



Background

- This document describes a follow-up study to a July 2013 report from the Office of Research and Strategic Improvement (ORSI; formerly the Office of Program Evaluation) that examined the impact of socio-economic factors on FCPS elementary schools (commonly referred to as the “tipping point” study).
- The original study was undertaken in response to guidance from Joseph Murray, a nationally recognized expert on educational improvement, that one way to close achievement gaps in Fairfax County Public Schools (FCPS) might be for economically challenged students to attend schools with lower numbers of economically challenged students.
- The 2013 study (which examined data from SY 2011-12) had two important findings about the relation between the socio-economic factors in a school and student achievement:
 - ⇒ Similar to typical trends throughout the country, schools with high levels of economically challenged students (FRM) were statistically more likely to have lower reading and mathematics achievement both overall at the school and for individual students.
 - ⇒ At certain percentages of economically challenged students, individual students, regardless of their own socio-economic status (SES) were more likely to perform poorly on reading and mathematics standardized tests.
- Based on the findings of the original study, the 2013 report recommended potential changes, including reducing the levels of economically challenged students in FCPS schools and maximizing teaching and learning conditions in these schools. Since the original study, FCPS has focused its efforts around maximizing conditions in schools, such as through supports provided by Project Momentum.
- The current study was undertaken at the School Board’s request to support decision-making about how best to manage schools with many economically challenged students and, potentially, to inform criteria for boundary-setting.
- The current study analyzed the most recent five years of available performance data (SYs 2013-14 thru 2017-18) to look for both school and student success impacts related to socio-economic factors. Additionally, ORSI conducted an updated literature review on school-level SES impacts, which included information on school reintegration efforts.

Findings

What, if any, school level enrollment of economically challenged students is associated with the capacity for FCPS schools to meet academic performance expectations?

- Over the last five years, when FCPS elementary schools reached approximately 40 to 50 percent (or higher) enrollment of economically challenged students, they were unlikely to meet the accreditation benchmark level in reading. Figure 1 shows the SY 2017-18 FRM enrollment level at 40 percent for reading.
- The relation between enrollment levels of economically challenged students and performance on mathematics varied considerably across the five years, ranging from approximately 40 to 65 percent before schools became unlikely to meet accreditation benchmark levels of performance. Figure 2 shows the SY 2017-18 FRM enrollment level at 55 percent.

Figure 1: SY 2017-18 Reading Pass Rates*

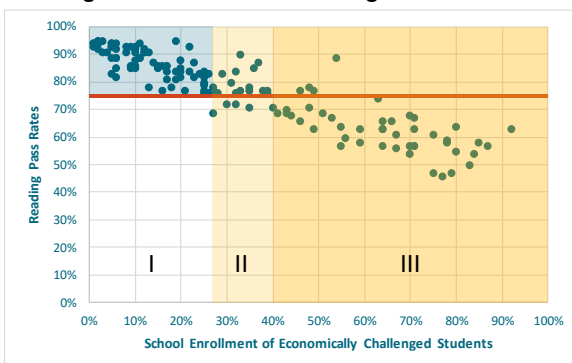
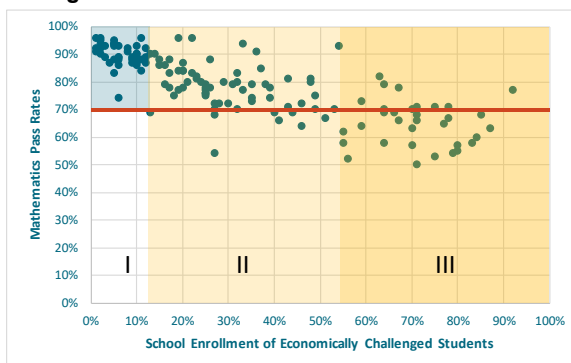


Figure 2: SY 2017-18 Mathematics Pass Rates*



Zone I shows the FRM enrollment levels where all school pass rates are above the accreditation benchmark level, represented by the red line.

Zone II indicates enrollment levels where most schools are above the benchmark.

Zone III indicates enrollment levels where most schools are below the benchmark.

*Each dot represents an individual FCPS elementary school.

What is the typical impact on students attending schools with higher levels of economically challenged students?

- Generally, higher levels of economically challenged students contributed to an additional decrease in students' SOL scores, above and beyond an individual student's SES.
- On average, economically challenged students at FCPS elementary schools with the lowest enrollment of economically challenged students performed at approximately the same level as non-challenged students at FCPS schools with the highest enrollment of economically challenged students (for example, see Figure 3, left-most section of the blue line compared with right-most section of the red line).
- Beyond the general downward trend in performance as levels of economically challenged students increased, FCPS elementary students demonstrated lower performance of approximately 10 SOL scale score points on both reading and mathematics tests when a school's enrollment of economically challenged students reached 10 percent or greater (see Figures 3 for reading and 4 for mathematics).
- Students attending schools with approximately 45 percent or higher enrollment of economically challenged students demonstrate a slowing of the downward trend in both reading and mathematics performance, amounting to an increase of approximately 12 SOL scale score points.
- Lastly, as levels of economically challenged students at several FCPS schools has increased in recent years, an additional slowing of the trend has emerged, especially in mathematics performance, when students attend schools with approximately 80 percent or higher enrollment of economically challenged students.

Figure 3: SY 2017-18 Student Reading Performance

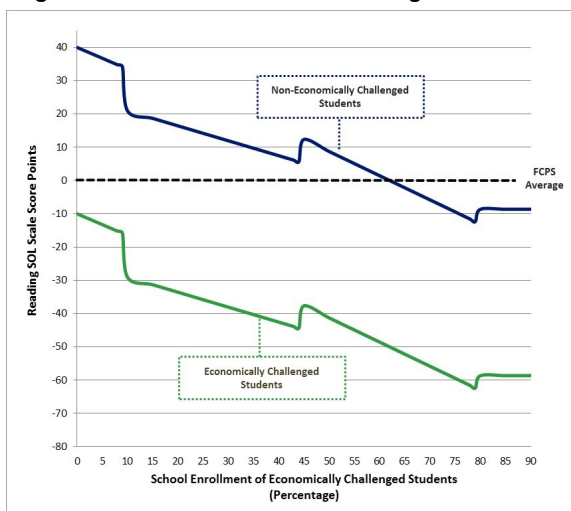
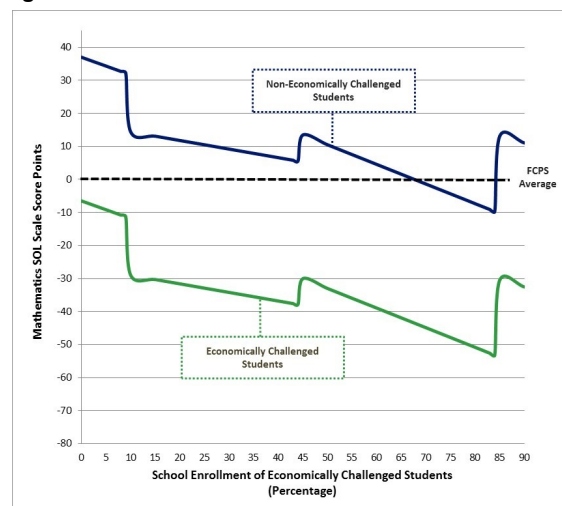


Figure 4: SY 2017-18 Student Mathematics Performance



Conclusions

- Overall, the results of the original 2013 study were largely replicated, though the specific levels at which school enrollment of economically challenged students impact school and student success shifted slightly.
- Many FCPS schools with high enrollment levels of economically challenged students (approximately 40 percent or more) continue to have difficulty meeting benchmarked levels for reading and mathematics pass rates. Therefore, the additional resources that FCPS provides to meet the challenges these schools face may be helping but are not fully addressing the challenges.
- The same student, whether living in poverty or not, is likely to have greater success on the reading and mathematics SOLs when the school the student attends has a low enrollment of economically challenged students.
- Reducing enrollment of economically challenged students at all FCPS elementary schools to less than 10 percent is not a feasible goal since the average enrollment of economically challenged students in FCPS is approximately 32 percent. However, a goal of having less than 40 percent enrollment of economically-challenges students, which is the level where most FCPS elementary schools were able to successfully reach benchmarked pass rates, is feasible.
- Students who are not economically-challenged are, on average, performing around the Division mean or higher, while economically challenged students, on average, perform from 10 to 60 points below the Division mean, even in FCPS elementary schools with low enrollment of economically challenged students.

Recommendations

1. Focus reading and mathematics support and intervention efforts on all students living in poverty, regardless of which school the student attends.
2. Strive to maintain school levels of economically challenged students at less than 40 percent, whenever possible.
3. Continue to work with Fairfax County partners, including through One Fairfax, to coordinate efforts to support neighborhoods and schools that are socio-economically diverse.
4. In situations where changes to the level of students facing economic challenges cannot be reduced to 40 percent or less, select or develop school-based staff who are specially trained to work in these challenging situations.