



Updated Findings on the Impact of Early Colleges on Postsecondary Performance and Completion

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SUMMARY

Early colleges are an innovative model of schooling that combines high school and college. A 16-year, rigorous experimental study has been examining whether this model works. The study compares early college students who were accepted through a lottery to students who applied to early colleges but were not accepted through the lottery (the control group). This brief includes findings for the full sample of over 4,000 students. Key results include:

- More early college students *earned postsecondary credentials*. By six years after 12th grade, 48.6% of early college students had earned some sort of postsecondary credential compared to 36.4% of the control group.
- Early college students *were almost three times as likely to get associate degrees* as control students. 37.0% of early college students earned an associate degree, compared with 13.8% of control students.
- Early college students earned bachelors' degrees at a slightly higher rate with statistically significant impacts for economically disadvantaged students (5.3 percentage point impact) and first generation college-goers (5.2 percentage point impact).
- *Early college students earned their degrees more rapidly*. The early college model shortened students' time to degree by two years for associate degrees and by half a year for bachelor's degrees.
- Early college students took *more advanced courses* and were *slightly less likely to switch majors* than control group students. Both groups had similar GPAs.

This brief gives an overview of the early college model as implemented in North Carolina, the study's design, and the model's impacts on student outcomes.

What are Early Colleges?

Early colleges are often small schools that integrate the high school and college experiences. Serving students in grades 9-12 or 9-13, the schools are frequently located on college campuses. At the end of high school, students are expected to graduate having simultaneously earned a high school diploma and an associate degree or two years of transferable college credit. The target populations for these schools are students who traditionally face challenges making the transition to college, including students who are low-income, the first in their family to go to college, or members of a racial or ethnic group underrepresented in college.

The early college model can be implemented in different ways. Our study looked at this model in North Carolina (NC), which has had a statewide program since 2005. Under the Cooperative Innovative High School legislation, and with the financial support of the North Carolina General Assembly, NC has created a total of 134 early colleges and similar schools.¹ As implemented in NC, early colleges are not just dual enrollment programs on steroids. Instead, these schools redesign the entire high school experience to prepare all their students for success in postsecondary education. Thus, early colleges provide a rigorous high school curriculum with instructional practices that support students' ability to think critically, write effectively, and work collaboratively. Students start taking college courses as early as 9th grade, and by 11th or 12th grade, they are taking college courses almost exclusively. To ensure that students are successful in the rigorous curriculum, early colleges provide students with academic and affective supports. The schools also focus on providing ongoing professional learning and opportunities for collaboration to the teachers, which helps them provide more wrap-around support to students.

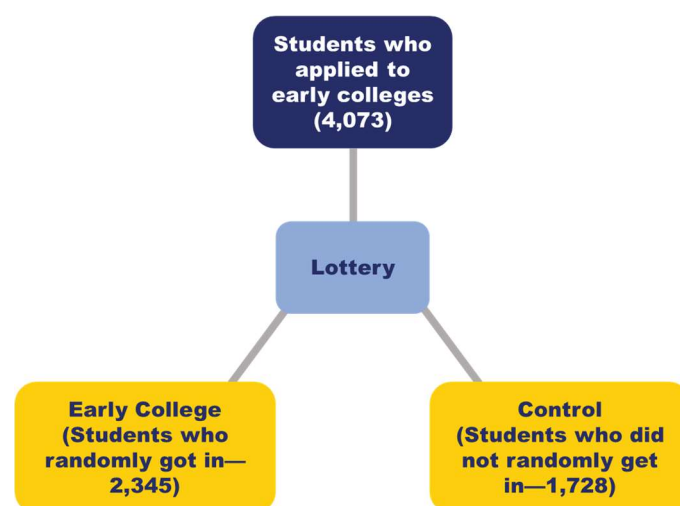
The Study

Funded through four federal grants from the U.S. Department of Education's Institute of Education Sciences and a grant from Arnold Ventures, this 16-year study was the first to rigorously examine the impact of the early college high school model. This independent study is led by a team at the Early College Research Center at the University of North Carolina at Greensboro, partnering with researchers at RAND Corporation and RTI International. The study has been examining the impact of the model on a variety of student outcomes: high school achievement, attendance, suspensions, attainment of college credits in high school, graduation from high school, enrollment and performance in postsecondary education, and graduation from postsecondary education. This brief summarizes results for postsecondary performance and degree attainment.

METHODS

In this longitudinal experimental study, participating early colleges used a lottery to select students from their applicant pool.

Figure 1: The Sample



To track outcomes of all applicants who went through the lottery, the study team collected data from the North Carolina Department of Public Instruction, the University of North Carolina System (our postsecondary performance outcomes), and the National Student Clearinghouse (the source of associate and bachelor's degree attainment).

The study uses a methodology known as “intent-to-treat,” which means that all students who were initially assigned to the early college remain in the treatment group, even if they did not end up going to the early college or if they left the school before graduating. The advantage to this approach is that it preserves the original “apples-to-apples” comparison;² the disadvantage is that the impact estimates are likely to be smaller because they include outcomes of students who are no longer in the early college. We use this approach to look at the degree attainment outcomes.

However, to look at students' postsecondary performance in a four-year institution, we had to use a different approach because we only had performance data for students who went to a University of North Carolina (UNC) System school. Those who chose to go to a UNC System school might differ from those who did not, so to look at their outcomes in college, we used statistical weights to make the treatment students look like the control students who also attended UNC.

SAMPLE

The sample for the postsecondary credential analyses includes a total of 4,073 students who applied to attend 12 early colleges and went through a lottery process (see Figure 1). 2,345 were randomly chosen to attend and 1,728 (called the control group) were randomly chosen not to attend and went to a different school, usually the comprehensive high school in the district. Results were compared for the early college sample and the control sample.

The sample for the postsecondary performance (advanced coursetaking and majors) includes only those students who went to a four-year institution in the UNC System (because we don't have coursetaking data or majors for students who went somewhere else or did not go to college). In the performance sample, there are 877 treatment and 544 control students.

Comparing Apples to Apples

It is often challenging to determine the impact of a program like the early college model because the students who apply might be very different than regular high school students who do not apply. This makes it hard to tease out whether any positive outcomes are because of the strength of the school or because the school might be attracting more motivated or academically talented students. This study uses an experimental design—frequently called the “gold standard” in impact education research—to address this concern. The study only included schools that used a lottery to select their students. The study team randomly assigned the pool of eligible applicants either to attend the early college, or not. The study compares the outcomes for the students who applied and were randomly accepted to the results for the students who applied and were not randomly accepted. This means that we are comparing apples to apples.

Results

Overall, the study found that early colleges are meeting their goal of increasing the number of students successfully completing postsecondary education. Specifics on the key findings appear below.

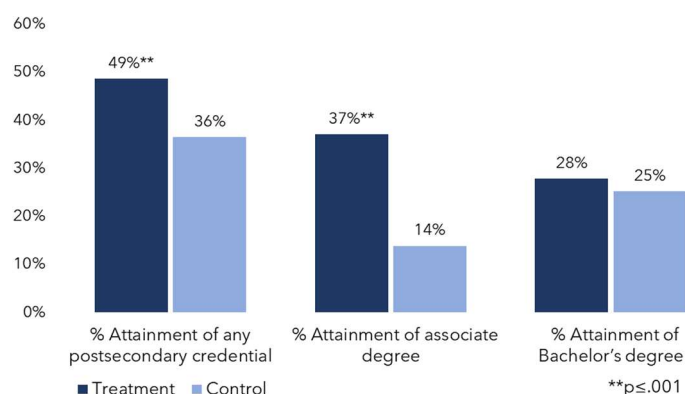
FINDING 1

More early college students earned postsecondary credentials. The study looked at the percentage of students who had earned any sort of postsecondary credential (associate degree, a bachelor's degree, or a technical credential). By six years after 12th grade, 48.6% of early college students had earned some sort of postsecondary credential compared to 36.4% of the control group.

FINDING 2

Early college students were almost three times as likely to get associate degrees as control students. By six years after 12th grade, 37.0% of early college students had earned an associate degree, compared to 13.8% of control students (see Figure 2). This is because many early college students earn an associate degree at the same time as they earn a high school diploma.

Figure 2: Early College Students Earned More Postsecondary Credentials (6 Yrs. after 12th Grade)



“Without a shadow of doubt, if it wasn't for early college, I don't think I would be on this path that I am today. I wouldn't have gone to college... If I would have went to a traditional high school, I think I would have just been a number.”

—Early College graduate who earned his bachelor's by the age of 20

FINDING 3

Economically disadvantaged and first-generation college students were significantly more likely to earn bachelor's degrees, but there was no significant impact overall. The higher rate of associate degree attainment did not result in a lower rate of bachelor's degree attainment. In fact, among economically disadvantaged early college students, we found a statistically significant and positive impact of 5.3 percentage points and a statistically significant positive 5.2 percentage point impact for first generation college-goers. There was also a positive 4.0 percentage point impact on students who were not members of underrepresented racial and ethnic groups. However, we did not find a statistically significant overall impact. For the full sample, early college students were 2.7 percentage points more likely to have earned a bachelor's degree by six years after 12th grade, a difference that was statistically significant only at the $p \leq .10$ level.



FINDING 4

Early college students earned their degrees more rapidly. Early college students who earned a degree did so more rapidly than control students. On average, the early college group earned an associate degree two years more quickly than the control group did, and they earned a bachelor's degree six months more quickly.

FINDING 5

Early college students took more advanced courses and had similar GPAs to students in the control group. As might be expected, early college students were able to take more advanced courses due to their early exposure to college courses. For early college students who earned bachelor's degrees, 48.8% of their credits came from advanced courses (300+ level) compared to 42.1% of credits earned in control group graduates. Early college students also appeared to be more focused; 34.2% of bachelor's-degree-earning early college students switched majors compared to 40.1% of the control group although the difference was not statistically significant. There were no significant differences in final college GPA between the two groups.

CONCLUSIONS

The early college model is essentially a test case of whether we can merge the high school and college experiences in such a way that students earn a postsecondary credential or a substantial number of transferable college credits while they are in high school. According to results from this rigorous experimental study, the model results in higher rates of students overall earning associate degrees and higher rates of some populations of students earning bachelor's degrees. On average, early college students earned their degrees more quickly.

People may be concerned that early college students might miss important high school learning opportunities and be less prepared for their future, including for success in college. At this point, there is no evidence to suggest that this is the case; early college students took more advanced courses and had similar GPAs. As this study continues, it will continue following students and look at the impact of the program on students' employment and earnings.

For more information about the study, please contact Julie Edmunds, the Principal Investigator, and Director of the Early College Research Center at the University of North Carolina at Greensboro: 336-315-7415 or jedmunds@serve.org.

Footnotes

¹ For more information about North Carolina's Cooperative Innovative High Schools, many of which are early colleges, please visit

<https://www.dpi.nc.gov/students-families/enhanced-opportunities/advanced-learning-and-gifted-education/cooperative-innovative-high-schools>

² Students who choose to leave the school might be different in some way than students who choose to remain. The students who remain might be more motivated or more prepared; if the study looked only at results for those students, it might overestimate the program's impact.

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