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WRITTEN TESTIMONY FOR THE HEARING "THE VALUE OF EDUCATION CHOICES: SAVING THE D.C. OPPORTUNITY SCHOLARSHIP PROGRAM"

SENATE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL OPERATIONS

FEBRUARY 16, 2011

Mr. Chairman, Ranking Member Collins, Distinguished Senators,

I am pleased to be with you today to discuss what we know about the D.C. Opportunity Scholarship Program (OSP). I served as the principal investigator of an outstanding team of researchers who conducted a congressionally-mandated independent study of the OSP supported by the U.S. Department of Education's Institute of Education Sciences. I am also a professor of education policy at the University of Arkansas with more than a decade of experience evaluating school choice programs in D.C., Milwaukee, New York, and Dayton, Ohio. Although the facts that I present to you today are taken directly from our recently completed impact evaluation of the OSP, the ideas and opinions that I express are the professional judgments of me alone and do not necessarily represent any official positions of the evaluation team, the University of Arkansas, the Institute of Education Sciences or the U.S. Department of Education.

Study Background

Our evaluation of the OSP used the most rigorous research method available for determining the impact of this school choice program. Parents who seek schooling options for their children are likely to be highly motivated to promote their children's educational success. That high level of parental motivation that leads parents to participate in school choice programs probably also contributes to greater student achievement over time, leading to what we call "self-selection bias" in the research world.

To ensure that parent motivation does not bias studies of school choice programs, researchers over the past decade have focused on evaluating them using experimental research designs called Randomized Control Trials (RCTs) whenever possible. With an RCT design, a group of students that all qualify for a voucher or scholarship program and whose parents are equally motivated to exercise school choice are subject to a scholarship lottery. The students who win the lottery become the experimental "treatment" group. The students who lose the lottery become the experimental control group. Since only a school voucher and mere chance distinguish the treatment students from their control counterparts, any subsequent difference in student outcomes for the treatment students can be attributed with great reliability to the voucher intervention. That is, the outcomes from the control group represent what would have happened to the treatment group absent the program, and the treatment impact is therefore the treatment outcomes minus the control outcomes. Because of the rigor of experimental designs they are often dubbed the "gold standard" for policy evaluations and are widely used to evaluate the efficacy of medical drugs and procedures prior to such treatments being made available to the public.

Student and School Participation

Two cohorts of students were followed for purposes of this evaluation. All of the students were attending public schools or rising Kindergartners at the time of application. Cohort 1 consisted of 492 students entering grades 6-12 in 2004. Cohort 2 consisted of 1,816 students entering grades K-12 in 2005. The characteristics and outcomes of these two groups, combined into an impact sample of 2,308 students, were the focus of our impact evaluation. A total of 1,387 students in the impact sample won the scholarship lottery and were thereby assigned to the treatment group, while the remaining 921 students who did not win the lottery were assigned to the control group. Over the five years of program operation from 2004 to 2009, other students received scholarships without having to go through a lottery. These students were not included in the rigorous impact evaluation because no appropriate comparison group was available for them.

Evidence from the study confirms that the OSP serves a highly disadvantaged group of DC students. Descriptive information from the first two annual reports about program participation indicates that over 90 percent of students are African American and nine percent are Hispanic. Their family incomes averaged less than \$20,000 in the baseline year in which they applied for the program. Overall, participating students were performing well below national norms in reading and math when they applied to the OSP. Forty-four percent of students in both cohorts were attending a public school designated as “in need of improvement” (SINI) between 2003 and 2005.

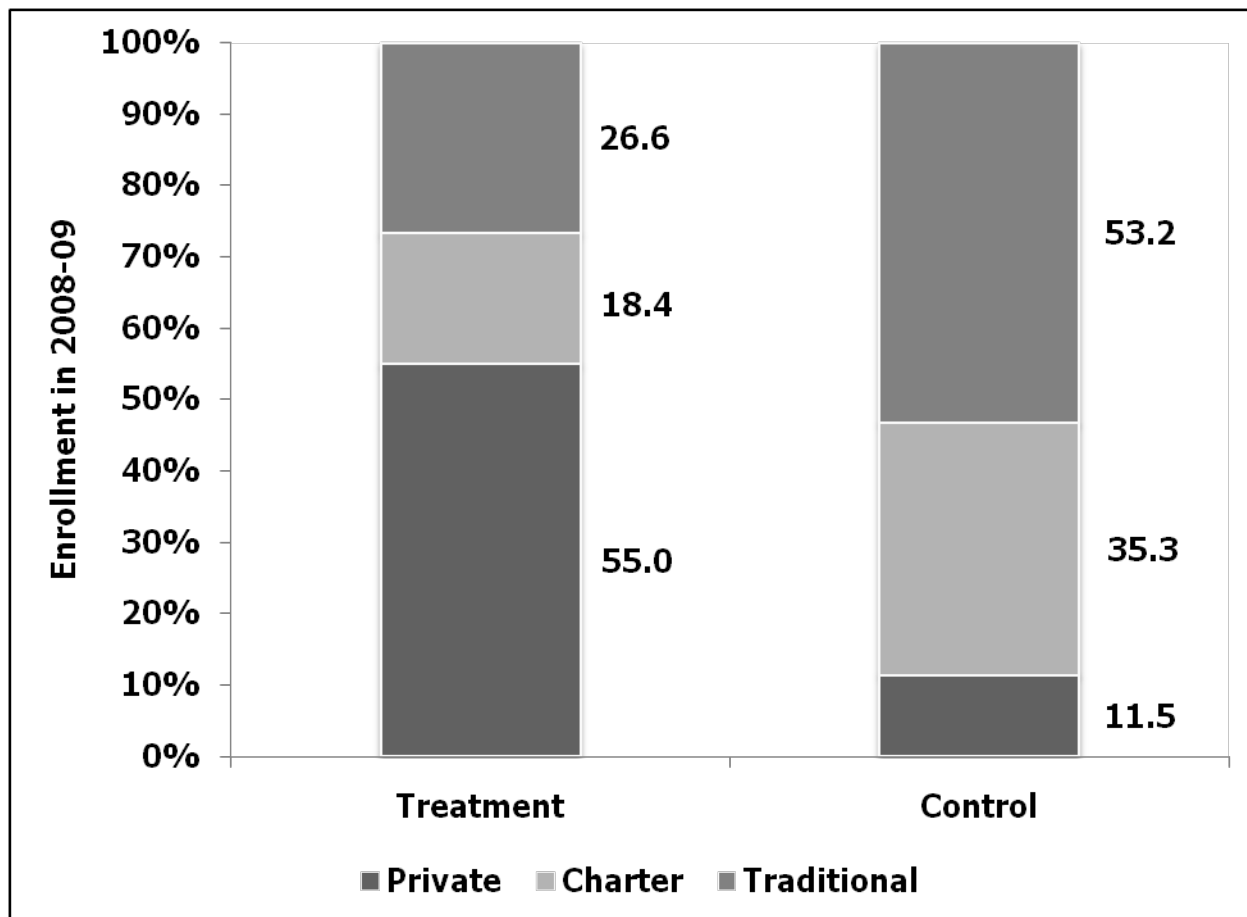
The Opportunity Scholarship Program is designed to facilitate the enrollment of low-income District students in private schools of their parents’ choosing. It does not and cannot guarantee enrollment in a private school, but the \$7,500 voucher should make such enrollments relatively common among the students who won the scholarship lottery. The eligible students who lost the scholarship lottery and therefore were assigned to the control group still might attend a private school but they would have to do so by drawing upon resources outside of the OSP. At the same time, students in both the scholarship treatment group and the control group have access to a large number of public charter schools in the District.

The implications of these realities is that, for this evaluation of the OSP, assignment to the treatment group did not necessarily mean private schooling and assignment to the control group did not necessarily mean education in a traditional public school. Members of both the treatment and control groups attended all three types of schools – private, public charter, and traditional public – after 4 or more years of the voucher experiment, though the proportions that attended each type differed significantly based on whether or not they won the scholarship lottery (figure 1). About 55 percent of the students who won the voucher lottery and provided outcome data in the final year of data collection were attending private schools. Less than 12 percent of the students who lost the voucher lottery were enrolled in private schools that same year. Over 18 percent of the treatment students chose to attend a public charter school four or more years after receiving a scholarship offer, compared to over 35 percent of the control group who opted for that public school choice option. Almost 27 percent of the treatment group students were enrolled in traditional public schools in the final year of data collection, compared with over 53 percent of control group students in such schools.

I see these data as underscoring that these families wanted educational options for their children. Over 73 percent of them placed their child in a private or public school of choice four or more years after winning the scholarship lottery and nearly 47 percent of them did likewise

even if they lost the lottery. This was a group of families with a strong motivation to exercise parental school choice.

Figure 1. Types of Schools Attended by the Treatment and Control Groups in 2008-09



Source: Wolf et al., *Evaluation of the DC Opportunity Scholarship Program: Final Report* (NCEE 2010-4018), Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education, 2010, Table 2-4, p. 27.

The enrollment pattern of students in the evaluation also highlights the fact that the comparison of the treatment and control groups in the final year of the analysis does not amount to a comparison between “all choice” and “no choice.” Instead, it is a comparison of outcomes between a group exercising lots of private school choice and some public school choice with a group exercising a small amount of private school choice and a substantial amount of public school choice. Any differences between the outcomes of the treatment and control groups therefore indicate the incremental impact of adding private school choice through the OSP to the existing schooling options for low-income DC families.

If one’s purpose is to evaluate the effects of a specific public policy, such as the OSP, then the comparison of the average outcomes of the treatment and control groups, regardless of what proportion attended which types of school, is most appropriate. A school voucher program cannot force scholarship recipients to use a voucher, nor can it preclude control group students

from attending private schools at their own expense. A voucher program only can offer students scholarships that they subsequently may or may not use. Nevertheless, the mere offer of a scholarship, in and of itself, clearly has no impact on the educational outcomes of students. A scholarship could only change the future of a student if it were actually used.

Fortunately, two statistical techniques are available that draw upon the unbiased results of the pure experimental analysis of treatment and control group differences. In the opinion of many researchers, including myself, these methodological approaches produce reliable estimates of the average effect of using a voucher compared to not being offered one and the average effect of attending private school with or without a voucher compared to not attending private school. The technique that produces the estimate of the effect of using a voucher is called a Bloom adjustment. Since lottery winners who never used a scholarship could not have been affected by it, the average impact of the voucher program on student outcomes that was generated by the entire sample of treatment students – users and non-users alike – is simply re-scaled by dividing it by the percentage of the treatment group that actually availed themselves of the treatment. For example, if 80 percent of the treatment students used their scholarships at any time since the voucher lottery and the treatment group as a whole averaged test score outcomes that were 4 points higher than the control group, the Bloom-adjusted estimated effect of using a scholarship on test scores would be $4/.8$ or 5 points.

The method for estimating the effect of attending versus not attending private schools, called Instrumental Variable (IV) analysis, produces estimates that tend to be larger than Bloom-adjusted estimates because they adjust for both non-use of the scholarship by the treatment group and private school attendance by members of the control group. As such, an IV analysis of the effect of private schooling is not an evaluation of a school voucher program *per se* but, instead, is an evaluation of the effect of the condition (private school enrollment) that a voucher program seeks to facilitate. Because such analyses place heavy demands on the underlying data, smaller differences that are found to be statistically significant at the purely experimental stage can end up as larger differences that are not statistically significant when estimated through IV analysis. The estimation of the impact of private schooling using the IV technique also requires specific information about whether or not students in the study attended private schools, information that is not always available for all students. As a result, in my remarks, I will focus on the purely experimental impacts of the OSP, called the "intent to treat" (ITT) estimate, and the effect of actually using a scholarship, called the "impact on the treated" (IOT) estimate. Whenever one sees "ITT" in the graphs that follow, that designates the impact of being offered an Opportunity Scholarship, whereas "IOT" signifies the impact of the program from using a scholarship. The effects of attending private schools for the students in our study are available in the appendices of our reports for anyone who is interested in those figures.

In our reports, we identify the differences between the treatment and control groups and then describe whether or not those differences are "statistically significant." A difference is judged to be statistically significant if, with a high level of confidence, we can rule out random statistical noise as its cause, leaving the program intervention as the only possible explanation for the difference. The level of confidence that any experimental difference is a true impact of the program being evaluated ranges from 0 to 99.9 percent. Although evaluators usually report the actual confidence level associated with each difference, we often simplify our analyses of program impacts by using a specific cut-off point to judge whether impacts are statistically significant. We thus transform the question of statistical significance from a matter of "more or

less" to a matter of "either-or." The most common cut-off points are 90 percent and 95 percent confidence.

We used the 95 percent confidence level as the minimum threshold for an impact to be judged statistically significant in our evaluation, a standard that I characterized in my previous Senate testimony as setting a high bar for statistical significance. Any difference with less than a five percent chance of being mere statistical noise was identified as a statistically significant program impact. Any difference with more than a five percent chance of being mere statistical noise was identified simply as no impact. It was 95 percent confidence or bust. In scientific terms, holding fast to the 95 percent confidence level as the standard for judging statistical significance means that you are four times more likely to miss a true program impact than you are to embrace a false one. Because the use of strict confidence level cut-points is somewhat controversial in the scientific literature, and different evaluators use different cut-points, in the interest of full information I will describe to the committee the specific confidence level that we can associate with each OSP impact finding and leave it to members to judge if, for example, 91 percent confidence is sufficient to think that the program really made a difference regarding that outcome or if the 9 percent chance that random noise produced the finding is enough to doubt the result. Reasonable people can and do differ regarding such interpretations.

OSP Impacts on Educational Attainment

The most important outcome we examined in our evaluation of the OSP was the program's impact on student educational attainment, as measured by the rate of high school graduation. High school graduation is critical because many careful studies have concluded that graduating from high school, as opposed to dropping out, is closely associated with a variety of positive personal and social outcomes. For example, a study by the Educational Testing Service (ETS) determined that graduating from high school increases lifetime earnings by \$8,500 per year and decreases the risk of unemployment by one-third. A study of high school drop-outs and graduates in California by Clive Belfield and Henry Levin concluded that each graduate reduces the cost of crime by \$112,000. Conditions are notably better for individuals and society when they graduate from high school.

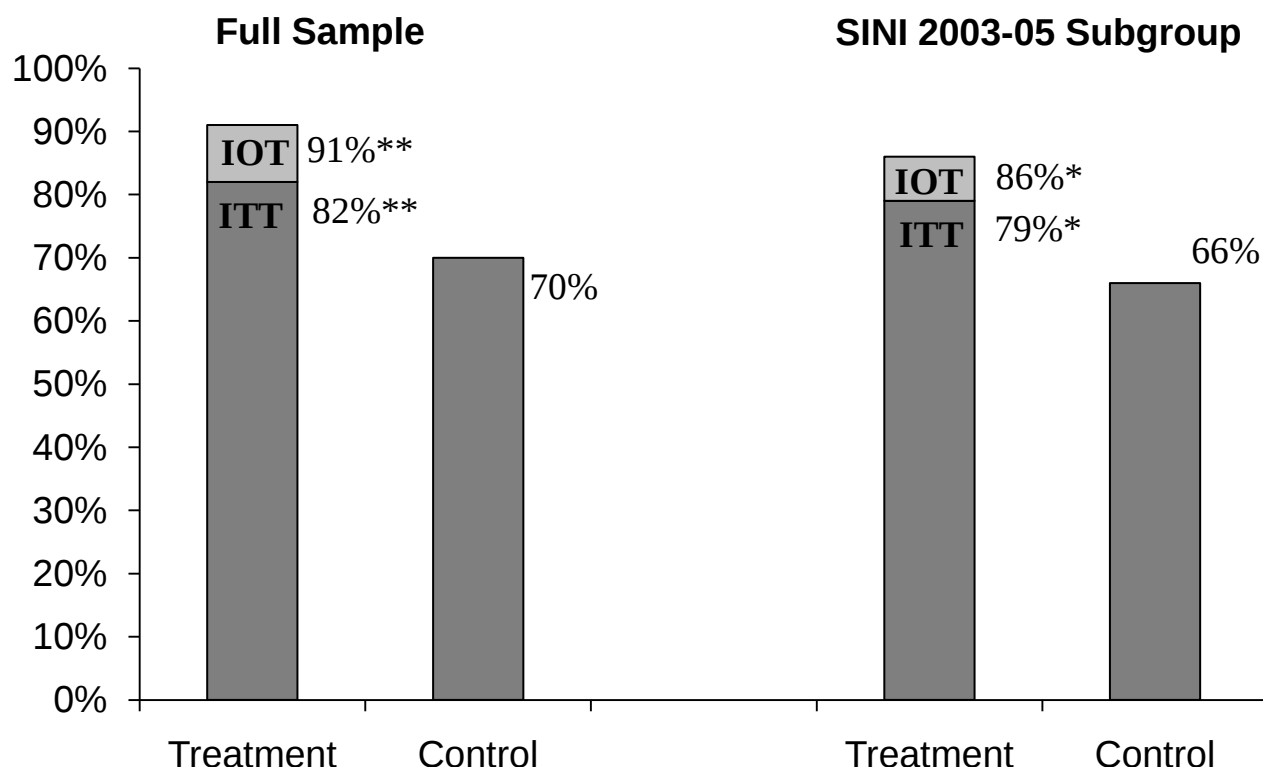
Based on parent reports, the students in our study graduated from high school at significantly higher rates as a result of the OSP. The treatment group students graduated from high school at a rate of 82 percent which was 12 percentage points higher than the control group rate of 70 percent. Adjusting for students who never used their scholarship, the impact of using an Opportunity Scholarship was to increase the probability of graduating from 70 percent to 91 percent -- a positive impact of 21 percentage points (figure 2). We can be more than 99 percent confident that access to school choice through the Opportunity Scholarship Program, and not mere statistical noise, was the reason why OSP students graduated at these higher rates.

The positive impact of the OSP on high school graduation was also clear for the high-priority SINI students in the study. Access to the OSP increased the graduation rate for SINI students from 66 percent to 79 percent. The impact of using an Opportunity Scholarship on the likelihood of high school graduation was to increase it by 20 percentage points, from 66 percent to 86 percent. This positive impact of the OSP on the high school graduation rate of SINI students was statistically significant with more than 98 percent confidence.

Conclusive experimental results, such as these important findings regarding the positive impact of the OSP on reported high school graduation rates, permit us to make reliable forecasts. For example, Cecelia Rouse, a member of President Obama's Council of Economic Advisors,

has determined that each additional high school graduate saves the nation an average of \$260,000 as a result of higher taxable earnings and lower demands for social services. That means that the 449 additional high school graduates due to the operation of the OSP will save our nation approximately \$116,625,600 over the long run. These experimental results also mean that approximately 111 students in the experimental control group will fail to graduate from high school simply because they were denied access to the Opportunity Scholarship Program.

Figure 2. Impact of the OSP on High School Graduation Rates, Overall & SINI Subgroup



*Statistically significant at the 95 percent confidence level.

**Statistically significant at the 99 percent confidence level.

SOURCE: Wolf et al., *Evaluation of the DC Opportunity Scholarship Program: Final Report*, U.S. Department of Education, National Center for Education Evaluation and Regional Assistance, NCEE 2010-4018, Table 3-5.

NOTE: ITT means the impact of the voucher offer; IOT means the impact of scholarship use.

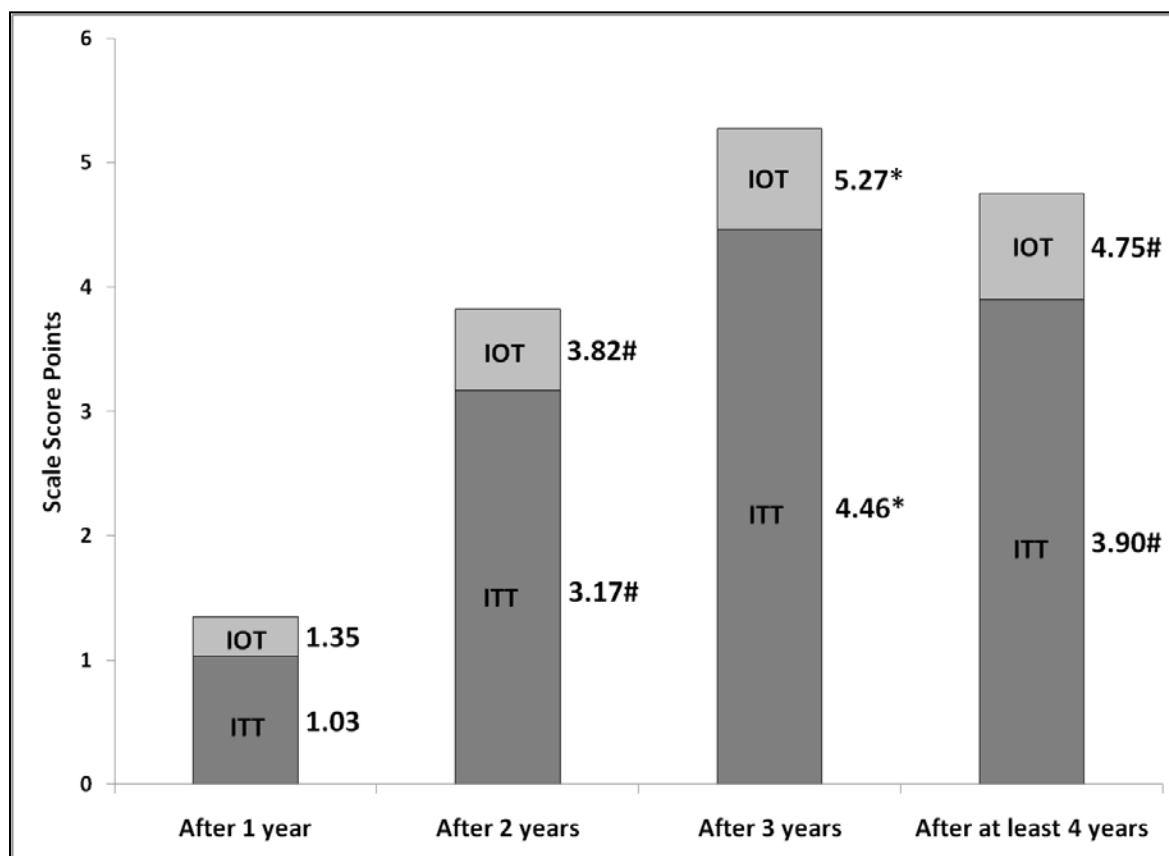
The Opportunity Scholarship Program and Student Achievement

Our analysis of test score data across all four years of the study suggested that, overall, OSP students likely benefited academically from the program in reading but not in math. The statistical probability that the OSP had a positive impact on student reading scores was 44 percent after one year, 91 percent after two years, 99 percent after three years, and 94 percent after four or more years (figure 3). If one uses the 95 percent confidence level as the minimum threshold for an impact to be judged "statistically significant", as we did in our study, then only the positive reading impacts in year 3 could be conclusively attributed to the program. If, instead, one used 90 percent confidence as the standard, then the positive reading impacts of the OSP were statistically significant in every evaluation year except the initial year of program implementation. Another way to think about the statistical significance of the reading impacts in

the final year of the evaluation is that, if you claimed that the OSP had no positive impact on student reading achievement, using the final year results as the basis of your claim, there is a 94 percent chance that you would be wrong.

Although the students offered Opportunity Scholarships on average consistently scored higher than the control group in math, those differences were so small each year that we cannot ruled out statistical noise, with any reasonable level of confidence, as their cause.

Figure 3. Impact of the OSP on Reading Achievement Overall, by Years After Application



#Statistically significant at the 90 percent confidence level.

*Statistically significant at the 95 percent confidence level.

SOURCE: Wolf et al., "School Vouchers in the Nation's Capital: Summary of Experimental Impacts," in *School Choice and School Improvement: Research in State, District and Community Contexts*, Mark Berends, Marisa Cannata and Ellen Goldring (eds.), Cambridge, MA: Harvard Education Press, forthcoming in 2011.

NOTE: Differences between each year's cumulative impact estimates have not been tested to determine their statistical significance. ITT means the impact of the voucher offer; IOT means the impact of scholarship use.

Why are we less confident that the OSP students gained in reading in the final year of the analysis compared to year 3? Statistical significance is largely a function of the size of impacts and the size of samples. Larger differences supported by evidence from more study participants are more likely to be significant at high confidence levels than are smaller differences supported by evidence from fewer participants. In year three, we observed an average reading achievement difference of 4.5 scale score points between the treatment and control group and a gain of 5.3 scale score points from using an Opportunity Scholarship. A total of 96 percent of the students in the study were still in 12th grade or below, which means we were able to administer achievement tests to them. A sizable reading achievement difference informed by a large sample

of testable students produced a high 99 percent confidence level regarding the statistical significance of the year 3 reading impacts of the OSP. Between year 3 and the final year of data collection, a large cohort of 211 students graduated out of the testable grade range. Only 87 percent of the initial impact sample of students remained in testable grades for the final achievement analysis. In that final year, the difference between the average reading scores of the remaining treatment and control group students was 3.9 -- a decrease of 13 percent from the year 3 difference of 4.5. A somewhat smaller reading achievement difference informed by a smaller sample of testable students produced a more modest 94 percent confidence level regarding the statistical significance of the final year reading impacts of the OSP. One could argue that the year 3 reading impacts are the better gauge of the program's achievement impacts, since it was based on more evidence than the final year impacts. One could also argue that the final year impacts are the better barometer of the OSP's test score impacts because it gave a smaller sample of students more time to be influenced by the program. Either claim is reasonable.

Because either the third or final year achievement impacts could be viewed as the most conclusive evidence of the effect of the OSP on reading, I characterize the educational significance of both sets of impacts here. One constructive way to view achievement gains is in terms of additional months of instruction. The overall reading gains from the OSP observed after three years, which we know with 99 percent confidence were caused by the program, represent the equivalent of about 3.1 additional months of schooling for the entire treatment group and an additional 3.7 months of schooling due to the use of a scholarship (Table 1). The reading gains from the OSP observed in the final year of the study, which we know with 94 percent confidence were caused by the program, represent the equivalent of about 2.8 additional months of schooling for the entire treatment group and an additional 3.4 months of schooling due to the use of a scholarship. The year 3 results suggest that students who used an Opportunity Scholarship gained about 1.2 months of additional learning per year; whereas, the final year results that they gained about 0.9 months of additional learning per year.

Table 1. Estimated Impacts in Months of Schooling of the Scholarship Offer and Use of a Scholarship for Reading Impacts in Year 3 and the Final Year of the Evaluation

Student Achievement: Reading	Months of Schooling	
	Impact of the Scholarship Offer	Impact of Scholarship Use
Overall year 3	3.1	3.7
Overall final year	2.8	3.4

SOURCE: Wolf et al., *Evaluation of the DC Opportunity Scholarship Program: Impacts After Three Years*, U.S. Department of Education, National Center for Education Evaluation and Regional Assistance, NCEE 2009-4050, Table 3-4; Wolf et al., *Evaluation of the DC Opportunity Scholarship Program: Experimental Impacts After at Least Four Years*, paper presented at the National Bureau of Economic Research Education Program Meeting, Nov. 1-12, 2010, Table 9.

The Pattern of Achievement Impacts by Key Subgroups

Beyond the evidence suggesting that the OSP increased overall reading scores, the program demonstrated a positive impact on the reading achievement of five subgroups of participating students across multiple years of the evaluation, with at least 90 percent and often with 95 percent confidence that these were true program impacts. However, because the subgroup analyses involve significance tests on multiple groupings of students, any one of which, at the 95 percent confidence level, has about a 5 percent chance of being a false discovery, we should treat

these subgroup results with less certainty than the overall reading achievement results discussed above.

When examined as separate subgroups, five types of students experienced significant reading impacts at various points in our evaluation of the OSP. Students who were not attending schools in need of improvement prior to entering the program demonstrated reading gains from the program at the subgroup level in year 2 (96 percent confidence), year 3 (99 percent confidence), and the final year (98 percent confidence). Students in the higher two-thirds of the performance distribution, whose average reading test score was at the 37th National Percentile Rank at baseline, improved their reading test scores due to the OSP in year 2 (98 percent confidence), year 3 (98 percent confidence), and in the final year (96 percent confidence). Female students demonstrated positive reading impacts from the program in year 3 (96 percent confidence) and in the final year of the evaluation (95 percent confidence). Students entering grades K-8 at baseline, where slots were plentiful in a wide variety of participating private schools, gained in reading achievement due to the program in year 2 (92 percent confidence) and year 3 (99 percent confidence). During the final year of the analysis, the students who were entering grades K-8 at baseline represented almost the entire sample still in testable grades and therefore could not be a part of the final subgroup analysis. Finally, Cohort 1 students demonstrated positive reading impacts at the subgroup level in year 2 (96 percent confidence) and year 3 (96 percent confidence). By the final year of the evaluation, so many members of the first cohort had graduated from high school that we could not analyze their test score impacts as a distinct subgroup.

Reading impacts for the other five subgroups examined individually – applicants from schools in need of improvement (i.e. SINI), students in the lower one-third of the performance distribution at baseline, males, students entering high school grades at baseline, and students in Cohort 2 – were not statistically significant in any of the years of the analysis. This does not mean that those subgroups of students did not benefit from the program, as research results never prove a negative, but it does mean that reading gains were not clearly evident at the subgroup level for those types of students. The fact that significant reading impacts were not observed for the subgroup of SINI students is noteworthy, since Congress designated SINI students as the highest service priority for the program. Math impacts were not statistically significant for any of the 10 subgroups examined after two, three or four or more years.

In sum, the evidence is conclusive that OSP students performed better on reading tests after three years as a result of the program. There is additional supportive evidence that the program had a positive effect on reading achievement in year 2 and the final year of the evaluation, as well. Five of 10 distinct subgroups of students demonstrated statistically significant reading gains from the program in multiple years of the evaluation. Most of those subgroup impacts were statistically significant with greater than 95 percent confidence and even after adjusting for the multiple comparisons involved in such subgroup analyses. Any claim that the OSP had no significant impact on student reading achievement would fly in the face of a wealth of scientific evidence to the contrary.

Overall Impacts on Parent and Student Satisfaction

Whenever school choice researchers have asked about satisfaction with schools, parents who were given the chance to select their child's school have reported much higher levels of satisfaction. Students themselves, for any number of possible reasons, have rarely described themselves as more satisfied with the new schools chosen by their parents. The satisfaction

results from the final year of the OSP evaluation fit this pattern of previous studies. The proportion of parents who assigned a high grade of A or B to their child's school was 8 percentage points higher if they were in the treatment group, 10 percentage points higher based on scholarship use. The impact of the OSP on increasing parent satisfaction with their child's school was statistically significant with more than 99 percent confidence. Parents also rated the safety of their children in school as higher if they had been awarded or used an Opportunity Scholarship, a positive program impact that was statistically significant with 98 percent confidence in the final year of the study. Students in grades 4-12, when asked similar questions, were no more likely to be satisfied with their school or describe it as safe if they were in the treatment compared to the control group.

Interpreting the Findings

What does this pattern of results suggest about the effectiveness of the OSP? Any answer to that question is bound to be somewhat subjective, so I think the best way to judge the program's impact is to compare the academic outcomes from the OSP with those from randomized control trials of other education programs.

The National Center for Educational Evaluation (NCEE) at the Institute of Education Sciences has released the results of 13 other studies that, like this one, employ the methodological rigor of random assignment to distinct treatment and control groups. The DC OSP evaluation is one of only four of these 14 NCEE studies to report overall positive impacts, statistically significant with at least 95 percent confidence, on academic outcomes such as achievement or attainment (table 2). The other three federal education programs which have been confirmed to deliver overall achievement impacts are Problem Based Economic Instruction, K-PAVE Vocabulary Development, and Enhanced Reading Opportunities. The relative size of the OSP impact on boosting high school graduation rates, more than one-quarter standard deviation (SD) is the second largest statistically significant positive impact yet identified in an NCEE experimental analysis. Only the Problem Based Economic Instruction evaluation has reported larger positive impacts on student academic outcomes than those demonstrated in the evaluation of the Opportunity Scholarship Program.

Nine other education programs have not demonstrated statistically significant academic impacts overall. The interventions that have not demonstrated statistically significant effects on student academic outcomes in NCEE experimental evaluations includes charter schooling, student mentoring, Reading First, classroom literacy interventions in Even Start, alternative teacher certification, initial teacher training, literacy intervention for adult English Language Learners, , Odyssey Math, and simplifying the wording of math questions. One other program, After-School Programs and Enhanced Academic Instruction, demonstrated a mix of positive, non-significant, and negative impacts on achievement. The larger point is that many federal education programs targeted at disadvantaged students have been the subjects of rigorous evaluations. Most of these programs have failed to demonstrate the ability to move disadvantaged students to significantly higher levels of academic outcomes such as achievement and high school graduation. In my opinion, by demonstrating statistically significant experimental impacts on boosting high school graduation rates and generating a wealth of evidence suggesting that students also benefited in reading achievement, the DC OSP has accomplished what few educational interventions can claim: It markedly improved important education outcomes for low-income inner-city students.

Table 2. NCEE Intervention Studies in Order of Significance of Academic Impacts, Through February 2011

	NCEE Single Intervention Study	Overall Significant Impact (95% Confidence)	Partial or Subgroup Sig. Impact
1	Effects of Problem Based Economics on High School Economics Instruction	Positive (Economics content knowledge; Economics problem-solving skills and application to real-world economic dilemmas) Impacts = .27-.32 SD	N/A
2	DC Opportunity Scholarship Program	Positive (Graduation, Reading Year 3) No effect (Math, Reading Year 4) Graduation Impact = .26 SD Year 3 Reading Impact = .13 SD	Some positive subgroups (Reading), some no effect
3	K-PAVE Program to Accelerate Vocabulary Development in Kindergarten	Positive (Vocab development: one month; Academic knowledge: one month; Vocab and comprehension support); No effect (Listening comprehension); Impacts = .14 SD	N/A (insufficient power to calculate impacts)
4	Enhanced Reading Opportunities	Positive (1 year) Reading Impact = .08 SD	Some positive subgroups, some no effect
5	Evaluation of Charter School Impacts	No effect	Some positive subgroups (Math); some negative subgroups (Math)
6	DOE Student Mentoring Program	No effect	Some positive subgroups, some no effect
7	Reading First	No effect (3 years)	Improvements in student decoding skills
8	Classroom Literacy Interventions and Outcomes in Even Start	No effect (literacy measures)	Improvements in parenting skills and children's social skills
9	Teacher Certification Routes	No effect	Some negative effect, most no effect
10	Comprehensive Elementary Teacher Induction	No effect	N/A
11	Reading Intervention for Low-Literate Adult ESL Learners	No effect	No effect
12	Effects of Compass Learning Odyssey Math on the Math Achievement of Selected Grade 4 Students in the Mid-Atlantic Region	No effect	No effect
13	Linguistic Modification of Math Test Item Sets	No effect	Some positive subgroups (depending on the scoring approach used), some no effect
14	After-School Programs and Enhanced Academic Instruction	Positive (Math after 1 year); No effect (Reading after 1 year, Math after 2 years); Negative (Reading after 2 years)	No effect
	Totals:	2 positive, 2 some pos., 9 no effect, 1 mix of pos./neg.	

NOTE: Items in top box show at least some overall significant positive effects with at least 95 percent confidence and no significant negative effects. SD means standard deviation units.

SOURCE: Calculated from review of the most recent evaluation reports where interventions were compared to a control group (see <http://ies.ed.gov/ncee/pubs/>). Evaluations that merely compared interventions to each other are excluded.

Conclusion

For the past seven years, the District of Columbia Opportunity Scholarship Program has provided income-disadvantaged students with government-financed scholarships or vouchers to facilitate their enrollment in participating private schools selected by their parents. Having collected and analyzed data from up to five years of student and parent experiences with the OSP, we have learned much about the program. The DC Opportunity Scholarship Program has proven itself to be a highly effective drop-out prevention program. The SINI students, who were the highest service priority of the program, graduated from high school at a rate that was 20 percentage points higher due to the use of an Opportunity Scholarship. We know, with more than 90 percent confidence, that the program has increased student reading performance. No program impacts have been observed in math achievement. When the data are parsed into smaller subgroups, half of those individual subgroups of students have demonstrated reading gains as a result of the program across multiple years of the evaluation. Parents, but not students, say that they are more satisfied with their schools if offered an Opportunity Scholarship and they view those schools as safer. No negative effects of the program were uncovered in any years of the rigorous government-sponsored evaluation.

Actual people often speak more eloquently than do statistics and scientists. I close by quoting the words of an OSP parent who attended one of the focus groups we conducted to augment the government evaluation of the program. Here is what the Opportunity Scholarship Program meant to her and her son who used a scholarship to attend a private high school in the District:

When my son dressed in that uniform with that green blazer, the white shirt, tie, gray trousers and he looked like a gentleman and a scholar and he had his hair cut and his glasses and he was just grinning from ear to ear that he was going to be a part of that [private school culture] and he went to school that day and he was excited about going to school.

Senators, the research evidence and testimonials of parents confirm that the District of Columbia is a better place because of the Opportunity Scholarship Program.