Study Finds Gifted and Talented Programs in Middle-Schools Have Little Impact on Math and Reading Achievement

CAMBRIDGE, MA – Studies of two middle-school programs for high-achieving students -- known as gifted and talented (G&T) programs -- show that being placed in programs with academically strong peers does not boost students’ achievement over and above what is learned in a regular classroom from the start of 6th grade to mid-way through 7th grade. However, student performance in science was higher for those who attended G&T magnet schools.

A team of scholars from the University of Houston – Sa Bui, Steven Craig, and Scott Imberman -- studied programs in a large urban school district with a substantial minority and low-income population in the southwestern United States, where since 2007 all 5th-grade students have been tested for eligibility to participate in GT programming. Students deemed eligible often are grouped in classes with other high-achieving students; they also are permitted to apply for admission to two schools that focus on high-achieving students. The report, “Poor Results for High Achievers: New evidence on the impact of gifted and talented programs” will appear in the Winter, 2012, issue of Education Next and is available at www.educationnext.org.

The authors’ report results from two separate studies. One study looks at students who attended two magnet middle school programs that had an exclusive focus on high-achieving students. Because these schools were popular, applicants exceeded space available and lotteries were held to determine which students were admitted. Of the 542 eligible students who applied to these schools, 394 won the lottery, while 148 lost the lottery and were not admitted.

The lottery process allowed the researchers to compare the performance of students who won the lottery with those who lost the lottery and either attended a neighborhood G&T program, a charter school, or an alternative magnet school. The two groups of students are assumed to be identical in all respects other than admission to the program, allowing for a precise identification of the effect of attending a school for high-achieving students. The study found positive effects of attending the school on student performance on a science test. The effect was 0.28 standard deviations, approximately one extra year’s worth of learning. No statistically significant effects in math, reading, language and social studies were identified, however.

Another study examines the effects of participation in a G&T program offered within regular middle schools to students who were just barely deemed eligible to participate as compared to those who just missed
becoming eligible, based on the “identification matrix” scores the district used. The researchers assumed that those who barely passed the threshold of acceptance were little different from those who barely missed that threshold. Students entered the G&T program in 6th grade, and their progress was measured when they were 7th graders, using data drawn from their Stanford Achievement Test scores and attendance rates. Using data on 2,600 students the study shows no statistically significant impact on performance in math, science, language, reading or social studies.

The data do not allow for a clear explanation for striking gains in science from attending a magnet school but not in other subjects. The authors suggest that instruction in science may require especially qualified teachers with access to excellent science facilities, something that may be more available in G&T programs than in regular middle schools.

The authors caution that test scores are not the only way in which programs for high-achieving students should be assessed. There might also be benefits that the researchers said they are not able to study, such as the impact on graduation rates and college attendance. Further, they caution that the analysis of G&T programs within regular schools focuses only on students who are on the margin of entering a gifted program and hence may not apply to higher achieving students.

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