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Research Brief

Magnet School Student Outcomes: What the Research Says

By Genevieve Siegel-Hawley and Erica Frankenberg

This research brief outlines six major studies of magnet school student outcomes. Magnet schools are programs with special themes or emphases designed to attract families from a variety of different backgrounds. They were originally established to promote voluntary racial integration in urban districts.

The following studies are located within a much broader body of research that documents the benefits of attending racially and socioeconomically diverse schools. Some of what we know from the literature on the benefits of racial diversity indicates that students of all races who attend diverse schools have higher levels of critical thinking, an ability to adopt multiple perspectives; diminished likelihood for acceptance of stereotypes, higher academic achievement, more cross-racial friendships, willingness to attend diverse colleges and live in diverse neighborhoods, access to more privileged social networks, higher feelings of civic and communal responsibility, higher college-going rates, more prestigious jobs.[1]

The research discussed here is relatively recent, but older studies suggest that magnet schools are associated with increased student achievement, higher levels of student motivation and satisfaction with school, higher levels of teacher motivation and morale, and higher levels of parent satisfaction with the school.[2]

A note about magnet school enrollment and segregation trends[3]

Before delving into the research, however, we quickly review the current demographic breakdown of magnet schools. Enrollment data collected by the National Center for Education Statistics, a reliable and wide-ranging federal dataset, show that, in 2008-09, more than 2.5 million students enrolled in magnet schools across the nation, up from just over two million students five years earlier. Magnet programs enrolled more than twice the number of students served by charter schools, making magnets the largest sector of choice schools.

Compared to regular public schools, both charter and magnet programs enrolled a larger share of black and Latino students (mainly due to the concentration of magnet and charter schools in more urban locales). Magnet students were slightly less likely than charter school students to attend intensely segregated minority schools, where 90-100% of students were nonwhite, and also slightly less likely to enroll in intensely segregated white schools (0-10% nonwhite students). Beyond these two extreme ends of the spectrum of white student enrollment, large differences emerged in the shares of magnet and charter students attending majority nonwhite (more racially diverse) and majority white (less diverse) schools. Forty percent of magnet students attend majority nonwhite school settings, compared to just 23 percent of charter students. Conversely, almost 35 percent of charter students attended majority white settings, compared to 20 percent of magnet students. In terms of school

poverty composition, white students experience markedly lower levels of exposure to low income students in the charter sector compared to the magnet and regular public sector, suggesting that some charters may be serving as places of white flight from poverty in other public schools. Of course, a wide diversity of school environments exists within these broad patterns for the magnet and charter sectors.

A brief comparison of the two largest choice sectors reveals that, in general, magnet school students are more likely to enroll in racially and socioeconomically diverse environments than charter school students. Further, in contradiction to concerns related to whether magnet schools "cream" more affluent students, white students attending magnet schools are *more* exposed to low-income students than are white students in charter schools. These trends matter because, as noted above, research continues to indicate that enrollment in high minority segregated school environments is linked to harmful educational outcomes, while enrollment in racially integrated schools is associated with myriad educational benefits. The following research synopsis discusses recent studies dealing specifically with the benefits associated with magnet schools.

Connecticut's inter-district regional magnet schools: Higher levels of racial diversity, better academic and social/emotional outcomes compared to non-magnet schools

In a 1996 ruling, the Connecticut Supreme Court held that as a result of racial and economic isolation in Hartford and racial segregation in the 22-district region, Hartford public school students had been denied equal educational opportunity under the state constitution. The remedy called for a system of magnet schools to help bridge district boundary lines, a vital policy development since most school segregation today exists between different school districts, not within the same district. Today, the state has a system of more than 60 interdistrict, regional magnet schools to help comply with *Sheff v. O'Neill*. A pair of peer-reviewed 2009 studies from Connecticut sought to examine the effectiveness of these educational settings, asking two questions: 1. Do regional magnets integrate students, and 2. what is the impact of magnet schools on student achievement?

These studies addressed the critical issue of selection bias, or the idea that students and families who choose magnet schools (or any other schools of choice) are fundamentally different from students and families who don't choose their educational setting, with two different sophisticated statistical methods. The research team examined magnet school lottery winners and losers, in addition to carefully controlling for pre-magnet school experiences in order to determine the exact impact of magnet schools on achievement. Importantly, the two different methods each produced similar results, which suggested that the findings were reliable and valid.

The first article published from this research found that attendance at a regional magnet high school had positive math and reading effects for central city students, and that attendance at inter-district middle schools had positive effects on reading achievement.[4]

The second study by the same authors found that magnet school students generally reported more positive academic attitudes and behaviors than students in non-magnet schools. These academic and social benefits of magnets included the following:

- Peer support for academic achievement was stronger in magnets than in non-magnet city schools;
- Twelfth-grade magnet city students perceived more encouragement and support for college

attainment than 12th grade city students in non-magnets;

- Magnet students were less likely to be absent or skip classes than non-magnet city students
- Minority students in magnet city schools reported feeling significantly closer to whites and were more likely to have multiple white friends than minorities in non-magnet city schools;
- White magnet students felt more connected to minority students and were more likely to report multiple minority friends than white students from the non-magnet suburban school; and
- Magnet school students expressed stronger future multicultural interests and were significantly more likely than students in the suburban non-magnet schools to report that their school experience helped them understand people from other groups.[5]

Together, this pair of recent studies from an innovative, inter-district magnet arrangement in Connecticut indicates improved academic and social indicators for magnet school students.

National study finds magnet schools more effective at raising reading and social studies achievement than regular public schools, Catholic or secular private schools

One of the more widely-cited studies regarding magnet schools and achievement was published by Adam Gamoran of the University of Wisconsin at Madison in 1996. The study remains one of the few large-scale, national studies of magnet school effects.[6]

Gamoran took a sample of urban students from the federal National Educational Longitudinal Survey (NELS) to estimate differences in 10th grade achievement for students attending magnet schools, regular public schools, Catholic schools, and secular private schools. He also controlled for an extensive list of family background characteristics—including 8th grade achievement. Significantly, the study showed that magnet schools were more effective than regular public schools, Catholic or secular private schools at raising student achievement in reading and social studies.

Gamoran's research supported an earlier, U.S. Department of Education (ED) study that found that over 80% of surveyed magnet schools had higher average achievement scores than the district average for regular public schools.[7] A follow-up summary of the 1983 ED report highlighted four school districts (Austin, Dallas, San Diego, and Montgomery County, Maryland) where, after controlling for differences in student backgrounds, magnet programs had positive effects on achievement test scores.[8]

Studies from large, urban districts in California find higher levels of racial diversity, math achievement and graduation rates in magnet schools

A 2007 study out of San Diego Unified, the nation's 8th largest school system, examined the district's four systems of choice—magnets, Voluntary Enrollment Exchange Program (dating back to voluntary desegregation plan), open enrollment and charter schools.[9] Both VEEP and the magnet programs contain civil rights considerations, including transportation and outreach; and the study found that they produced more racial integration than the other two systems of choice. Beyond magnet schools' ability to foster diverse learning environments, the authors found that winning the magnet lottery at the high school level increased math achievement two and three years after entering the program, which the authors suggest is likely a causal relationship (in other words, magnet schools caused math achievement effects).

Another California study looked at magnet programs in Los Angeles Unified, the second largest district in the nation.[10] As early as 1982, school desegregation in Los Angeles was limited almost entirely to a system of magnet schools. Nearly three decades later, in 2008, UCLA researchers tracked the individual data records of 48,561 students through their high school experience. After controlling for a variety of student-level factors (like race, gender and absenteeism) and school-related factors (magnet or non-magnet, poverty and racial concentrations, teacher quality), the research team found that students enrolled in LAUSD's magnet programs graduated at *much* higher rates than non-magnet students. Specifically, 73% of students attending a magnet high school in the district graduated, compared to 43% of non-magnet students. Stated differently, attending a magnet more than doubled the probability of a student earning a high school diploma.

A study released this month shows that magnet schools effectively create racially diverse student bodies and are linked to beneficial academic outcomes

Finally, a new study using an econometric analysis of long-term outcomes for magnet schools in a mid-sized urban school district led researchers to conclude that "magnet programs are effective tools for attracting and retaining households and students."[11] By carefully analyzing the impact of winning or losing the magnet school lottery, as well as decisions to stay or leave the school district, the team of researchers found that magnet schools were able to retain significant groups of white students from higher income and more highly educated communities. The data also indicated that students in the district's high school magnet programs had better attendance records than non-magnet school students.[12] The first finding is extremely significant, since it suggests that magnet schools are continuing to carry out their original mission.

Across multiple dimensions then—achievement, of course, but also social/emotional indicators and graduation rates—we see that magnet schools are linked to very desirable outcomes for students.

An important note about teachers: Magnet school faculties are more racially diverse and more stable than regular public school faculties

Teaching is strongly related to student outcomes—indeed, teachers are the most predictive school factor related to student performance.[13] We also know that stability and experience of teaching faculties is critical. Importantly, a Civil Rights Project study found that magnet school faculties are more stable than non-magnet school faculties, in addition to being more racially diverse.[14] Further, another Civil Rights Project study on the Clark County/Las Vegas school district found that magnet schools were more successful in retaining experienced teachers than non-magnet programs in the district.[15] Again, these findings are situated in a larger body of work documenting the exit of experienced and highly qualified teachers from schools that are resegregating by race and socioeconomic status.[16]

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Endnotes

1 For summary of research on benefits of racially and socioeconomically diverse schools, *See generally* Gary Orfield, Erica Frankenberg & Liliana Garces, *Statement of American Social Scientists of Research on School Desegregation to the U.S. Supreme Court in Parents Involved v. Seattle School District and Meredith v. Jefferson County*. 40 URB REV. : Issues and Ideas in Public Education 96 (2008); Robert Linn & Kevin Welner, *Race-Conscious Policies for Assigning Students to Schools: Social Science Research and the Supreme Court Cases*, (National Academy of Education, 2007). *See also* a series of the Diversity Coalition's policy briefs summarizing latest research at www.school-diversity.org.

2 *See* Rolf Blank, *Educational Effects of Magnet High Schools*, National Center of Effective Secondary Schools, (University of Wisconsin-Madison, 1989); Crain et al., *The Effectiveness of New York City's Career Magnet Schools: An Evaluation of Ninth Grade Performance Using an Experimental Design*, (1992); Adam Gomoran, *Student Achievement in Public Magnet, Public Comprehensive, and Private City High Schools*, (University of Wisconsin-Madison, 1996); Marilyn Musumeci & Ronald Szczypkowski, New York State Magnet School Evaluation Study: Final Report, (MAGI Educational Services, 1991); Amy Heebner, *The Impact of Career Magnet High Schools: Experimental and Qualitative Evidence*, 20 J. VOCATIONAL EDUC. RES. 27 (1995); Mary Haywood Metz, *Teachers' Pride in Craft, School Subcultures and Societal Pressures*, 1 EDUC. POL'Y 115 (1987).

3 Data from this section is drawn from a forthcoming book chapter on magnet school trends by the authors. Genevieve Siegel-Hawley & Erica Frankenberg, *Designing Choice: Magnet School Structures and Racial Diversity*, (forthcoming). Further information can be found in Erica Frankenberg & Genevieve Siegel-Hawley, *The Forgotten Choice? Rethinling Magnet Schools in a Changing Landscape*, (The Civil Rights Project at UCLA, 2008); and Erica Frankenberg, Genevieve Siegel-Hawley & Jia Wang, *Choice Without Equity: Charter School Segregation and the Need for Civil Rights Standards*, 19 EDUC. POL'Y ANALYSIS AND ARCHIVES 1 (2011).

4 Robert Bifulco, Casey Cobb & Courtney Bell, *Can Interdistrict Choice Boost Student Achievement? The Case of Connecticut's Interdistrict Magnet School Program*, 31 EDUC. EVALUATION & POL'Y ANALYSIS 323 (2009).

5 Excerpted from Casey Cobb, Robert Bifulco & Courtney Bell, *Evaluation of Connecticut's Interdistrict Magnet Schools*, The Center for Education Policy Analysis, (University of Connecticut, 2009), available at http://www.education.uconn.edu/research/cepa/assets/Final%20Magnet%20Report.pdf.

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7 Rolf Blank, Robert Dentler, & D. Catherine Baltzell, *Survey of Magnet Schools: Analyzing a Model for Quality Integrated Education*, Final Report for a Nat'l Study for the U.S. Dep't of Educ. (1983).

8 Rolf Blank, *Educational Effects of Magnet High Schools*, National Center of Effective Secondary Schools, (University of Wisconsin-Madison, 1989).

9 Julian Betts, et al., *Does School Choice Work? Effects on Student Integration and Achievement* (Public Policy Institute of California, 2006).

10 David Silver & Marisa Saunders, *What Factors Predict High School Graduation in the Los Angeles Unified School District?* (California Dropout Research Project, Report #14, 2008).

11 John Engberg, Dennis Epple, Jason Imbrogno, Holger Sieg & Ron Zimmer, *Bounding the Treatment Effects of Education Programs that Have Lotteried Admission and Selective Attritition*, (Colum. Univ., Center for the Study of Privatization in Educ., 2011) p.26.

12 Ibid.

13 Patricia Gándara & Frances Contreras (Eds.), *The Latino Education Crisis: The Consequences of Failed Social Policies*, (Harv. Univ. Press, 2009).

14 Genevieve Siegel-Hawley & Erica Frankenberg, *Designing Choice: Magnet School Structures and Racial Diversity*, (forthcoming).

15 Veronica Terriquez, Jennifer Flashman & Sarah Schuler-Brown, *Expanding Student Opportunities: Prime 6 Program Review*, Clark County School District, Las Vegas, Nevada, (The Civil Rights Project, 2009), available at http://civilrights project.ucla.edu/research/k-12-education/ integration-and- diversity/expanding-student-opportunities-prime-6- program-review-clark-county-school-district-las-vegas-nevada/terriquez-expanding-student-opportunities-2009.pdf

16 C. Kirabo Jackson, Student Demographics, *Teacher Sorting, and Teacher Quality: Evidence from the End of School Desegregation*, Journal of Labor Economics 27.2 (2009), available at http://www.nctq.org/docs/cornell_charlotte.pdf.

Further Reading on Magnet School Research Outcomes

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