California’s Preschool for All Act (Proposition 82): A Policy Analysis

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California is home to more than 500,000 4-year-old children. Proposition 82 has been designed to offer those children a publicly funded high-quality preschool education. In brief, Proposition 82 will offer voluntary, high-quality preschool education to all 4-year-olds whose parents wish to enroll them. The initiative seeks to ensure that there is minimal disruption of existing early childhood programs and that parents have choices of programs in various settings including the private sector. It ensures program proximity so that no child has to travel farther to attend preschool than to reach a kindergarten program. During the first four years it would give priority to children living in school districts with the lowest academic performance. We conservatively estimate that over the long-run Proposition 82 would return $2.78 for every dollar California invests in the program.

Our analysis of Proposition 82 finds that it is well planned and will bring higher standards, accountability, and adequate resources to early childhood education. It has the potential to create the nation’s premiere preschool education system. We also find that the universal preschool education program provided by Proposition 82 is likely to significantly improve the educational achievement of California’s children. Because it is to be carefully implemented with adequate supports over a reasonable time period, it is likely to have positive effects on the private sector, particularly those who teach in preschool education programs. Although the program would cost about $2.4 billion per year when fully implemented, our analysis estimates that it would yield far larger economic benefits to California over the long-run due to decreases in school failure and its attendant problems such as high crime and low productivity.

Background

Enrollment in some type of early care and education program has become the norm for this country’s 4-year-olds. Many policymakers and families expect such programs to enhance young children’s kindergarten readiness and to bring about such long-term effects as greater achievement, less grade retention and special education, and higher graduation rates. Research establishes that preschool programs can produce these outcomes. Unfortunately, it is all too rarely the case that this promise is fulfilled. One reason is that there are still many children without access to preschool education, particularly in Western states like California. The other reason is that most of the child care and preschool programs children now attend are not educationally effective or are only weakly effective. Such programs may meet families’ child care needs, but do little for children’s learning and development and will not provide the desired future benefits.
Increasingly, states are trying to rectify this situation by establishing publicly funded preschool education for all children beginning at age 4. Oklahoma comes closest to providing universal preschool while New York, West Virginia, Georgia, Illinois, and Florida are in various stages of providing such a program. The quality and effectiveness of preschool programs varies among these states, but is quite high in several, including Oklahoma. California’s *Preschool for All Act* (Proposition 82) is designed to offer California’s pre-kindergartners a 180-day, three-hour long, voluntary preschool education program that is quite similar to others that have demonstrated substantial educational benefits in rigorous studies.

In the next section of this report we provide the results of a policy analysis designed to answer key questions for Californians regarding the impacts of Proposition 82. To make this information as accessible to the general public as possible, the results of our policy analysis are presented as responses to a series of questions.

**Issues Regarding the Impacts of Proposition 82**

**Does California need a new public preschool education program to increase school readiness? Aren’t our kids doing just fine with kindergarten and elementary school?**

Kids *aren’t* starting out just fine educationally in California. California’s median household income is 13\textsuperscript{th} highest in the nation, well above average. Ordinarily, that should translate into high levels of educational achievement and low levels of social problems. Yet, education in California faces tremendous challenges and is seriously troubled. Consider these facts about California’s public schools:

- 38 percent of the children starting school are English Language Learners.\(^2\)
- 49 percent of the children qualify for free or reduced-price lunch.\(^3\)
- 50 percent are in compensatory education programs.\(^4\)
- 29 percent fail to graduate on time with a regular diploma, 36 percent in central city schools.\(^5\)
- 64 percent of third graders score below the national average on reading.\(^6\)

Perhaps the single most telling fact is that reading abilities of California’s 4\textsuperscript{th} graders are significantly lower than those of their peers in 43 other states.\(^7\) *California is in a statistical dead heat for last place in fourth grade reading—tied with Mississippi, New Mexico, Nevada, Alabama, and Louisiana.* Data from the National Assessment of Educational Progress, the Nation’s report card for 2005, reveal that 50 percent of California’s children scored below basic on fourth grade reading. Essentially this means they don’t understand the overall meaning of what they are expected to read. Only 21 percent of California’s children in public schools scored at or above proficient on fourth grade reading in 2005, which is the level most children should achieve.

These educational problems mean that California’s future labor force is unlikely to be highly competitive in the global economy. They also suggest that California is likely to have a serious crime problem as school failure predicts crime and delinquency.\(^8\) This problem is already evident in crime statistics. California has the 10\textsuperscript{th} highest reported rate of violent crime and 9\textsuperscript{th} highest reported murder rate among the states according to the Uniform Crime Reports for 2004.
Is preschool education an effective response to California’s early educational problems?  
Don’t the effects of preschool education fade-out by third grade anyway?

The educational problems that Californians see in the early grades and later do not start in third or fourth grade. To a considerable extent these problems go back to the limited knowledge and skills children bring with them when they start school. The early years are a time of tremendous learning and, yet, national data show that many children enter kindergarten without either the cognitive or social and emotional skills that are needed to succeed in school. While this is a national problem, the data presented above on California’s children at kindergarten entry and in the first years of school indicate that the problem is far worse than the national average in California.

Rigorous studies have demonstrated that intensive preschool education with high standards can produce substantial gains in children’s abilities at school entry. The biggest effects have been produced by the most intensive preschool education programs. However, good public programs – like Chicago’s Child Parent Centers and a number of state-funded preschool programs with high standards including those in Oklahoma, West Virginia, Michigan, New Jersey, and South Carolina – produce sizeable gains in children’s school readiness. Such preschool programs alone won’t solve all educational problems, but they can and have made a real difference.

The notion that preschool education’s effects fade out by third grade is one of the most common myths about early childhood education. It is based on half-truths and poor research. Research studies have generally shown that gains in IQ due to preschool programs are most apparent in the short term and tend to gradually diminish over time. However, other outcomes do not disappear over time. Overall, the strongest studies find that meaningful effects on achievement persist. After participating in high-quality preschool programs, children are less likely to repeat a grade or to be placed in special education. They are also more likely to graduate from high school. It is also important to understand that public education can create what looks like “fade-out” when schools assist children who are failing with expensive additional services, costs that are better avoided in first place, and that poor-quality preschool programs will not generate persistent effects. In addition, important effects have been found on a wide range of children’s social and emotional outcomes, including reductions in delinquency and crime and in behaviors like smoking and teen pregnancy that pose significant health risks.

One of the most important benefits of high-quality preschool education is improvement in children’s social and emotional development and behavior. These benefits have been found to be persistent, leading to such outcomes as lower rates of smoking (which will reduce smoking-related illness and mortality) and lower crime rates which benefit the population generally. These findings come from highly rigorous studies and the crime reduction results, in particular, have been replicated in other countries.

Does California really need preschool for all children? Wouldn’t it be cheaper and more effective to have public preschool programs just for children in poverty?

For several reasons, California likely would benefit more from a program open to all children than from a targeted program. First, as is evident from the statistics presented earlier, the problems of school readiness and school failure cannot be effectively addressed by programs that target only the poor. Children in middle-income families have the same kinds of problems as children in poverty, only to a lesser extent. For example, nationally more than 1 in 10 middle income children will fail a grade and be held back, and more than 1 in 10 will fail to graduate
from high school. Children in middle-income families start school as far behind children from high-income families as children in poverty are behind the middle income.

Second, as a practical matter it is expensive and ineffective to try to target children from families in poverty. Many families meet eligibility thresholds one month, but not the next. Third, children in the middle have been found to reap substantial gains in school readiness from high-quality state preschool programs, and children from lower-income families learn more when they attend programs with children from middle and higher income families. Studies in the United States and abroad find that children from middle-income families enter school better prepared when they have attended good preschool education programs. Universal programs in both Oklahoma and West Virginia have been shown to get all children off to a better start, regardless of income.\textsuperscript{15}

Finally, this targeted approach has been tried for 40 years, and it has not done the job. California already has a targeted state preschool programs and federal Head Start. That is not enough. A targeted program would be cheaper, at least in the short-run, but it won’t reach enough children with a highly effective education.

How would Proposition 82 affect access to preschool education? Some people say that few children would be added to the preschool education rolls and that Proposition 82 will just subsidize rich people who already send their children to a preschool education program.

California is home to about 503,000 4-year-olds. In 2004-2005, 136,000 (27 percent) of California’s 4-year-olds received some type of publicly funded preschool education program. This total includes about 58,000 children (11 percent) in the federal Head Start program (some of whom attended Migrant programs), 55,000 (11 percent) in state preschool, and 23,000 (5 percent) in preschool special education. By reasonable estimates, another 38 percent of 4-year-olds attend some kind of private child care or preschool program bringing the total enrolled to 65 percent of the population or 327,000.\textsuperscript{16} That leaves 176,000 in no program at all. However, some of those enrolled in a program attend may not attend but 2 or 3 days a week and most are enrolled in child care or preschool programs that are not high-quality. Even most public programs available in California today are not of high quality. Thus, very few California children are currently enrolled in a preschool education program that is comparable to what would be provided by Proposition 82.

Other experts have estimated that 70 percent of the population would enroll in a public program under Proposition 82.\textsuperscript{17} Another 5 percent would remain served by special education, bringing the total served in public programs to 75 percent. They estimate that about 10 percent would remain in private programs. Based on experiences in Oklahoma and in other nations that have universal preschool education we believe that enrollment in California in the long term could be higher than these experts have estimated. Thus, in our analysis we take the conservative approach of considering what might happen over the long term if more children enter the program than under the 70 percent forecast. As the additional children are most likely to be higher income children, our higher enrollment scenario provides a “worst case” estimate of benefits and costs, as we explain below.

In our alternative high enrollment scenario, the new universal preschool (UPK) program would enroll 73 percent of the population. Another 11 percent would be enrolled in collaborating Head Start programs primarily funded by federal Head Start, but “topped up” by state UPK. Special education would continue to fund programs for 5 percent of the population. Only 6 percent would remain in private programs that did not receive public funds under
Proposition 82. Details of our estimates for current enrollment and projected future enrollment are provided in Table 1. This Table breaks out the distribution of current program participation by three categories: high need (children in the poorest 20 percent of families), moderate need (children in middle-income families) and low need (children in the richest 20 percent of families). The children and families that benefit the most in terms of new access to programs are those in the middle. Families with incomes near the average are actually those least likely to send their children to any type of preschool program. They rarely qualify for state or federal programs, but find it difficult to afford to pay for a good preschool education.

Using either the estimates of other experts or our own upper bound estimates on long term enrollment, the largest percentage of children who benefit are those who would receive a higher quality preschool education under Proposition 82, but who would otherwise have attended a child care or preschool program of lower quality. In our scenario, Proposition 82 also would provide access to preschool education to 146,000 children (29 percent of the population) who currently don’t attend any preschool program. However, the breakdown is quite different by need (family income). As can be seen from Table 1, in our long-term projections new enrollment constitutes 40 percent of the high need children (typically the lowest income), 30 percent of the moderate need children, and 15 percent of the low need children. If fewer children enrolled as other experts have predicted, new enrollments of low need children especially would be much lower.

Proposition 82 would increase the quality of the programs attended by most of the population under either projected enrollment scenario. This is important because the current state preschool program, Head Start, and most private programs are not educationally intensive enough to produce large gains in school readiness and long-term educational and social outcomes. Every year, NIEER rates state-funded preschool programs based on 10 benchmarks for program quality standards. California’s program meets only four of these benchmarks. The National Head Start Impact Study indicates that Head Start has some positive benefits, but these are small compared to what research indicates can be achieved by more educationally intensive programs. Neither the current state program nor federal Head Start is adequately funded to achieve their goals. Only the 5 percent of children who attend the relatively well-funded, high standards preschool special education program can be assumed to receive a highly effective education presently.

Only 25 percent of funded slots in federal Head Start offered full-day, full-week services to children served in California during 2004-2005. Notable shortcomings in program quality existed, as well. Less than 25 percent of Head Start teachers in the state had attained a 4-year college degree, and the average teacher salary was below $30,000. Even among teachers with a BA, average pay in Head Start was only $32,700.

The current state preschool program in California offers predominantly half-day services to 3- and 4-year-olds. Enrollment is offered to children from families with incomes at or below 230 percent of the federal poverty level, which in 2005 was equivalent to $44,505 for a family of four. Children identified as abused, neglected, or exploited are also eligible. Only 28 percent of school districts in California offered State Preschool in 2004-2005, leaving children in many areas without access. Teachers are not required to have a BA degree and, as noted earlier, the program met just four out of 10 benchmarks on NIEER’s Quality Standards Checklist.

Substantial increases in enrollment and improvements in current programs won’t happen overnight. Thus, it is important that Proposition 82 has a well designed, carefully laid out approach to developing capacity including building infrastructure, ensuring that higher education
is ready and accessible to develop the teaching force, and maximizing the use of existing facilities and staff. The timelines set out seem reasonable for accommodating projected increases in enrollment in public programs to meet the estimates of other experts or even if our higher projections resulted over the long term. We estimate that for a public program serving a population that includes a substantial number of children from middle and upper-income families a cost of about $5,000 per child (in current dollars) would be adequate. Therefore, the funds expected to be available to fund the program in the long term should be adequate even if this upper bound estimate of enrollment is eventually reached.\textsuperscript{20}

**Proposition 82 requires that teachers be well educated. Why does this matter? Will this requirement harm the existing staff of preschool programs?**

The *only* preschool programs that have been shown to produce large gains in school readiness and long-term gains that benefit taxpayers and their children more than the programs’ cost have been programs with college educated teachers with specialized training who were paid decent (not high) salaries.\textsuperscript{21} A national study in England found that preschool program’s effectiveness increased as the percentage of highly educated teachers in a center increased.\textsuperscript{22} Evaluations of preschool programs relying on staff with weaker qualifications have found that they produce very small gains in children’s school readiness, at best.\textsuperscript{23} The programs with the weakest teacher qualifications (including much of the child care available to even middle- and high-income families) have been found to produce the smallest gains.\textsuperscript{24} Thus, anyone who prescribes a preschool education using less qualified teachers is prescribing an unproven and risky reduction in the remedy for school failure. Moreover, they are prescribing exactly the formula that has been found not to work well enough already. In medicine, this would be called malpractice.

Recent studies found that less than 25 percent of Head Start teachers, and between 35 and 49 percent of teachers in California’s state-funded preschool programs, had attained a bachelor’s degree.\textsuperscript{25} As discussed earlier, this means that most children currently in preschool programs do not receive an education that will substantially enhance their early development and learning. Proposition 82 would change this by requiring that teachers in participating programs obtain a bachelor’s degree with 24 credits in early learning by 2014. This timeline takes into account how much preparation the existing teachers have and time needed to upgrade qualifications and recruit and train new teachers, as well.

Recent estimates\textsuperscript{26} of teachers’ educational attainment in seven California counties show that from 31 to 70 percent of preschool teachers in any program had already attained an Associate’s degree or BA. In five of the seven counties, about half of all preschool teachers had completed either degree. In addition, 3 percent or less of teachers had no college credits at all. These data suggest that while significant numbers of teachers will need to upgrade their credentials, many have already made some progress toward the goal. Thus, Proposition 82 provides a reasonable timetable for accomplishing its teacher qualification goals. Teachers will have until July 2014 to obtain a BA with 24 early learning units, and until July 2016 to obtain the state’s new Early Learning credential.

Proposition 82 also makes financial aid available, with funding allotted based on teachers’ financial need, years of experience in preschool programs, and commitment to working in geographical areas that have the greatest need for qualified teachers. Teachers will also receive increased compensation as they work towards upgrading their qualifications.
What are the likely benefits of Proposition 82 to the children and families served and to the larger population of California? Will the economic value of these benefits exceed costs?

The first five years of life are a unique period of growth and development in which children acquire the knowledge and skills that prepare them for later success in school and life. As participation in preschool programs has increased, a growing body of research has shown that young children are capable learners who benefit from quality education with lasting social and academic gains. These gains have been demonstrated in many rigorous studies (including randomized trials) with economically disadvantaged children, some of which have followed children from preschool to adulthood. In addition to increasing kindergarten readiness, these studies found long-term educational benefits of quality preschool to include: reductions in grade repetition and special education placement, and increased achievement scores and graduation rates. Other benefits later in life include increased employment and earnings and decreased delinquency and crime. Under Proposition 82, children in the lowest performing school districts would be offered priority enrollment for the first four years after the effective date of the Act.

There is growing evidence that preschool has similar, though most likely somewhat smaller, benefits for children who are not poor. One recent study that adds to our knowledge of the benefits of offering preschool to all children regardless of income is an evaluation of Oklahoma’s universal preschool program. On both math and language achievement tests, benefits were found for children across all races and from diverse income brackets. A similar pattern of across-the-board benefits was found in a preschool evaluation study that examined the effects of five high-quality state preschool programs that included programs open to all children in Oklahoma and West Virginia.

Benefits of quality preschool exist not only for the children who attend programs, but extend to their families, as well. Proposition 82 requires that each county superintendent ensure coordination of services so that full-day care can be provided to children if all adult family members work. In addition, by providing a program at no cost to families, parents who have stayed at home to care for their children would now have the opportunity to seek employment and increase household income. Parent outreach and involvement are required components of all programs funded under Proposition 82, which would inform parents about program availability and impact, and would help to keep parents involved in their children’s education.

Families of children with special needs would benefit from universal preschool through early identification and intervention. Generally, better outcomes are associated with earlier referral to special services. While a greater number of children may receive preschool special education services, many of these children will be moved back into regular education programs, and the incidence of referrals in later grades will likely decline.

Several studies have estimated the economic value of high-quality preschool education for disadvantaged children based on rigorous long-term studies. These studies find that the benefits exceed costs many times over and that the taxpayers benefit substantially, as well as the program recipients. Such preschool programs have been found to be one of the few investments with the potential to increase long-term productivity of the workforce while reducing the costs of government. Thus, in the long-term preschool education is pro-growth and anti-tax despite being paid for with public dollars.

Analyses of the economic consequences of programs that are open to all children, not just the disadvantaged, are necessarily more speculative. We don’t have the same kinds of long-term studies of preschool education’s impacts on the general population. However, we do have...
enough information to produce rough estimates. We know for example, that the rates of educational problems for middle-income children (which we call moderate risk) are about half as large as those for lower-income children.\textsuperscript{32} We also know that the school readiness gap between middle-income children and children of the richest 20 percent is about half as large as school readiness gap between lower-income children and the richest 20 percent.\textsuperscript{33} The potential to address educational problems seems to be about half as large for middle-income children as for low-income children. And, when we look at how much difference good preschool programs make in school readiness for middle-income children compared to lower-income children, the estimated effects for the middle are more than half the size of those for lower-income children. Thus, a reasonable ballpark estimate of economic returns for middle-income children is half what would be expected for disadvantaged children.

Given the uncertainties, we produced only a rough estimate of the economic benefits of Proposition 82 under conservative assumptions including the long-term high enrollment scenario portrayed in Table 1. Because we assume no long-term economic benefits to low risk children, the higher the percentage of those children assumed to attend, the lower the estimated benefit-cost ratio. We do not believe that there will be no benefits from serving low risk children—to the children, their families, and society—but this ensures that we do not overestimate their benefits. Had we employed the projected enrollment estimates of other experts, which will certainly hold for the short term and could hold for the long term, we would have estimated lower costs with little or no loss of benefits. Our assumptions for the benefit-cost analysis are detailed in the Appendix that follows Table 1.

Our rough benefit-cost analysis estimates the present value of economic benefits from Proposition 82 to be $13,885 per child.\textsuperscript{34} At a cost of $5,000 per child in UPK this yields a benefit-cost ratio of 2.78 to 1.\textsuperscript{35} This is quite similar to the 2.62 to 1 estimate in a recent RAND report on the economics of universal preschool education in California.\textsuperscript{36} In addition, we estimate that government cost savings alone ($5,693) are sufficient to ensure that California taxpayers get more than a dollar of value back from each tax dollar invested. Government cost savings alone are not, of course, the criterion against which this or any other program should be judged. After all, the improved outcomes for the next generation of Californians are the program’s primary goal and are properly included. Finally, the progressive structure of the California income tax suggests that government cost savings would be of more benefit to the higher-income taxpayers who finance the program than to others.\textsuperscript{37}

Summary

California has a school readiness crisis. The state’s young children are not doing well, even though California is a wealthy state with the 13th highest median household income in the nation. Four in 10 California children start school as English Language Learners. Half the public school children require expensive compensatory education. By the time they reach fourth grade California’s children score significantly worse in reading than children in 43 other states. Tied for dead last in the nation, half of California’s children fail to attain even basic reading skills by fourth grade. Only two in 10 children score “proficient,” the level most children should achieve.

The school readiness crisis in California is so severe that it cannot be addressed efficiently by waiting until children start school. By contrast, high-quality preschool education is capable of producing substantial gains in children’s language, cognitive, social and emotional abilities at school entry. These gains translate into later school success—higher reading and math test scores, less grade repetition and special education, less dropout—as well as decreased crime and delinquency and increased productivity in the workforce.
Unfortunately, at present California doesn’t invest enough in education during those important early years. Many children never attend a preschool education program at all, especially children from lower- and middle-income families. Few of those who do attend some sort of child care or preschool program receive the kind of high-quality education that would noticeably improve their learning and development. Proposition 82 would turn this around by ensuring that all children have an opportunity for high-quality preschool education. Although Proposition 82 by itself is not a cure all for the school readiness crisis, it would make a significant difference.

Opponents of Proposition 82 have recommended targeted programs for low-income children with much lower standards, and at substantially less cost. This is a prescription for what California already has: a targeted state preschool program and federal Head Start. It is clear that this prescription is inadequate to address the crisis, while research demonstrates that high-quality public preschool education for all helps children from middle-income families, as well as the poor, with particularly large gains for Latino children.

Proposition 82 is a well-designed response to California’s school readiness crisis that can contribute to a better future for children and the state as a whole. Proposition 82 would greatly increase the numbers of poor and middle-income children with access to high-quality preschool education. The results of this investment would benefit citizens across the state, whether or not they have young children. For every dollar spent, we find a return of $2.78. In other words, for a cost of $5,000 per child the economic benefits from Proposition 82 would be $13,885 per child, even under conservative assumptions. Good preschool education is a prudent public investment.

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Table 1. Enrollment by Type of Program and Child Need: Current and Projected Upper Bound

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<th>Distribution of Children</th>
<th>High Need</th>
<th>Moderate Need</th>
<th>Low Need</th>
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<td>60%</td>
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<td>100%</td>
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**Estimates of Current Enrollment for Any Hours, 2005**

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<th>Any Child Care Center or Preschool:</th>
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<th>65%</th>
<th>75%</th>
<th>65%</th>
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<td>47%</td>
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<td>5%</td>
<td>27%</td>
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<td>8%</td>
<td>37%</td>
<td>70%</td>
<td>38%</td>
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<td>Not in Pre-K Now</td>
<td>45%</td>
<td>35%</td>
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<td>35%</td>
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</table>

**Upper Bound Estimates of Enrollment After Long-Term Implementation of Proposition 82**

A. From No Program to UPK          40%  30%  15%  29%
B. From Old State Pre-K to UPK      14%  14%  0   11%
C. From Private to UPK              8%  32%  60%  33%
D. Total UPK                        62%  76%  75%  73%
E. Head Start Upgraded by UPK        27%  9%  0   11%
F. Special Education (No Change)    5%  5%  5%  5%
G. Total UPK, Head Start, Spec. Educ. 95%  90%  80%  89%
H. Remain in Private Child Care or Pre-K 0%  5%  15%  6%
I. Not in Child Care Center or Preschool 5%  5%  5%  5%
Appendix 1. Assumptions of Benefit-Cost Analysis

1. We assumed that serving children in the top 20 percent of families by income produces no economic value. This is highly conservative. Even some of these children encounter problems with school readiness that lead to school failure. Some of these children who have learning disabilities and other difficulties will be identified at an earlier age and will start school better prepared to succeed as a result. In addition, the children will benefit from access to higher-quality programs and the parents will benefit from the public subsidy of three hours a day during the school year. The benefit-cost analysis could include an estimate of the value of the subsidy to parents to the extent that Proposition 82 covers costs they would have borne. However, we were concerned about our ability to accurately estimate the value of this subsidy to parents and did not want to risk overestimation. Thus, we conservatively omitted it from the analysis, a clear source of downward bias in our estimated benefits to society as a whole.

2. We assumed that the economic value of benefits to children from families in the bottom 20 percent by income (high risk) can be estimated from those found in the Chicago Child Parent Center study. This program has similar standards to those in Proposition 82, but more important its estimated initial effects are quite similar in size to those of Oklahoma’s universal preschool program. The Oklahoma program is the closest approximation of the program to be provided by Proposition 82 that has been subject to rigorous evaluation. This estimated value of benefits in Chicago was approximately $53,600 per child in 2005 dollars. We divide this benefit amount by 1.5 because that was the average number of years of preschool education in the Chicago study, even though the Oklahoma program appears to produce the same size effects at kindergarten entry with only one year of preschool education. This yields an estimated benefit of $35,733 per child for low-income (high risk) children from the new preschool program compared to no-program participation.

3. We assumed that the economic value of benefits from the new program (compared to no program) to children in the middle 60 percent by income (moderate risk) is half that of disadvantaged children, approximately $17,867 per child in current dollars. This is proportionate to the relative size of their school readiness and school failure problems in comparison to children from lower-income families. It may be conservative, as the estimated initial effects of high-quality state preschool programs on children from middle-income families are more than half as large as the estimated initial effects on children from lower-income families.

4. We assumed that the estimated benefits for children who shift from a private child care or preschool program to the new public program are the same as for those who had no program: $35,733 for high risk, $17,867 for moderate risk, and zero ($0.0) for low risk.

5. For children who would have otherwise been in an existing state preschool program or federal Head Start, but would receive a higher-quality program due to Proposition 82, we assumed: 73 percent of the benefits for high risk children who would have been in Head Start or state preschool programs, and 65 percent of the benefits for moderate risk children who would have been in Head Start or state preschool programs. These estimates were derived based on estimated effects in the National Head Start impact study as a percentage of estimated effects for disadvantaged and non-disadvantaged children in the Oklahoma UPK program.
6. We assumed that children who would be in special education already receive a high-quality program and estimate no benefits for them from Proposition 82.

7. We assumed the share of benefits to taxpayers is equal to the share of benefits in government savings estimated by the Chicago Child Parent Center study, which is 41 percent.\textsuperscript{42}

8. We assumed an estimated cost of UPK of $5,000 per child including those children who moved from the existing state pre-K program and those children served by Head Start. This likely overestimates costs. The state would save the funds now spent on state pre-K, and Head Start probably could be brought up to UPK quality for an additional $1,000 per child. Of course, these “extra” funds could be used to increase the length of day and days per year for some children, but assuming quality was maintained this would increase benefits, as well.\textsuperscript{43}
ENDNOTES


Data from the National Center for Education Statistics show dropout rates of 23% for children in the lowest income quintile (high need) and 11% for children in the middle 60% by income (moderate need). The figures for grade repetition are 17% for the bottom income quintile and 12% for the middle-income children. U.S. Department of Education, NCES (1997). *Dropout rates in the United States: 1995.* Washington, DC: U.S. Department of Education.


This assumes the same 3% real discount rate used by the Chicago benefit-cost analysis. Reynolds, et al. (2002).

The average cost of K-12 education in California is about $10,000 per child. For the broad general population served under our long-term estimates of enrollment, half this amount for a half-day preschool program seems reasonable. If enrollment was lower as others have projected, and the population was less advantaged on average, cost per child might be somewhat higher. As noted, estimated benefits per child would be higher, as well.

The RAND analysis is much more detailed than ours, and employs different assumptions about children’s needs, the distribution of program participation and benefits.

The Proposition calls for a tax on very high-income earners that is expected to generate $2.4 billion when the program is fully implemented. Unless they can pass this cost on to others they will bear it entirely. They might also receive more of the benefits from future tax savings due to the program. However, our analysis is limited to estimating benefits and costs to the state as whole. Estimates of the precise incidence of costs and benefits to taxpayers in different brackets are beyond the scope of our analyses. We do not address the issue of the split between state and federal government cost savings. California taxpayers pay for both levels of government.
The point is that the estimated school readiness effects of Chicago and UPK are similar, and so similar long-term benefits may be expected, not that the programs are exactly alike. In the Chicago study, the comparison group had the advantage of greater access to full-day kindergarten so that the study may underestimate the Chicago Child Parent Centers’ impacts. The other early childhood programs that have economic analyses are more intensive and produced much larger economic benefits than the Chicago program.

This is a conservative assumption that reduces our estimated economic benefits by one third. The Oklahoma preschool education program may have been more effective than other programs because it is universal. See for example, Sylva, et al. (2004).

It is important to note that the estimated effects of the Oklahoma program that guide our analysis are relative to outcomes children would have had if that universal public preschool program had not been available not relative to outcomes if all children had attended no program.

The estimates employed from both studies are for effects on the Woodcock Johnson Letter Word Identification Test. The National Head Start Impact Study reported an effect size of .22, and the Oklahoma study effect sizes of .63 for nondisadvantaged (full-price lunch) and .81 for disadvantaged (free lunch) children.
