



DOCUMENT(S) REVIEWED:	Assessing Proposals for Preschool and Kindergarten: Essential Information for Parents, Taxpayers and Policymakers
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SUMMARY OF REVIEW:

This Reason Foundation report selectively reviews studies and accounts of early childhood programs and presents an argument against universal pre-school and all-day kindergarten programs and more specifically against new proposals in Arizona, California, and Illinois. The report authors find that public investment in preschool education programs is unnecessary, and that preschool programs and full-day kindergarten do not have lasting educational effects on children. They conclude that all of these programs should be collapsed into a kindergarten and a voucher program for four-year-old children.

This report should not be used to guide policy because relies on selective citation of research and inconsistent use of standards for research quality. Moreover, the report's policy conclusions generally do not relate well to the literature reviewed or to the authors' findings.

INTRODUCTION

Over the long term both state and federal governments have increased their support for preschool education. A few states have even embarked on efforts to provide preschool education to all four-year-olds. Most state preschool education programs and the federal Head Start program are targeted to children in poor or low-income families. Most children in poverty, however, are not served by this program. Children whose families have modest incomes and are ineligible for these targeted services are even less likely to attend a preschool education program. Standards of quality in many of preschool programs are lower than they are for kindergarten, and funding levels are correspondingly lower. These programs serving many lower-income families thus show more modest effects than researchers have found from programs with higher standards. When budgets have tightened some states have backed away from their commitments to these programs. At local, state, and federal levels, there are important debates about who should be served, the quality and intensity of the programs that should be offered, and funding levels.

I. THE REPORT'S FINDINGS AND CONCLUSIONS

The Reason Foundation's (RF) report presents two major findings. First, the authors assert that public investment in preschool education programs is unnecessary because American children are ready for school and perform well through fourth grade. Educational failure, they maintain, results from the failure of schools to support this early success. Second, the authors assert that preschool programs and full-day kindergarten have no lasting educational effects on children. They say that Head Start has not "measurably improved" educational outcomes.

Setting aside issues related to the merits of these findings (discussed below), they are only loosely connected to the report's conclusions, which are as follows:

- Public preschool programs have a poor track record of financial accountability and, thus, better data is needed on their finances before further investments;
- Public programs are duplicative and if consolidated would cost large sums per child even for universal programs;
- More evaluation is needed because there is "almost no information available" on program outcomes; and,
- All current programs should be collapsed into a kindergarten voucher and (although the authors are not very clear about this) a voucher for four-year-olds.

II. THE REPORT'S RATIONALES FOR ITS FINDINGS AND CONCLUSIONS

The RF case that children do not need publicly supported preschool education is built on two sets of data. First, it uses data from ECLS-K¹ to say that children are well prepared relative to what kindergarten teachers expect. Then, the authors use

comparisons of different states' National Assessment of Educational Progress (NAEP) scores, as well as comparisons of the U.S to other countries—without controlling for any other state or national characteristics—to argue that the United States is doing well in the early grades and that preschool education does not affect test scores.

The RF report's case against the effectiveness of preschool and kindergarten programs is built in the following way. First, they recognize that there are short-term effects of the programs, though they do not fully acknowledge the vast research base that establishes these facts. Second, they attack studies that have conclusions unfavorable to their views as methodologically weak, based on Campbell and Stanley's² characterization of studies' strengths for testing causal claims, or when the studies qualify as very strong seek to dismiss them on other more speculative grounds. (But as discussed below, they do so inconsistently and they fail to hold studies to this high standard when the studies reach conclusions that are favorable to their views.)

The RF authors then cite, as evidence of fade-out (which is the term used to describe earlier positive effects fading away as children get older), studies that are the weakest—according to the authors' own Campbell and Stanley criteria—for testing causal claims. These studies use a single group and often do not include a pretest (meaning that the researchers have no way of adjusting for initial differences). Similarly, the RF authors cite an older report to the effect that the body of research on Head Start is insufficient to draw conclusions; they then cite a synthesis of that body of research as evidence of the conclusion that Head Start has no long-term effects. In the course of this analysis, the RF report also conflates preschool education with other approaches—child care and other weak early childhood programs—that are not intended to have any direct impact on academic outcomes so as to support their claim that these programs have no meaningful impacts on learning and development.

III. REVIEW OF THE REPORT'S USE OF RESEARCH LITERATURE

In making their arguments, the RF authors ignore data from the ECLS-K showing that neither poor children nor middle-income children are well prepared for school compared to higher income children. The size of the gap between poor children and children of middle-income families is equal to the size of the gap between children of middle-income families and children from high-income families. This middle class readiness gap was found for social and emotional development as well as cognitive development. For example, dividing children into five income groupings, the children in the middle group (the middle quintile) scored 6 points higher in reading, 7.3 points higher in general knowledge, and 6.5 points higher in math than the children in the bottom quintile (the 20 percent of families with the lowest incomes). Yet, the middle group was still 6.7 points lower in reading, 6.5 points lower in general knowledge, and 6 points lower in math than children in the top quintile (the 20 percent of families with the highest incomes).³

The RF authors also ignore reports from kindergarten teachers (whose expertise they acknowledge). In a 1995 survey of 3,500 kindergarten teachers from across the country, many reported that large proportions of their students lacked important school readiness skills. For example, 46 percent of the kindergarten teachers reported that at least half of their students had difficulty following directions, 36 percent reported that at

least half lacked academic skills they needed, and 34 percent reported that at least half had difficulty working independently.⁴ In Maryland, only 52 percent of children who entered kindergarten in 2002 were considered “fully ready.”⁵ In a 2001 statewide survey, Colorado kindergarten and first-grade teachers reported that four out of ten children were not academically prepared for school and that about one-third were not socially and emotionally prepared.⁶

Similarly, the RF report overlooks the RAND report by David Grissmer and colleagues that found a positive effect on NAEP scores of state preschool programs, controlling for other state characteristics and educational policies.⁷ This is a much stronger basis for state comparisons than the RF’s method which compared the NAEP rank of two states with the largest percentage of children in state supported preschool program. Moreover, the RF report ignores the overall indication from fourth grade NAEP scores that the nation’s children are not doing particularly well in the early grades, and it also ignores comparisons of fourth and eighth grade NAEP scores that do not show that they drop off.⁸

The RF report does not consider the stronger studies of publicly-supported preschool education programs. These studies include two randomized trials (one is national) of Head Start that find modest effects of the program on cognitive outcomes, as well as one randomized trial of Early Head Start, which found modest positive effects on children’s cognitive and social development.⁹ None of these is cited. The stated goal of Head Start is improving children’s health and nutrition, but evidence of positive effects on these outcomes is nowhere to be found in the RF report. The report ignores positive evidence of long-term effects from studies that are at least as methodologically strong as the ones the report cites as evidence that Head Start has no lasting effects.¹⁰ These include some sophisticated regression-discontinuity designs and other approaches that go beyond simple regression analysis to adjust for selection bias. That is, the researchers’ methodologies took into account the fact that the students were not randomly assigned to two groups (treatment and control) and, therefore, could differ on both measured and unmeasured characteristics that might affect their learning and development.

Moreover, when discussing the effects of preschool programs at school entry and through third grade, the RF report trumpets weak (according to the Campbell and Stanley criteria) studies. In particular, evidence from a weak study of the Georgia program is cited as proof that universal programs are ineffective. The RF authors could have presented the findings of the national randomized trial of Head Start (which is the gold standard using the Campbell and Stanley criteria). That, however, would show positive effects of the program and that some of the studies they cite favorably do not accurately estimate even the initial effects of Head Start. RF could have told their readers of evidence from a regression discontinuity study of the Oklahoma universal preschool program that found strong effects for all children; this study (a much more careful study than the Georgia one that is cited) is not cited.¹¹ The RF report does not mention a strong quasi-experimental study providing long-term estimates (that are quite positive) for Michigan’s state preschool program. The authors similarly do not tell their readers of the only randomized trial of extended-day, extended-year preschool and kindergarten education, which finds effects growing through first grade (which is as far as the study has been carried out to date).¹²

The report must deal with the fact that multiple, well-known randomized trials have found very long-term positive effects of preschool education. It does this by selectively attacking the randomized trials it cites, identifying flaws and limitations as reasons to doubt the studies' findings even when these limitations have been shown not to significantly affect the results. The authors also minimize the importance of these randomized trials by repeatedly claiming that they have not been replicated. The RF report states that "no other study has produced results as dramatic as those found" for the Perry Preschool Program. The truth, however, is that Perry's estimated impacts are not larger than those in a good number of other studies. The Abecedarian study is also said to be unique. Still, three close replications in randomized trials exist (CARE, IHDP, and the Milwaukee study), none of which are referenced by the RF report.¹³

The RF authors fail to cite all of these randomized trials and other studies (from the Consortium for Longitudinal studies and even abroad, such as a study of preschool's effects in Mauritius through to adulthood).¹⁴ It is apparent that there is a dose-response relationship in these replications with somewhat different programs, populations, and contexts, and that this consistency across such variation provides much greater confidence in the relationship than exact duplications of programs. That is, the story that emerges is one where larger and higher-quality doses of the treatment (early children education) result in more and longer-term benefits. The authors of the RF report apparently demand exact replication of studies showing positive outcomes. After reviewing its use of research literature, this report must be understood as a rhetorical device to allow for wholesale dismissal of a large and convincing body of evidence, and it requires the reader to accept a definition of replication that is so narrow as to be practically impossible and unwise in the real world.

The RF report seeks to label findings on grade repetition and special education as short-term impacts. However, this is not the case. Many of these findings are at third grade and beyond, even into high school. The findings on educational attainment (at ages 19 and later) also are consistently positive in the randomized trials and stronger quasi-experimental studies that have followed children this far with reasonably limited attrition.¹⁵

IV. REVIEW OF THE REPORT'S METHODOLOGY

The RF report is essentially a selective review of studies and accounts of early childhood programs. It is presented as an argument against universal pre-school and all-day kindergarten programs and more specifically against new proposals in Arizona, California, and Illinois. The methodology that they articulate sets forth high standards for research. In particular, the methodology demands that research be highly appropriate for assessing causal claims. As noted in this review, however, the authors do not consistently apply these standards to the research that they cite.

V. REVIEW OF THE VALIDITY OF THE FINDINGS AND CONCLUSIONS

The RF report's findings about children's readiness and the effects of preschool education are unwarranted and misleading. A broader review of the relevant literature making consistent use of principles regarding research strengths for drawing causal conclusions yields quite opposite findings.

The report's policy conclusions generally do not relate well to the literature reviewed or their findings. The one exception is the call for more assessment of impact. While this is a reasonable recommendation, the authors' conclusion that "almost no information is available" is at odds with their view that the evidence shows that effects fade out. To some extent, this conclusion also reflects the number of evaluations they have failed to include in their review.

While increased transparency might be beneficial, there is little evidence of a lack of financial accountability (as financial accountability is currently defined). Most child care programs are not designed to improve children's learning. The evidence does not substantiate massive fraud and abuse in Head Start. In fact, the evidence from New Jersey (highlighted in the report on pages 30-31) indicates that there is good financial oversight, which is exactly why audits were conducted when suspicions arose and cases were referred for prosecution (albeit just a handful out of hundreds of providers). Moreover, if the allegations made in the RF report regarding financial abuse were true, it would cast doubt on their recommendation that all programs be collapsed into a single voucher. After all, each one of these alleged problems involved private providers, not those run by governmental entities.

In connection with these voucher arguments, the RF report produces estimates of the amounts available per four-year-old in the form of a voucher by summing up resources across multiple programs that do not serve only four-year olds. This includes Head Start, which serves children from three to five, and child care, which serves children from birth through age 13. In addition, it appears that the authors assume that no administrative costs or accountability measures are necessary for a voucher program. The numbers of kindergarten and four-year-old children that RF reports does not seem consistent, raising questions about the validity of their data.

Overall, the RF report misleads the reader, relying on distortions, selective citation of research, and inconsistent use of standards for research quality. A few minor examples of distortions regarding the terms of the debate are instructive. Contrary to assertions and implications in the report, Governor Kaine did not say that preschool was a "Silver Bullet." California's Preschool for All initiative is not estimated to cost \$8000 per child for a part-day school year program, nor does it propose to create a "state controlled monopoly." The California program is estimated to cost \$5,000 to \$6,000 depending on who is estimating, and it emphasizes the use of private providers and parent choice.¹⁶

VI. THE REPORT'S USEFULNESS FOR GUIDANCE OF POLICY AND PRACTICE

At the most general level, the RF report's conclusions have some usefulness. For example, better information about funding and the services delivered and about program outcomes would be desirable, even though a policy maker pursuing this recommendation

certainly should not put decisions and programs on hold in the meantime. Another good point made by the authors is that the field is indeed highly fragmented and insufficiently coordinated. However, this does not mean that a desirable solution is to fold all programs into a single program (and they have neglected some, like early childhood special education, for example) or that such a program should be a single voucher. Florida, which they cite approvingly as an example of their recommended policy solution, dismantled some higher quality programs for which there was some information on outcomes, and replaced them with a single voucher that is funded at a very low level relative to costs of quality programs. At present no data on the effects of this new program on children exist, but what is known is that enrollments are much smaller than anticipated. This suggests that satisfaction with the available choices is much lower than might be suggested by the survey data cited by the RF report, another example of selective presentation of information.

Given its many limitations, the RF report cannot be viewed as a reliable source of information about research or policy. Too much important information is omitted. Too much of what is included is presented in ways that can mislead the reader about the actual quality of that research. Readers understandably might expect that the studies given great weight in this report to employ the strongest not the weakest research designs. The overall result is an inaccurate view of research on early childhood education.

¹ Early Childhood Longitudinal Study, Kindergarten Cohort (Fall 1998). National Center for Education Statistics.

² Campbell, D. T. & Stanley, J. C. (1963). *Experimental and Quasi-Experimental Designs for Research*. Boston: Houghton Mifflin Company.

³ Data from the Early Childhood Longitudinal Study—Kindergarten Cohort (Fall 1998). National Center for Education Statistics.

⁴ Rimm-Kaufman, S. E., Pianta, R. C., & Cox, M. J. (2000). Teachers' judgments of problems in the transition to kindergarten. *Early Childhood Research Quarterly*, 15(2), 147–166.

⁵ Bowler, M. (March 26, 2003). Fifty-two percent of kindergarteners in Maryland judged “fully ready.” *Baltimore Sun*.

⁶ Educare Colorado and Colorado's Children's Campaign. (February 20, 2002). First-ever statewide K-1 teacher survey on school readiness. Available at http://www.ecs.org/clearinghouse/33/40/3340_files/frame.htm.

⁷ Grissmer, D.W., Flanagan, A., Kawata, J.H., & Williamson, S. (2000) Improving student achievement: What state NAEP test scores tell us. Arlington, VA: RAND Corp. Retrieved May 23, 2006, from http://www.rand.org/pubs/monograph_reports/MR924/index.html

⁸ For example, on the 2005 NAEP reading tests, in 4th grade the percentage at or above proficient is 31% and the percentage at or above basic is 64%, while the comparable figures in 8th grade are 31% and 73%, respectively.

⁹ Puma, M., Bell, S., Cook, R., Heid, C., Lopez, M., Zill, N., Shapiro, G., Broene, P., Mekos, D., Rohacek, M., Quinn, L., Adams, G., Freidman, J., & Bernstein, H. (2005). *Head Start impact study: First year findings*. Washington, DC: US Department of Health and Human Services, Administration for Children and Families. Retrieved May 23, 2006, from

http://www.acf.hhs.gov/programs/opre/hs/impact_study/reports/first_yr_finds/first_yr_finds.pdf

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<http://www.mathematica-mpr.com/publications/pdfs/ehsfinalvol1.pdf>

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- ¹¹ Gormley, W. T., Gayer, T., Phillips, D., & Dawson, B. (2005). The effects of universal pre-k on cognitive development. *Developmental Psychology*, 41(6), 872-884.
- ¹² Robin, K.B., Frede, E.C. & Barnett, W.S. (2006). Is More Better? The Effects of Full-Day vs Half-Day Preschool on Early School Achievement. *NIEER Working Paper*. New Brunswick, NJ: National Institute for Early Education Research, Rutgers University.
- ¹³ Garber, H.L. (1988). *The Milwaukee Project: Prevention of Mental Retardation in Children at Risk*. Washington, D.C.: American Association on Mental Retardation. Wasik, B.H., Ramey, C.T., Bryant, D.M., & Sparling, J.J. (1990). A longitudinal study of two early intervention strategies: Project CARE. *Child Development*, 61(6), 1682-1696. McCormick, M., Brooks-Gunn, J., Buka, S, Goldman, J., Yu, J., et al. (2006). Early Intervention in Low Birth Weight Premature Infants: Results at 18 Years of Age for the Infant Health and Development Program. *Pediatrics*, 117(3), 771-780.
- ¹⁴ Royce, J. M., Darlington, R. B., & Murray, H. W. (1983). Pooled analyses: Findings across studies. In Consortium for Longitudinal Studies, (Ed.). *As the twig is bent...lasting effects of preschool programs*. Hillsdale, NJ: Erlbaum. Raine, A., Mellinger, K., Liu, J., Venables, P., Mednick, S.A. (2003). Effects of environmental enrichment at ages 3-5 years on schizotypal personality and antisocial behavior at ages 17 and 23 years. *American Journal of Psychiatry*, 160(9), 1627-1635.
- ¹⁵ Barnett, W.S. (2002, January). Early childhood education. In Molnar, A. (Ed.), *School reform proposals: The research evidence*. Tempe, AZ: Education Policy Research Unit, Education Policy Studies Laboratory, Arizona State University. Retrieved May 23, 2006, from <http://www.asu.edu/educ/eps/EPRU/documents/EPRU%202002-101/Summary-01.Barnett.htm>
- ¹⁶ Legislative Analysts Office. (2006, February). Proposition 82: Preschool education tax on incomes over \$400,000 for individuals; \$800,000 for couples. Sacramento, CA: Author. Retrieved May 23, 2006, from http://www.lao.ca.gov/ballot/2006/82_06_2006.htm
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