

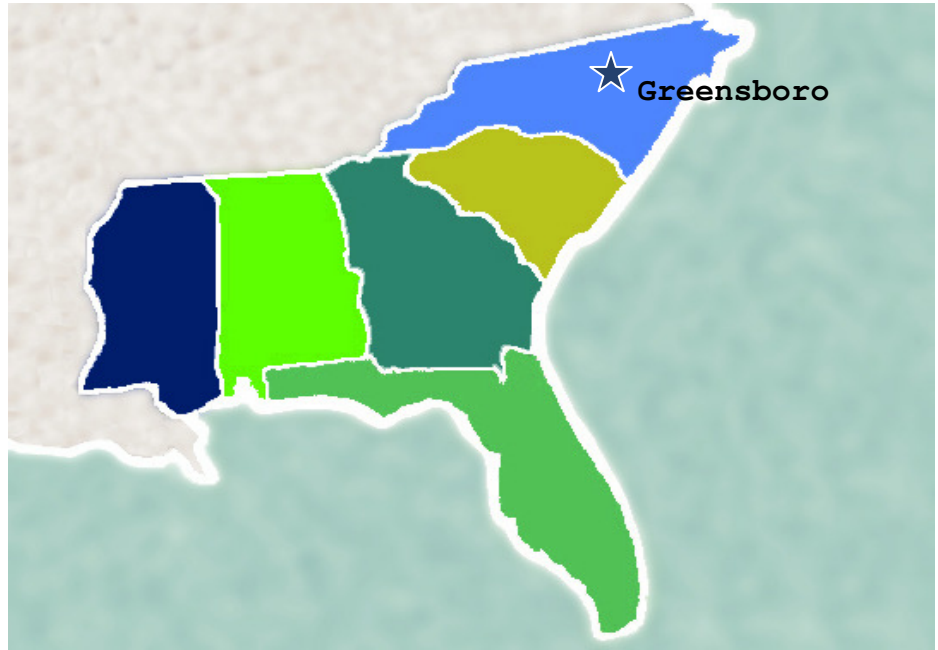
REGIONAL *EDUCATIONAL* LABORATORY

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EVIDENCE BASED EDUCATION REQUEST DESK

OUR GOAL

To assist educators and policymakers in their efforts to apply the evidence base to decisions about policies, programs, and practices they encounter.



REQUEST:

What is the REL's position on school choice for private or charter schools? Is there research or evidence that shows that schools who compete for students serve their customers better?

Introduction

It is difficult to make a clear impact statement about charter schools. Much of the available research is equivocal, and many important questions related to the impact of charter schools remain unanswered. Researchers have primarily examined four general topics with respect to the impact of charter schools;

- Do charter schools raise student achievement?
- Do charter schools provide competition that result in improved traditional public schools?
- Do charter schools results in less racial and ethnic integration and/or result in a lower-achieving student body in local public schools by skimming white and better-achieving students from traditional public schools?

This report offers current thinking on these topics.

If you have any questions regarding this document, please contact the
REL-SE, 1-800-755-3277 or RELSoutheast@serve.org

Overview of the Research

Impact on Student Achievement

Achievement results for charter schools are mixed. A few studies show increased achievement for students attending charter schools. Abdulkadiroglu et al. (2009) reports that using student assignment lotteries, estimates show large, significant test score gains for students attending charter schools in middle and high school; and Holmes, DeSimone, and Rupp (2003) state that an increase in charter schools in North Carolina correlated with robust test score gains. In New York City, Hoxby and Murarka (2009) found that charters with lottery assignment had significant increases in both mathematics and reading achievement for those students enrolled. Zimmer et al. (2009) provide a review of charter school performance across eight states. Overall, however, research indicates that students attending charter schools generally achieve on a par with their peers who attend traditional public schools (Berends et al., 2010; Booker et al., 2009; Cullen, Jacob, & Levitt, 2005; Gill et al., 2007; Gleason et al., 2010; Zimmer et al., 2009) although charter schools vary greatly, and the available information indicates that charters tend to produce poor results in their first year of operation, improving over time (Booker et al., 2009). Student characteristics appear to have an important impact on the achievement results reported for charter schools (Adnett & Davies, 2005). African-American students attending charter schools may receive a modest benefit after one or two years in the program (Zimmer et al., 2009), although this benefit does not generalize across other ethnic groups. Beyond such immediate effects as improved test scores, researchers report that students attending charter schools are more likely than students attending traditional public schools to graduate high school and enter college (Booker et al., 2009; Zimmer et al., 2009). For instance, Booker et al. (2009) did find Chicago charter schools “may produce substantial positive effects” on ACTS scores, graduation rates, and probability of enrolling in college. Parents are typically satisfied with charter programs (Zimmer et al., 2009). However, access to these programs may be problematic. Although some minority students may be placed through voucher programs, access is seldom improved for students with disabilities or poorly educated parents (Lauen, 2009; Zimmer et al., 2009). And, many questions remain unanswered about charter programs. The long-term and systemic effects of these programs has yet to be examined, and their effectiveness has not been compared to that of other school reforms (Berends et al., 2009; Gill et al., 2007; Goldhaber & Eide, 2003; Greene et al., 2010; Rouse & Barrow, 2009; Zimmer et al., 2009).

Effects of Competition

As charter schools have become an increasingly important part of the education picture, a hope for these programs has been that the competition they provide will stimulate improvement in traditional public schools (Berends et al., 2009; Greene et al., 2010; Howell & Peterson, 2006; Hoxby, 2000, 2003; West & Peterson, 2006). However, the research has not supported this. While some research indicates that this competition has beneficial effects (Belfield & Levin, 2002; Figlio & Hart, 2010; Lavy, 2010), with effects being more pronounced for marginal schools, the evidence that competition improves public schools is not definite (Figlio & Rouse, 2006; Rouse & Barrow, 2009). Much of the available information indicates that the competition brought about by school choice does not seem to have a positive effect on public schools (Braun, Jenkins, & Grigg, 2006; McMillan, 2004; Rothstein, 2007; Zimmer et al., 2009) and may even have a detrimental effect, negatively impacting learning (Ladd & Fiske, 2003) and possibly lowering student effort (De Fraja & Landeras, 2006). However, charter schools do offer expanded educational opportunities to students and encourage educational innovation (Abdulkadiroglu et al., 2009; Booker et al., 2009; Gleason et al., 2010; Zimmer et al., 2009).

One of the more high-profile voucher experiments was the DC School Choice Incentive Act which utilized lotteries in the District of Columbia. The Institute of Education Sciences (IES) evaluation of the program found some reading achievement improvement for voucher recipients in preliminary reports (Wolf et al., 2009), but the final report for the DC program did not find significant differences between voucher recipients and those students lotteried out of the program (Wolf et al., 2010). However, the final report did find substantial increases in voucher students' probability of high school graduation. Overall, DC scholarship recipients had graduation rates of 82 percent while the comparison group graduated approximately 70 percent. Mean graduation rates in DC Public Schools range between 50–55 percent across all student groups. Parents of students receiving scholarships also indicated higher satisfaction with their child's educational experience (Wolf et al., 2010). This tends to be the case in charters as well (Gleason et al., 2010). Similar positive and mixed results have been witnessed in the Milwaukee Parental Choice Program, the nation's longest running voucher program (Witte et al., 2010).

Effects on Student Compositions

A fear that has been expressed related to school choice and charter schools is that they will decrease racial and ethnic integration by skimming the higher-achieving and white students from the public school pool. This has not proven to be true (Booker et al., 2009; Hoxby & Murarka, 2009; Koedel et al., 2009; Zimmer et al., 2009). Transfers to charter schools have proven to slightly reduce racial stratification across schools (Booker et al., 2009). Figlio and Page (2002) found that if a choice program is combined with student ability, tracking achievement/efficiency gains from choice can be masked or even negated by the presence of tracking. However, the type of choice program can determine the presence and extent of any compositional effects on student enrollment. For example, Koedel et al. (2009) did find that open-enrollment policies in San Diego tended to promote ethnic/racial segregation throughout the district. Ledwith (2010) found similar mixed results with open-enrollment policies in Los Angeles County. Depending on the structure and type of choice program initiated, the effects on student composition can be mixed.

Relevant Websites

- **National Center on School Choice (NCSC):** The NCSC is funded by a 5 year, \$13.3 million grant from the U.S. Department of Education's Institute of Education Sciences. Its lead institution is Vanderbilt University in Nashville, Tennessee:
<http://www.vanderbilt.edu/schoolchoice/index.php>
- **School Choice Demonstration Project (SCDP):** Is an educational research project based within the University of Arkansas' Department of Education Reform. A repository for the research on the Milwaukee Parental Choice Program (MPCP) and District of Columbia Public Schools (DCPS) DC Opportunity Scholarship Program: <http://www.uark.edu/ua/der/SCDP.html>

Bibliography/References

Abdulkadiroglu, A., Angrist, J., Dynarski, S., Kane, T.J., & Pathak, P. (2009). *Accountability and flexibility in public schools: Evidence from Boston's charters and pilots* (NBER Working Paper No. 15549). Cambridge, MA: National Bureau of Economic Research.

Abstract: Charter schools are publicly funded but operate outside the regulatory framework and collective bargaining agreements characteristic of traditional public schools. In return for this freedom, charter schools are subject to heightened accountability. This paper estimates the impact of charter school attendance on student achievement using data from Boston, where charter schools enroll a growing share of students. We also evaluate an alternative to the charter model, Boston's pilot schools. These schools have some of the independence of charter schools, but operate within the school district, face little risk of closure, and are covered by many of same collective bargaining provisions as traditional public schools. Estimates using student assignment lotteries show large and significant test score gains for charter lottery winners in middle and high school. In contrast, lottery-based estimates for pilot schools are small and mostly insignificant. The large positive lottery-based estimates for charter schools are similar to estimates constructed using statistical controls in the same sample, but larger than those using statistical controls in a wider sample of schools. The latter are still substantial, however. The estimates for pilot schools are smaller and more variable than those for charters, with some significant negative effects. [PDF included]

Adnett, N., & Davies, P. (2005). Competition between or within schools? Reassessing school choice. *Education Economics*, 13(1), 109–121.

Abstract: Market-based reforms of state schooling systems have been justified by the benefits anticipated from encouraging greater interschool competition in local schooling markets. Promoting increased school choice and competition by comparison were seen as a means of stimulating greater allocative, productive, and dynamic efficiency in the schooling system. However in England, school effectiveness research suggests that once adjustment is made for pupil characteristics, variations in pupil attainment levels between secondary schools are small and unstable over time. Some evidence suggests that differences in pupil attainment by subject within schools are larger, indicating the potential to raise attainment levels by increasing choice within schools. In this paper, we seek to extend the school choice debate by examining the rationale for increasing competition within secondary schools. [PDF included]

Belfield, C.R., & Levin, H.M. (2002). The effects of competition between schools on educational outcomes: A review for the United States. *Review of Educational Research*, 72(2), 279–341.

Abstract: This article systematically reviews U.S. evidence from cross-sectional research on educational outcomes when schools must compete with each other. Competition typically is measured by using either the Herfindahl Index or the enrollment rate at an alternative school choice. Outcomes are academic test scores, graduation/attainment, expenditures/efficiency, teacher quality, students' post-school wages, and local housing prices. The sampling strategy identified more than 41 relevant empirical studies. A sizable majority report beneficial effects of competition, and many report statistically significant correlations. For each study, the effect size of an increase of competition by one standard deviation is reported. The positive gains from competition are modest in scope with respect to realistic changes in levels of competition. The review also notes several methodological challenges and recommends caution in reasoning from point estimates to public policy. [PDF included]

Berends, M., Goldring, E., Stein, M., & Cravens, X. (2010). Instructional conditions in charter schools and students' mathematics achievement gains. *American Journal of Education*, 116(3), 303–335.

Abstract: Since charter school research on student achievement is mixed, many researchers and policymakers advocate looking inside the “black box” of schools to better understand the conditions under which schools of choice may be effective. We begin to address this issue with data from charter schools and a comparison group of traditional public schools. We also conduct propensity score matching at the student level to further understand achievement gains. In our analyses of these data, we find no charter school effects on students' achievement gains. Instructional conditions, such as teachers' focus on academic achievement, are related to mathematics gains. However, we find that our innovation measure is negatively associated with gains (when other conditions are controlled for), which suggests that innovation for innovation's sake should not be the sole focus of schools, whether charter or not.

Berends, M., Springer, M.G., Ballou, D., & Walberg, H J. (Eds.). (2009). *Handbook of research on school choice*. New York: Routledge.

Contents: Figures -- Tables -- Preface -- Introduction and Overview / Mark Berends, Matthew G. Springer, Dale Ballou, Herbert J. Walberg -- Section I Perspectives on School Choice -- 1 Political Perspectives on School Choice / Paul T. Hill & Ashley E. Jochim -- 2 An Economic Perspective on School Choice / Henry R. Levin -- 3 Social Perspectives on School Choice / Mark Berends & Genevieve C. Zottola -- 4 A Legal Perspective on School Choice / Frank R. Kemerer -- 5 International Perspectives on School Choice / Stephen P. Heyneman -- Section II Charter Schools -- 6 Perspectives on Charter Schools / Tom Loveless & Katharyn Field -- 7 Politics and Governance in Charter Schools / Kenneth K. Wong & Shayna Klopott -- 8 Charter School Law / Preston Green -- 9 The Social Context of Charter Schools / Amy Stuart Wells -- 10 Charter School Finance / Larry Maloney -- 11 The Competitive Effects of Charter Schools on Traditional Public Schools / Julian R. Betts -- 12 Charter School Outcomes / Bettie Teasley -- 13 An International Perspective on Publicly-Financed, Privately-Operated Schools / Dominic J. Brewer & Guilbert C. Hentschke -- Section III School Vouchers -- 14 Voucher Impacts: Differences between Public and Private Schools / Paul E. Peterson -- 15 Voucher Politics and Governance / Joseph P. Viteritti -- 16 Voucher Law / Clint Bolick -- 17 The Social Context of Vouchers / Thomas J. Nechyba -- 18 Voucher Finance / Dan Goldhaber -- 19 Voucher Outcomes / David Figlio -- 20 An International Perspective on School Vouchers / Felipe Barrera-Orsorio & Harry Anthony Patrinos -- Section IV Magnet Schools -- 21 Perspectives on Magnet Schools / Ellen B. Goldring -- 22 Legal Aspects of Magnet Schools / Christine H. Rossell -- 23 The Social Context of Magnet Schools / Claire Smrekar -- 24 Magnet School Outcomes / Dale Ballou -- Section V Private Schools -- 25 Perspectives on Private Schools / Thomas B. Hoffer -- 26 Private Schools in Education Markets / Derek Neal -- 27 Perspectives on Elite Boarding Schools / Peter W. Cookson, Jr. -- 28 Perspectives on Catholic Schools / Helen M. Marks -- 29 An International Perspective on Private Schools / Ludger Woessmann -- Section VI Other Forms of School Choice -- 30 Perspectives on Homeschooling / Clive R. Belfield -- 31 Perspectives on Cyber and Homeschool Charters / Luis A. Huerta, Chand D'Entremont, & María Fernanda González -- 32 Perspectives on Educational Management Organizations / Brian P. Gill, Laura S. Hamilton, & Ron Zimmer -- 33 Supplemental Educational Services Under No Child Left Behind / Matthew G. Springer, Matthew J. Pepper, Catherine D. Gardner, & Corey Bunje Bower -- 34 Education Tax Credits / Adam B. Schaeffer -- Contributors -- Index.

Bettinger, E., Kremer, M., & Saavedra, J.E. (2010). Are educational vouchers only redistributive? *Economic Journal*, 120(546), F204–F228.

Abstract: It is unclear if vouchers increase educational productivity or are purely redistributive, benefiting recipients by giving them access to more desirable peers at others' expense. To examine this, we study an educational voucher programme in Colombia which allocated vouchers by lottery. Among voucher applicants to vocational schools, lottery winners were less likely to attend academic secondary schools and thus had peers with less desirable observable characteristics. Despite this, lottery winners had better educational outcomes. In this population, vouchers improved educational outcomes through channels beyond redistribution of desirable peers. We discuss potential channels which may explain the observed effects. [PDF included]

Booker, K., Gill, B., Zimmer, R., & Sass, T.R. (2009). *Achievement and attainment in Chicago charter schools* (Technical Report TR-585-1). Santa Monica, CA: RAND Corporation.

Abstract: Over the past decade, charter schools have been among the fastest growing segments of the K–12 education sector in Chicago and across the country. This report addresses several key issues related to charter schools using student-level data provided by Chicago Public Schools. Students leaving traditional public schools for charter schools in Chicago tend to look much like the peers they left behind, in both demographic characteristics and student achievement. Transfers to charter schools tend to slightly reduce racial stratification across the schools. Achievement trajectories suggest that, on average, charter schools' performance in raising student achievement is approximately on par with traditional public schools—except that charter schools do not do well in raising student achievement in their first year of operation. Chicago's charter high schools may produce substantial positive effects on ACT scores, the probability of graduating, and the probability of enrolling in college—but these positive effects are solidly evident only in the multigrade charter high schools (those that include middle-school grades). The large, positive attainment results in Chicago suggest remarkable promise for (at least) multigrade charter high schools and demonstrate that evaluations limited to test scores may fail to capture important benefits of charter schools. If charter schools (or other multigrade high schools) have positive effects on graduation and college entry, they may make a substantial, long-term difference in the life prospects of their students.

PDF: http://www.rand.org/content/dam/rand/pubs/technical_reports/2009/RAND_TR585-1.pdf

Braun, H., Jenkins, F., & Grigg, W. (2006). *Comparing private schools and public schools using hierarchical linear modeling* (NCES 2006-461). U.S. Department of Education, National Center for Education Statistics, Institute of Education Sciences. Washington, DC: U.S. Government Printing Office.

Abstract: This study compares mean 2003 National Assessment of Educational Progress (NAEP) reading and mathematics scores of public and private schools in 4th and 8th grades, statistically controlling for individual student characteristics (such as gender, race/ethnicity, disability status, identification as an English language learner) and school characteristics (such as school size, location, and the composition

of the student body). In grades 4 and 8, using unadjusted mean scores, students in private schools scored significantly higher than students in public schools for both reading and mathematics. But when school means were adjusted in the HLM analysis, the average for public schools was significantly higher than the average for private schools for grade 4 mathematics and not significantly different for reading. At grade 8, the average for private schools was significantly higher than the average for public schools in reading but not significantly different for mathematics. Comparisons were also carried out between types of sectarian schools. In grade 4, Catholic and Lutheran schools were compared separately to public schools. For both reading and mathematics, the results were similar to those based on all private schools. In grade 8, Catholic, Lutheran, and Conservative Christian schools were each compared to public schools. For Catholic and Lutheran schools for both reading and mathematics, the results were again similar to those based on all private schools. For Conservative Christian schools, the average adjusted school mean in reading was not significantly different from that of public schools. In mathematics, the average adjusted school mean for Conservative Christian schools was significantly lower than that of public schools.

PDF: <http://nces.ed.gov/nationsreportcard/pdf/studies/2006461.pdf>

Cowen, J. (2010). Who chooses, who refuses? Learning more from students who decline private school vouchers. *American Journal of Education*, 117(1), 1–24.

Abstract: I argue that lottery-based school choice programs offer the opportunity to study a unique group of students: those who want to attend or are very interested in attending private school but simply cannot, even when given the chance. The differences between these students and those who choose private school are compelling education outcomes in their own right. To illustrate the argument, I analyze data from a small and little-known private school scholarship lottery in Charlotte, North Carolina, that occurred prior to the 1999–2000 academic year. I show that race, family structure, employment status, and religion significantly predict the decision to refuse a voucher offer, as does student admission into a specific school of choice. I argue that models of voucher effects on student achievement are interpretable only in the context of factors underlying the ability to choose in the first place.

Cullen, J.B., Jacob, B.A., & Levitt, S.D. (2005). The impact of school choice on student outcomes: An analysis of the Chicago Public Schools. *Journal of Public Economics*, 89(5–6), 729–760.

Abstract: We explore the impact of school choice on student outcomes in the context of open enrollment within the Chicago Public Schools (CPS). Roughly half of the students opt out of their assigned high school to attend a different CPS school, and these students are much more likely than those who remain in their assigned schools to graduate. To determine the source of this apparent benefit, we compare outcomes across (i) similar students with differential access to schooling options and (ii) travelers and non-travelers within the same school. The results suggest that, other than for students who select career academies, the observed cross-sectional benefits are likely spurious. [PDF included]

De Fraja, G., & Landeras, P. (2006). Could do better: The effectiveness of incentives and competition in schools. *Journal of Public Economics*, 90(1–2), 189–213.

Abstract: This paper studies the effects of incentive mechanisms and of the competitive environment on the interaction between schools and students, in a set-up where the students' educational attainment depends on their peer group, on their effort, and on the quality of the school's teaching. We show that increasing the power of the incentive scheme and the effectiveness of competition may have the counterintuitive effect of lowering the students' effort. In a simple dynamic set-up, where the reputation of the schools affects recruitment, we show that more powerful incentives and increased competition lead to segregation of pupils by ability, and may also determine lower attainment in some schools. [PDF included]

Figlio, D.N., & Hart, C.M.D. (2010). *Competitive effects of means-tested school vouchers* (CALDER Working Paper 46). Washington, DC: National Center for Analysis of Longitudinal Data in Education Research.

Abstract: Voucher options like tuition tax credit-funded scholarship programs have become increasingly popular in recent years. This study examines the effects of private school competition on public school students' test scores in the wake of Florida's Corporate Tax Credit Scholarship (FTC) program which offered scholarships to eligible low-income students to attend private schools. The authors examine whether students in schools exposed to a more competitive private school landscape saw greater improvements in their students' test scores after the introduction of the program, than did students in schools that faced less competition. Students in public schools faced with increased private school competition showed greater gains in test scores than students in other public schools with the introduction of the program. These findings are not an artifact of prepolicy trends; the degree of competition from nearby private schools matters only after the announcement of the new program, which makes nearby private competitors more affordable for eligible students. The gains appear to be much more pronounced in the schools most at risk of losing students and in the schools that are on the margin of Title I funding.

PDF: <http://www.urban.org/UploadedPDF/1001393-means-tested-school-vouchers.pdf>

Figlio, D.N., & Page, M.E. (2002). School choice and the distributional effects of ability tracking: Does separation increase inequality? *Journal of Urban Economics*, 51(3), 497–514.

Abstract: Tracking programs have been criticized on the grounds that they harm disadvantaged children. The bulk of empirical research supports this view, but existing studies compare outcomes across students placed in different tracks. Track placement is likely to be endogenous with respect to student outcomes. We use a new strategy for overcoming the endogeneity of track placement and find no evidence that tracking hurts low-ability children. Previous studies have also been based on the assumption that students' enrollment decisions are unrelated to whether or not the school tracks. When we account for the possibility that tracking programs affect school choice, we find evidence that they may help low-ability children. [PDF included]

Figlio, D.N., & Rouse, C.E. (2006). Do accountability and voucher threats improve low-performing schools? *Journal of Public Economics*, 90(1–2), 239–255.

Abstract: We study the effects of the threat of vouchers and stigma in Florida on the performance of “low-performing” schools. Estimates of the change in raw test scores from the first year of the reform are consistent with the early results which claimed large improvements associated with the threat of vouchers. However, we also find that much of this estimated effect may be due to other factors. The relative gains in reading are largely explained by changing student characteristics and the gains in math—though larger—appear limited to the high-stakes grade. We also find some evidence that these improvements were due more to the stigma of receiving the low grade rather than the threat of vouchers. [PDF included]

Gill, B., Timpane, P.M., Ross, K E., Brewer, D.J., & Booker, K. (2007). *Rhetoric versus reality: What we know and what we need to know about vouchers and charter schools*. Santa Monica, CA: RAND Corporation.

Abstract: Education vouchers and charter schools are two of the most prominent and far-reaching forms of family-choice policies currently in evidence in the nation’s elementary and secondary schools. As such, they present important challenges to the traditional provision of public education in schools that are created, governed, funded, and operated by state and local authorities. This update of Chapters One and Three of a book originally published in 2001 reviews the theoretical foundations for vouchers and charter schools and the empirical evidence of their effectiveness as set forth in hundreds of recent reports and studies. It incorporates a substantial amount of new evidence on achievement effects, and it also examines the ways in which multiple dimensions of policy design—such as targeting, funding levels and limitations, admissions policies, academic standards and assessments, and accountability—will determine the nature and extent of any specific program’s impact. A comprehensive assessment is made of what is known about the effects of vouchers and charters in terms of not only academic achievement but also family choice, equitable access, racial/ethnic integration, and civic socialization. The book discusses the important empirical questions that are as yet unresolved and considers the prospects for answering them in the future. Finally, it explores the details of the design of voucher and charter policies, concluding with recommendations for policymakers who are considering their enactment.

Link to PDFs: http://www.rand.org/pubs/monograph_reports/MR1118-1.html

Gleason, P., Clark, M., Tuttle, C.C., & Dwyer, E. (2010). *The evaluation of charter school impacts: Final report* (NCEE 2010-4029). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Abstract: Adding to the growing debate and evidence base on the effects of charter schools, this evaluation was conducted in 36 charter middle schools in 15 states. It compares the outcomes of 2,330 students who applied to these schools and were randomly assigned by lotteries to be admitted (lottery winners) or not admitted (lottery losers) to the schools. Both sets of students were tracked over two

years and data on student achievement, academic progress, behavior, and attitudes were collected. The study is the first large-scale randomized trial of the effectiveness of charter schools in varied types of communities and states.

Key findings include:

- On average, charter middle schools that held lotteries were neither more nor less successful than traditional public schools in improving math or reading test scores, attendance, grade promotion, or student conduct within or outside of school. Being admitted to a study charter school did significantly improve both students' and parents' satisfaction with school.
- Charter middle schools' impact on student achievement varied significantly across schools.
- Charter middle schools in urban areas—as well as those serving higher proportions of low-income and low-achieving students—were more effective (relative to their nearby traditional public schools) than were other charter schools in improving math test scores. Some operational features of charter middle schools were associated with less negative impacts on achievement. These features include smaller enrollments and the use of ability grouping in math or English classes. There was no significant relationship between achievement impacts and the charter schools' policy environment.

Because the study could only include charter middle schools that held lotteries, the results do not necessarily apply to the full set of charter middle schools in the U.S.

Link to PDFs: <http://ies.ed.gov/ncee/pubs/20104029/>

Goldhaber, D.D., & Eide, E.R. (2003). Methodological thoughts on measuring the impact of private sector competition on the educational marketplace. *Educational Evaluation and Policy Analysis*, 25(2), 217–232.

Abstract: Numerous researchers have speculated on and attempted to quantify the impact of policies designed to increase school choice and competition between schools, and they have reached widely differing conclusions. In this article, we provide an overview of the research that focuses on the potential achievement effects of greater private sector competition on K–12 schooling. In particular, we explore the various methodologies that have been used to assess the relative effectiveness of public and private schools. We discuss the strengths and shortcomings of different approaches, and based on this, we ponder what is known and not known about the impact of increased choice and competition. In conclusion, we maintain that although many of the methodologies used to assess the effects of particular interventions, such as educational vouchers, are sound, they likely fail to capture the general equilibrium consequences of enhanced choice. As a result, many of the questions we would want answered to inform policymaking remain unknown. [PDF included]

Greene, J., Loveless, T., MacLeod, W.B., Nechyba, T., Peterson, P., Rosenthal, M. et al. (2010). *Expanding choice in elementary and secondary education: A report on rethinking the federal role in education*. Washington, DC: Brown Center on Education Policy at Brookings.

Abstract: Choice is most frequently realized within the public sector using the mechanisms of residence, magnet schools, and open-enrollment systems, whereas the voucher-like systems applauded by choice advocates and feared by opponents are extremely rare. Further, the charter sector is neither large enough nor sufficiently prepared to go to scale to represent a threat to the traditional system of public schools. The policy recommendations detailed in this report are framed within the realities of large variation in the quality of public schools, widespread selection of schools by choice of place of residence, and choice being exercised predominantly within the public sector. Recommendations are provided for: supporting the expansion of choice; grounding the exercise of choice in valid and easily using information on the characteristics and performance of education programs; and supporting the enhancement of meaningful school choice. These recommendations do not represent advocacy for any particular type of education institution or program. Rather, the authors' assert that school choice should be a democratic process that benefits from the informed participation of parents. The recommendations are suitable to a range of schooling designs, from a school district in which there are no choices other than district-run public schools, to a system of charter schools, to a division of courses between traditional and virtual schools, to a voucher-based open market in which all providers are on an equal footing, and to many variations in between. The authors' position is that whatever the education delivery design the public has chosen to put in place in a particular school jurisdiction, parents should be afforded the maximum degree of choice, provided with valid information on the performance of the education programs that are available, and have their preferences for education programs reflected in the funding of those programs.

PDF:

http://www.brookings.edu/~media/Files/rc/reports/2010/0202_school_choice/0202_school_choice.pdf

Hanushek, E.A., Kain, J.F., & Rivkin, S.G. (2004). Disruption versus Tiebout improvement: The costs and benefits of switching schools. *Journal of Public Economics*, 88(9–10), 1721–1746.

Abstract: Most students change schools at some point in their academic careers, but some change very frequently and some schools experience a great deal of turnover. While many argue that mobility harms students, economists tend to emphasize Tiebout type moves to procure better school quality (SQ). This paper disentangles the disruption effects of moves from changes in SQ. Importantly, it identifies the negative externality movers impose on other students. Student turnover is shown to entail a substantial cost for movers and non-movers alike. This cost appears to be larger for lower-income and minority students who typically attend much higher turnover schools. [PDF included]

Holmes, G.M., DeSimone, J., & Rupp, N.G. (2003). *Does school choice increase school quality?* (NBER Working Paper No. 9683). Cambridge, MA: National Bureau of Economic Research.

Abstract: Federal No Child Left Behind legislation, which enables students of low-performing schools to exercise public school choice, exemplifies a widespread belief that competing for students will spur public schools to higher achievement. We investigate how the introduction of school choice in North Carolina, via a dramatic increase in the number of charter schools across the state, affects the

performance of traditional public schools on statewide tests. We find test score gains from competition that are robust to a variety of specifications. The introduction of charter school competition causes an approximate one percent increase in the score, which constitutes about one quarter of the average yearly growth. [PDF included]

Howell, W.G., & Peterson, P.E. (2006). *The education gap: Vouchers and urban schools* (Revised Edition). Washington, DC: Brookings Institution Press.

Abstract: The voucher debate has been both intense and ideologically polarizing, in good part because so little is known about how voucher programs operate in practice. In *The Education Gap*, William Howell and Paul Peterson report new findings drawn from the most comprehensive study on vouchers conducted to date. Added to the paperback edition of this groundbreaking volume are the authors' insights into the latest school choice developments in American education including new voucher initiatives, charter school expansion, and public-school choice under No Child Left Behind. The authors review the significance of state and federal court decisions as well as recent scholarly debates over choice impacts on student performance. In addition, the authors present new findings on which parents choose private schools and the consequences the decision has for their children's education. Updated and expanded, *The Education Gap* remains an indispensable source of original research on school vouchers.

Contents: Preface to the Paperback Edition -- Preface to the First Edition -- Acknowledgments -- 1 School Choice and American Democracy -- 2 Evaluating Voucher Programs -- 3 Seeking and Using a Voucher -- 4 Attending Urban Schools -- 5 Social Consequences -- 6 The Urban Test Score Gap -- 7 Satisfaction with Urban Schools -- 8 Vouchers and Urban Schools -- Afterword -- Appendixes -- Notes -- Index.

Hoxby, C.M. (2000). Does competition among public schools benefit students and taxpayers? *American Economic Review*, 90(5), 1209–1238.

Abstract: Tiebout choice among districts is the most powerful market force in American public education. Naive estimates of its effects are biased by endogenous district formation. I derive instruments from the natural boundaries in a metropolitan area. My results suggest that metropolitan areas with greater Tiebout choice have more productive public schools and less private schooling. Little of the effect of Tiebout choice works through its effect on household sorting. This finding may be explained by another finding: students are equally segregated by school in metropolitan areas with greater and lesser degrees of Tiebout choice among districts. [PDF included]

Hoxby, C.M. (Ed.). (2003). *The economics of school choice*. Chicago and London: University of Chicago Press.

Contents: Acknowledgments -- Preface -- Introduction / Caroline M. Hoxby -- 1. Does Public School Competition Affect Teacher Quality? / Eric A. Hanushek & Steven G. Rivkin -- 2. Can School Choice and School Accountability Successfully Coexist? / David N. Figlio & Marianne E. Page -- 3. The Role of Special Education in School Choice / Julie Berry Cullen & Steven G. Rivkin -- 4. School Vouchers: Results from

Randomized Experiments / Paul E. Peterson, William G. Howell, Patrick J. Wolf, & David E. Campbell -- 5. Introducing School Choice into Multidistrict Public School Systems / Thomas J. Nechyba -- 6. School Vouchers as a Redistributive Device: An Analysis of Three Alternative Systems / Raquel Fernandez & Richard Rogerson -- 7. Neighborhood Schools, Choice and the Distribution of Educational Benefits / Dennis Epple & Richard Romano -- 8. School Choice and School Productivity: Could School Choice Be a Tide that Lifts All Boats? / Carolyn M. Hoxby -- Contributors -- Author Index -- Subject Index.

Hoxby, C.M. (2007). Does competition among public schools benefit students and taxpayers? Reply. *American Economic Review*, 97(5), 2038–2055.

Abstract: Not provided. [PDF included]

Hoxby, C.M., & Murarka, S. (2009). *Charter schools in New York City: Who enrolls and how they affect their students' achievement* (NBER Working Paper No. 14852). Cambridge, MA: National Bureau of Economic Research.

Abstract: We analyze all but a few of the 47 charter schools operating in New York City in 2005–06. The schools tend to locate in disadvantaged neighborhoods and serve students who are substantially poorer than the average public school student in New York City. The schools also attract black applicants to an unusual degree, not only relative to New York City but also relative to the traditional public schools from which they draw. The vast majority of applicants are admitted in lotteries that the schools hold when oversubscribed, and the vast majority of the lotteries are balanced. By balanced, we mean that we cannot reject the hypothesis that there are no differences in the observable characteristics of lotteried-in and lotteried-out students. Using the lotteries to form an intention-to-treat variable, we instrument for actual enrollment and compute the charter schools' average treatment-on-the-treated effects on achievement. These are 0.09 standard deviations per year of treatment in math and 0.04 standard deviations per year in reading. We estimate correlations between charter schools' policies and their effects on achievement. The policy with the most notable and robust association is a long school year—as long as 220 days in the charter schools. [PDF included]

Koedel, C., Betts, J.R., Rice, L.A., & Zau, A.C. (2009). The integrating and segregating effects of school choice. *Peabody Journal of Education*, 84(2), 110–129.

Abstract: We evaluate the integrating and segregating effects of three distinct school choice programs in San Diego. We go beyond the traditional question of racial integration and examine the integration of students by test scores, parental education levels, and language status. In addition to measuring the net integrative effects of school choice, we also examine the underlying motives behind student participation in school choice programs and the limiting influence of supply-side constraints. Two of the programs that we consider are rooted in 1970s integration-based reforms that provide public transportation for program participants. The third program is a state-mandated, open-enrollment program that requires participants to find their own transportation to and from their choice schools. We find that the two programs with underlying integrative objectives do indeed integrate the district, but

the open-enrollment program segregates the district along most dimensions. Provision of busing and geographic preferences appear to be important factors in promoting integration. [PDF included]

Ladd, H.F., & Fiske, E.B. (2003). Does competition improve teaching and learning? Evidence from New Zealand. *Educational Evaluation and Policy Analysis*, 25(1), 97–112.

Abstract: Central to the argument for more competition in education is that it will induce schools to provide higher-quality education at no greater cost. This article sheds new light on this issue by measuring how competition among New Zealand's schools affected student learning as perceived by teachers and principals. The analysis builds on the fact that New Zealand's introduction of full parental choice in 1992 increased competitive pressures more for some schools than for others. With careful attention to various potential threats to validity, we conclude that competition—as perceived by teachers—generated negative effects on the quality of student learning and other aspects of schooling in New Zealand's elementary schools. [PDF included]

Lauen, D L. (2009). To choose or not to choose: High school choice and graduation in Chicago. *Educational Evaluation and Policy Analysis*, 31(3), 179–199.

Abstract: School choice reforms have been proposed as ways to enhance efficiency, equity, and effectiveness in education. This study examines the consequences of participating in public high school choice in Chicago, a city with a wide variety of choice programs, including career academies, charter schools, magnet schools, and selective test-based college prep high schools. The analysis uses population-level administrative and survey data on all public school eighth graders enrolled in Chicago to estimate the effect of school choice participation on on-time graduation propensity (i.e., in 4 years). Techniques employed to estimate this effect include propensity score, catchment area fixed effects, and multilevel analysis. Results suggest that there is a modest positive graduation benefit from exercising school choice. There are no racial/ethnic differences in the choice benefit, but low-achieving students benefit less from high school choice than high-achieving students. In addition, students in high-poverty neighborhoods gain less from exercising choice than do students in low-poverty neighborhoods. These findings call into question the extent to which school choice enhances equity for low-achieving students and students in high-poverty neighborhoods. [PDF included]

Lavy, V. (2010). Effects of free choice among public schools. *Review of Economic Studies*, 77(3), 1164–1191.

Abstract: In this paper, I investigate the impact of a programme in Tel-Aviv, Israel, that terminated an existing interdistrict busing integration programme and allowed students free choice among public schools. The identification is based on difference-in-differences and regression discontinuity designs that yield various alternative comparison groups drawn from untreated tangent neighbourhoods and adjacent cities. Across identification methods and comparison groups, the results consistently suggest that choice significantly reduces the drop-out rate and increases the cognitive achievements of high-school students. It also improves behavioural outcomes such as teacher–student relationships and

students' social acclimation and satisfaction at school, and reduces the level of violence and classroom disruption. [PDF included]

Ledwith, V. (2010). The influence of open enrollment on scholastic achievement among public school students in Los Angeles. *American Journal of Education*, 116(2), 243–262.

Abstract: Increased school choice is leading to enrollment patterns that do not reflect attendance in the neighborhood school. The impact of this increased mobility on scholastic achievement is still undecided, in part because of the difficulty in untangling compositional and contextual effects on educational outcomes. This article uses data from the Los Angeles Family and Neighborhood Survey to examine the influence of student mobility associated with open enrollment on the scholastic achievement of public school students in Los Angeles. Using a series of OLS regressions, the analysis shows that increased student mobility associated with open enrollment has a positive influence on the scholastic achievement of public school students controlling for student motivation, race, socioeconomic status, and the effects of school and neighborhood characteristics. It is also apparent that the wealth of the student's residential neighborhood is also important. Taken together, these results highlight the complexity of the geography of opportunity associated with educational outcomes and the need for continued research on the sociospatial dimension of scholastic achievement.

McMillan, R. (2004). Competition, incentives, and public school productivity. *Journal of Public Economics*, 88(9-10), 1871–1892.

Abstract: When competition increases, it is often presumed that public schools will be forced to become more efficient. This paper challenges that presumption, showing that in well-defined circumstances, rent-seeking public schools find it optimal to reduce productivity when a voucher is introduced. This occurs for incentive reasons alone. More generally, the productivity effects of vouchers are shown to be nonuniform, varying systematically according to the distribution of households and the form the voucher takes; when the voucher is targeted, perverse productivity outcomes do not arise. The analysis has relevance to the policy issue of voucher design. [PDF included]

Rothstein, J. (2007). Does competition among public schools benefit students and taxpayers? Comment. *American Economic Review*, 97(5), 2026–2037.

Abstract: Not provided. [PDF included]

Rouse, C.E., & Barrow, L. (2009). School vouchers and student achievement: Recent evidence and remaining questions. *Annual Review of Economics*, 1(1), 17–42.

Abstract: In this article, we review the empirical evidence on the impact of education vouchers on student achievement and briefly discuss the evidence from other forms of school choice. The best research to date finds relatively small achievement gains for students offered education vouchers, most

of which are not statistically different from zero. Furthermore, what little evidence exists regarding the potential for public schools to respond to increased competitive pressure generated by vouchers suggests that one should remain wary that large improvements would result from a more comprehensive voucher system. The evidence from other forms of school choice is also consistent with this conclusion. Many questions remain unanswered, however, including whether vouchers have longer-run impacts on outcomes such as graduation rates, college enrollment, or even future wages, and whether vouchers might nevertheless provide a cost-neutral alternative to our current system of public education provision at the elementary and secondary school level. [PDF included]

West, M.R., & Peterson, P.E. (2006). The efficacy of choice threats within school accountability systems: Results from legislatively induced experiments. *Economic Journal*, 116(510), C46–C62.

Abstract: Targeted stigma and school voucher threats under a revised 2002 Florida accountability law have positive impacts on school performance as measured by the test score gains of their students. In contrast, stigma and public school choice threats under the U.S. federal accountability law, No Child Left Behind, do not have similar effects in Florida. Estimation relies upon individual-level data and is based upon regression analyses that exploit discontinuities within the accountability regimes. Choice threats embedded within accountability regimes can moderate educational inequalities by boosting achievement at the lowest performing schools, but policy design is crucial. [PDF included]

West, M.R., & Woessmann, L. (2010). ‘Every Catholic child in a Catholic School’: Historical resistance to state schooling, contemporary private competition and student achievement across countries. *The Economic Journal*, 120(546), F229–F255.

Abstract: Nineteenth-century Catholic doctrine strongly opposed state schooling. We show that countries with larger shares of Catholics in 1900 (but without a Catholic state religion) tend to have larger shares of privately operated schools even today. We use this historical pattern as a natural experiment to estimate the causal effect of contemporary private competition on student achievement in crosscountry student-level analyses. Our results show that larger shares of privately operated schools lead to better student achievement in mathematics, science, and reading, and to lower total education spending, even after controlling for current Catholic shares. [PDF included]

Witte, J.F., Cowen, J.M., Fleming, D.J., Wolf, P.J., Condon, M.R., & Lucas-McLean, J. (2010). *The MPCP Longitudinal Educational Growth Study third year report* (SCDP Milwaukee Evaluation Report #15). Fayetteville, AR: University of Arkansas, School Choice Demonstration Project.

Abstract: Not provided.

PDF: http://www.uark.edu/ua/der/SCDP/Milwaukee_Eval/Report_15.pdf

Wolf, P.J. (2010). *The Comprehensive Longitudinal Evaluation of the Milwaukee Parental Choice Program: Summary of third year reports* (SCDP Milwaukee Evaluation Report #14). Fayetteville, AR: University of Arkansas, School Choice Demonstration Project.

Abstract: Not provided.

PDF: http://www.uark.edu/ua/der/SCDP/Milwaukee_Eval/Report_14.pdf

Wolf, P., Gutmann, B., Puma, M., Kisida, B., Rizzo, L., & Eissa, N. (2009). *Evaluation of the DC Opportunity Scholarship Program: Impacts after three years* (NCEE 2009-4050). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Abstract: The DC School Choice Incentive Act of 2003 established the first federally funded private school voucher program in the United States, providing scholarships of up to \$7,500 for low-income residents of the District of Columbia to send their children to local participating private schools. The law also mandated that the Department conduct an independent, rigorous impact evaluation of what is now called the DC Opportunity Scholarship Program (OSP). The study's latest report, *Evaluation of the DC Opportunity Scholarship Program: Impacts After Three Years*, measures the effects of the Program on student achievement in reading and math, and on student and parent perceptions of school satisfaction and safety. The evaluation found that the OSP improved reading, but not math, achievement overall and for 5 of 10 subgroups of students examined. The group designated as the highest priority by Congress—students applying from “schools in need of improvement” (SINI)—did not experience achievement impacts. Students offered scholarships did not report being more satisfied or feeling safer than those who were not offered scholarships; however, the OSP did have a positive impact on parent satisfaction and perceptions of school safety. This same pattern of findings holds when the analysis is conducted to determine the impact of *using* a scholarship rather than being *offered* a scholarship.

Link: <http://ies.ed.gov/pubsearch/pubsinfo.asp?pubid=ncee20094050>

PDF: <http://ies.ed.gov/ncee/pubs/20094050/pdf/20094050.pdf>

Wolf, P., Gutmann, B., Puma, M., Kisida, B., Rizzo, L., Eissa, N., & Carr, M. (2010). *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.

Abstract: The DC Opportunity Scholarship Program (OSP) is the first federally funded voucher program in the United States, providing scholarships of up to \$7,500 for low-income residents of the District of Columbia to send their children to local participating private schools. The congressionally mandated evaluation of the Program compared the outcomes of about 2,300 eligible applicants randomly assigned to receive or not receive an OSP scholarship through a series of lotteries in 2004 and 2005. This final report finds that the Program had mixed longer-term effects on participating students and their parents, including:

- No conclusive evidence that the OSP affected student achievement overall, or for the high-priority group of students who applied from "schools in need of improvement."
- The Program significantly improved students' chances of graduating from high school, according to parent reports. Overall, 82 percent of students offered scholarships received a high school diploma, compared to 70 percent of those who applied but were not offered scholarships. This graduation rate improvement also held for the subgroup of OSP students who came from "schools in need of improvement."
- Although parents had higher satisfaction and rated schools as safer if their child was offered or used an OSP scholarship, students reported similar ratings for satisfaction and safety regardless of whether they were offered or used a scholarship.

The evaluation also found that the cumulative loss of students between 2004 and 2009 from DC Public Schools (DCPS) to the Program was about 3 percent. In contrast, an estimated 20 percent of students annually change schools or leave DCPS. Thus, OSP-related transfers to private schools may not have been distinguishable from the larger share of other student departures.

Link: <http://ies.ed.gov/ncee/pubs/20104018/index.asp>

PDF: <http://ies.ed.gov/ncee/pubs/20104018/pdf/20104018.pdf>

Zimmer, R., Gill, B., Booker, K., Lavertu, S., Sass, T.R., & Witte, J. (2009). *Charter schools in eight states: Effects on achievement, attainment, integration, and competition*. Santa Monica, CA: RAND Corporation.

Abstract: The first U.S. charter school opened in 1992, and the scale of the charter movement has since grown to 4,000 schools and more than a million students in 40 states plus the District of Columbia. With this growth has also come a contentious debate about the effects of the schools on their own students and on students in nearby traditional public schools (TPSs). In recent years, research has begun to inform this debate, but many of the key outcomes have not been adequately examined, or have been examined in only a few states. Do the conflicting conclusions of different studies reflect real differences in effects driven by variation in charter laws and policies? Or do they reflect differences in research approaches—some of which may be biased? This book examines four primary research questions: (1) What are the characteristics of students transferring to charter schools? (2) What effect do charter schools have on test-score gains for students who transfer between TPSs and charter schools? (3) What is the effect of attending a charter high school on the probability of graduating and of entering college? (4) What effect does the introduction of charter schools have on test scores of students in nearby TPSs?

PDF: http://www.rand.org/pubs/monographs/2009/RAND_MG869.pdf

Methodology

In order to answer this request, we looked in Wilson Web (UNCG education database) and ERIC databases. In addition, we also searched Google using the phrases "competition," "school choice," etc.

We also searched the websites of the following organizations: Alliance for Excellent Education; American Enterprise Institute (AEI); American Institutes for Research (AIR); Brookings Institution; Center for Assessment/The National Center for the Improvement of Educational Assessment, Inc. (NCIEA); Center for Comprehensive School Reform and Improvement; Center for Public Education; Center for the Study of Evaluation (CSE)/National Center for Research on Evaluation, Standards, and Student Testing (CRESST); Center on Education Policy (CEP); Center on Innovation & Improvement; Consortium on Chicago School Research (CCSR); Consortium for Policy Research in Education (CPRE); Council of Chief State School Officers (CCSSO); Economic Policy Institute (EPI); Education Commission of the States (ECS); Educational Testing Service (ETS); Institute of Education Sciences (IES); Mathematica Policy Research, Inc.; MDRC; National Center for Analysis of Longitudinal Data in Education Research (CALDER); National Governors Association Center for Best Practices; National Bureau of Economic Research (NBER); RAND Corporation; Urban Institute; and U.S. Department of Education.



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