

## Murky Evidence

Given the shaky, antiquated condition of standards and judgments of quality in this field, we ought not be surprised that the evidence to date about what works and what lasts is confused and ambiguous. Countless studies of dozens of programs of many sorts have yielded findings and conclusions that point in every direction. Indeed, preschooling painfully illustrates the discouraging epigram about education research (and much else in social science): if you tell me what conclusions you'd like, I can point you to a study that meets your needs. This circumstance alone should caution readers against succumbing quickly to anything that claims to be a consensus of research in this field. Discord reigns.

That being so, is there anything useful to be gleaned from prior investigations into what pre-K education does or doesn't do, for which children, and under what circumstances? If an approach isn't effective in advancing some important public mission, after all, why have more of it at public expense? There are lots of kids out there; pre-K programs are relatively expensive; society has many needs; the economy is foundering; this policy arena is contentious; and despite all the uplifting rhetoric, zealous advocacy, and heartstring tugging on behalf of small children, taxpayers might better devote their resources to other purposes unless this one is unequivocally beneficial.

In examining the question of what works and what lasts, it's useful to note that while a number of studies find desirable short-term effects from various programs and interventions, especially for disadvantaged youngsters, few can point to significant effects that endure over time and fewer still to lasting gap reductions.

As Bruce Fuller says in summarizing the findings of numerous studies with regard to the initial impact of pre-K education:

The short-term effects of preschooling...on poor children's cognitive growth are well established....The general effect size—even for poor children—ranges from one-fifth to one-third of a standard deviation....Significant benefits [also] accrue to children from middle-class households, but at considerably lower levels of magnitude.<sup>47</sup>

Fuller also notes that some studies have found a downside to placing young children in center-based care for prolonged periods. In particular, their social development may be retarded and their propensity to “act out” may rise slightly. In short, any cognitive gains may be partially offset by other losses.

On the other hand, summarizing a wide body of evidence, David Figlio finds that preschool has beneficial behavioral effects on children from the most disadvantaged circumstances, leading to “reduced student disciplinary problems and reduced rates of being classified [as] emotionally disabled or severely emotionally disturbed.” These benefits, however, like the cognitive gains from preschool, are “concentrated in the least advantaged communities”; Figlio and his colleague “do not find evidence that public pre-kindergarten programs have appreciable behavioral benefits” in “relatively advantaged neighborhoods.”<sup>48</sup>

But the big issue with pre-K education is whether the gains and gap reductions last—and for how long and in what ways. Evidence is limited because the longitudinal studies needed to answer such questions are costly, complex, and obviously time consuming. But insofar as any central tendency can be found in the research done so far, the news isn't good. Most of the gains that can be found upon entry into school ebb over time, and the differences attributable to various kinds of programs tend to wash out, too. In fact, effects that may appear significant at the conclusion of the program itself frequently fade to the vanishing point. Because that erosion is at least as much a commentary on the public schools (and children's lives outside school) as on early-education programs per se, it also underscores the folly of making pre-K policy in isolation.

Let me illustrate with an example from *kindergarten* research, addressing a basic question: the relative merits of full- versus half-day programs for children from varying circumstances. In 2001, three-fifths of U.S. kindergartners were in full-day programs, and in many states a vigorous argument asserts that *all* programs should be full-day. That has become its own hot policy (and budgetary) issue, akin to expanding pre-K programs. The RAND Corporation finds that, while full-day programs yield greater achievement gains during the kindergarten year itself, by the end of third grade no significant differences are detectable in academic performance. In fact, most of the effect has vanished by the completion of first grade.<sup>49</sup> That's because the school experience swamps the kindergarten effect—and is in turn overwhelmed by the "risk factors" (race, poverty, family, etc.) that some children bring with them to school.

We ought not be too surprised. After all, a typical one-year kindergarten (or pre-K) program, even a relatively ambitious one that operates six hours per day for some 200 days, will affect a child for

just 1,200 of the 8,760 hours in his/her life that year, never mind the tens of thousands of hours that precede and follow the pre-K experience. For poor and middle-class youngsters alike, albeit in very different ways, the impact of the program is trumped by the many other forces at work in their lives. A child's "fade" could be the consequence of inferior teaching in the early grades, the delayed effect of weak vocabulary and a meager knowledge base that persist in school even when certain "pre-literacy" skills like "decoding" are present at the onset of kindergarten, or other causes barely understood.

Compounding this problem is the fact that, just as early-education's initial impact isn't the same for all kids, its fade rate differs as well. After reviewing the pertinent research, Fuller concludes that, "for children from middle-class and affluent families, few sustained benefits from preschool have been observed," a finding echoed by Figlio's analysis of the behavioral impact of preschooling.<sup>50</sup>

We must also face the fact that children aren't all the same, even when they hail from similar backgrounds. Anyone who has spent time around little kids knows that, despite identical stimuli and nurturing, they develop various competencies at different stages. Some, for example, master the motor skill of "coloring within the lines" before entering kindergarten, while others are still scribble-scrabbling in first grade. That difference doesn't necessarily reflect the teaching they did or didn't receive.

Yet the policy dilemma is inescapable: how important is it to expand participation in programs and services whose effects are unpredictable and uneven or that don't last? It's a fine thing to give kids an early boost along life's highway. But how high a priority can this be when, not far down that road, either those kids slow down or others pick up speed (or both) and the pre-K advantage slowly ebbs?

As Fuller notes, “How to sustain the initial benefits of preschool is turning out to be a pivotal question. Even if [programmatic] quality gains yield modest improvements in children’s trajectories, a bump of one-fifth to one-fourth of a standard deviation initially isn’t likely to persist very far into elementary school. It will be swamped by the disparate effects of children’s home environments, which often mirror the quality of elementary schools entered.”<sup>51</sup>

Yes, there’s some evidence, much debated, that ultra-intensive pre-K programs have greater and longer-lasting effects. But fasten your seat belt, because the programs that everyone cites in this regard—notably Michigan’s Perry Preschool and North Carolina’s Abecedarian Project—turn out to be truly exceptional. They were richly financed, highly sophisticated, multifaceted interventions in the lives of extremely disadvantaged youngsters and their families—and they took place decades ago. Fuller calls them “boutique programs.” Besharov favors the term “hothouse programs,” noting that they were “run by top-notch specialists,...served fewer than 200 children, cost at least \$15,000 per child per year in today’s dollars, often involved multiple years of services, had well-trained teachers, and instructed parents on effective child-rearing. Significantly, the children they served had low IQs or had parents with low IQs.”<sup>52</sup>

Some studies have found that these programs had positive impacts on their participants that endured into adulthood, such as reducing their likelihood of incarceration. That’s obviously encouraging, albeit rather remote from the school readiness and academic gap-closing that are customarily proffered as reasons for more and better pre-K education. But the two programs’ long-term effects also turned out to be uneven and mostly small. In a 2005 appraisal, when the original Perry Preschool participants were turning forty, analysts reported that (in Fuller’s words):

exposure to Perry explains less than 3 percent of all the variation in earnings...and about 4 percent of the variability in school attainment levels....Reduction in the total number of criminal arrests was significant in some years and not for others; at age forty it was significant for males, but not for females. In short, findings for some key outcomes are inconsistent across years, and alleged benefits reported in the popular media fade out in terms of statistical significance.<sup>53</sup>

Similarly mixed conclusions about long-term effects apply to the Abecedarian Project, which delivered exceptionally intensive birth-to-kindergarten services—some thirteen times as many “preschool intervention service” hours per child as Head Start provides—to a small number of low-income black children in North Carolina between 1972 and 1977. On the plus side, Besharov and his colleagues agree, the program “achieved positive and lasting gains on a wide range of cognitive and school-related outcomes, including IQ, reading, and mathematics achievement scores.” On the other hand, “these gains became ambiguous as time went on” and “did not lead to many improved outcomes in adulthood...with, for example, no statistically significant differences in high school graduation rates, employment, or criminal activity.”<sup>54</sup>

After a sophisticated re-analysis of both the Perry and Abecedarian results, Berkeley economist Michael Anderson found “positive, significant overall long-term effects on females” but practically no lasting positive effects for males. (A somewhat similar program in Tennessee that Anderson examined yielded few results for either girls or boys.)<sup>55</sup>

Also widely admired and much discussed in the field is the Chicago Child-Parent Center, which has operated for four decades under the aegis of that city’s public school system with funding from the federal Title I program. (Annual cost per preschooler:

about \$5,400.) Its primary evaluator, the University of Wisconsin's Arthur J. Reynolds, reports positive and lasting effects from the center's efforts, though Besharov raises methodological issues with the studies and finds the "effect sizes" reported by Reynolds to be no more than modest.

Except perhaps in the case of Chicago, it's doubtful that the conditions, circumstances, and cost structures of these boutique programs are readily replicable on a large scale. Neither Perry nor Abecedarian has yet been successfully reproduced in ways that allow independent analysts to determine whether the program's effects were also reproduced. And it's naïve to suppose that these programs' intensive features would be found in the sort of universal program that pre-K advocates are bent on creating. (Perry Pre-school cost about \$17,000 per participant per year; Abecedarian served children for five years at a total cost per participant of about \$74,000. Both figures are in 2005 dollars.) Ironically, advocates' success in pushing for more universal-style pre-K programs is probably dimming the prospects for more Perry-style intensive interventions in the lives of the neediest children and families.

The acclaimed hothouse programs also had many moving parts, and no one can say for sure which (if any) of them mattered more than others. Abecedarian, for example, ran year-round from infancy to kindergarten entry, afforded each child an individualized education plan, and provided parents and families with sundry added services. To the extent that it had a lasting impact, nobody knows which elements were most consequential and therefore which are most important to try to incorporate into large-scale successor programs. Policymakers and taxpayers therefore face considerable risk of locking into huge new programs a costly array of services and activities that may or may not contribute materially to the desired education results.

There's also a problem in using long-term outcomes from Perry Preschool et al. in such spheres as adult incarceration to argue for (and against) contemporary pre-K programs. It borders on the absurd to expect preschool experiences, however robust, to ameliorate all of life's challenges and problems far into the future. I for one would be satisfied with evidence that a year or two of preschool could reduce achievement gaps to near-invisibility upon entry into kindergarten provided that the K–12 system then devised methods for keeping the gaps from re-opening in the elementary grades.

Yet the separate and self-referential policy universe of pre-K education deepens the challenge of maintaining preschool gains after children enter “regular school.” Their fade-out in K–12 is plainly not a problem that pre-K policy alone can solve or should be expected to solve. Moreover, the pre-K world's only real way of addressing it—redoubling and intensifying its own programs, a la Perry and Abecedarian—exceeds what a large-scale venture could reasonably contemplate.

Sustaining whatever pre-K gains can be produced, especially for poor kids, is therefore principally a challenge for K–12 policy and practice. But that challenge becomes no easier when pre-K education is entrusted to public-school systems. Today, those systems cannot even sustain their own gains—which is why American fourth graders tend to have stronger results than eighth graders and high school students do less well than middle schoolers. Adding more years to the present K–12 mandate of public education would, I fear, simply give ineffectual school systems additional time to fumble around while entangling pre-K education more tightly in the webs of public-school politics, federalism disputes, bureaucratic rigidities, and adult interest groups.

Why preschool gains dissipate and gaps don't stay narrowed has much to do with unchanging home and neighborhood situations. But we must also ruefully acknowledge, despite all the K–12 education reforming of recent decades, the crummy, ineffectual schools that most poor children still enter, the absence of decent choices among schools, and the system's still-widespread weak expectations, limp curricula, slipshod accountability, and ill-prepared, ill-compensated, ill-motivated, and often inexperienced teachers.<sup>56</sup>

Besides all that, kindergarten and primary-grade teachers tend to “batch-process” their pupils, so that youngsters arriving with skills and knowledge already acquired in preschool must tread water, educationally speaking, while their instructors struggle to ready those who entered without that earlier boost.<sup>57</sup> Despite much talk of individualized learning, few teachers—especially those most apt to be found in inner-city schools—are truly able to differentiate their instruction according to whether a given child did or didn't bring certain knowledge and skills with him/her. The lowest common denominator among a classroom's pupils is apt to become the level of instruction for everybody.<sup>58</sup>

On the bright side of the continuity divide between pre-K and K–12 education, we observe growing interest among policymakers in developing an education system that seamlessly advances and tracks young people from preschool through college (and sometimes beyond), with synchronous standards, multiple options, and robust data systems, all helping to ensure that individuals don't “fall through the cracks” and that policymakers can get better information about how the system is working and what needs attention. Thus some states are developing “P-16 councils” and the like, intended to harmonize and align their education offerings from early childhood into adulthood. And despite pushback

from “privacy” advocates, most states are developing “unique student identifiers” and other ways of monitoring the progress of individual youngsters as they pass through the various levels of the system and move from school to school and town to town. The interstate mobility problem remains to be tackled, however. So, unfortunately, does the development of effective links between the K–12 and pre-K data systems.