Getting Preschool Right

The push for rigorous prekindergarten education has overlooked the evidence on how young kids really learn best

By Melinda Wenner Moyer

PHOTOGRAPHS BY ANNABEL CLARK
"Scaffolded" play, in which teachers prompt and guide children at play to help them learn, may be uniquely effective in helping preschoolers develop concepts and skills. Two students build together at the Randolph School, a private school, that runs from prekindergarten through fifth grade. High-quality preschool programs balance free-flowing playtime with structured activities and guidance from teachers.

**FAST FACTS**
- **The Problem with Preschool**
  - Poor funding, ill-prepared teachers and a premature emphasis on academics put many pre-K programs out of alignment with what researchers recommend.
  - Many programs sideline recess and exploration in favor of teacher-led instruction; other schools rely too much on unstructured play.
  - Scaffolded play, in which teachers prompt and guide children at play to help them learn, may be uniquely effective in helping preschoolers master new concepts.

The seeds of our country’s vast reconceptualization of preschool were sown in 1983, when President Ronald Reagan’s National Commission on Excellence in Education published a report entitled A Nation at Risk. It asserted, among other things, that if “an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war.” The report demanded that the country dedicate greater resources to education to make public school more rigorous. Fast forward to 2002, with President George W. Bush’s signing of the No Child Left Behind Act (NCLB), and public schools were suddenly being held accountable for educational outcomes in consequential ways. “Passage of NCLB made for the greatest amount of standardized testing this country has ever seen,” says Samuel Meisels, founding executive director of the Buffett Early Childhood Institute at the University of Nebraska.

Accountability itself is not a bad thing; it is important for schools to assess whether their programs are effective. But high-stakes standardized tests are not always reliable, and they can have unintended downstream effects. For one thing, there has been little evidence to suggest that scores on early elemen-
Attendance Numbers by the Preschool
57% of kids from low-income homes attend
77% of kids from high-income homes attend
1 in 3 affluent four-year-olds attend vs. 79% of kids from low-income homes attend.

How Much Is Invested?
$8,147 spent per student in federal Head Start programs
$4,521 average annual per-child spending in state-run preschools
$16,431 per child in Washington, D.C. (the most in the U.S.),
$7,178 per child in Mississippi, which spends the least apart from the nine states that have no public preschools.

Who Gets a High-Quality Start in School?
1 in 3 affluent four-year-olds
1 in 5 poor kids
Rural kids are only half as likely as others to get this exposure.

Public vs. Private
29% of all four-year-olds attend a pre-K run by the state
25% attend a private preschool
9% attend the federal Head Start program

Who Goes?
44% of rural four-year-olds attend vs. 79% of urban and suburban kids
About 60% of preschoolers (at any age) attend a public preprimary school

About 1 in 5 poor kids attend vs. 79% of rural four-year-olds.

Recess is an invaluable part of the pre-K experience, although many programs are cutting unstructured time. Randolph students participate in a spontaneous drumming session during an outdoor break (1). Indoors, a pair of four-year-olds discuss a building project with a teacher (2).

How Do Teachers Fare?
30%–37% Annual turnover among pre-K and child care staff, driven by low wages, limited training and instability in management.

Median preschool educator’s salary $28,570
Median salary for a public elementary school teacher in the U.S. $54,890

Who Goes to a Public Head Start Program? 57% of kids from low-income homes.

Importance of Being Little.
Melinda Wenner Moyer is a science and health writer based in Cold Spring, N.Y. She is a frequent contributor to Scientific American and Scientific American Mind.

Preschool in Other Countries
Average Annual Spending per Preschooler in Other Countries
France $7,507
Luxembourg $19,233
Norway $14,704
Finland $10,477
Turkey $3,172

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For decades researchers have been touting the benefits of free, unstructured play for children. “Play is critical learning in the way that’s developmentally appropriate for young children,” NAECY’s Hedges says. Kids learn about physics when they play with marbles, levers and ramps; they learn about math and geometry when they play with blocks. Make believe teaches self-regulation. If you are playing the patient and not the doctor, you do not get to use the stethoscope, even if you really want to.

But the science on play has evolved in recent years, and today many researchers believe that play can be even more educational for young kids when it’s not free and unstructured but rather when it is guided by skilled adults. “Good teachers set up play experiences, a variety of them,” Hedges says. “When you see there’s a time to introduce complexity to their play and enrich that for them—either verbally or through getting down and playing with them—you do that.”

Free play certainly has a time and a place, scientists say, but it also has limits—when similarly aged kids play together, they can get into a rut and act out scenarios over and over again. I saw this happen when I visited a preschool in Westchester County, New York. The teachers never engaged with the students while they played, and after a while some of the play routines turned stale, and the kids lost interest.

Scaffolded play is more important and useful than it used to be, researchers say, because kids are not having the same types of rich play experiences that they had in decades past. Generations ago kids spent hours a day outside playing with mixed-age groups of neighborhood children. The oldest boys and girls modeled and taught the younger ones more sophisticated forms of play. Today such romps are much less frequent because of parental safety concerns and the takeover of more structured activities such as sports and music lessons. When kids do play, it is typically with kids their own age, who do not provide the same prompts and challenges. But teachers can.

During recess, one Randolph preschool student explained that she was making “sand smoothies” for anyone who might be hungry. A nearby teacher piped up and asked how much they cost, prompting a discussion about money and math.

Research suggests these kinds of play prompts help kids learn important concepts. In a 2016 study, Trivette-Smith and his colleagues recorded interactions between 47 teacher-student pairs in preschool and found that the students whose teachers scaffolded their play by introducing mathematical ideas and discussions later scored better on tests that measure math ability. “We have found that interactions that are respectful to children’s play but enhance children’s thinking about mathematics are real- ly powerful and lead to all kinds of positive outcomes,” he says.

In a 2013 study, Johns Hopkins University psychologist Kelly Fisher, then at Temple, and her colleagues divided 70 children ages four and five into three groups. Some were given the opportunity to learn about geometric shapes through guided play, and others played freely with the shapes. A third group was taught about the shapes using direct instruction. The kids who engaged in the guided play learned the most, by far, about the shapes, and they remembered what they had learned a week later. Kids in the direct instruction and free-play groups, in contrast, had trouble recognizing shapes presented in different ways and orientations.

As the researchers concluded, the guided play “helps direct children’s attention to key defining shape features and prompts deeper conceptual processing.”

Guided play has also been shown to help with literacy. In a 2010 study, researchers at the University of Delaware had two groups of low-income preschoolers participate in a vocabulary activity twice a week for 30 minutes. One group was taught two vocabulary words using direct instruction the entire time. The teachers in this situation read a book containing the words, showed the children the words in the book, explained what they meant, asked the kids to repeat the definition and did a word-related action to help solidify their understanding. A second group was given similar direct instruction for 20 minutes and then participated in a guided-play activity for 10 minutes related to the two new words. Furthermore, when the kids were learning the word “bake,” they were given a mixing bowl, oven mitt and timer and told to play-bake.

After four months, the researchers tested the preschool students. The children who participated in the guided play performed much better on standardized vocabulary tests designed to assess verbal ability: 62.5 percent of the kids who did guided play met age-appropriate benchmarks compared with only 44 percent of those who got only direct instruction.

Scaffolded play encourages kids to engage with materials and concepts in meaningful ways—far more than when they hear a lecture. Indeed, many researchers note that child-directed activities that are not technically "play" can still be highly educational. “Children can be engaged in, for example, looking at a pile of sand or a leaf under a microscope,” Yale’s Christakis says. “It’s not necessarily play, but it’s very engaging and requires active, hands-on and usually social experiences.”

Of course, ample play or exploratory time is not all that a preschool classroom needs, either—more important, in fact, may be the warmth and emotional responsiveness of the teacher. This is often lacking in programs with poor resources. At a private preschool I visited outside of New York City, one that allowed hours of free play each day, the lead teacher did not invite her students to speak up or share thoughts during circle time or when she was trying to teach new concepts. One child who wanted to add her perspective to a discussion was admonished and told to be quiet. At snack time a boy who said he did not like his snack was told that he was not “being nice.”

In a 2001 study, researchers at the University of Virginia found that the quality of children’s relationships with their kindergarten teacher predicted various academic and behavioral outcomes in eighth grade. “Whatever happens in children’s first...
Educational experiences sets the stage for receptivity for what comes later—so if you inherit a nurturing and interesting environment in preschool, that’s what school becomes for you,” Bank Street’s Koplow says. Randolph’s students clearly adored their teachers, and it was not hard to see why—the teachers were all encouraging, responsive, playful and warm. There were more hugs in one day than you could count.

Valuing the Invaluable

Considering everything that goes into making preschools good, it is not too surprising that our country has so few of them. High-quality curricula require a lot of money and planning to create; they take a tremendous amount of skill to implement. Yet “it’s hard to demand a lot of education and preparation when you’re going to earn a salary as low as preschool teachers [get],” Stipek says. Indeed, the median preschool salary in the U.S. is $28,570, according to a June 2016 report co-published by the U.S. Department of Education and the U.S. Department of Health and Human Services. Janitors and hairdressers are paid more.

Why are these crucial jobs—roles that shape the lives of our future generations—so underpaid? In large part, Nebraska’s Meisels blames sexism: 97 percent of preschool teachers are women, so it is “seen to be women’s work, and—I hate to say it—even unskilled work,” he says. In fact, as of 2015, 16 states did not require their preschool teachers to have bachelor’s degrees. And four of those states—Texas, Florida, Arizona and Massachusetts—did not require them to have specialized training in early childhood education.

Preschool could be a way to help every American child, regardless of background, reach his or her fullest potential. But first, researchers say, the country needs to stop valuing universal preschool in and of itself and recognize that it is only high-quality preschool that can accomplish this feat. Then the country needs to be honest about what separates the good from the bad. We need to invest much more richly in our preschool workforce, understand the research on how young children learn, and stop worrying so much about tests and other useless proxies. It is time to put aside the worksheets and curriculum kits and let our nation’s preschoolers learn the way they do best—by engaging meaningfully with others and the world around them.

MORE TO EXPLORE

- National Association for the Education of Young Children: www.naeyc.org
- From Our Archives
- The Serious Need for Play. Melinda Wenner Moyer; February/March 2009.