

College and workforce outcomes for Indiana students who concentrate in career and technical education

The Indiana Commission for Higher Education, Indiana Department of Education, and Indiana Governor’s Workforce Cabinet have worked together to develop career and technical education courses and course sequences intended to improve high school students’ college and career readiness. Representatives of these agencies partnered with the Regional Educational Laboratory (REL) Midwest to **examine whether students who concentrated in career and technical education in high school had different college and workforce outcomes than samplers and nonparticipants with similar demographic and academic backgrounds.**



Concentrator

High school student who attains six or more semester credits for courses within a single career and technical education pathway. Indiana offers 64 pathways across 12 career clusters.



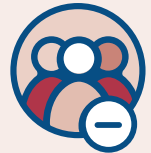
Explorer

High school student who attains six or more semester credits for courses spread across multiple career and technical education pathways but fewer than six credits within a single pathway.



Sampler

High school student who earns at least one half of a semester credit but fewer than six semester credits in career and technical education courses.



Nonparticipant

High school student who did not earn credit for a career or technical education course.

The study used **K–12 education data, postsecondary education data, and employment data** for all students who graduated from Indiana public high schools between 2013/14 and 2017/18.

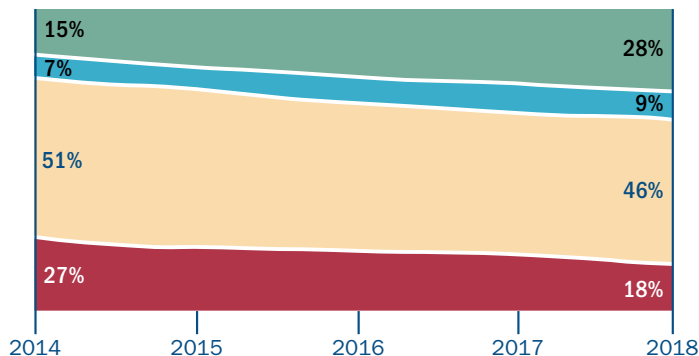


REL Midwest also examined how college and workforce outcomes for explorers compared with samplers and nonparticipants. To learn more read the [full report](#).

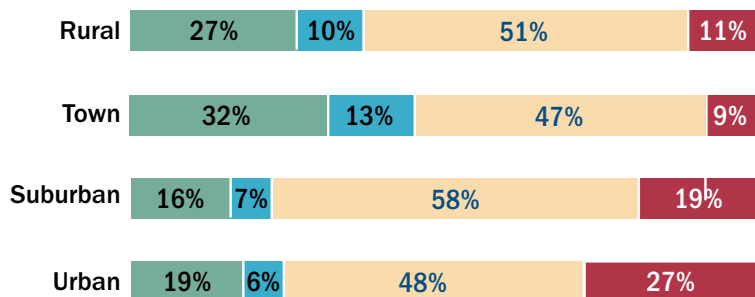
More than **330,000 students** graduated from Indiana public high schools between 2013/14 and 2017/18.



The percentage of graduates within each cohort who were **concentrators increased over time from 15 percent in the 2013/14 cohort to 28 percent in the 2017/18 cohort.**

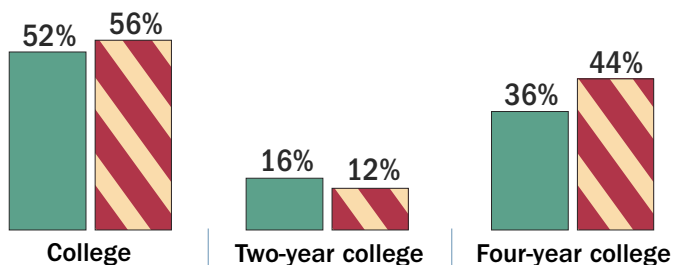


Graduates in urban and suburban areas were less likely to be concentrators and more likely to be nonparticipants than graduates in towns and rural areas.



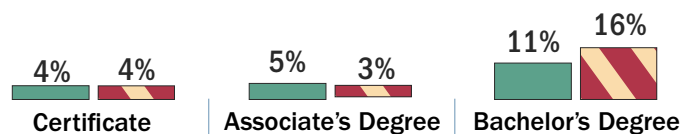
College outcomes

Concentrators had lower college enrollment rates than samplers and nonparticipants with similar demographic and academic backgrounds within one year of high school graduation.



Concentrators were more likely than samplers and nonparticipants with similar demographic and academic backgrounds **to enroll in two-year colleges but less likely to enroll in four-year colleges.**

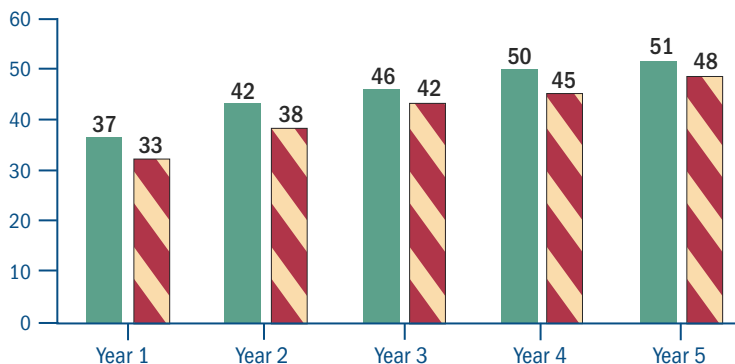
Concentrators were slightly more likely than samplers and nonparticipants with similar demographic and academic backgrounds **to attain an associate's degree** but less likely to attain a bachelor's degree.



Workforce outcomes*

Concentrators were more likely to be employed during the first five years after high school than samplers and nonparticipants with similar demographic and academic backgrounds.

Percent of high school graduates employed



Concentrators had higher earnings during their first five years after high school than samplers and nonparticipants with similar demographic and academic backgrounds.

Annual earnings (dollars)



* Employment information was not available for graduates who were employed outside the state, who were self-employed, who entered military service, or whose employer did not report wages to the state (including employees of the federal government), so it was not possible to distinguish them from unemployed graduates. They were treated as unemployed in these analyses. Earnings for graduates designated as unemployed are \$0. Annual earnings were converted to 2013 dollar values using inflation calculations based on the Consumer Price Index for All Urban Consumers, Midwest Region.

More research is needed to explore longer-term outcomes, including whether concentrators continue to have higher employment rates and earnings than samplers and nonparticipants with similar demographic and academic backgrounds five years after high school graduation and beyond.

Teachers and guidance counselors can use these findings to help students understand the postsecondary options available to them if they choose to take career and technical education courses in high school.

Teachers and counselors can help students who are considering concentrating in a single career and technical education pathway understand the college enrollment, college completion, employment, and earnings outcomes of students who have made similar choices and explain that concentrating in a career-oriented course of study does not preclude students from enrolling in a two-year or four-year college, attaining a degree, or becoming employed.

1 How do these findings relate to students in your school and district?

2 What are the CTE offerings for students in your district and in your school?

3 What is your next step?

View the full report: <https://ies.ed.gov/ncee/edlabs/projects/project.asp?projectID=4655>

Citation: Lindsay, J., Austin, M., Wan, Y., Pan, J., Pardo, M., & Yang, J. H. (2021). *Indiana and Minnesota students who focused on career and technical education in high school: Who are they, and what are their college and employment outcomes?* (REL 2021–090). U.S. Department of Education, Institute of Education Sciences, National Center for Education Evaluation and Regional Assistance, Regional Educational Laboratory Midwest. <http://ies.ed.gov/ncee/edlabs>

This study was conducted by REL Midwest in partnership with members of the Midwest Career Readiness Research Alliance: https://ies.ed.gov/ncee/edlabs/regions/midwest/partnerships/midwest_career_readiness_research_alliance.aspx

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