Avoiding the “Poverty Trap”

Poverty is a problem in America, and it is a more serious problem here than in many other nations including some with average incomes considerably below ours. However, it is not the only problem in America, nor is it the sole cause or even most important cause of our student achievement problem. Nevertheless, our debates about education policy and education reform typically focus on reducing the “achievement gap” between rich and poor. While this is an admirable goal, focusing on the achievement gap as the primary problem is a mistake —conceptually, practically, and politically.

The conceptual mistake is to confuse the federal poverty line with a real and meaningful distinction that defines two clearly different populations. The federal poverty line is an artificial cutoff that many experts find unsatisfactory.

In reality, there is no sharp differentiation in school readiness or later educational success between those above and below the poverty line; instead there is a strong linear gradient along which school readiness, achievement, and high school graduation rates increase with income. There is no clear point at which risk for failure sharply changes.

The practical mistake is to design education reforms to focus on poverty and the achievement gap by providing additional resources and programs only to children in families below an arbitrary income cutoff. This is how most government programs for young children are designed, including child care assistance, Head Start, Early Head Start, and many state pre-K programs.

Children move in and out of poverty. Programs can either frequently re-certify eligibility, bouncing children in and out of programs, or they can provide long-term services to children who happened to be poor at time of enrollment while failing to serve children who become poor later.

Moving the cut-off up to 130 or 185 percent of the poverty line makes the problem smaller but mostly just pushes it up the income ladder. As a result we fail to prevent or treat most of the problem. Most school failures and high school dropouts are accounted for by children in middle-income families. Similarly, most children who are poorly prepared when starting school, whether we look at cognitive or social development, are from middle-income families.

The political mistake is to create government programs that serve only low-income families and then tax the rest of the population to pay for them. It seems that this is just the tack taken by the Obama administration and Congress. It is a sharp departure from the rhetoric of a political campaign that captured the center by consistently talking about government serving all Americans, including quality preschool education for all. Yet, the legislative agenda has been quite different with large increases in funding passed for means-tested programs (Head Start, Early Head Start, and child care assistance), but nothing for children in middle-income families. The Early Learning Challenge Fund legislation making its way through Congress is similarly limited to improving services only for low-income children.

While some have suggested that one lesson from the 2009 elections is that voters are allergic to higher taxes, I would suggest that the lesson is slightly different. Voters are particularly opposed to higher taxes viewed as paying for programs for which they will never be eligible—especially if they believe government is not trying to help them with their problems.

So I am suggesting that pre-K for all children is not only a better policy than targeted preschool education but it is also likely to be better politics.

W. Steven Barnett
Co-Director, NIEER

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2010 Will Be a Tough Year for Pre-K in Many States

Tight State Budgets Threaten Preschool Progress

No doubt, the sour economy has had an effect on many things—from belt tightening and bailouts to stay-at-home vacations and stimulus packages. When it comes to state budgets, preschool education is one of many areas where the funding progress seen in recent years has taken a considerable blow. According to Votes Count: Legislative Action on Pre-K Fiscal Year 2010, a report from Pre-K Now, total state spending for FY 2010 will be $5.3 billion, about one percent higher than in 2009. Beyond the national total, however, lie serious setbacks.

Even though revenues had been decreasing for some time, most states had been holding the line when it comes to pre-K funding. In June 2009, the National Conference of State Legislatures (NCSL) reported that $651 million in new money for early care and education was allocated by states in FY 2009, despite budget shortfalls and revenue declines. However, the mood shifted in a number of states when finances deteriorated even further and governors and lawmakers found themselves making tougher choices than they ever imagined they would when crafting FY 2010 budgets. Even though states took advantage of federal stimulus funds to soften budget cuts, education, including state pre-K, took cuts, received no funding increases, or saw small increases with planned expansions scaled back.

Ten states, many with well-established programs, decreased funding from FY 2009 levels: Connecticut, Illinois, Louisiana, Massachusetts, Michigan, New York, North Carolina, Ohio, South Carolina, and Washington. The rust-belt states were particularly hard hit. Ohio eliminated the Early Learning Initiative, its higher quality program launched in 2005 to raise school readiness through provision of full-day, year-round pre-K for children of working families. Illinois, which made national headlines in recent years for its aggressive pursuit of preschool for all 3- and 4-year-olds, cut funding by 10 percent but then saw more than half of the cut restored by the governor. Michigan cut state pre-K by 7 percent and added a provision to the budget enabling school districts to use their state pre-K funds to make up for cuts in K-12 education. As a result, experts there predict pre-K enrollments will decline more than 7 percent.

Six states left pre-K funding at essentially the same levels as 2009: Delaware, Kentucky, Minnesota, Missouri, Nevada, and Pennsylvania. Even though flat funding exposes programs to reductions in resources due to inflation, many leaders regard preservation of the 2009 funding levels as a political victory in such difficult times. Pennsylvania Governor Ed Rendell and the state legislature remained in negotiations more than 100 days after budget deadline in order to get a budget that didn’t cut funding for the Pre-K Counts program. Delays in crafting budgets in Pennsylvania and Michigan forced parents of children in state-funded preschool programs to scramble to find alternate schooling or child care arrangements when some programs didn’t start up due to lack of funding.

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Even though flat funding exposes programs to reductions in resources due to inflation, many leaders regard preservation of the 2009 funding levels as a political victory in such difficult times.

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The federal stimulus program played a key role in a number of states. Florida, facing a budget shortfall of more than 27 percent, used stimulus dollars to increase its Voluntary Prekindergarten funding by more than 4 percent and serve more children. However, per-child spending there decreased for FY 2010. While all the news is not bleak—Pre-K Now reports that 23 states increased funding for state pre-K—there were states where planned expansions have been on hold. The first phase of New Jersey’s planned expansion of state-funded preschool was cut from the budget. In Texas, the governor vetoed legislation that would have set new quality standards for pre-K, including teacher training and class-size limits (See page 9).

NIEER Co-Director Steve Barnett notes that some states responded to budget shortfalls by reducing funding per child and supports for quality, like professional development. “Legislators in North Carolina sought to dismantle the state’s top quality More at Four program and replace it with child care. Until the public and their elected officials insist on treating pre-K like real education, as they do in states like Oklahoma and West Virginia, legislators will continue to tell young children, ‘Sorry you can’t go to school this year because we don’t have the money,’” he says. “That is inconceivable for kindergarten or third grade. It doesn’t make sense for pre-K either.”
Let’s face it: Math and science are about more than counting and recognizing shapes, even for 3- and 4-year-olds! The pre-K crowd is curious about exploring everyday math and science and comes to preschool armed with basic concepts. Young children create patterns with different colored materials and build towers with blocks, noting that one tower is taller than the other. They question where puppies come from and observe that people have different color eyes and come up with explanations for the difference. These early explorations and engagement in associated thinking processes serve as foundations for learning as children continue toward more formal understandings.

Yet opportunities for young children to learn math are often limited to memorizing the number words in sequence up to 20 and counting objects. Some teachers also encourage children to identify patterns or basic shapes in the environment, such as squares and circles. Similarly, opportunities to explore science concepts are provided occasionally but are rarely available on a daily basis or integrated into daily activities.

Evidence continues to mount, however, that this is not enough to help children learn the skills that will serve them best in elementary school and beyond. Most recently, it comes by way of the new report from the National Assessment of Education Progress showing that the nation’s fourth grade math scores have remained essentially unchanged since 2007.

This reinforces the need for policymakers to heed what NIEER recommends in its March 2009 brief Mathematics and Science in Preschool: Policies and Practice and to spend quality time becoming familiar with the National Research Council’s comprehensive July 2009 report Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity.

The NRC report points to the emphasis placed on literacy in recent years and research showing that pre-K teachers are less comfortable teaching math and science as factors contributing to the lag in support for math. Whatever the case, there is a growing sense that American children should be better grounded in these critical domains. One reason is the poor performance American high school students perennially turn in on math and science tests relative to their peers in most developed countries. Another is research pointing to the larger role played by early math skills in later school success than previously thought.

An analysis of six long-term studies by Northwestern University’s Greg Duncan and colleagues found early math knowledge to be the most powerful predictor of later learning. In fact, early math was a more powerful predictor of later reading achievement than early reading was of later math achievement.

While interpretations of these findings continue to be debated, few argue that concentrating more on math and science in pre-K isn’t needed. It’s one thing, however, to be aware that math and science should rate a higher priority and quite another to effectively capitalize on children’s innate interest in these areas of learning with appropriate teaching strategies and teacher support.

Preschool presents an ideal opportunity not only to expand children’s education in math and science but also to engage them in ways that foster a lifelong enjoyment of these areas of learning. Kids are primed to learn math before they arrive in pre-K. Research from Rochel Gelman at Rutgers University and many others shows that young children are able to develop number knowledge even before they know the

Preschoolers will use math and science-related thinking to solve problems—even though they may not be aware they are doing so.
words (one, two, three) that correspond with the numbers. Research demonstrates that children spend much of their day engaged in activities that support mathematical thinking. Views that young children are “empty vessels” when it comes to early math and science are outdated and no longer supported by research.

Kimberly Brenneman, assistant research professor at NIEER and co-author of NIEER’s math and science policy brief, says, “Given the opportunity, preschoolers will use math and science-related thinking to solve problems even though they may not be aware they are doing so.” She says high-quality pre-K classrooms support math and science by providing experiences that encourage numerical reasoning and lead to investigations of objects by considering their sizes, quantities, measurements, spatial relationships, and various other aspects. Children engage in explorations of science ideas and content, and skilled teachers interact with them in intentional ways to help them extend their knowledge and reasoning.

The NRC report also underscores the importance of intentional teaching in which a teacher adapts instruction to different learning contexts that include group instruction and child-initiated play. They say too many pre-K classrooms limit math instruction to rote number knowledge and counting, and very little time is spent even on that poor instruction. Studies have shown anywhere from 8 to 15 percent of the instructional day is spent on math or science, which is much less than the time spent teaching language and reading.

NIEER research project coordinator Judi Stevenson-Boyd, also a co-author of NIEER’s math and science brief, says much remains to be done to strengthen teacher preparation programs before this will be remedied. Currently, even four-year degree programs in early childhood education rarely include coursework in early childhood math or science. Once teachers are in the classroom, access to professional development that supports quality instruction in these domains is often limited. “What’s needed most urgently in this field is more comprehensive instruction and support for both pre-service teachers and those already in the classroom,” she says.

Stevenson-Boyd and others at NIEER are working on a professional development initiative aimed at increasing teacher knowledge of and appreciation for preschool math and science to improve learning environments and teaching practices, and increase confidence with teaching math and science. Key components of the effort will be describing trajectories of development, providing examples of how children reason in these domains, and allowing teachers to analyze and discuss video of children’s thinking and high-quality teacher-child interactions.

NIEER has also designed the Preschool Rating Instrument for Science and Mathematics (PRISM), a classroom observation tool that measures the quality of math and science materials and teaching interactions. The PRISM is used to assess the strengths and weaknesses of a program and to indicate areas for improvement. A related self-assessment is designed to help educators assess and improve their own teaching practices by increasing their focus on the specific ways their students reason about mathematics and science.

The question is no longer whether children should be taught math and science in preschool. Research has established mathematics and science as essential components of a comprehensive, high-quality early education program. Evidence is accruing that early success in mathematics contributes to later positive learning outcomes. This means we can no longer accept mediocre professional training and preparation and lackluster classroom and teaching supports for educators of young children. Teachers need to be prepared by their professional training to better understand children’s mathematical development and competence and to learn best methods for encouraging and extending children’s learning. If we want to get good news from future NAEP reports, the place to start is the preschool classroom.

### National Research Council Recommendations

The National Research Council report, *Mathematics Learning in Early Childhood: Paths Toward Excellence and Equity*, makes the following nine recommendations:

1. A coordinated national early childhood mathematics initiative should be put in place to improve math teaching and learning for all children ages 3 to 6.
2. Math experiences in early childhood settings should concentrate on a) number (which includes numerical operations and relations) and b) geometry, spatial relations, and measurement with more math learning time devoted to number than to other topics.
3. All early childhood programs should provide high-quality math curricula and instruction.
4. States should develop or revise their early childhood learning standards or guidelines to reflect the teaching-learning paths described in the report.
5. Curriculum developers and publishers should base their materials on the principles and teaching-learning paths described in the report.
6. An essential component of a coordinated national early childhood math initiative is the provision of professional development to early childhood teachers.
7. Coursework and practicum requirements for early childhood educators should be changed to reflect an increased emphasis on children’s math.
8. Early childhood education partnerships should be formed between family and community programs so that they are equipped to work together in promoting children’s math.
9. More informal programming, curricular resources, software and other media should be developed to use in supporting young children’s math learning in such settings as homes, community centers, libraries, and museums.
What Many Don’t Know About Early Literacy

A poll from the Pearson Foundation found that three-quarters of Americans assume that even if children enter kindergarten not ready for school, they will acquire the necessary literacy skills in elementary school to catch up with their peers. However, research shows that children who enter kindergarten behind are three to four times more likely to drop out of school when they get older. While the vast majority of those polled acknowledged that early childhood illiteracy is a problem, they did not recognize that reading to 3- to 5-year-olds can have significant impacts on children’s academic success.

“It’s common to underestimate the importance of early literacy experiences for young children’s later language and literacy development, especially those experiences before the age of 3,” says Shannon Ayers, an assistant research professor at NIEER and a specialist on early literacy. “Experiences of a caregiver cooing back at an infant provide the basis for conversation turn taking, and singing lullabies and silly rhyming songs provide experiences with the cadence of language,” she adds. “Lap reading and talking about stories and personal experiences with children offers exposure to story structure, print, and language (vocabulary development) in a comfortable, loving way that will provide the foundation for later learning.”

NIEER discusses literacy in the preschool classroom and its link to academic and lifelong achievement in the policy brief Early Literacy: Policy and Practice in the Preschool Years.

Georgia to Finance Pre-K Teachers’ Education

In late October, Bright from the Start, the Georgia Department of Early Care and Learning, established a new program providing financial support for pre-K teachers to further their education by obtaining a Child Development Associate (CDA) or other early childhood and education (ECE) credential. The program, the First-time Incentive to Raise Standards for Teachers (FIRST) Program, is made available through funding allocated from the American Recovery and Reinvestment Act of 2009. The program will provide $1,200 each to 3,400 pre-K professionals who earn a CDA or other ECE credential for the first time between September 1, 2009, and February 28, 2011.

Among other things, eligibility criteria include working in a child care learning center or group day care home licensed by Bright from the Start or the Department of Defense, working in a registered family day care home, or working in a state-funded Georgia Pre-K program. The FIRST Program will be managed by Care Solutions, Inc., an Atlanta-based management consulting firm.
New Oversight for California’s Pre-K System

California took a step toward improving its pre-K system by creating the California State Advisory Council on Early Childhood Education and Care. The new council will coordinate federal, state and local investments in early childhood education and collaborate with existing programs to develop a data system for continuous program improvement.

Establishing the council puts the state in a position to compete for federal funding, including grants from the America Recovery and Reinvestment Act of 2009 for states to develop and implement plans established by state early learning councils. In addition, funds from the Early Learning Challenge Fund, if passed, are likely to go to states with early childhood councils.

Last year, California established the Early Learning Quality Improvement System (ELQIS) committee to develop an early learning quality rating system and propose other recommendations for improving quality. The ELQIS committee will now be an official committee of the California State Advisory Council on Early Childhood Education and Care.

Michigan Creates Funding Dilemma for Pre-K

Michigan’s long-delayed fiscal year 2010 budget cut funding for the Great Start Readiness Program (GSRP). Although the portion that’s formula-funded remained the same as FY 2009 at $88.1 million, the portion that is competitively funded was reduced from $15 million to $7.5 million. That’s a big hit, especially considering those funds had gone to Head Start and other providers serving children most at risk of school failure.

Then the legislature created more uncertainty by enabling districts to opt out of providing formula-funded GSRP altogether and apply the pre-K funds to shortfalls in K-12 education. That will be a temptation for many districts since they received a $292 per-pupil reduction in K-12 funding. The decision by Michigan’s leaders to include this provision was intended to provide districts flexibility in difficult circumstances. However, in early education circles it looks more like a “stealth incentive” to chip away at preschool education.

Lindy Buch, director of Michigan’s Office of Early Childhood Education and Family Services, says that getting a handle on the number of districts intending to apply for flexibility is proving difficult because of the time needed and cost of re-programming the state’s electronic grants system to include this information.

ELL Working Group Recommends Ways to Invest Stimulus Dollars

The 14-member English Language Learner Working Group, including NIEER Co-Directors Steve Barnett and Ellen Frede, released a set of recommendations outlining ways that stimulus money from the American Recovery and Reinvestment Act can be used to address the needs of ELL children. The group targets specific opportunities for improving ELL outcomes through allocations to Title I, IDEA special education, technology, data systems, teacher grants, early childhood education, the National Science Foundation, and state stabilization grants. Stimulus funding represents a rare opportunity to rapidly expand professional development for teachers in ELL classrooms and align early care and education programs more closely with the needs of ELLs. The recommendations can be found online at: http://nieer.org/pdf/ELL-stimulus-summary.pdf.
Recent national emphasis on accountability has stimulated a movement in early childhood toward greater use of academic curricula and standardized testing, which provide readily quantifiable results. Because this movement appears to be gaining momentum, the message of this book remains current: “The educational establishment has stopped admiring the stunning originality of its youngest students, preferring a list of numerical and alphabetical achievement goals” (p. 33). As a result, kindergartens and preschools have become places in which play is decreasingly valued as a key piece of teaching and learning.

The main concern appears to be that children seem less prepared and more at risk, so the solution is to move toward a more dependable, predictable curriculum. But Paley asks, in essence, which came first, the chicken or the egg? Has too much time spent in play led to more children being unprepared or are more children unprepared because they aren’t given enough time to play? Paley asserts that an increased focus on learning through workbooks and computers places us in danger of “delegitimizing mankind’s oldest and best-used learning tool” (p. 8). She laments the rapid disappearance of time spent in play and defends the role of fantasy play in the social and cognitive development of young children.

An early childhood educator for almost 40 years, Paley has accumulated decades of evidence demonstrating not only the importance but the critical role of play as the path through which children learn. This book is not just about the value of “play” or “free play” but specifically fantasy play, in which children create imaginary scenarios and act them out, develop and follow specific rules, and adapt or change roles to fit the occasion. The value of including this type of play in a school day is regularly questioned by school administrators and parents but is fervently defended by teachers who have discovered how much children learn and how much can be learned about children as they play. Paley is perhaps the most fervent of these defenders, and she is discouraged by the loss of play in children’s lives today. Where play was once considered the main work of children, it is now seen as a deterrent to academic achievement.

Written from the perspective of an educator who is herself developing a greater appreciation for children’s fantasy play, Paley takes us on a journey through time as she shares stories of preschool and kindergarten children from multiple generations. Without references to which time period the stories were from, it would be difficult to tell, only because children today still play at being daddies and mommies, princesses and monsters, doctors and bus drivers, just as their parents and grandparents did before them. The names of their superheroes may have changed, but the intensity of their imaginations has not. Paley describes all children as, “natural-born storytellers who created literature as easily as I turned the pages of a book” (p. 16).

Paley views fantasy play as the “glue that binds together all other pursuits, including the early teaching of reading and writing skills” (p. 8). She shares Vygotsky’s view of play, which is that children rise above themselves as they play, becoming more than their average selves. The stories in this book demonstrate this process, as each chapter shares the experiences of a child or group of children as they create imaginary roles for themselves that allow them to share their thoughts and feelings and communicate ideas they otherwise may have had difficulty expressing. When children are allowed to imagine freely, their minds are primed to engage new ideas. This is where the value of the process lies. Paley understands the importance of process while solving a math problem or conducting a scientific experiment, but wonders why the same value is not placed on the process of play. Her approach to play is an attempt to honor that process. She encourages teachers to provide children the time to play, to stop and listen to and record their stories, and interpret these stories to find the deeper meaning behind them.

Each chapter of this book provides simple, yet powerful testimony to the fact that fantasy play is in fact work and allows children to construct meaning in their worlds. This book is a pleasure to read and should be on the bookshelves of all teachers of young children. It also provides valuable insights for parents by interpreting pretend play in a way that will help them see the benefits of their children playing at home and at school. The first step honoring the process of play is believing in its potential, which will ultimately allow both teachers and children to stand tall above their ordinary selves.

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Vivian Gussin Paley
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A Teacher’s Resolve: Texas Rep. Diane Patrick

Many states confronting fiscal deficits have put pre-K expansion on hold or cut services. Texas, with its energy-rich economic base, was almost an exception. Last year, the Texas Legislature approved HB 130, a bill providing $300 million to expand full-day pre-K to 7,000 more kids and improve quality by reducing child-adult classroom ratios and phasing in higher teacher qualifications. In a move that surprised many, Governor Rick Perry vetoed the bill even though it enjoyed the broadest bipartisan support of any bill in the Legislature and was sponsored by fellow Republican Diane Patrick. As a result, pre-K’s funding increase was cut to $25 million. Preschool Matters asked Representative Patrick, a former teacher, what she thinks about preschool education in Texas and the chances of revisiting her bill.

Q: How did you come to be interested in preschool education?
A: I have had a lifelong interest in public education, having graduated from college and started teaching elementary school at the age of 20. Later, after 16 years of elected public service on the local and state school boards, I completed my Ph.D. and taught at the University of Texas at Arlington in the College of Education. Over the years, I realized that developing a child’s potential starts with high-quality early childhood education.

Q: What were the critical elements, as far as pre-K is concerned, in HB 130?
A: It provided optional, fully funded, full-day pre-K for currently eligible students, which includes economically disadvantaged kids, English Language Learners, children of the homeless, and children from military families. It called for pupil-to-teacher ratios of 22 to 1, pupil-to-staff ratios of 11 to 1, and certified teachers. There were curriculum and assessment components as well.

Q: How did you manage to secure 100 co-authors on this bill?
A: In securing 100 co-authors (out of 150 House Members), we had bi-partisan support, which was accomplished by educating my colleagues and their staffs on the importance of the investment in high-quality pre-K in a well-educated workforce as a future economic driver for the state.

Q: The governor’s veto surprised many. Did it surprise you and if so, why?
A: Yes, the governor’s veto completely surprised me because throughout the session we had worked closely with the governor’s office to address their concerns about this bill.

Q: What were the governor’s chief complaints with HB 130?
A: I cannot speak for the governor, but his veto message and press releases indicated that the $25 million appropriated for HB 130 could be better spent serving a larger number (27,000 students) in the current pre-K grant program, rather than the 7,000 students proposed in HB 130. What he didn’t address, however, was the fact that the current grant program only funds a small portion of the costs, leaving local school districts to fund the difference from the local taxpayers’ pocketbook. In these tough economic times, this clearly is not the best option! HB 130 was about the state providing high-quality, full-day pre-K for our state’s most at-risk young students, an approach shown through research to yield a significant return on each dollar spent.

Q: Obviously, that was an opportunity lost. How long do you think it will be before another opportunity will arise to address Texas state pre-K on the scale that HB 130 did?
A: Next session in 2011!
Long-Term Studies Show Lasting Gains from Pre-K

The effects of high-quality preschool education are long-lasting and substantial, says Steve Barnett, NIEER Co-Director, yet many continue to claim that the benefits disappear by the time children reach third grade. “Absolutely not,” he counters. “A new NIEER study that provides an objective summary of all the research on preschool education’s effects finds substantial positive effects on achievement, special education, grade retention, and social behavior at ages 10 and higher.”

“This is really the last nail in the coffin of the idea that preschool effects disappear at third grade,” he says. “If you look at all the research—don’t cherry pick for results—it shows that long-term effects are robust even if smaller than initial effects.”

The idea that preschool effects fade out by third grade originated with one flawed study in the early 1960s, and this belief continues to be propagated by those who cite a few methodologically weak newer studies.

“The challenge for policymakers is sorting through the evidence,” says Barnett, one of the authors of the new study. “When policymakers ask, ‘what does the research say?’ they get lots of studies thrown at them. One study says one thing, another study finds something else. Policymakers want to know what all the research says, not just studies that have been selectively picked to support a particular point of view.”

NIEER researchers statistically summarized all the evidence since 1960 in Meta-Analysis of the Effects of Early Education Interventions on Cognitive and Social Development. “Overall, looking across the entire research literature over four decades—123 different studies— preschool has substantial impacts on cognitive development, on social and emotional development, and on schooling outcomes,” says Barnett.

The meta-analysis found that by third grade about one-third of the achievement gap is closed by preschool education. “Of course this is less than the immediate impact, but substantial nonetheless,” he says.

In another detailed review of the methodologically strongest and relevant research, Preschool Education and Its Lasting Effects: Research and Policy Implications, Barnett pointed out that rigorous studies find not only immediate gains, but lasting benefits for learning and educational achievement, school progress and educational attainment, and social behavior, including delinquency and crime.

Evidence that directly contradicts the idea that pre-K benefits fade out comes from many studies including a massive Rand study showing that enrollment in public pre-K increased scores on the National Assessment of Educational Progress (NAEP) tests at both fourth and eighth grade. State NAEP scores are widely accepted as showing the effects of state policies on student achievement. This Rand study also directly contradicts the claims that NAEP scores have not been raised by state-funded pre-K.

The “gold standard” for scientific research on pre-K effects is the randomized trial, and randomized trials find meaningful long-term effects of high-quality pre-K on achievement, school success, and behavior. Moreover, the findings of achievement test score gains, school success, earnings, and crime reduction all have been replicated in multiple randomized trials. None of the studies that claim to show pre-K effects disappear over time are randomized trials.

Even studies in other countries dispel the fade-out myth, finding that preschool education raises test scores from elementary school through high school and decreases school failure. Not only does preschool increase national test scores overall, but it decreases the amount of inequality within a country on test scores. These studies are confirmed by the findings of an international meta-analysis by Milagros Nores, NIEER assistant research professor. Studies in her analysis that looked at benefits at later ages found the positive effects lasted over the long term.

A broad base of research shows that the issue of fade out is more than anything else a red herring used by opponents of public pre-K. “It is no longer a credible argument that preschool benefits fade out,” says Barnett. ■
Worldwide, a huge source of human potential is lost as children grow up without effective investments in their early development. More than 200 million children under age 5 are not reaching their full mental, physical, and social developmental potential, says a recent report from The Open University based in the United Kingdom.

Many associate early interventions to support child development with preschool education. That is only part of the story in countries where problems like growth stunting, hunger, disease, and extreme poverty necessitate early investments that focus on directly improving nutrition and health as well as care and education. With wide variations in the approaches to investments in early development and in children’s environments in the international arena, policymakers around the globe are asking, ”How effective are the various programs in improving the development of children and does this vary across countries with very different economic conditions?”

To help answer that, NIEER recently conducted a meta-analysis of studies that looked at 30 interventions with varying approaches in 23 countries in Europe, Asia, Africa, and Latin America. What NIEER found is encouraging: Regardless of the type of program, all had moderate positive effects in all domains of child development. The size of the long-term effects is similar to that found in a comprehensive meta-analysis of U.S. studies. On average, they were about one-quarter to one-third of a standard deviation, with cognitive effects at the higher end, which translates to a gain of about 5 points on an IQ test. Studies that evaluated effects at older ages showed positive effects being sustained through adulthood.

Policymakers want answers to questions like what types of programs are most cost-effective, whether single-focus or combined-focus programs are best, and what treatment dosage is likely to yield the greatest gain in a given set of circumstances. While many of those answers will require further research, NIEER’s findings shed some light.

Interventions providing direct child care and education were more effective than other types of programs, particularly in terms of cognition. Interventions that combined education and care with attention to nutrition or health were more effective than cash transfer programs that gave money to parents in order to achieve a goal such as making sure kids get medical attention or programs that were solely nutritional in nature.

Of the interventions in the study, eight were early education, five were child care, five were nutrition, four were nutrition and education, two were nutrition and child care, one was early education and child care, and six were cash transfers.

NIEER’s international meta-analysis is a first step in bringing international research to a common scale and points to the importance of program design in achieving goals. However, further research is needed to generate a better understanding about what dimensions matter, how much and for what reasons, so policymakers can identify the most cost-effective approaches to investing in children growing up in mild to severe poverty.

Unfortunately, cost appears to have been greatly neglected in most international evaluations. The benefits analyzed here are only one piece of the puzzle. Early intervention studies would contribute more to policymaking if costs were also estimated so that we could compare interventions on a cost-benefit framework.

The NIEER study, entitled ”Benefits of early childhood interventions across the world: (Under) Investing in the very young,” appears in the journal Economics of Education Review.

by Milagros N ores
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Studying the Physical Activity of Preschoolers
Preschool’s Role in Fighting Childhood Obesity

While new data from the Centers for Disease Control (CDC) suggests that the childhood obesity epidemic may have hit a plateau, the fact remains that in 2008, 14.6 percent of low-income children from ages 2 to 4 were obese. Obesity at such young ages has been linked to less physical activity, thus perpetuating unhealthy weight and inactivity status into adulthood. While obesity levels have been rising, the number of children enrolled in preschool programs has also been steadily increasing. Researchers and advocates have proposed that preschools might be an appropriate place for preventive health measures, particularly activities that increase young children’s physical activity. Enter the Children’s Activity and Movement in Preschools Study (CHAMPS).

CHAMPS studied preschool children enrolled in 24 preschools in an urban area of South Carolina, with the aim of learning how much and in what context preschoolers were engaging in physical activity. Preschools in the study were child care centers, faith-based preschools, and Head Start programs, and children were all between 3 and 5 years old. Of the more than 450 children participating in the study, roughly half were males and half were African Americans.

Children were observed during the preschool hours, both indoor and outdoors, and their levels of physical activity were recorded by trained observers. Physical activity levels were: motionless, stationary with limb or trunk movement, light activity, moderate activity, and vigorous activity.

The researchers found that children engaged in moderate to vigorous physical activity (MVPA) during only 3.4 percent of the preschool day. They also found that 4- and 5-year-olds were less physically active than 3-year-olds, and males were more active than females. In addition, the study found that children in higher quality preschools were more likely to engage in physical activity than children in programs of lower quality.

While spending more time indoors, children were more likely to engage in physical activity when outdoors. The five most common outdoor activities involved open space, fixed equipment, ball and object use, socio-dramatic props, and wheel toys. The first three conditions are associated with high levels of moderate to vigorous physical activity (MVPA). The other two are also associated with MVPA at lower levels.

While indoors, the five most common scenarios were nap time, large group, indoor transition, snack, and manipulative. All of these conditions are largely sedentary in nature and resulted in very little physical activity. However, teacher-arranged physical activity and music exercises, while observed rarely, were related to very high levels of physical activity. Therefore, the researchers call for more teacher involvement in promoting preschoolers’ physical activity.

While conventional wisdom holds that preschoolers expend lots of energy, this study found this is not always so. In view of the high levels of sedentary activity observed, the researchers call for careful attention in designing outdoor spaces for preschoolers. Designs should include sufficient open spaces and specific outdoor play materials associated with increased levels of physical activity.

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