

Do College and Career Readiness and Early College Success in Indiana Vary Depending on Whether Students Attend Public, Charter, or Private Voucher High Schools?

Indiana has a robust portfolio of high school options, including traditional public schools, charter schools, and private schools that accept Indiana Choice Scholarships (private voucher schools). This study identified the type of high school enrollment (high school type and voucher status) among the student populations of four cohorts (who were in grade 9 in 2010/11–2013/14) and examined those students' performance on indicators of college and career readiness and early college success. The study found that charter school students and recipients of private school vouchers (voucher recipients) were more likely than other students to be Black or to be eligible for the national school lunch program (an indicator of low socioeconomic status). In addition, students in private voucher schools who did not receive vouchers (nonvoucher students) performed similarly to or better than students in traditional public schools and charter school students on most indicators of college and career readiness, after other factors were adjusted for. And voucher recipients performed similarly to or better than students in traditional public schools on most indicators of college and career readiness, after other factors were adjusted for, whereas charter school students performed similarly to or worse than students in traditional public schools. Finally, nonvoucher students performed better than students in all other types of high school enrollment on one indicator of early college success, completing all attempted credits in the first year, after other factors were adjusted for. State and district administrators, charter school leaders and authorizers, and leaders of private voucher schools could use these findings to inform the design of policies to improve college and career readiness and early college success.

Why this study?

Indiana has a robust portfolio of high school options, including traditional public schools, charter schools, and private schools that accept Indiana Choice Scholarships (private voucher schools). But little research is available on the characteristics of students who attend different types of Indiana high schools or how their college and career readiness and early college success vary. This study responds to a request from the Indiana Department of Education for help in better understanding the characteristics of students with different types of high school enrollment (type of high school and voucher status) and the association between type of high school enrollment and several indicators of college and career readiness and early college success. State and district administrators, charter school leaders and authorizers, and leaders of private voucher schools could use these findings to inform the design of policies to improve college and career readiness and early college success.

What was studied and how?

This study examined Indiana students who were in grade 9 between 2010/11 and 2013/14 and on track to begin college between 2014/15 and 2017/18. These students were enrolled in traditional public schools, charter schools,

and private voucher schools. The students who were enrolled in private voucher schools either received a voucher (voucher recipients) or did not receive a voucher (nonvoucher students).

The study identified how student background characteristics, high school background characteristics, indicators of college and career readiness, and indicators of early college success varied by type of high school enrollment. The student background characteristics were gender, race/ethnicity, eligibility for the national school lunch program (an indicator of low socioeconomic status), English learner student status, special education status, grade 8 achievement on state tests, and grade 8 school type (public, private, or charter). The high school background characteristics were school size and locale (urban, suburban, town, or rural). The indicators of college and career readiness were whether students ever failed a course, were ever suspended, were absent more than 15 days a year, took at least one Advanced Placement examination, passed at least one Advanced Placement examination, took a college entrance examination, graduated from high school within four years, earned an honors diploma in high school, enrolled in college within one year of high school graduation, and, for students who enrolled in an Indiana public college or university, enrolled in a four-year college rather than a two-year college within one year of high school graduation. The indicators of early college success (for students who enrolled in an Indiana public college or university) were whether students took only nonremedial courses in the first year, completed all attempted credits in the first year, and persisted to a second year.

The research questions addressed by the study include:

1. How did student and high school background characteristics vary by type of high school enrollment?
2. What was the relationship between type of high school enrollment and students' college and career readiness, after student and high school background characteristics were adjusted for?
3. What was the relationship between type of high school enrollment and students' early college success, after student and high school background characteristics were adjusted for?

Data and methods

The study team calculated the percentages of students with different characteristics for each type of high school enrollment. The study team also used regression models to examine the relationship between type of high school enrollment in grade 9 and each outcome related to college and career readiness and early college success. The regression models adjusted for student and high school background characteristics and accounted for the fact that each outcome takes one of only two values (for example, achieved the outcome or did not achieve the outcome). Results are averaged across all students. The sample included 340,737 grade 9 students (317,367 students in traditional public schools, 5,820 students in charter schools, 2,021 voucher recipients, and 15,529 nonvoucher students). The sample of grade 9 students who enrolled in an Indiana public college or university after high school was 120,649 (111,174 students in traditional public schools, 1,876 students in charter schools, 779 voucher recipients, and 6,820 nonvoucher students).

Findings

Charter school students and voucher recipients were more likely than other students to belong to disadvantaged groups, and charter school students had the lowest percentage of students meeting or exceeding standards on the grade 8 state achievement test

- Charter school students and voucher recipients were more likely than students in traditional public schools and nonvoucher students to be Black or to be eligible for the national school lunch program, and voucher recipients also were more likely to be English learner students. About 49 percent of charter school students were

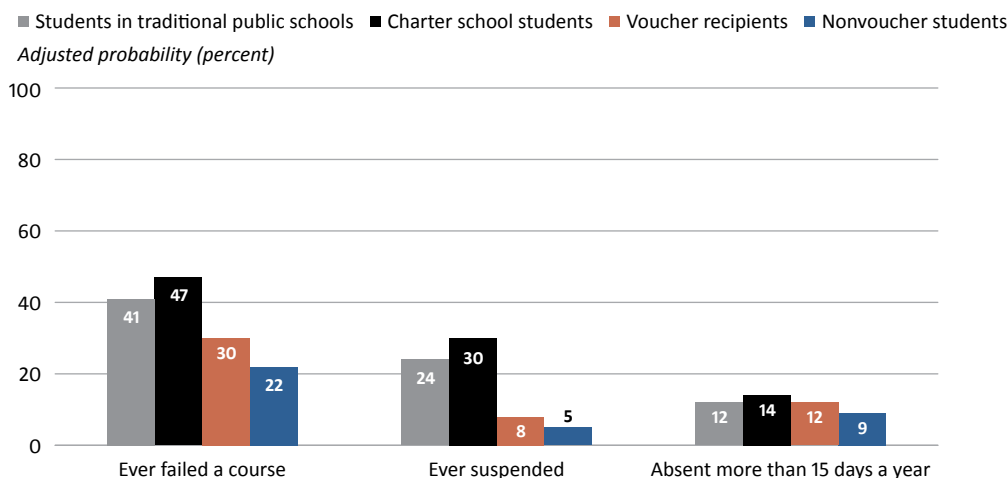
Black compared with 30 percent of voucher recipients, 11 percent of students in traditional public schools, and 4 percent of nonvoucher students. About 52–53 percent of charter school students and voucher recipients were eligible for the national school lunch program compared with 35 percent of students in traditional public schools and 8 percent of nonvoucher students. About 14 percent of voucher recipients were English learner students compared with 7 percent of students in traditional public schools and charter schools and 4 percent of nonvoucher students.

- Charter school students were the least likely to have met or exceeded standards on the Indiana state test in grade 8. In math 59 percent of charter school students met or exceeded standards compared with 72 percent of students in traditional public schools, 79 percent of voucher recipients, and 83 percent of nonvoucher students. (The pattern was similar in English language arts.)

Nonvoucher students performed similarly to or better than students in traditional public schools and charter school students on most indicators of college and career readiness, after student and high school background characteristics were adjusted for, and voucher recipients performed similarly to or better than students in traditional public schools

- After student and school background characteristics were adjusted for, voucher recipients and nonvoucher students were less likely than students in traditional public schools and charter school students to ever fail a course or to ever be suspended in high school (figure 1).
- Students in traditional public schools were more likely than students in all other enrollment types to take an Advanced Placement examination and more likely than charter school students to pass one. Students in traditional public schools had a 28 percent probability of taking at least one Advanced Placement examination in high school compared with 23 percent for charter school students, 22 percent for nonvoucher students, and 18 percent for voucher recipients. Students in traditional public schools had a 12 percent probability of passing an Advanced Placement examination compared with 7 percent for charter school students.
- Both types of students in private voucher schools had a probability of graduating from high school within four years similar to that of students in traditional public schools (93 percent for voucher recipients and 94 percent for nonvoucher students compared with 90 percent for students in traditional public schools). Nonvoucher

Figure 1. Students in private voucher schools in Indiana were less likely than students in traditional public schools and charter school students to ever fail a course or to ever be suspended in high school, after student and high school background characteristics were adjusted for, 2010/11–2013/14



Note: $n = 285,029$. Adjusted probabilities are predicted probabilities for each student averaged across all students in the sample, based on regressions that control for student and high school background characteristics.

Source: Authors' calculations using data provided by the Indiana Management Performance Hub.

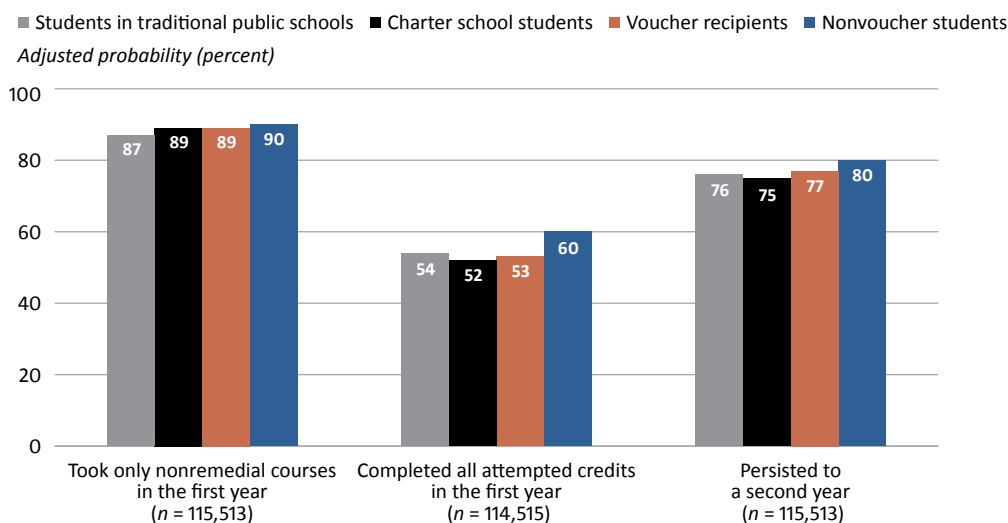
students had a higher probability of earning an honors diploma in high school (39 percent) than students in traditional public schools (34 percent) and voucher recipients (30 percent).

- Both types of students in private voucher schools were more likely than students in traditional public schools and charter school students to enroll in college within one year of high school graduation. Nonvoucher students had a 64 percent probability of enrolling in college, and voucher recipients had a 61 percent probability compared with 54 percent for charter school students and 53 percent for students in traditional public schools. Among students who enrolled in an Indiana public college, students in traditional public schools were less likely than other students to enroll in a four-year college rather than a two-year college (a 71 percent probability compared with 81 percent for nonvoucher students, 78 percent for voucher recipients, and 77 percent for charter school students).

Nonvoucher students were more likely than other students to complete all attempted credits in the first year of college and were more likely than charter school students to persist to a second year of college, after student and high school background characteristics were adjusted for

- Nonvoucher students were more likely than students in traditional public schools, charter school students, and voucher recipients to complete all attempted credits in the first year of college (figure 2). Nonvoucher students had a 60 percent probability of completing all attempted credits compared with 54 percent for students in traditional public schools, 52 percent for charter school students, and 53 percent for voucher recipients. Nonvoucher students were more likely to persist to a second year of college (80 percent probability) than charter school students (75 percent probability). There were no differences in the likelihood of taking only nonremedial courses in the first year of college by type of high school enrollment.

Figure 2. Among students who enrolled in an Indiana public college or university, nonvoucher students were more likely than other students to complete all attempted credits in the first year and were more likely than charter school students to persist to a second year, after student and high school background characteristics were adjusted for, 2010/11–2013/14



Note: Adjusted probabilities are predicted probabilities for each student averaged across all students in the sample, based on regressions that control for student and high school background characteristics.

Source: Authors' calculations using data provided by the Indiana Management Performance Hub.

Implications

The results of this study suggest the need for future research that can generate causal evidence of the impact of type of high school enrollment on the college and career readiness and early college success of students in Indiana. Although this study adjusted for many observed characteristics of students and schools, unobserved factors might have contributed to the differences in outcomes for students in each type of high school enrollment. If future research finds that the differences in college and career readiness and early college success outcomes are caused by students' type of high school enrollment, further research could provide insights into the policies, practices, or resources that might account for different outcomes. School leaders also might use the results to identify which college and career readiness and early college success outcomes to target for improvement for their type of high school. After identifying these outcomes, school leaders could gather or conduct causal research to identify practices that improve these outcomes.

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