

Examining Enrollment and Success in Ohio’s Online Schools

Online education is fast rising as a potential strategy to provide choices at all levels of education. Advocates of e-schools—schools that present entire curricula online—argue that new web-based technologies have the potential to expand the depth and breadth of courses available to students, while providing them with increased flexibility in terms of where, when, and how they learn. At the same time, questions have been raised about the potentially negative effects of introducing e-schools into K–12 public education, such as increased pressure among stakeholders to compete for limited resources, profiteering by private companies, and ineffective learning outcomes for students. Much is still unknown about the landscape of online education, from what drives families to select such schools to how effective they are at meeting students’ needs.

To better understand who is taking advantage of e-schools and what effects such choices have on achievement, researchers analyzed data from Ohio, which has authorized e-schools since the early 2000s. E-school providers in Ohio have come under fire in recent years as their enrollments and revenue have increased, while the state has begun to question whether students are actually “attending” and learning in these school environments. The study looked at which students are opting into Ohio’s e-schools, compared with their peers in face-to-face

Key findings:

- E-school enrollments have been rising in Ohio.
- Low-income and low-performing students are more likely to opt out of traditional public schools.
- There are considerable racial and ethnic differences between e-schools and charter schools.
- E-school students score lower on standardized achievement tests than peers in charter and traditional public schools.
- The lowest-performing students fare the worst in e-schools.

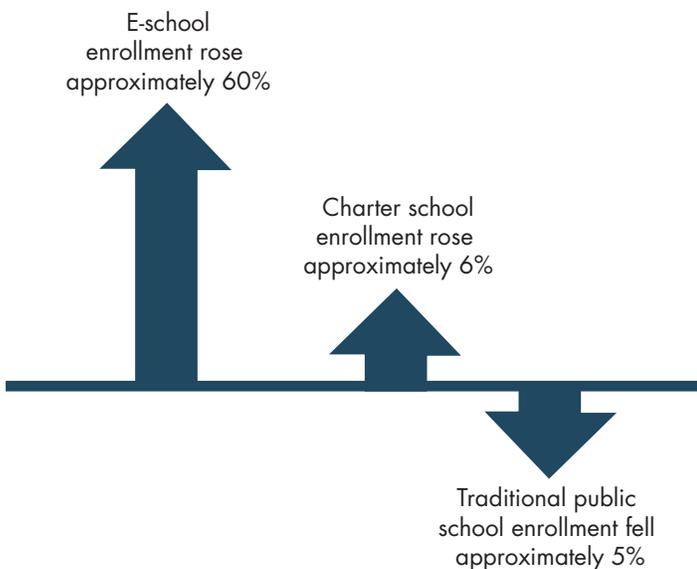
school settings (i.e., traditional public schools or face-to-face charter schools). It also examined how achievement differs between students in e-schools and students in traditional public schools and face-to-face charter schools.

Who is attending e-schools?

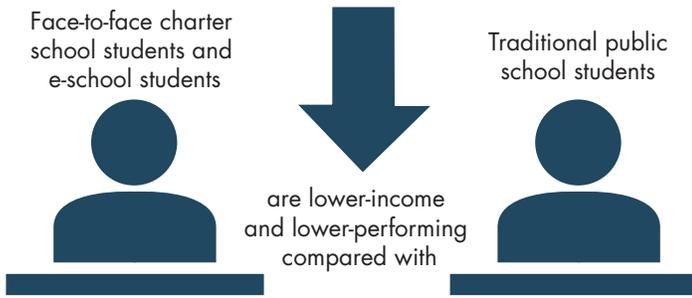
E-school enrollments have been rising in Ohio. From 2010 to 2013, enrollments in e-schools rose from just over 22,000 students to more than 35,000 students, an increase of approximately 60 percent. Although e-school enrollments accounted for only 2 percent of Ohio’s student population in 2013, this is still a considerable increase. During the same four-year period, enrollment in face-to-face charter schools increased as well, but at the much lower rate of 6 percent (approximately 4,000 students). And traditional public schools experienced a decrease of approximately 71,000 students during this period, a 5-percent drop. As may be expected, e-school enrollment is largest in high school grades (i.e., 9 to 12).

Low-income and low-performing students are more likely to opt out of traditional public schools. Compared with students who attend traditional public schools, students who opt out of such schools have lower baseline achievement than their peers (scoring in the 30th to 35th percentile, compared with the 50th percentile for their peers), are more likely to qualify for the federal free and reduced price lunch

Changes in enrollment



Student profiles

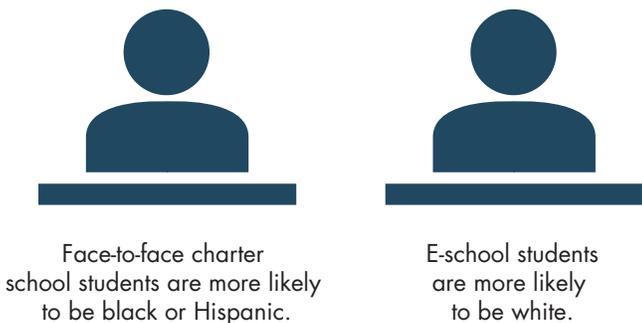


(FRPL) program (60 to 80 percent qualify, compared with the state average of approximately 40 percent of their peers), and are less likely to participate in gifted education (2 to 12 percent qualify, compared with approximately 25 percent of their peers). However, researchers found that among “opt-out” students, there is not much difference in socioeconomic status (SES) or achievement between those who choose face-to-face charter schools and those who choose e-schools.

There are considerable racial and ethnic differences between e-schools and face-to-face charter schools.

Although students who opt out of traditional public schools demonstrate similarities with regard to SES and achievement, among these students, white students are more likely to choose e-schools, while black and Hispanic students are more likely to choose face-to-face charter schools. Indeed, approximately 50 to 60 percent of face-to-face charter school students are black, compared with approximately 10 percent in e-schools and 12 percent in traditional public schools. These differences persist even when comparing enrollment patterns within the same district. For example, within urban districts, black and Hispanic students are approximately 20 and 10 percentage points, respectively, more likely than white students to choose a face-to-face charter school over

Among “opt-out” students



an e-school. The same pattern holds for suburban districts, though no significant differences were found in rural and small town districts. It is important to keep in mind that charter schools are clustered in urban and suburban areas, which have much larger percentages of black students than the state as a whole.

How are e-school students performing?

E-school students score lower than students in charter schools and traditional public schools. Across all subjects and grade spans, students in e-schools score significantly lower than students in traditional charter and public schools, even when controlling for prior achievement, previous school attended, and student demographics. In particular, students in e-schools score worse in math and reading than students in both traditional public schools and face-to-face charter schools.¹

Similar patterns emerge for high school students across the 10th grade Ohio Graduation Tests (OGTs) scores in math, reading, science, social studies, and writing. E-school students are significantly less likely to pass the OGTs than students in traditional public schools, ranging from three percentage points less in reading to 14 percentage points if you include all subjects at once. Furthermore, e-school students are significantly less likely to pass than their peers in face-to-face charter schools.

The lowest-performing students fare the worst in e-schools. For elementary/middle school students, regardless of e-school students’ prior achievement levels, all e-school students perform worse than their peers with similar prior achievement. However, the negative effects are most pronounced for students with lower levels of prior achievement (i.e., those who scored in the bottom third of the prior year math and reading standardized assessments compared with all students in the state). They are less pronounced for students with higher levels of prior achievement (i.e., those who scored in the top third of the prior year math and reading standardized assessments).²

High school students demonstrate a similar pattern to that of elementary and middle school students. Interestingly, in contrast to the achievement analysis, e-school students from the top third of the distribution are passing the 10th grade OGTs at the same rate as students in traditional public schools. Nevertheless, the same students receive much lower

¹ For example, elementary/middle school e-school students score 0.37 standard deviations (SD) worse in math and 0.19 SD worse in reading than traditional public school students, and approximately 0.40 SD worse in math and 0.22 SD worse in reading than face-to-face charter school students.

² For example, e-school students in the top third of the prior reading distribution experience negative effects of -0.10 SD, while students from the bottom third of the prior distribution experienced negative effects of -0.26 SD.

test scores, on average. Furthermore, e-school students in the bottom two-thirds of the achievement distribution are significantly less likely to pass the 10th grade OGTs than their peers in traditional public schools.

Lessons for state and local policymakers and educators

As online schooling in the K–12 education system expands, it is likely to come under increased scrutiny. Understanding who is choosing to opt out of face-to-face schooling and why, as well as the implications of these choices on educational success, will be critical to guide policy in this relatively new landscape. For example, what drives the stark racial and academic differences in families who choose e-schools in Ohio versus those who remain in their local districts or attend charter schools? Are there cultural and social reasons for such choice patterns? Perhaps minority, low-SES families in urban and suburban areas are constrained in their choices and opt out of e-schools. **States instituting or expanding e-schools will need to pay attention to how school choice policies influence the supply and provision of online schools to encourage certain student populations to enroll.**

In addition, it may be likely that asking students to independently work through curricula online imposes heightened stresses, such as the need to self-regulate learning and to have advanced meta-cognitive skills in order to monitor and manage one's own learning process. These skills have been shown to be quite difficult to foster for learners and often require careful scaffolding and guidance, challenges that may be exacerbated for students who have lower prior academic achievement or are novices in a topic domain. Given this, the current format for e-schools—a largely independent learning experience—is likely not effective for K–12 learners, especially those like Ohio's e-school students, who experience lower performance than their peers. Instead, such students may still need structured interactions with teachers and mentors, as well as peers to help them through the learning process. **State and local policymakers and administrators should consider how online curricula might be designed and employed to efficiently deliver content, but with new ways of distributing human support (e.g., different teaching or mentoring practices) that could serve students more effectively.**

This brief describes work done in RAND Education and documented in June Ahn and Andrew McEachin, "Student Enrollment Patterns and Achievement in Ohio's Online Charter Schools," *Educational Researcher*, Vol. 46, No., 1, January 2017, pp. 44–57. To view this brief online, visit www.rand.org/t/RB9964. The RAND Corporation is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. RAND® is a registered trademark. © RAND 2017

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