A recent evaluation has roiled the field of early childhood education with the finding that by the time they reached third grade, children who participated in Tennessee’s statewide pre-K program had worse attitudes toward school and poorer work habits than children who didn’t. Why should this be, and how do we square it with decades of studies showing that other early childhood programs produce positive impacts that last into adulthood? The short answer is that we don’t yet know. As the push for pre-K accelerates, with strong support from policymakers and the public, we need a research agenda designed to tell us how pre-K programs can best support children’s long-term academic success.

We are living in a golden age for early education in the United States. But the results of a recent evaluation of Tennessee’s prekindergarten (pre-K) program by widely respected researchers Dale Farran and Mark Lipsey of Vanderbilt University’s Peabody Research Institute have disrupted the field, causing some scholars to rethink their assumptions. We believe that the vigorous debate about these empirical results and claims will help to clarify the goals of the nation’s growing pre-K movement, stimulate new research on the preschool experiences associated with long-term development and school achievement, and reinforce the classic message that perhaps we don’t know as much as we think we do.

Early education—and especially the pre-K movement, in which states are establishing high-quality programs largely for four-year-olds—has
been expanding in recent years and enjoys a positive public image. State pre-K programs are taking their place among other major early childhood education and care programs (Head Start, home visiting, the Child Care and Development Block Grant), numerous smaller programs, and two provisions in the tax code that subsidize child care for those who pay federal income taxes. The federal government and the states annually spend about $34 billion on these programs, and the amount grows almost every year.

We’ve seen many good evaluations of early childhood education programs over the years, including the more recently established state pre-K programs. Researchers have explored issues such as school readiness; long-term impacts of early childhood programs that last into adulthood; impacts on language development, especially on children who are English language learners; benefits versus costs; the effectiveness of various curricula; and many more—all of which are discussed in a just-released issue of the Princeton-Brookings journal *Future of Children*, “Starting Early: Education from Prekindergarten to Third Grade.”

**Public Support for Pre-K Is Crucial**

In addition to numerous programs, high-quality research, and substantial and growing spending, one of the most important aspects of early education is its popularity with the public. Public support is vital if we aim to expand the availability and quality of pre-K programs. This is particularly true because low-income families, whose children need early education programs the most, will never be able to afford the cost of high-quality programs. The annual cost of Head Start is around $9,000 per child, and some pre-K programs cost as much as $15,000 per child or more. Poor single mothers, whose annual earnings are often under $12,000, simply can’t put their children in a quality preschool program without substantial financial assistance. Many policymakers and nearly all early childhood education experts see early education programs as a key way for the nation to improve the economic mobility of children from poor families. Thus poor families’ inability to pay for quality early education is a major public issue. That’s why nearly all early childhood programs sponsored by the federal and state governments—with the notable exception of the tax benefits—focus a disproportionate share of their funds on children from low-income families. Public support for the programs is crucial to protect and expand public financing of early childhood programs.

Opinion polls usually show that the public thinks highly of preschool programs. A 2015 poll conducted by Public Opinion Strategies and Hart Research of 800 registered voters, for example, found that 54 percent of respondents said they would “hold a more positive view” of any presidential candidate who supported improving early education. When pollsters asked respondents to rank the importance of a list of policy topics, 89 percent said that children getting a “strong start in life” is “extremely” or “very” important. An earlier poll by the same companies found that 76 percent of respondents supported a 2012 proposal by President Obama to spend $100 billion over 10 years to expand pre-K programs for low- and moderate-income families.

**A Surprise in Tennessee**

Despite all the good news and popularity, the past year has seen a disagreement erupt on the playground. An evaluation of the impacts of Tennessee’s pre-K program has been conducted, with results reported in 2013 and 2015. About 3,000 children from oversubscribed programs were randomly assigned to attend a pre-K classroom or not; data on this group were taken from a state database, available a year after the children completed third grade. In May 2013, Lipsey, Farran and others reported on their website the short-term impacts of the program. The report was based on a subgroup of children from the larger sample whose parents had consented for them to be followed through third grade. Because a large proportion of families didn’t give the researchers permission to follow their children—a little over two-fifths overall, and about half of the control group that didn’t receive pre-K—the results from this subsample analysis are no longer based on random assignment. These children—from now on, we’ll call them the consented subsample— took an array of achievement tests, and teachers
rated their school-related behavior. In 2013 the researchers had reported that children in the consented subsample who participated in the Tennessee pre-K program performed better than children who didn’t on achievement tests at the end of the pre-K year and received higher ratings from their teachers when the kindergarten year began. Teachers said that program children were better prepared for school, had better work skills, and were more positive about school. Similar results have been reported for most pre-K programs. And grade repetition was lower for the larger randomized sample. So far, so good.

But the 2015 report contained a major surprise. In October of that year, Farran and Lipsey posted a much shorter and zippier essay in an “Evidence Speaks” report on the Brookings Institution website. That version of the report attracted a great deal of attention, some of which was critical. But it nonetheless provides an opportunity to think about what goes into pre-K programs and why some may be effective while others are not.

When the researchers followed the children in the consented subsample through the early grades of public school, they found that by the end of kindergarten, the achievement test advantage for children who attended the pre-K program had disappeared. More surprising, by the end of first grade teachers rated program children as weaker in their work skills and less prepared for and more negative about school. In other words, first-grade teachers reported the opposite of what teachers had said at the beginning of kindergarten. Similarly, at the end of both second grade and third grade, children who hadn’t participated in the program performed better on academic tests than children who had. The well-known, well-conducted Head Start Impact Study had already reported the finding that preschool academic gains fade out over the kindergarten year. What caused the controversy over the Tennessee study was the finding that the program children’s work skills, attitudes about school, and academic scores had all fallen below those of children who didn’t attend the state pre-K program. Results from school-level data aren’t yet available to determine how pre-K participation affected such important outcomes as grade repetition, attendance, disciplinary infractions, and special education placement.

The results reported so far imply that Tennessee’s pre-K program produced poorer work skills and that program children learned less than those who didn’t attend the program. Some pre-K researchers, including Farran and Lipsey, have raised the possibility that pre-K programs are too academically oriented for young children and create an environment in which four-year-olds are too regimented. For example, Erika Christakis, an early childhood expert at Yale’s Child Study Center, wrote in *The Atlantic* that prekindergarten is “crushing” kids. She cited “overreliance on direct instruction and repetitive, poorly structured pedagogy” as the “likely culprits” in Tennessee. However, research hasn’t yet addressed that question directly. Some scholars wondered whether the surprising results suggested that the Tennessee pre-K program was of low quality. Farran and Lipsey pointed out that on the most frequently used 10-item scale for rating preschool programs, Tennessee’s program stacked up very well against other high-quality preschool programs. Further, they asked, if Tennessee’s program was of low quality, what caused the positive impacts at the end of the program and at the beginning of kindergarten? It’s also possible that the problem lies in what happened to the children in kindergarten and first and second grade; for example, teachers may have focused on other students who needed to catch up and as a result covered material that kids who attended pre-K had already learned. Research hasn’t yet answered that question, either.

Other critics, including the editors of the just-released issue of the *Future of Children* (one of whom is an author of this brief), argue that the Tennessee study suffered from design flaws. Even so, the results have raised important questions about how to create pre-K programs that have sustained impacts—especially those taken to scale at the city, county or state level.

**One Study among Many**

Whatever the results of the Tennessee study, there is a strong argument against placing too much emphasis on a single study among hundreds, many of them of high quality, that go back many decades (though few involve the scaled-up programs being implemented today). A basic lesson of
social science research and evaluation is that although a single study can shake up accepted wisdom, it must nonetheless be interpreted in the context of other research. Many critics of the Tennessee study’s conclusions have pointed to the preponderance of studies that show both immediate and long-term impacts from early childhood programs of varying types. Two good reviews of this research showed that if we average across high-quality studies from the past, both in the United States and other nations, we find evidence that preschool produces “substantial benefits” for children in both their intellectual and social development.

Responding to the critics who cited broader research on early childhood programs, Farran and Lipsey clarified that both their empirical results and their provocative conclusions apply primarily to scaled-up pre-K programs, meaning programs that are being implemented by states on a large scale specifically to improve school readiness. This new type of pre-K program, some version of which is now being implemented in 42 states, tends to emphasize academic goals for math, literacy, and other school subjects.

Big Questions Unanswered

There’s a huge difference between implementing a single program at one site and implementing a network of scores of programs throughout a state. Most states are still learning how to implement pre-K programs on a large scale while maintaining standards and quality. Both of these factors could have contributed to the negative results in Tennessee.

When a new study stirs up a field of social science research, scholars often see it as a useful development. The finding that children from the consented subsample who didn’t attend the Tennessee pre-K program did better in school by second grade and the suggestion that a major reason could be that the program overemphasized academic skills have certainly stirred up controversy. The ensuing debate has raised the possibility that pre-K as currently configured may not be beneficial for all four-year-olds and that some characteristics of pre-K may be associated with unfortunate impacts on children. Even if those things are true, too many good studies have shown that some preschool programs produce positive impacts that last beyond third grade—and produce benefits that exceed their costs—to dismiss preschool as a bad investment. But most researchers agree that big questions remain unanswered. One of the biggest is whether it might be fruitful to back off on academic skills in favor of developing social skills through play-like activities, and offer more choices of activities to the children themselves.

Farran and Lipsey raised another set of issues, forcefully spelled out by Farran in a February 2016 report, again published as an installment of Brookings’s “Evidence Speaks.” She argued that the claims made by most researchers, editorial page writers, the Obama administration, and many others about state pre-K programs’ beneficial impacts on poor children are not fully justified and that the entire edifice on which popular support for preschool programs rests is much weaker than the experts claim. For example, it’s hard even to define a pre-K program, because the versions being implemented across the nation differ widely in teacher/student ratios, curricula, ages of children, parents’ involvement, hours of operation, sponsorship, and many other dimensions. In other words, we have nothing like a national pre-K model that makes programs similar across states. So how is it possible to argue that “pre-K programs” work when we have no common definition of the term? If a given pre-K program produces positive impacts, those impacts might not generalize to other pre-K programs that differ in important ways.

Farran makes three recommendations about how research on pre-K programs should proceed if the goal is to stimulate children’s long-term growth, especially the growth of children from poor families. First, we need to figure out what early skills are truly important for long-term success. Second, we need to determine which classroom practices stimulate the development of those specific skills. Third, we must develop ways to measure the classroom practices that promote those basic skills so we can determine whether a program’s classroom quality is high and remains high over the long run.
We doubt that many researchers or practitioners would oppose this research agenda, and most would strongly endorse it. Farran is certainly correct about the lack of uniformity in pre-K programs, and she sets a worthy and comprehensive agenda for pre-K research with her appeal for identifying the skills that facilitate long-term success, the classroom practices that nurture those skills, and the accurate measurement of those classroom practices. But most pre-K researchers and practitioners don’t believe that it’s necessary or wise to stop fighting for funds to expand pre-K programs until these questions are answered. An anecdote about Head Start and President Lyndon Johnson suggests why continuing to fight for pre-K expansion would be a wise course of action. When Head Start was created in 1965, advisers told Johnson that it should be implemented on a small scale and gradually expanded so that order and quality could be maintained and glitches could be worked out before scaling up the program. Johnson told them they didn’t understand politics. If Congress was willing to support Head Start as an innovative entry in the War on Poverty, Johnson was going to get as much money out of Congress as he could before the will to fund the program dried up. “Take the money—now!” were Johnson’s watchwords. As we’ve seen, evidence supporting the short- and longer-term impacts of early childhood programs is broad and deep. Some pre-K programs may be too directive and academically oriented and leave children too little time for play and social engagement, but the three-pronged research agenda should be able to tell us whether that’s so. “Let’s find the answer through rigorous research—and keep the money rolling” should be early childhood education’s watchwords now.

**Seeking the Way Forward**

A project just launched by a group of early childhood researchers represents perhaps one of the most encouraging signs of the sort of positive response that can come from the surprising results from Tennessee and the recommendations from the reports’ authors. Deborah Phillips of Georgetown University, Ken Dodge of Duke University, and Lipsey have organized a group of distinguished early childhood researchers with support from the Heising-Simons and David and Lucile Packard foundations and the SAS Institute. The group has three aims: to stimulate public discussion of the evidence for pre-K programs and the cumulative experiences that support long-term educational success; to write a balanced synthesis of what we know about long-term outcomes of large-scale pre-K programs; and to propose an agenda of longitudinal research on the major questions that bear on the future of pre-K education, including the questions raised by Farran and Lipsey.

This episode is a compelling example of how a field of social science ambitious to influence national policy on educational inequality—one of the most important problems facing the nation—can increase its chances of success. Here’s the recipe:

- Propose a strategy for attacking a national problem.
- Implement the strategy and conduct rigorous evaluation research to determine whether the strategy is working.
- Bring the results to public attention and encourage continuous reaction and temperature-taking by evaluators, practitioners, and other knowledgeable figures.
- Modify the strategy in accord with the results of the evaluations and the consensus of experts.
- Repeat.
Additional Reading

Tim Bartik. “We have Enough Evidence to Expand Quality Pre-K.” Investinginkids, February 25, 2016, https://investinginkids.net/2016/02/25/we-have-enough-evidence-to-expand-quality-pre-K.


This policy brief is a companion piece to Starting Early: Education from Prekindergarten to Third Grade, which can be found at no charge on our website, www.futureofchildren.org. Print copies of Starting Early can also be purchased on our website. While visiting the site, please sign up for our e-newsletter to be notified about our next issue, Social-Emotional Learning, as well as other projects.

The Future of Children would like to thank the Foundation for Child Development for its generous support.

The Future of Children © 2016 by The Trustees of Princeton University, all rights reserved.