches to education that promote screen-time and minimize opportunity for play are exacerbating the attention-deficit/hyperactivity epidemic. The 'rapid-fire' stimulation which children are exposed to increasingly on television and computers require the brain to adapt information processing strategies that become dysfunctional in contexts such as the classroom, in which - at increasingly younger ages - sustained attention is required. Armstrong also presents research that links physical play to frontal lobe development, which supports the capacities for organization, classification, synthesis, reflection and cooperation. Diminished opportunities for rough-and-tumble play, may thus be compromising frontal lobe development, and exacerbating symptoms of hyperactivity, distractibility, and impulsivity.

Eva-Maria Simms, director of the developmental psychology graduate program at Duquesne University, presents a play therapy case in chapter 9, which illustrates the power of play as a tool for psychological healing. This case study also elucidates the central role of play for emotional, social, intellectual, and ethical development, and for the development of selfhood.

In Chapter 10, Sharna Olfman, a clinical psychologist and associate professor of psychology at Point Park College, considers how the current climate in early

childhood education and wider social trends have fostered the recent upsurge in rates of child psychopathology across a wide range of diagnostic categories. She points out that we create educational environments that do not respect children's individuality, introduce concepts before they are ready to master them, deny their need for play, subject them to uniform curricula and assessment, and transform their three dimensional and vividly experiential world, to one dominated by two dimensional 'virtual reality'. Then we label and drug the children who do not fit in. Our preoccupation with the genetic and neurological explanations of mental disorder, and our corresponding indifference to the impact of the environment, speak to our increasingly mechanized conceptualization of human nature. She concludes that we must humanize our classrooms and curricula, and stop diagnosing and drugging children whose creativity, energy and budding intellect render them incapable of adjusting well to the narrow constraints of a technological society.

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