

Teaching young children well: Implications for 21st Century educational policies

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I am delighted to be with you and have an opportunity to talk about early childhood care and education. In this talk, I will address three things. First, I will provide a brief historical perspective on the care and education of young children. Second, I will describe some of the factors that have changed our thinking about the needs of young children and their families. And finally, I will suggest some steps we might take to respond to the challenges we face in improving young children's care and education.

Changes in the world of early childhood

The world has changed a good deal since I began working with young children almost a half century ago. Then, there were two separate systems for the care and education of young children; full-day child care for children of working parents - usually low income children - and half-day nursery schools for middle and upper income children. Today, most early childhood educators agree that the care and education of young children should go hand-in-hand since both are needed if children are to develop and learn well. Programs for young children are coming together; increasingly they have overlapping goals, use the same developmental knowledge base, similar pedagogical methods, and have increasingly integrated systems. So, today, we can talk about the early childhood field as if it is a single entity.

When I began teaching almost fifty years ago hardly any young children were enrolled in center-based programs. In the 1970s, only 13 percent of all 3-year-old and 28 percent of all 4-year-old children attended preschools of some type, a significant but still small portion of the U.S. population. By 1997, however, 65 percent of four year olds and 40 percent of all 3-year-olds were in some form of early childhood program (Bowman, Donovan, & Burns, 2001). This has led many experts to predict that preschool will soon be as ubiquitous as kindergarten even though currently early childhood programs lack the systemic supports from the public schools that kindergartens enjoy.

But this, too, is changing. Twenty years ago few public schools considered early childhood as relevant to their interests. Now there are early childhood specialists in state departments of education, many schools have preschools and standards for achievement, and most are collaborating with Head Start, child care centers, and other early childhood programs to ensure a smooth transition of children into kindergarten.

When Head Start began in 1966, there were few opportunities for parents, particularly low-income parents, to get education and support. Today parent programs are as diverse as Missouri's *Parents As Teachers*, (a program for parents of infants and toddlers to help them prepare their children for school), family support programs (to help parents organize their own lives as well as those of their children), and a literacy program sponsored by pediatricians to get

parents to read to their children. Churches, government agencies, schools, social service agencies and the media are all working to educate and support parents (Powell, 1991).

Colleges and universities have also felt the change. When the Erikson Institute began 35 years ago there were very few higher education institutions that focused on preparing professionals to work with young children and their families. Today almost every college and university has a program to prepare students to work with children from infancy through the preschool-primary years. And finally, Congress has declared that having all young children ready to learn is school should be our first educational goal.

Factors that have changed our thinking

What has changed our thinking so radically? A number of things: changes in our knowledge about child development, changes in our expectations for children - particularly those who traditionally have not done well in school, and changes in family life. These changes have much to say about how we need to care for and educate young children.

Changes in the knowledge base

Probably the most profound change over the past 50 years is in our knowledge base of child development and learning. The evidence has altered our thinking about young children in a number of ways; particularly in how early learning begins, the capacity of young children to learn, the importance of relationships to development, the role of culture in framing development, and the precursors of school success. Let me give you some of the evidence on each of these points. Most of this research can be found in the reports of the National Research Council, *Eager to Learn* (Bowman, Donovan, & Burns, 2001).

One set of findings highlights how early children begin learning. It seems that infants do not just passively wait around for the world to teach them things. At birth they begin to reach out and learn about their world of people, objects, and events, using their natural learning systems. For example, babies usually will suck on a nipple to increase visual stimulation, or turn their head to hear music or speech sounds, or shift their eyes away from a familiar and toward a novel stimulus. Probably the most interesting of these findings is that children as young as a few months notice changes in the number of objects in an array to which they are attending. With so much potential available so early, our challenge is to provide programs that are stimulating, interesting, and responsive to children - beginning at birth.

Another set of findings has pointed to the importance of early learning to subsequent learning. The research in neurobiology, for example, has literally revolutionized our thinking about the brain and learning. Instead of brain's capacity being fully set at birth and the only factor driving learning, we find that as children learn, the learning itself develops or constrains the brain's capacities, as much as the other way around. The classic example of this is that young children only keep the babbling sounds they can make during infancy if these sounds are heard in their language community. If they do not use particular sounds in the language they hear, they lose the capacity to make them. Eventually, as many of us have found out when we have tried to learn a

foreign language later in life, our brains no longer let us hear or make unfamiliar sounds. So, there seem to be critical or sensitive periods for learning different things.

Other studies show that when children know a great deal about a subject they can operate on a higher cognitive level than we would expect. For example, it is generally assumed that young children cannot sort objects using multiple criteria. Yet Gobbo and Chi (Bowman, Donovan, & Burns, 2001) found that children who knew a great deal about dinosaurs were able to demonstrate much higher levels of classification ability than we would expect. So, although Piaget alerted us to the difficulty that young children have taking the perspective of another person, for example, given enough background, children can do some things we used to think they could.

Information like this has made us very aware of the importance of learning during the early years, not because children can never learn if they miss a critical or sensitive time, but because it is so much more difficult to learn later. We also do not know exactly what kinds and quantities of experience children need to maximize their capacity to learn. Children learn different things at different times and new experiences must be within their zone of proximal development if they are to have an effect. Nevertheless, it is clear that early childhood is a time of rapid development and that deprivations and opportunities during this period can have long term effects on children's learning.

Children who have a broad base of experience in domain specific knowledge move more rapidly toward acquiring more complex skills. It seems that when children know something well, they can build on it to learn even more complex ideas. This new research has made it essential to reconsider many traditional beliefs about what young children can and cannot do or learn during their preschool years. Our challenge is to make sure our programs provide children with the kinds of experience that promotes school learning.

Another set of new findings points to the importance of early relationships to development. Children's brains are evidently pre-wired to encourage them to engage in social interchange and infants are primed to gaze at their caregivers face, they respond to cuddling by calming down, and they seek out social interaction and will smile or look sad in response to the expression of their others. But, if no one provides attentive and responsive care, children's capacity to love and care about others doesn't develop. There are numerous examples of this, including studies of hospitalism (Spitz, 1973), Rumanian orphans (Carlson & Earls, 1997), and the effect of depressed mothers on children's development (Sameroff, 1981). All of these studies suggest that if children do not have responsive and caring interactions with caregivers during early childhood, they are apt to have great difficulty forming satisfactory social relationships later.

In addition, positive relationships predict later learning. Presumably this is because children attend better to objects that the caregiver shows interest in, are freer to explore when their caregiver is present, learn to control their feelings better when their caregiver is available, and are more willing to accept help from people they know and care about. Adults, through their caregiving - by looking, touching, talking, feeding, changing clothes - by doing the ordinary things adults do, stimulate children's interest and learning. Through children's enjoyment of social relationships and through social mediation we help children create their intelligence.

And finally, studies have noted the connection between children's relationships with their teachers to how well they learn in school. Children with positive relationships with their preschool teachers are more apt to learn better in kindergarten and children with good relationships with their kindergarten teachers learn to read faster (Pianta & Cox, 1999). During the preschool years, adults bring new experiences to children that challenge and excite them, thereby helping them learn. Our challenge is to provide for children's need for responsive relationships throughout their preschool years.

Another set of research findings has focused us on the role of culture in what and how children think and learn. Children's experiences are defined by cultural definitions of appropriate goals and aspirations as well as by the kinds of experiences that are provided for them. Development and culture are two sides of the same coin, interacting to set parameters for individuals (Bowman & Stott, 1993). For instance, acquiring language is a developmental accomplishment, and it doesn't matter developmentally whether children speak Standard English, Spanish, Black English, or Chinese. So, a developmental capability may have many different forms, all of which represent competence.

Despite the fact that all children have learned a great deal before they come to school, all environments do not prepare children equally well for school. For example, when children are exposed to environments that are rich in verbal language, they are apt to have greater ability to express ideas and learn to read than children who are exposed to more limited language environments are. Children learn what is in their environment to be learned and what they learn prepares them to learn more of similar things.

While developmental competence may be similar across cultures, what children learn is, of course, different. If Spanish, Black English, or Chinese speaking and reading children must operate in an environment where only Standard English is used and they do not have a chance to learn it, then they are at a learning but not developmental disadvantage. Culture becomes a problem when children are in environments that does not recognize the way their culture has taught them to express their developmental capabilities. Our challenge, then, is to structure learning environments so that developmentally normal but culturally different children receive the support they need to learn new things.

Changes in our educational expectations

The second change I want to talk about is our changed expectations for children's achievement, particularly children seen at risk for school success. Our world has changed and it is inevitable that what children need to know and be able to do has changed with it. As the global economy undermined the industrial focus of Americans industry, technology has moved to the forefront and the technological revolution is altering society as dramatically as did the industrial revolutions of the prior age. Today, the mantra of business and government is that children who are not adequately educated cannot participate in the new economy and will become a drain on the society. This means that we must educate poor children as well as rich children, minority as well as majority children, children who speak other languages and dialects as well as those who

speak Standard English, typically developing children and those with handicapping conditions. The challenge for our society is to educate all children.

Not only must we educate all children, they must learn much more and much faster than they used to. High standards and school reform are the hottest buttons on the social agenda of Americans today. But, high educational standards have created a number of concerns and one of the most difficult is the concern about equity. What should we do about the so-called “high risk” children who traditionally have not done well in our schools. Our challenge is to achieve high educational standards without leaving these children behind.

Changes in family life

Lastly, there have been enormous changes in family life. The ideal of mother-care permeated much of the 20th century, although it was not until mid-century that increases in US economic well being made this ideal realizable by the majority of Americans. The increasing ability of American fathers to earn enough to support a non-working wife and children and the willingness of the American public to subsidize non-supported women with young children lasted through almost one-half of the century. However, the last 30 years has seen considerable change in this paradigm. Globalization eroded the industrial base of the American economic structure and the real wages of American men fell. And as they decreased, American women entered the work force, earning the difference between what men earned in the 1950s and what they earned in the 1970s. By the 1980s, as more middle and working class wives moved into the labor force, public support for Aid to Families with Dependent Children declined. And, by the 1990s it was generally accepted that mothers, all mothers, should work if their spouses were unable to support them and their children adequately. As a consequence of these economic and social changes, more young children must spend significant periods of time each day in the care of others.

A parallel imperative is the necessity for school success. As I mentioned earlier, school achievement is no longer optional. Therefore, the early childhood enterprise has the responsibility not only for caring for children and attending to their general development, it is also responsible for making sure that they learn whatever is needed to succeed in school. Our challenge is to provide out-of-home care and education programs that attend both to children’s well-being and their later achievement.

Meeting the challenge

The changes that I have described - in our developmental knowledge base, in school expectations for children at-risk, and in family life - have not connected as well as they should to the programs and policies we arrange for young children. Let me give you some examples of where I see the misfits as well as some ideas about what we might do to remedy these.

It seems to me that our major challenge is to provide programs that are stimulating, interesting, and responsive to children, beginning at birth and continuing through the preschool years. What prevents us from doing this? I suggest the following: a) we have not sufficiently integrated new findings into the practice of early education, b) we have gotten caught up trying to decide whether a practice is developmentally appropriate rather than reflecting on the effect that

practices have on children and our goals for them, c) we have not devoted enough attention to the quality of programs we provide for children at risk, and d), we have not mobilized the American community to understand the importance of the early years.

Implementing the knowledge base.

As a whole, what the research says is that if we want high educational standards, we must teach our children well from the moment they are born, not just from when they reach the schoolhouse door (Shonkoff & Phillips, 2001). Yet, many programs fail to act on the information we have about what is good for young children in preparation for school. Let me give you just a couple of examples. I mentioned the importance of relationships in children's lives. Relationships between children and their teachers/caregivers are built on consistent and responsive interaction. Yet, assigned caregivers in infant programs and looping (keeping children with the same teacher for more than one year) are not widely practiced. Indeed, a preschool teacher recently told me she tried not to have too important a relationship with her children because she did not want to compete with their parents. Well, the research says, "don't worry," kids still prefer their parents. Our programs need to reflect what we know about children: they need discipline, information, and motivation, and underlying all of these qualities is the caring relationship.

Another of the findings is that early care and education in centers - as opposed to homes-is not harmful to children, indeed it may be beneficial. As I noted earlier, there is a lingering belief in the United States that young children, particularly infants, only should be in the care of their mothers. (It is surprising to me that even some early childhood professionals share this belief.) This is despite 20 years of research in the United States that shows that given good quality programs, children's development and learning in centers can be at least as good as that of similar children at home. Further, this belief lingers despite 50 years of experience in European countries that shows that systems of out-of-home child care can provide excellent care and education for children beginning in infancy. Yet, we continue the myth that children are best off at home and that centers are poor substitutes.

Over the past 25 years, we have identified characteristics that define good quality centers, and that result in good outcomes for children. These include small groups, low child to teacher ratios, well-educated, responsive teachers who know child development and early childhood education (Howes, Phillips, & Whitebook, 1992). Yet we continue to sanction programs and arrangements where there are too many children with too few adults, programs where adults have too little education and too little knowledge of child development and early education. Why are we so behind in providing high quality early childhood programs for children who need them? One of the major problems is resources - resources to obtain buildings, resources to buy equipment and materials, resources to train teachers, and most of all, resources to pay teachers for doing a good job. The other reason is that some teachers and caregivers have not thought of their work as a profession, a profession that requires continuing education to be informed about new research and reflection on practice to make good judgments about curricula. I suggest that we need to do some more work in our own profession.

Developmental appropriateness

This question has divided early childhood educators in a similar and equally unproductive way as the reading wars have divided primary grade teachers. The research in the *Eager to Learn* (2001) report indicates that children who have numerous opportunities to learn about literacy, or math, or science, or presumably any subject, can achieve higher levels of mental processing than children who have not had such opportunities. While age plays a role in what and how much children can learn, children should not be limited in their opportunities to learn simply because of their age. Further, the report says that many teaching strategies can work and that good teachers use a range of techniques, including direct instruction.

How do these new findings fit with developmentally appropriate practices? As I am sure many of you know, the National Association for the Education of Young Children recommended that practices used in preschool/primary programs be developmentally appropriate. Unfortunately, there has been considerable confusion about what this means. Many teachers think that to be developmentally appropriate means that you shouldn't directly teach preschoolers or focus on discipline knowledge. They think it means children chose what they want to do and that they should play a lot. Many teachers think it inappropriate for children to have to sit down and listen, to learn the alphabet and numbers, to all go to the bathroom at the same time, or to participate in a large group activity. In reality, it may be developmentally appropriate to do any or all of these things. Developmentally appropriate practices do not tell you exactly what and how to teach. It provides a set of developmental principles, or guidelines, and a number of different activities may respond to those principles. The teacher must decide what is appropriate for a particular child or group of children at a particular time and place.

So, developmental principles are not the same as recipes for practice. Principles provide a framework for thinking about practice; they don't determine the practice itself. Let me give you some examples. One principle of development is that novelty attracts the attention of infants and that they pay attention to novel sounds, visions, and touches. We use this principle with infants when we play peek-a-boo, when we make noises with rattles, when we tickle tummies - all of which can command the baby's attention. But the principle does not tell us if, with a particular child on a particular day, we should play peek-a-boo, or shake the rattle, or tickle a tummy or do something else that is novel and perceptual.

Practice should respond to principles but there may be a number of practices that reflect the same principle. An example from literacy learning is that young children should have an opportunity to understand uses of written language through meaningful activity. Many of our programs will respond to this principle with good books for children to look at like *Make Way For Ducklings*. But it is equally valid to make books out of old magazines, to generate stories and pictures on a computer, or to use photographs to make books. Or, a teacher does not know a good sequence for teaching phonemic or print awareness might purchase a good computer program for children to use. Or, if children do not have much past experience with letters and numbers, she may be more intentional in how she plans such experiences for the children.

Here is another example. It is recommended that we teach the principle of measurement to young children. I was doing an in-service program for teachers recently and told them about these new standards. Some teachers have understood this to mean that children should measure with rulers and tape measures and they thought this would be too hard for four-year-olds because

they do not know their numerals. But tape measures and yardsticks are not necessary for four-year-olds to learn some of the principles of measurement. What can we do instead? Children can measure with their shoes, their fingers, and pieces of string, long blocks and use hatch marks to indicate "how many." My point is that there are many different ways to teach in a developmentally appropriate manner and it is the teacher's responsibility to find the most appropriate way. Developmentally appropriate has to be decided in the context of a program with particular goals for particular children.

Programs for children at risk

In the report, the Prevention of Reading Difficulties (Snow, Burns, & Griffen, 1998), a committee sponsored by of the National Research Council found that preschool experiences can help lessen difficulties and improve the chances that children will learn to read well. During the preschool years the committee recommended among other things that children have a literacy rich environment: with explicit opportunities to observe how literacy tools - paper, pencils, pens, technology - are used to create signs, write narratives, make lists, get information use computers, etc. Another recommendation was that children should receive explicit alphabetic information, including the letter sound relationships. Yet many programs still have not refocused their literacy efforts despite the fact that children without such knowledge will be disadvantaged when they get to school.

We now have a robust research base that shows that programs can successfully alter long-term educational trajectories for low-income children (Campbell & Ramey, 1995). The primary findings of this research are a) interventions should begin as early as possible and b) they should provide a well planned and executed program for children combined with an educational and supportive program for families.

Early intervention programs were developed to give children a leg up, to even the playing field, and they can have enormous consequence for children's later educational achievement, but only if they are planned and carried out correctly (Bowman, 1999). Head Start has a 36-year history of working with low-income children and families. And the research repeatedly has shown that children who attend Head Start do better socially and academically than their peers who have not attended--for a while. However, in order to get the robust results reported by model programs, many low-income children and families need a longer, more intense and more carefully designed and implemented program than is currently available to them. Similarly, inclusion has been shown in model programs to have a salutary effect on children with disabilities and to be neutral or helpful to typically developing children. But these are not the outcomes we get when children are tossed willy-nilly into inclusive classrooms with teachers who are unfamiliar with their conditions or the techniques they need to learn. To provide a high quality classroom for children with disabilities, teachers need both information and resources.

Resources

The last challenge I want to mention is that of obtaining the resources we need to have a high quality system for the care and education of children. I, like many of you, have been working hard in the vineyard of the state legislature to get the resources we need. But I had an eye

opening, an epiphany, last week when I went to two different meetings. One meeting was for the Reinvention of Center Accreditation Project for National Association for the Education of Young Children and the other was for the National Board for Professional Teaching Standards. At both of these meetings the participants noted that until we get the general public behind us, legislators are not going to do much. At both meetings we agreed that it would take a group effort to bring young children to public attention. We need to get parents who need child care, and neurobiologists who can talk about brain development, and school reform advocates who want to improve public education, and business leaders who understand the importance of an educated and reliable work force, and researchers who can show the relationship between good quality care and education and children's development to work together. All these groups need to join early childhood educators in Head Start and child care, in public schools and private organizations, to raise public awareness about the importance of early childhood programs and the kind of resources needed.

Too few people know what we should be doing to improve young children's development and learning. Too few know that teachers of young children are among the lowest paid professionals in America. Too few early childhood teachers have access to tax supported higher education to get the skills and knowledge that they need. Too few parents can afford to pay the full cost of care for their children. And too few people understand the seriousness of the problem. Our challenge is to help the general public understand that teaching young children is not a no-brainer; it is rocket science and it needs resources.

In conclusion, my central message in this address, then, is that if we are to improve children's school achievement we need to understand the importance of the years before school and ensure that all children have the kinds of preschool care and education that supports development and learning. We also need to broaden our vision about what is important for school success to include emotional-social competence, relationships, culture, intellectual curiosity along side academic knowledge and skills. And finally, we need to make sure that teachers have the time and training that they need to educate themselves, to plan good curriculum, and to reflect on their own learning and children's learning.

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