

# Why Pre-K is



High-quality, universal pre-K can impact the nation's international ranking.

**By Ellen Frede and W. Steven Barnett**

# critical to closing the achievement gap

**T**he recently released results of the 2009 Program for International Student Assessment (PISA) comparison of educational achievement across 65 countries has brought renewed attention to the achievement gap and recommended changes to improve U.S. performance. The U.S. was well down in the middle of the pack for reading, math, and science while Shanghai, a Chinese city with a population equal to that of New York, was at the top of the leader board. One might think recommendations on how the U.S. could gain ground might start with an analysis of education policy in Shanghai or the European nation with top scores: Finland. For example, we might consider emulating Finland's universal access to high-quality early care, education starting in infancy, and requirement that every public school teacher earn a master's degree. Or, we might replicate Shanghai's universal pre-kindergarten, in which all teachers must have at least a bachelor's degree, or China's 251-day school year.

Of course, not every policy followed by

high-achieving countries is an effective strategy for the U.S. To identify those that are effective, we can look systematically at policies associated with higher scores internationally, and then look at the full body of education research to identify what works in the U.S. as well as abroad. Most of the recommendations for raising U.S. PISA scores we have seen so far ignore both international and U.S. research on the effects of policies. They often recommend policy changes that will do little to raise scores here, have not led to success elsewhere, and neglect pre-K and its clear salience in the most successful countries. Yet, research supports the notion that high-quality pre-K should be one part of a broader reform strategy to help us emulate the success of systems in Shanghai, Singapore, Finland, and Norway. Although quality pre-K is just one arrow in the education reform quiver of school systems that are well-equipped to battle the achievement gap and compete at the highest level internationally, by itself, high-quality pre-K might eliminate 20 percent of the achievement gap. That's far from a panacea, but hardly trivial either.

The availability of preschool education is one strong predictor of differences in PISA scores across countries. In fact, institutionalized preschool education is found to increase school-appropriate behavior and cognitive abilities, both of which contribute to increased test scores. Studies also find that as preschool participation rates move toward universal coverage, average test scores rise *and* within-country inequality in eighth-grade math and science test scores falls. Other research finds that national achievement test scores rise with the level of public expenditure on preschool education and with the quality of preschool education, as measured, for example, by teacher qualifications. Note that all these studies focus on long-term impacts on achievement, and that preschool education also is found to increase earnings at the national level.

The international comparison results are consistent with U.S. research findings. A review of the literature makes clear that quality preschool education increases test scores, decreases school failure and dropout, and can produce even longer term benefits such as

## Principal ONLINE

Access the following web resources by visiting *Principal* magazine online: [www.naesp.org/MayJune](http://www.naesp.org/MayJune)

➔ NAESP's **Legislative Action Center** allows NAESP members to contact their representatives in Congress about the issues and legislation that matter to them and their schools.

➔ "Who Goes to Preschool and Why Does It Matter?" identifies **factors that influence preschool enrollment**, such as income, geography and ethnicity, and offers policy recommendations to address inequities in access.

➔ Visit the *Principal* archive to access the May/June 2008 issue, which also focused on early childhood education. It includes articles on **ways to improve early childhood literacy outcomes**, and the value of play interventions to enhance learning for young students with developmental delays.

reductions in crime and increases in earnings. However, to result in real life-changing benefits, the initial impacts on early education must be quite substantial because initial improvements are only partially maintained over the long term.

### Early Learning at a Glance

Adding to the complexity of this issue is the reality that all preschool programs are not created equal; some are much more effective than others. As a nation, we spend a considerable amount of money subsidizing what is often custodial child care that produces few, if any, benefits for child development. Head Start is better than typical child care, but it has not been nearly good enough to produce large long-term gains in either cognitive or social development. Fortunately, Congress and the Obama administration have both responded with reforms that will make Head Start more effective, including increasing Head Start teacher pay, which is half that of teachers in public schools. This discrepancy won't work in the U.S. or in any other country.

Turning to state and local preschool and pre-K, programs vary widely from place to place like the rest of public education. Some states have highly effective pre-K programs that are based on high standards and that are adequately funded. Others are barely better than subsidized child care—probably not harmful, but not likely to improve achievement.

Just how much could a commitment to quality preschool education do to improve U.S. test scores? The most effective programs might cut the achievement gap in primary and secondary education by half. Although that figure is probably too much to expect nationwide, even reducing the achievement gap between low-income and other students by 20 percent to 30 percent with this one reform would be a major accomplishment. To close the gap in primary and secondary education, preschool programs would have to produce immediate effects large enough to close half or more of

the achievement gap at kindergarten entry. This is easy to do for simple literacy skills such as letter recognition and letter-sound correspondence. It is much more difficult for broad domains like language, mathematics, and social skills. However, these are the domains in which large gains are necessary if we are to have a strong, persistent impact on achievement and development more generally. Large gains are possible if we copy what has proved most effective in the past and learn not to repeat what has failed.

### Action Steps for Principals

The answers reside right here in the U.S.—the difference between our performance on PISA and the performance by countries like Finland is that they do on a national basis what we do in only certain communities. The programs found to produce the largest gains have had well-educated, adequately paid teachers who exhibit high expectations for children's learning and development. These teachers worked with a well-defined curriculum under strong supervision. Our country, by dint of its cultural diversity, is less homogenous than Finland and Shanghai, so our challenge is greater. Yet some states and communities as different as Tulsa, Oklahoma; Union City, New Jersey; and Montgomery County, Maryland, have shown they know how to surmount those challenges. Other states and communities can learn from their successes. In fact, much could be accomplished if all school leaders would take the following 10 research-based, practice-tested action steps.

If you don't currently offer pre-K through your school:

- ➔ **1. Reach out** to local preschool programs, child care centers, Head Start agencies, university experts, social service agencies, and parent groups to form an early childhood advisory council to develop transition plans, share professional development opportunities, and ensure that you are making the most of what is available through common planning and communication.

**2. Convert some, or all, of your pre-K special education classes into inclusion classes** by enrolling children without disabilities into the program. This is a low-cost way to increase preschool enrollment. You might need to adapt the curriculum to be appropriate for all children, but that will likely benefit the children with individualized education plans, too. The parents in your community will love it.

**3. Contract with local pre-K providers or offer pre-K yourself.** Some elementary schools with extra classroom space provide pre-K by making the space available to a local agency or Head Start, or the school district operates the preschool program, often offering tuition at a sliding scale. If your state regulations don't allow you to charge tuition, then form an education foundation to run the program.

If you do offer pre-K, do all of the above and in addition:

**4. Get educated** on what makes pre-K effective and different from the higher grades. If you try to impose the expectations you have for the higher grades for behavior, cleanliness, order, and curriculum scope and sequence on these classrooms, you won't be nearly as effective at closing the achievement gap. Children this age need intentional teaching that enables them to experiment, explore, learn to solve problems with others, and develop abstract thinking and self-regulation through make-believe play. This requires a large amount of self-initiated activity with teachers who know how to expand children's thinking and learning systematically during play and how to deliver instruction through play as well as through games, shared reading, planning and recall times, and other structured activities.

**5. Revise teacher evaluation and coaching tools** to include criteria that reflect effective, research-based teaching practices for pre-K. One size does not fit all when it comes to teaching. Focus on intentional teaching and effective use of small groups and other means of individualizing instruction.

**6. Hire only qualified preschool teachers.** Make sure that they have expertise in teaching 3- and 4-year olds. Former first-grade teachers with early childhood certification might not be adequately trained for pre-K teaching. Reassigning ineffective fourth-grade teachers definitely won't help you meet the promise of pre-K.


**7. Guarantee a diverse classroom composition.** Do everything you can to include mixed abilities and mixed incomes in the classroom. All children benefit from integration, and school failure is not isolated to those with a high number of low-income families. All children benefit from high-quality preschool, and even though the most disadvantaged gain the most from pre-K, they also learn the most from more advantaged peers.

**8. Provide dual-language classrooms** where non-English speakers learn English but English speakers also become bilingual. This makes sense given our increasingly global economy and world languages goals for our schools, but it is also most effective educationally. Bilingualism is associated with more flexibility of thinking, higher achievement, and increased meta-linguistic ability. Moreover, children in dual-language classrooms learn just as much English as those in monolingual English classrooms, so there is no downside. Dual-language programs provide enough English-language experience so that children do not start kindergarten so far behind that they never catch up speaking English, while taking advantage of the child's developing home language base. Dual-language programs are most practical when there is a preponderance of one home language. When bilingual staff are lacking, schools can provide immersion in side-by-side home language and English-language classrooms where the children rotate weekly.

**9. Design professional development days expressly for the teachers in the pre-K program and other early grades.** It is clear that ongoing, classroom-specific, in-service education is critical to overall school success. However, pro-

fessional development that consistently requires the pre-K teachers to "adapt this to the age of the children in your classroom" is not going to improve classroom practices. They don't need to just know where the children are going but how to get them there and where they came from developmentally. This is especially true for the domains that often are inadequately taught in teacher education programs: math, science, early literacy, oral-language development, bilingual acquisition, and inclusion of children with disabilities.

**10. Institute other schoolwide practices that meet the needs of young children.** For example, assemblies that are appropriate for fourth graders are almost never effective for 4-year-olds, cafeterias are not good places for young children to eat, and playground equipment is dangerous if not designed for younger children.

If American schools are going to close the achievement gap and move toward the top of the international achievement comparisons, widespread access to high-quality preschool will have to be one of the reforms that schools implement. If principals take the steps outlined here, they will shortly find test scores rising, grade retention falling, and special education loads might even decline. So to some extent, this is a self-financing reform. Beyond this, schools can use federal Title I funds and many states make funding available for pre-K. If adequate funds are not available, now is the time to make yourself heard at the local, state, and federal levels by telling the public and elected officials what you need to succeed in a global race to the top. 

**Ellen Frede** is co-director of the National Institute for Early Education Research (NIEER) and senior vice president of Acelero Learning Inc.

**W. Steven Barnett** is co-director of NIEER and a professor at Rutgers University.

**ASSESSING LEARNING**  
It's different from the common perception of testing 