

Universal and Targeted Approaches to Preschool Education in the United States

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In the United States, enrollments in preschool center-based programs have leveled off at about 75 percent of four-year-olds and 50 percent of three year olds. Nearly all government programs restrict eligibility to children in low-income families, and these families have substantially increased preschool participation rates as a result. However, in the last decade little progress was made toward increasing enrollments, despite increases in government spending, and less than half of children in poverty attend public programs even at age four. The average educational quality of private programs is quite low, and public programs are only modestly better. As a result, the educational effectiveness of preschool programs in the United States tends to be much weaker than that of the well-known programs research has shown be cost-effective. This paper considers whether publicly funded preschool education for all children would alleviate these problems. Universal public preschool education would reach many more children in poor and low-income families. For means-tested programs constantly changing incomes present a moving target, while the stigma associated with programs for the poor also limits participation. Program effectiveness would be at least as good in a universal program as in targeted program, and effectiveness might actually improve. One source of increased effectiveness is peer effects on learning. In addition, parents from higher-income families may be better advocates for quality, and political support for quality may be higher. Children from middle- and higher-income families also will benefit from high-quality publicly-subsidized preschool programs. A universal approach will cost more than current targeted programs, but moving from targeted to universal public preschool education is likely to produce benefits that far exceed the additional cost.

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Introduction

Over the past several decades participation in preschool education in United States has expanded at

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a remarkable pace. In 1960, just 10 percent of the nation's 3- and 4-year-olds were enrolled in any type of classroom. By 1970, the percentage enrolled had doubled, and the vast majority (70%) attended private programs paid for by parents. Participation continued to rise, and by the mid-1990's participation had reached current levels. Today over 70 percent of children attend a preschool program the year prior to kindergarten (ages four to five) and about half attend two years prior to kindergarten (ages three to four).

About half these children attend private programs, though often with direct or indirect public subsidies. Many of these programs are primarily marketed to parents as child care, but nearly all of them emphasize their contributions to early learning as a rationale for participation. Although public spending on preschool programs continued to increase throughout the last decade, participation has been little changed since the late 1990's.

Public funding for preschool education in the United States is provided at the federal, state, and local levels by multiple programs. Eligibility for most of this public support for child care and other forms of preschool education is limited to families with low-incomes or gradually reduced as family income increases. The major federal programs are: Head Start, child care subsidies through grants to states, the Child Care Food Program, federal income tax credits for

child care, and preschool special education. Additional state and local government funding includes: state pre-kindergarten programs, preschool special education, and state child care subsidies. Local schools and county governments also pay for preschool programs, though some of these funds may also originate at the federal level.

Estimated spending for these major federal and state programs in recent years and in the projected budget for Fiscal 2011 are reported in Table 1. Some figures are not yet available, but no large changes are expected in those. As can be seen, outside of special education (preschool and early intervention), the federal government dominates public spending on preschool programs. From 2008 to 2011, state and local government spending is expected to stagnate or even decline due to the recession, while federal spending increases.

Table 1

USA's Estimated Spending for Major Federal and State Programs for Children Under 5

	2008	2010	FY11 Federal Budget
Head Start and Early Head Start	\$6.9 billion	\$7.2 billion	\$8.2 billion*
Child Care Subsidies(CCDF)	\$4.9 billion	\$5.0 billion	\$6.6 billion
Child Care Food Program	\$1.3 billion	\$1.6 billion	\$1.6 billion
Tax Credits	\$2.5 billion	\$2.5 billion +	Expect increase
DOD Child Care	\$300 million	Not Available	Expect increase
Title I Preschool	\$400 million (2000 est.)	Not Available	Not Available
Preschool Special Education (IDEA Part B, Sect. 619)	\$374 million	\$374 million	\$374 million
Early Intervention for infants and toddlers with disabilities (IDEA Part C)	\$436 million	\$439 million	\$439 million
State Pre-K Initiatives (spending from all sources)	\$5.2 billion	\$5.7 billion	Expect no change
State and Local funds for Preschool Special Education	\$5 billion	Not Available	Not Available
State funded Early Intervention	\$2-3 billion	Not Available	Not Available
State Child Care Subsidies	\$2.4 billion +	Not Available	Not Available

Note. Most of this increase is for Early Head Start to serve infants and toddlers.

Despite the growth in program participation and public funding many children still do not enroll in any preschool program and the educational quality of the programs many attend is mediocre to poor. This will change little even with the funding increases in Table 1. Analysis of data from the National Household Education Surveys for 2005 and 2007 indicates that only 65 percent of children in the lowest two income quintiles attended a preschool program at age four compared to 90 percent in the top quintile. Public programs account for most of the attendance of children in low-income families, but public programs do not even serve a majority of children in poverty. At age three, only about 40 percent of children in the bottom two income quintiles and the middle income quintile, as well, attend a program, while preschool participation is 80 percent in the top income quintile. A recent statewide study in California found that barely 20 percent of preschool classrooms qualified as good based on observation with the Early Childhood Environment Rating Scale-Revised Edition with less than 10 percent of private child care centers scoring good or better (Karoly, Ghosh-Dastidar, Zellman, Perlman, & Fernyhough, 2008).

Given the inequities in access to programs, lack of progress in expanding access in recent years, and the inadequate quality of many programs it is worth asking whether the United States should fundamentally change its preschool policies. For the past 50 years the United States has favored approaches targeting public policy on children in low-income families. Perhaps it is time to try a new approach in which public policy offers all children access to preschool programs. In recent years a number of states have proposed to serve all children at age 4, and Illinois has committed to serving all children at ages 3 and 4 at some point in the future. Proposals for universal pre-K have been harshly attacked from both the right (Finn, 2009) and left (Fuller, 2007). Yet, neither attack is well-informed by hard evidence about the relative merits of the two

approaches. In what follows, I compare the two approaches using four criteria: how well they educate children, coverage of children from low-income families, political feasibility and sustainability, and net economic return.

Educational Effectiveness

Both targeted and universal preschool programs have been found to improve the learning and development of disadvantaged children (Barnett, 2008; Camilli, Vargas, Ryan, & Barnett, 2010). It seems clear that longer-term effects on achievement are smaller than the immediate effects, but they do not disappear altogether if the immediate effects are sufficiently large. A comprehensive review of the literature clearly demonstrates that preschool education can produce persistent gains in achievement, school success (less grade repetition and special education) and social behavior. Some of the long-term decline in effects is plausibly due to compensating efforts of schools on behalf of low achievers, but this is unlikely to explain all of the decrease. Nevertheless, benefit-cost analysis reveals that even modest long-term gains have substantial economic value (Barnett & Masse, 2007).

One frequent criticism of early childhood policy in the United States is that targeted programs for children from low-income families operating on a large scale have not reproduced the effects of small scale programs (Haskins, 1989). However, the problem is not one of scale. None of the major federal or state programs replicate the models that produced strong results on a small scale. For example, many Head Start teachers have minimal qualifications, and Head Start teachers are paid only about half what teachers earn in the public schools (Barnett, 2003). Child care programs that receive subsidies have even less qualified teachers on average and have larger class sizes. Many state-funded pre-K programs have similar weaknesses compared to programs with

demonstrated effectiveness, though some of these come closer to the models than do federal programs (Barnett, Epstein, Friedman, Sansanelli, & Hustedt, 2009).

In the United States, federal government support for preschool education takes three basic forms. Preschool special education is expensive, but serves relatively few children. Head Start provides direct federal grants to local private agencies (almost entirely nonprofit organizations) who deliver services. A recent national randomized trial found that Head Start's initial effects were quite small relative to those found for preschool in the literature as a whole and that after kindergarten and first grade no detectable effects remained (U.S. Department of Health and Human Services, 2010). Child care typically is found to have effects that are no larger and so some find that children from low-income families may actually develop more poorly in the social-emotional domain in child care than if they had remained at home with a parent (Barnett, 2008). By contrast, at least some state-funded preschool programs, including universal programs, have been found to produce much larger effects on children's learning. Table 2 presents a comparison of effects on common measures for the well-known Perry Preschool program, state pre-K, and Head Start. Clearly, Head Start is not performing

well compared to some other types of programs, and child care programs perform even more poorly on average (Barnett, 2008; Karoly et al., 2008; USDHHS, 2010). Oklahoma's universal pre-K program is one of the top performers in terms of results for disadvantaged children (Gormley, Phillips, & Gayer, 2008).

Even if universal preschool programs were not of higher quality *per se*, they could be more effective for children from lower-income families for other reasons. There is evidence that disadvantaged children learn more from classmates who come from more advantaged backgrounds than they do from disadvantaged peers (Mashburn, Justice, Downer, & Pianta, 2009; Neidell & Waldfogel, 2008). Teachers may have higher expectations for children's learning and development when they serve a broader cross section of students. In Tulsa, Oklahoma where Head Start and universal pre-K classrooms employ teachers with the same qualifications and pay, the universal pre-K program produced larger gains in literacy, but not mathematics for children from lower-income families (Gormley et al., 2008). Several other studies have found that disadvantaged children's achievement is raised when they attend preschool programs with more advantaged peers (Schechter & Bye, 2007; Sylva, Melhuish, Sammons, Siraj-

Table 2
Achievement Gains from Pre-K at Age 4 (standardized effect sizes)

	Perry Preschool	Tulsa UPK	8 State Pre K	Head Start
Cog/Lang	.75	NA	.23	.09 (.18)
Math	NA	.36	.31	NS (.15)
Print	NA	.99	.79	.25 (.24)

Note. Head Start effects at age 3 reported in parentheses. There were fewer problems with nonparticipation of the treatment group and participation in other programs for the control group at age 3, so these estimates may more accurately reflect program impact. From "Effects of eight state prekindergarten programs on early learning," by W. S. Barnett, K. Jung, E. C. Frede, J. Husted, & C. Howes, 2010, *Paper presented at the annual meeting of the American Education Finance Association, Richmond, VA.*; "Head Start Impact Study. Final Report," by USDHHS, 2010, Administration for Children and Families, Washington, DC.

Blatchford, & Taggart, 2004).

Of course, universal programs provide education for children from middle and higher income families that is not provided by means-tested programs. Although higher income families have somewhat better access to higher quality private programs, even families at and above the median income often enroll their children in programs of limited quality (Karoly et al., 2008). Many people seem to think that educational problems in the United States are limited to children in poverty. This is not true. In fact, the most children who enter kindergarten with low skill levels are from middle income households (Barnett & Frede, 2010). Table 3 shows that in sheer numbers the majority of children who fail and repeat a grade and the majority of children who drop out of high school come from middle and high income families (who account for 80 percent of all children) rather than families in poverty (the bottom 20%).

Studies have found gains for non-disadvantaged students from universal pre-K in the United States (Gormley et al., 2008; Wong, Cook, Barnett, & Jung, 2008). Gains for children from higher-income families may be smaller than those for disadvantaged children, but those gains are still substantial. At least one randomized trial has found persistent effects for highly advantaged children from a quality preschool program (Larsen, Hite, & Hart, 1983; Larsen & Robinson, 1989). Universal preschool education is more common in Europe, and programs there have been found to improve long-term cognitive and social

development there for children of all socioeconomic backgrounds. Again, effects are somewhat larger for disadvantaged children. Thus, in addition to increasing the average level of achievement through middle school, universal preschool education has been found to reduce inequality in achievement within countries (Biedinger, Becker, & Rohling, 2008; Waldfogel & Zhai, 2008).

In sum, universal programs may have modest advantages in educational effectiveness for children from low-income families. They also reach children from middle and higher income families who otherwise might not be well served. Targeted programs might result in a smaller achievement gap between children in poverty and others in the United States, but all children, rich and poor alike would be worse off in absolute terms than in a universal scenario.

Coverage of Disadvantaged Children

Public programs serve a substantial portion of the population, with the highest coverage at age four, lower coverage at age three and very low coverage for younger children. Head Start serves over 11 percent of four-year-olds and 7 percent of three-year-olds. Over two million children received subsidies for child care (not counting tax credits), though many of these were under age 3 or over age 5 (up to age 13). These and other targeted programs that seek to serve only children who meet an income cut-off inevitably miss some children who they intend to serve and enroll some children who are not in the target population. This problem can be quite large. For example, by the time they leave Head Start about half the children enrolled are not poor. Some of these children are intentional exceptions to the requirement that families fall below the poverty line. For example, children with disabilities do not have to meet the income guidelines. Also, in order to provide a continuous education, Head Start children must

Table 3
Grade Retention and Dropout Rate by Family Income Quintiles

Income	Retention(2004)	Dropout (2005)
Lowest 20%	12%	18%
Middle 20-80%	8%	9%
Highest 20 %	4%	2%

Note. From “Benefits and costs of quality early childhood education,” by W. S. Barnett, 2007, *Children’s Legal Rights Journal*, 27(1), 7-23.

qualify only at enrollment and may receive up to two years of services thereafter. Of course, children in families who become poor after enrollment is complete typically cannot access the program. In contrast, child care subsidy programs recertify eligibility periodically so that children have no guarantee of continuous services and may exit the program because of changes in family income or parental work status. In either type of program families may misrepresent their incomes or not have a precise accounting of their income. Accurately identifying and enrolling a low-income population entails costs and these rise as more precision is sought.

How well means-tested programs actually target can be judged from enrollment data and parental reports of participation from the National Household Education Survey (Iruka & Carver, 2006). In 2005, there were about 800,000 4-year-olds in poverty, and there was little universal pre-K. The federal Head Start program enrolled about 500,000 4-year-olds. Forty states had targeted state-funded preschool programs (excepting Oklahoma and Georgia where the programs were designed to be universal) that together served nearly 700,000 four-year-olds. The states without programs were mostly small and sparsely populated. Local schools had additional targeted programs. Special education enrolled 250,000 more 4-year-olds, some of whom were from low-income families. Capacity was not just large enough to enroll every child in poverty, but nearly large enough to enroll every child in the bottom two income quintiles.

Given this program capacity, some might find it surprising that public programs enrolled less than half of 4-year-olds in poverty and less than half those in the next higher income quintile in 2005. Moreover, the majority of children in public programs were not poor. This is true even excluding special education and for Head Start alone. Head Start was the most tightly targeted program. If state program enrollment had been targeted as tightly as that of Head Start, then enrollment of children in poverty would have

exceeded 70 percent and enrollment of the next income quintile 60 percent. However, it may be unrealistic to expect state programs to be as well-targeted as Head Start without a great deal of effort because state programs typically recruit children not already enrolled in Head Start (which starts at age three, whereas most state programs begin at four).

In contrast, universal preschool programs can be expected to enroll 90% of all children, including disadvantaged children, following the example of kindergarten which is not compulsory in most states (Barnett et. al., 2009; OECD, 2010). A universal approach to public preschool education addresses another enrollment problem. Some families may choose not to participate in a program that is only for poor families to avoid stigma or because they fear negative peer effects. A universal approach removes the stigma associated with targeted programs, while lowering barriers to participation and easing the integration of children from diverse socioeconomic backgrounds. Finally, when age is the only criterion for entry, it is easy to identify eligible children and the cost of outreach and screening for eligibility is lower.

Some public preschool programs in the United States have achieved essentially universal enrollment with disadvantaged populations. European countries also have achieved near universal enrollment. In the United States, some high-income families can be expected to continue to choose to attend private schools despite the availability of public programs for all children. Enrollment rates are likely to depend on program quality, the choices available within the public program (e.g., whether programs affiliated with religious organizations participate), and the extent to which child care needs are accommodated by the program.

Overall, it seems likely that universal programs would reach a much larger portion of the disadvantaged population. Despite a long history, public programs in the United States still fail to enroll most children in poverty at age four. The United States is even farther away from the goal of serving all

children in poverty at age three. Recent efforts to expand the federal Head Start program have focused on children under three, neglecting the program's failure to enroll most of the population for which it was originally designed. This failure raises questions about how many eligible families do not want to enroll in the program, the difficulty Head Start may have identifying the rest of the eligible population, and the lack of political will to serve all children in poverty.

Political Viability

Arguments have been advanced for and against both means-tested and universal approaches based on claims about the political realities. Proponents of targeting argue that the public prefers targeted programs over universal and has a very limited willingness to pay for public preschool education. They argue that preschool programs for all children will be weak and relatively ineffective. By focusing only on the most disadvantaged, programs can devote more funding to each child, which allows them to be much more intensive. Proponents of a universal approach argue that the public is much more responsive to funding programs for all children and that overall quality will actually be higher in a universal program. They argue that more intensive educational services for disadvantaged children can be provided within a universal program as is already done in the United States for children with disabilities and for low-income children in public primary and secondary schools.

Some opposition to a universal approach seems to arise from a concern that it would inevitably be implemented by the public schools and that the public schools are highly ineffective, particularly for disadvantaged children. The relative effectiveness of public and private schools has been long debated, but evidence suggests at best small advantages of private education for achievement (Lubienski, Weitzel, &

Lubienski, 2009; Peterson, 2008; Rouse & Barrow, 2009). In the preschool realm where much more of the provision is outside the public schools, comparisons of program quality and impacts on children's learning and development favor the public schools over private programs or Head Start (Barnett, 2008). However, private providers have delivered public preschool education to a high standard on a large scale in collaboration with the public schools.

Another objection raised against universal preschool education is that it is just a way to publicly finance child care for the middle class. As middle-income parents benefit when government pays for their child care, this has the potential to be true. Preschool education inevitably provides some amount of child care. This is not necessarily a reason to oppose universal preschool education. However, if preschool programs were diluted to expand the provision of cheap child care for middle income families this would have negative consequences for the development of children in poverty. The only place that something like this seems to have happened is Florida. However, in Florida an unwilling legislature was forced to provide a preschool program for all four-year-olds by popular ballot initiative. In response the Florida legislature eliminated a higher-quality program for disadvantaged children and replaced it with a program that provides weak services to all children. However, this was not the voters' expressed intent.

On the other side, proponents of universal pre-K argue that "programs for the poor are poor programs" so that support for targeted programs is rarely sufficient to enroll all eligible children or maintain high quality. They claim that the public will support greater enrollments of disadvantaged children and higher quality if pre-K is universal (Kirp, 2007). They argue that in the United States public support is strongest for government assistance that enables all families to access quality programs, but varies the level of assistance based on ability to pay. Economic theory strongly suggests that support for

funding adequate to maintain the educational quality of preschool programs will be stronger for a universal program than for one that is means-tested (Gelbach & Pritchett, 2002). Proponents of targeting counter that there are examples of well-funded targeted government programs for health care and education. Looking at all of the research, I cannot find a clear political advantage for either targeted or universal social programs (e.g., Greenstein, 1991; Nelson, 2007; Skocpol, 1991).

In view of the disagreements about the political consequences of targeting or universality generally, it is useful to examine the evidence on preschool programs in particular. After more than 40 years of pursuing a targeted approach, not even half of American children in poverty are served by public programs, and those services do little to improve their cognitive development (Barnett, 2008). They may have done more in the past to address the health care needs of young children, but with new targeted and universal health programs, the need for these more comprehensive social programs has declined.

Across all public preschool programs whether a program is universal or targeted is not clearly associated with spending per pupil or standards, indicating that there is no clear advantage to either approach in terms of the resources the public is willing to devote to each child in the program. Nevertheless, universal pre-k programs clearly have one advantage—they enroll far more children, and only universal programs have enrolled the vast majority of children from low-income families. Therefore, it seems that universal programs are able to secure public support to provide preschool education on a larger scale without reducing quality or intensity. Few programs ever disappear suggesting that long-term viability is high for both approaches. However, it is the case that in one state, Georgia, the universal pre-K program was created precisely because it was feared that the state's targeted preschool program was politically vulnerable and would be eliminated.

Relative Costs and Benefits

Universal and targeted public preschool education programs differ in their costs and benefits. Obviously, a universal program has a higher total cost, but whether the cost is worth it depends on the benefits. There are three ways in which a universal program might generate sufficient additional benefits to make it a better investment than a less costly targeted program. First, a universal program could provide more complete coverage of the disadvantaged population. Second, a universal program could provide greater benefits to disadvantaged children because of peer effects on learning and development. Third, children from middle-income families could benefit from the program and the benefits from serving the rest of the population could exceed the cost of serving them.

Each of the three potential benefits from moving to universal preschool from a targeted approach was discussed above. The first benefit is potentially quite large. As noted earlier, targeted federal and state programs currently fail to reach most children in poverty in the United States. A universal program could reach most of these children and produce reasonably large benefits for such children. There is evidence that children in poverty would benefit more from attending programs with a more diverse population of children. However, the magnitude of such benefits is difficult to judge. To produce a conservative estimate of the economic return of a universal program, I assume that such benefits are negligible. Finally, the benefits to children from middle- and higher-income families could be 75 percent or more of those for disadvantaged children. If such benefits are even 10 percent of those to children in poverty, then the program would break even. Thus, even very conservative estimates of these benefits will add more to the plus column than the negative for a universal approach.

I rely on data from the Chicago Child Parent Centers (CPC) to estimate cost (Temple & Reynolds,

2007). The CPC program cost about \$5900 per child for a half-day of preschool education. This is similar to the cost of better state pre-K programs today, perhaps a bit on the high side (Barnett et al., 2009). If the United States enrolled an additional 60 percent of 4-year-olds at a cost of \$6,000 per child this would cost about \$15 billion per year. Applying the CPC's 10 to 1 benefit-cost ratio, the benefits from increased enrollment of children in poverty alone could approach \$30 billion. Similar benefits may be expected for children who are near poor. Clearly, even if there were no additional benefits for children in the remaining 60 percent of the population, a universal program that succeeded in enrolling the vast majority of children from low-income families would have a high economic return.

Of course, it may be objected that it is possible to design a more effectively administered targeted program. Yet, even a program that enrolled 75 percent of the children in poverty or 75 percent of poor and near-poor children is unlikely to surpass a universal program in terms of net economic benefits. This is largely because the net return to serving an additional child has to fall below 10 percent of the benefits estimated in the CPC study before marginal cost exceeds marginal benefit. Perhaps at the very top of the income distribution, this might be true. However, this calculus ignores any benefits to these children might bring to the rest of those enrolled in terms of peer effects on learning, parental attention to program quality, and political support for adequate funding.

It is true that families at the top of the income ladder in the United States have the highest current enrollment rates in private preschool programs. They would benefit the most financially in the short-run from a universal public program (though the very wealthiest are likely to stay with private programs). As the proposal under evaluation here is for a half-day program, it is possible that many higher-income parents could be induced to spend much of what they already spend to add on a second half-day of

comparable quality, while public child care funds are used to add on second half-day of comparable quality for children from lower-income families.

Just as a targeted program could, in theory, be designed to more tightly target children in poverty than do current programs, a universal program could be designed to address some of the limitations of that approach. A universal program could introduce a sliding fee scale that would recoup a substantial portion of the cost for children at the top of the income distribution without fees that would discourage participation at the bottom. Such an approach would modestly reduce the cost of the program to the public and might be viewed as more equitable by some. However, in the United States higher income families pay a disproportionate share of the taxes that would support a universal public preschool program, particularly if it was to be primarily funded by the federal and state governments. If higher-income families felt they did not share in the program's benefits, this could undermine their political support for the program.

Summary and Conclusions

In the United States, the federal and state governments spend over \$25 billion annually on preschool and child care programs, excluding spending on early intervention and preschool special education for children with disabilities or developmental delays. Much of this spending targets three- and four-year-olds in poverty. Nevertheless, most children in poverty do not receive attend a public preschool program even at age four, and about one-third attend no preschool program at all prior to school entry. Coverage is even lower for children at age three. Moreover, the quality and effectiveness of publicly funded preschool programs often is low so that the potential benefits from preschool education for child development are not fully obtained. If the United States shifted its preschool policy from a focus

on children in poverty to a universal approach, benefits to children in poverty would increase while other children benefitted as well.

Universal public preschool education would be at least as educationally effective as the current targeted approach, reach a much greater percentage of children in poor and low-income families, and provide educational benefits to children from middle-income families. Political support for such a program would be just as strong as for targeted programs, perhaps stronger. While either a state or federal strategy could attain this goal, there are advantages to governance by state and local public education system, even if they use private programs for service delivery (Frede, Jung, Barnett, Lamy, & Figueras, 2009). Such an approach could resemble policy for young children with disabilities, where federal funding incentivized states to provide high-quality preschool special education for all children. Program quality and effectiveness might actually improve as states were pushed to adopt higher standards. Another source of increased effectiveness is peer effects on learning. In addition, parents from higher-income families may be better advocates for quality, and political support for quality may be higher. Children from middle- and higher-income families also stand to benefit from public pre-K for all. In the absence of universal public programs, some of these children attend no program (particularly those just below median income), and the programs many others attend are educationally ineffective. Even though a universal approach will cost more, the added benefits are likely to far exceed the added costs as universal public preschool education is likely to produce far greater economic benefits than an income-targeted approach.

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