

How Community Colleges Can Help Address Teacher Shortages

By Daniel Sparks

Improving teacher quality, retention, and diversity is crucial for ensuring a strong and effective educator workforce. Issues around the adequate and high-quality labor supply of teachers have persisted for decades, particularly in specific subject areas and for low-income school districts and districts serving a high percentage of students of color. What is more, COVID-19 has exacerbated teacher shortages.¹ In fall 2022, more than one in four schools nationally had multiple teacher vacancies; these staffing issues were more likely to be a concern for schools with a large minoritized student population and for schools in high-poverty neighborhoods (National Center for Education Statistics, 2022).

As policymakers grapple with the persistent issue of teacher shortages in the U.S., it is essential to consider a range of factors contributing to the decline of persons entering and staying in teaching careers. Declining professional prestige and working conditions and increasing pay gaps between similarly educated workers are commonly identified as significant obstacles to attracting and retaining effective teachers (Kraft & Lyon, 2022). But far less attention has been given to how colleges, and in particular community colleges, may influence the number of students who enter the teaching profession.² Many persons who are interested in teaching careers attend community colleges. By strengthening teacher preparation program pathways from community colleges to four-year colleges, institutions of higher education can help address teacher shortages.

In this research brief, I explore one community college system's contribution to education degree production, with particular emphasis on its contribution in critical shortage areas. The City University of New York (CUNY) system, the largest urban university system in the U.S., includes seven community colleges. I use administrative data from CUNY to explore the role these colleges play in contributing to CUNY degrees awarded in education and how, moving forward, policies adopted in systems and states across the nation can bolster the impact of community colleges by increasing access to high-quality teacher preparation programs at four-year colleges and by increasing support for community college students interested in careers in the teacher profession.

Community colleges are an underappreciated resource in supporting a diverse teacher pipeline and in alleviating ongoing issues with teacher labor supply.

While the number of enrollments and number of awarded degrees in education is not a perfect proxy for the number of credentialed teachers, it offers one approach for better understanding ways to increase the number of prospective educators. Descriptive findings from CUNY show that community colleges are an underappreciated resource in supporting a diverse teacher pipeline and in alleviating ongoing issues with teacher labor supply, especially in specific subject areas. Strengthening community college pathways in education and supporting students enrolled in foundational education coursework can enhance this contribution.

CUNY Teacher Education in the City and State Context

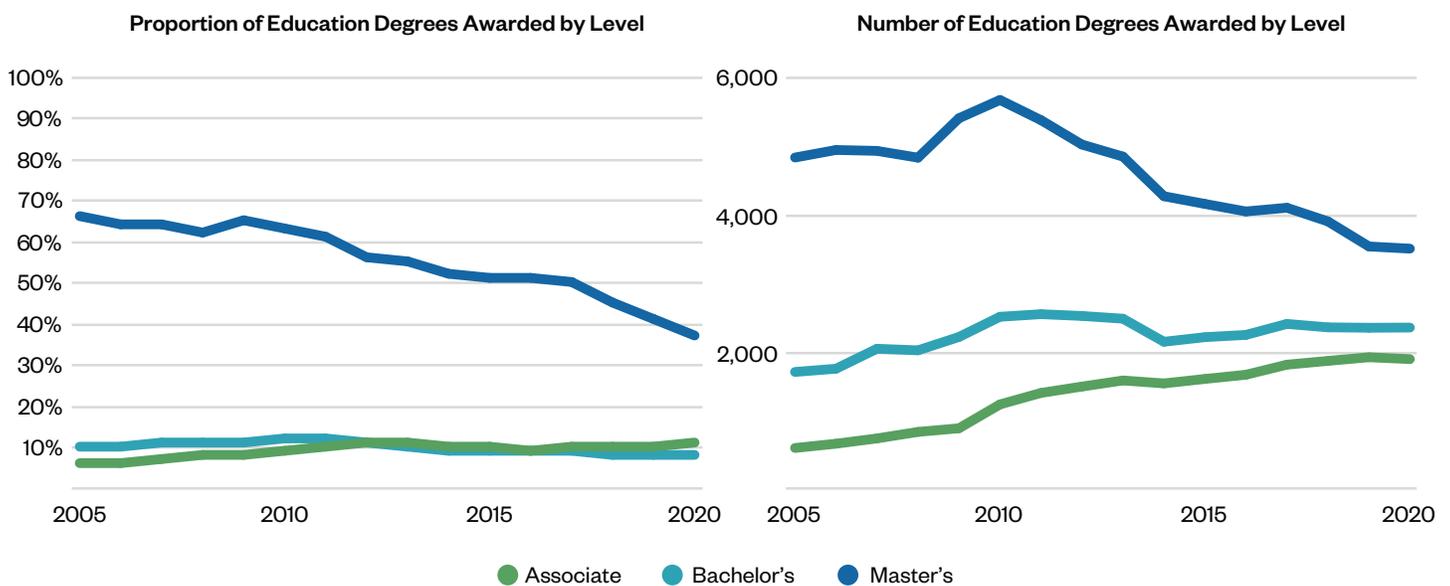
New York City is home to the largest public school district in the U.S., employing roughly 75,000 teachers who serve about a million students. New York City accounts for half of the state's teacher labor force, and 73% of new teachers in the state are certified through traditional preparation programs as opposed to alternative or individual evaluation pathways (Zweig et al., 2021). PreK-12 teachers in New York State are required to hold a bachelor's degree, complete an approved teacher preparation program, and pass state certification exams. Although New York City has the most racially diverse teaching force in the state, the demographics of New York City public school teachers still fail to reflect the diversity of the city's student body: Teachers of color make up about 40% of the teacher workforce, whereas non-White students account for more than 80% of school enrollment (Amin, 2019). New York, like most states, is not immune to teacher shortages and publishes a list of subject-specific shortage areas statewide as well as by geographic area within the state based on prior year data. Statewide shortage areas include bilingual education, career and technical education, special education, English language arts, and literacy; New York City critical shortage areas are more numerous and, outside of those already mentioned, include grade 7–12 math and science (Higher Education Services Corporation, n.d.).

The CUNY system is responsible for 22% of teacher graduates and 38% of teacher graduates of color for all of New York State, enrolling over 15,000 students in undergraduate and graduate teacher education programs each year (CUNY Office of Applied Research, Evaluation and Data Analytics, 2023). Associate degrees in education are predominantly awarded in liberal arts and early childhood programs, whereas bachelor's degree programs in education offer students a range of program concentrations from adolescent science education to instructional leadership. The proportion (and number) of associate and bachelor's degrees awarded in education have remained steady (and increased modestly) in recent years; CUNY continues to play a significant role in both the New York City and New York State education labor markets.

Associate and Bachelor’s Degree Earners in Education

Eight percent of all CUNY bachelor’s degree recipients earn their degree in education. While this may sound low, the number of students completing education degrees is substantial: For the most recent academic years, about 4,500 students completed an associate and/or bachelor’s degree in education (see Figure 1). The percentage of bachelor’s degrees CUNY awards in education is commensurate with the national average across all colleges and universities (Kraft & Lyon, 2022).

Figure 1.
Proportion and Number of Degrees Awarded in Education by CUNY



Note. The graph on the left depicts the proportion of degrees awarded in education over time. The denominator is the total number of degrees by level, including associate, bachelor’s, and master’s degrees. The graph on the right depicts the number of degrees awarded over time.

Education degrees encompass a range of programs from teacher training to educational administration to student counseling. CUNY’s community colleges collectively offer 22 associate degree and other credential programs in education, while senior colleges offer over 500 individual academic programs in education (CUNY Office of Applied Research, Evaluation and Data Analytics, 2023). Within classroom teaching programs, there are a variety of programs and areas of specialization that students can pursue. More than 40% of associate degree earners with specializations in education earn their degree in liberal arts and sciences, and another 30% earn associate degrees in early childhood education. Bachelor’s degree earners most commonly pursue and receive degrees in early childhood and elementary education. Importantly, roughly 80% of bachelor’s degrees in education awarded by CUNY are in areas identified as critical shortage areas for New York City public schools, including special education, bilingual education, and STEM (Zweig et al., 2021).

Ninety percent of CUNY associate degrees awarded in education and more than 55% of CUNY bachelor’s degrees awarded in education are earned by students of color, which is critically important given the discrepancy between teacher and student racial demographics and the extant research highlighting the academic benefits to students of a more diverse teacher workforce (Carver-Thomas, 2018). High proportions of both associate and bachelor’s degree completers in education are from low-income backgrounds, and many are first-generation college students.³ In short, students who pursue degrees in education at CUNY are racially and socioeconomically diverse, particularly community college students and students who earn associate degrees in education.

Table 1.

CUNY Degree Outcomes Among Community College Entrants by Demographic Characteristics, 2012–2014 Fall Cohorts

	BASELINE (%)	EARNED ASSOCIATE DEGREE (%)	EARNED ASSOCIATE DEGREE IN EDUCATION (CONDITIONAL ^a) (%)	TRANSFERRED TO SENIOR COLLEGE (%)	EARNED BACHELOR’S DEGREE (%)	EARNED BACHELOR’S DEGREE IN EDUCATION (CONDITIONAL ^a) (%)
Overall	100	35	2	35	18	4
Female	54	40	4	40	21	6
Male	46	29	0	30	14	2
Asian	15	43	2	46	28	4
Black	29	31	2	31	13	3
Hispanic	41	34	3	33	16	5
White	15	38	1	39	22	6
Received Pell in Year 1	70	35	3	35	18	4
Observations	61,680	61,680	21,533	61,680	61,680	10,937

Note. Observations are for community college fall entry cohorts from 2012 to 2014. Associate and bachelor’s degree completion and transfer rates are based on whether students ever transferred or completed a degree.

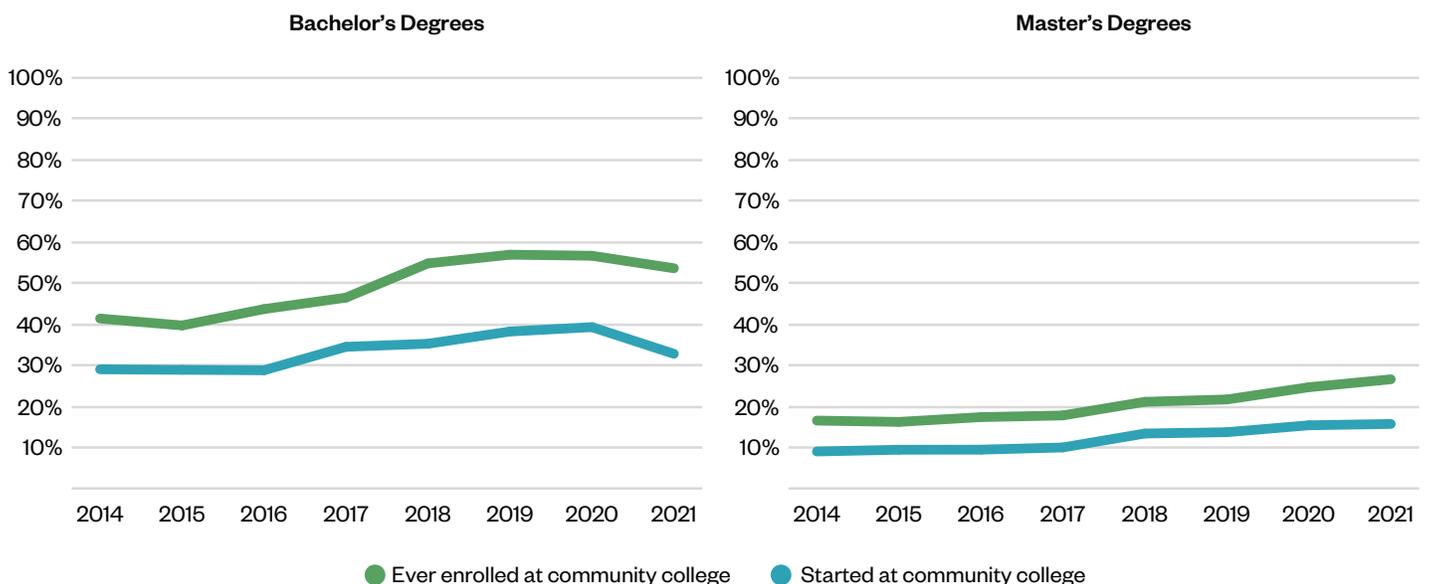
^aAssociate and bachelor’s degree completion in education is conditional on degree completion. For instance, 4% of students who earned a bachelor’s degree did so in education.

Community College Contribution to Education Degree Production

Improving CUNY community college student outcomes holds tremendous potential for boosting the university system’s contribution to local and state education labor markets. I measure the community college contribution to education degree production in terms of both students whose initial enrollment was at a community college and students who ever enrolled at a community college. The latter includes students who may have enrolled in a community college for only one or two courses. As shown in Figure 2, the percentage of CUNY students earning a bachelor’s or master’s degree in education who started or ever enrolled at a CUNY community college increased between 2014 and 2020. In 2020, 39% of students who received a bachelor’s degree in education first enrolled at a community college, and 56% took at least some coursework at a community college; 15% of students who earned a master’s degree in education were community college entrants, and 24% enrolled at a community college at some point.

Figure 3 shows the community college contribution to bachelor’s degrees awarded in education by critical shortage areas such as bilingual education, special education, STEM education, and English language arts and literacy. In 2020, more than half of bachelor’s degree recipients in education with a concentration in special education ever enrolled at a community college. More than half of bilingual education bachelor’s degree earners started at a community college. About 40% of STEM education bachelor’s degree earners ever enrolled at a community college. And more than half of students who earned a bachelor’s degree in English language arts or literacy ever enrolled at a community college. These data highlight the role community colleges play not only in increasing the number of qualified teachers but also in addressing teacher supply issues in critical shortage areas.

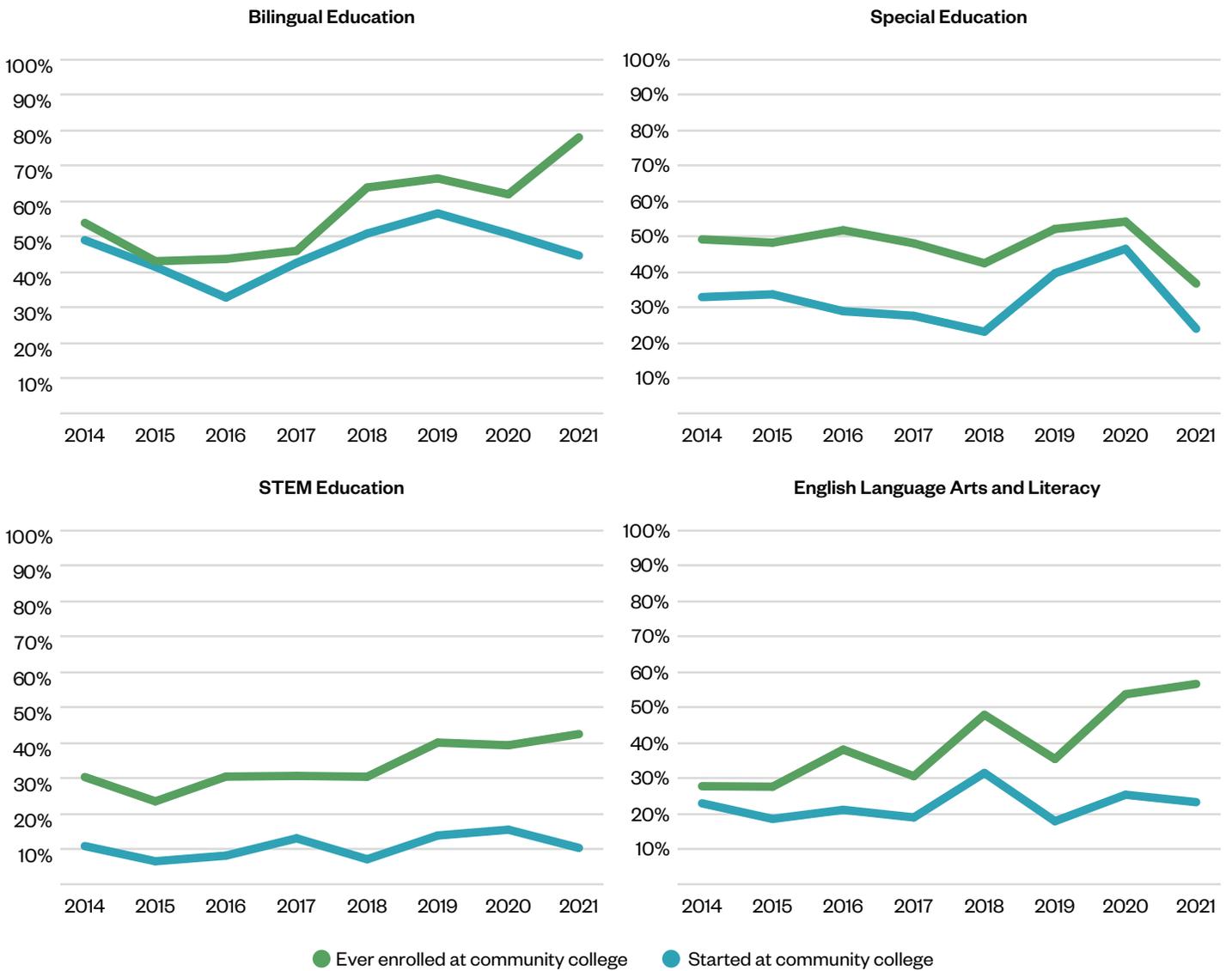
Figure 2.
CUNY Community College Contribution to Bachelor’s and Master’s Degrees in Education



Note. The two graphs depict the proportion of bachelor’s and master’s degrees in education awarded to students who either started at a CUNY community college or ever enrolled at a CUNY community college.

Figure 3.

CUNY Community College Contribution to Bachelor's Degrees in Education in Critical Shortage Areas



Note. The four graphs depict the proportion of bachelor's degrees in select critical shortage areas awarded to students who either started or ever enrolled at a CUNY community college.

Improving Transfer Among Education Students at CUNY

The most commonly earned associate degree among education bachelor's degree completers at CUNY is in general studies/liberal arts, yet fewer than 20% of community college students who go on to complete a bachelor's degree in education earned an associate degree in education prior to transfer. The fact that most community college students who go on to earn a bachelor's degree in education either earned an associate degree in general studies/liberal arts or earned no associate degree at all is not unique to the CUNY system. Nationwide, many community college students transfer without first earning an associate degree. And more than 40% of associate degrees awarded by community colleges across the U.S. are in general studies/liberal arts.⁴ The lack of program specificity in associate degrees can mask student intent to pursue bachelor's degrees in education and serve as a potential barrier to improving the transfer process for students. It also raises further questions about how well education programs are aligned between two-year and four-year colleges in a system or state, especially after accounting for differences in statewide credentialing policies for early childhood teachers and teachers' aides, who historically were not required to hold a bachelor's degree and could receive full credentialing through a community college.

While many community colleges across the U.S. fail to capture students' program intent, the CUNY Pathways initiative, which was created in fall 2013 to support student transfer between two- and four-year colleges, enables the CUNY administration to more readily identify student interest in and pursuit of education degrees. As part of the initiative, CUNY formed a committee of faculty across its two- and four-year colleges to review course syllabi and establish entry courses for education majors (it did so for students in other programs as well). In reviewing learning outcomes for education courses, the committee recommended three courses for articulation between two- and four-year colleges that it felt would best meet the needs of community college students interested in pursuing four-year degrees in education. These articulated foundational courses—which are available only at the community colleges but which fulfill education program requirements at the senior colleges—have since been updated and now include four: Social Foundations of Education, Psychological Foundations of Education, Special Education, and Arts in Education.

The Pathways initiative at CUNY—and specifically its creation of transfer course articulation for education coursework—highlights a potentially effective way to improve the transfer experience for community college students interested in pursuing programs and careers in education. It serves as one way for the administration to flag student interest in education through transcript data, and it offers more coherent foundational coursework in education for students. Since establishing the articulated foundational courses, the proportion of bachelor's degree completers in education who complete a foundational education course at a community college has increased by more than 10%.⁵ Among community college

entrants who complete such a course at the community college, 70% have gone on to complete an associate degree in education, and 10% have gone on to earn a bachelor's degree in education.⁶ The implementation of Pathways has coincided with the increase in the community college contribution to bachelor's and master's degree production in education depicted in Figure 2.

The system-wide development of articulated foundational courses in education has enabled students to complete program-specific coursework at community colleges that can be used toward bachelor's degrees in education upon transfer. Despite these efforts, there are still differences in access to subject-specific education courses (e.g., Social Studies Education) and practical or experiential learning courses in education, and there are differences in academic performance across foundational courses at community and senior colleges. For instance, CUNY community college pass rates are 74% for Social Foundations of Education and 72% for Psychological Foundations of Education, two of the most frequently taken education courses at the community colleges. In comparison, 90% of CUNY senior college students who enroll in Philosophy of Teaching, one of the most frequently taken courses among education majors, pass it.⁷

Ideally, foundational courses in education would serve to bolster rather than thwart student interest in the academic discipline and profession of education. The relatively lower pass rates for foundational educational courses at CUNY community colleges suggest that some community college students interested in education may face challenges completing foundational education coursework. Students may also have difficulties in accessing courses specific to their teaching interests within the academic discipline of education and navigating the transfer process amid incomplete alignment between community and senior college programs in education. Expanding on articulated foundational courses in education between community and senior colleges and increasing academic supports for students in these courses are two policy levers through which CUNY can continue to improve the transfer experience for community college students interested in pursuing bachelor's degrees in education, which could further increase the community college contribution to overall education degree production.

Conclusion

Community colleges play a key role in degree production in education: 39% of CUNY students who earn a bachelor's degree in education and 15% of CUNY students who earn a master's degree in education started at a CUNY community college. The CUNY system offers a relatively affordable public college pathway to teacher certification, which ultimately benefits local and state teacher labor markets. The provision of coherent foundational education coursework at community colleges, as is done at CUNY, can help ease the transfer process for community college students interested in pursuing education degrees, and offering greater support and guidance for such students could also be beneficial.

The racial and socioeconomic diversity of community college students as well as their substantial interest across education program concentrations hold important implications for addressing issues with teacher diversity and teacher shortages in critical subject areas in New York City, New York State, and other areas across the nation. Amid persistent teacher supply issues in many school districts, future research should further examine the underappreciated role community colleges play in contributing to the teacher labor supply.

Endnotes

1. Following Nguyen et al. (2022), I understand shortages as the extent to which school districts have unfilled teaching positions or employ underqualified teachers per state credentialing requirements.
2. Despite the rise of alternative certification programs, many of which are administered outside of institutions of higher education, traditional teacher training programs still make up the bulk of educator preparation (Yin & Partelow, 2020).
3. Data for financial aid is available only for students who complete the FAFSA, which is about 50% of the student sample. Indicators for first-generation status are based on information from the FAFSA. Based on available data, 29% of students who earned an associate or bachelor's degree in education were first-generation college students.
4. Author's calculation using IPEDS data.
5. Author's calculation comparing the 2014 fall entry cohort outcomes to those of 2012–2013 fall entry cohorts.
6. Author's calculation using 2014 fall entry cohort data.
7. Pass rates are for courses taken in years 2014-15 through 2021-22.

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